

The Answer:
Roadmap for a New Humanity



Richard Lawrence Norman

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Standing Dead—

*Let us cast aside the husk, walk away from that which was
our name, and leave it as a dead thing. Standing Dead are
we—as a tree rent by lightening: now bright and sudden,
we who refuse to fall.*

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The history of man is that of a parade following a buffoon.

Note to the reader and acknowledgements:

The views within these pages are my own, be they worthy of praise or blame. Those fine scientists who have seen fit to permit me the use of their work and my coauthors alike who are represented here, are not to be held accountable.

The reader should be aware that the current version of this work was prepared as a rapid response to situations spelled out in the first large section of the text entitled, "The Problem." Once the current situation began to unfold it was instantly clear that something grave was wrong. Tests were conducted and research completed to ascertain the actual causes, after which I decided to begin writing at once to expose the situation. *The Answer* presented here was already in my possession at that time, so, the book came into form. If you wish to aid the situation, clear instructions are found within the text. I may be contacted through www.mindmagazine.net. I am preparing a very high quality version of this text with more information, more artwork, further detail concerning child rearing within the context of integrated personality, more myth and deeper science. This new version will be of the finest quality. Once complete, that version will be priced so as to aid the distribution of this vital information. The version you are reading was prepared to be given away as widely as possible in an e-version, and also to be published as a paperback priced at around a dollar over cost. Any compensation received will be put frugally toward further distribution of this information.

Tempus Fugit.

I wish to thank Dr. Andrew Goldsworthy for his kind permission to reprint his excellent essay and Dr. Jeremy Dunning-Davies for all his support.

Dedication

This book is dedicated to what does not yet exist, to hope, to the future, as an ode which summons our human promise.

Of Promise Unspent

What dream is Man?
What imagining twice broken
Summons the eye to blink
Drawn away from the sight
Of light, twice stained?

The dawn drawn up as linen
A quilt swept beneath forgetting
A promise as yet unspoken
A dream mute and forgetful
An imagining unsure of itself,
A smear of rouge and light—
So is our pain but a folded dream
Cream and light swept up as forgetting
A spatter of rouged light, twice warm and unknowing.

The ages of twisted rope, stretched and taut
Choking upon its own weight
Twisting in ugly jerks
The soul of Man as twisted meat
Jerking upon cruel wire and war
Heat and burnt metal
Soot and ugly yellow fat
Burnt heat and crooked stains of torn hope
The knotted fingers of kindness broken
The child left to die
Tugging—Twisting
in cold broken wind
Filled up with choked cries, and sticky blots
Of empty silence... then—
No more.
Victory.
Is this not our dream?
The dream of Man?

A trillion silver sparks
The flashing teeth of time and space
Torn in two and burst.
A tiny secret
Ripped in half
The smallest places—held—
And wounded.
Snap!
The sky is torn
Light bursts from pain
Tears are burnt up into ugly wind...and vanish—
A wound more painful than truth
More true than suffering
A fact twice pungent
Becomes—nothing.
So is hope—the hope of Man
For now we know...too much
Far, too much.

The sky is torn and silver
White and roiling
Spitting opal swirls of amethyst and anguish
The heart of the world split and fused...into light
—and pain.

Soft waxy flesh sloughs from innocent arms—into dirt
and burnt light.
The suffering of a million millennia
Distilled
Into a single wound of heat and crushed light
Hope—now burst.

We soar as birds
Cutting the sky
Slipping her heart through
With white hissing jets of spray.
The jets, cutting the lens in two
Tearing the sky apart
Hissing through space
Ruining
Cutting
Splitting
Tearing Beauty open
—and leaving her.

Where are the jets going?
To do what?
To whom?...never mind—Why.
Only know—it is.
We are tearing the sky open
Splitting her tender heart and hurting her
Listen—Look—and know
Know—what we have done.

Bodies wash up
Tugged and bloated
Washed up upon the shore of Time
Purple knots of bruise and gristle
Circle dead necks
Where fingers once pinched and closed
Until the spark was choked away, into black.
Planes circle the heavens
And spit death, upon life
Heat, upon cool
And make burnt, all
That is our finest unknown
Now soiled and burnt up
As sticky yellow fat is burnt
And burnt off.
Ah!
Is this not our dream—
The dream of Man?

*We might hope that all of Human history,
Is a pre-history
A dream spilled before waking
A silent whisper before the fact
An imagining
—of promise unspent.*

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Introduction:

I am an autodidactic scientist and author. My abilities in psychology, physics, literature and neuroscience developed suddenly and unexpectedly late in life, after I made several profound changes in my personal mindset. These changes and new mental abilities were accompanied by a deep sense of connection and ethical warmth for all things and peoples. I have analyzed the processes and effects, and will present the results here, as well as the implications and methods of personal change.

This work will offer the reader many things. It contains physics and science, pharmacology and ideas concerning the transition of social change and economy, myths for young and old, and a specific method to reconstruct the fault at the basis of human division, neurosis and misery. It also contains information about the state of affairs in the world at this time, which is utterly vital to understand. It is possible that you may help the race of man itself avoid a dread future. The initial impetus for writing this book came on dove's feet after a dread storm. I am a psychologist of necessity trained in her brutal school. After developing methods to free myself, I discovered many unexpected things. Energy arrived in sufficient abundance to permit the joyous development of new skills, and I soon understood the wealth of new intellectual proliferation and output was not work at all, but pleasure! This new soft heart came with a change in 'luck,' and things became easy for me. There is neuroscience and physics to what we call luck, and those are part of a psychological configuration and balance most specific. Something basic had changed within me. It seemed as if I could feel the entire of the external world as an extension of myself, and these new connective pathways provided energy and an innate kindness which I had never before known. I had unearthed an ancient thing, a self which is within all. Intellectual, sexual and ethical aspects no longer posed in conflict and I understood, I had repaired the fault which was at the basis of human misery, want and war itself. I suddenly required almost nothing external in order to feel full and good. This book will explain those things, and place them in the context of an actual viable framework so they may be achieved in the case of the individual, and a society. There is hope for mankind. The ancient basis for empathetic connection and innocence can be brought to the fore, again.

Hopeful as that is, I caution and deeply encourage the reader to closely examine and fully comprehend the early parts of this book upon which that hope is founded.

There are things of which you must be made plainly aware, quite apart from the neuroscience, psychology, genetics and historical analysis which will allow you into the new world, a world of warmth. Quite literally, I feel compelled to write this book, as a matter of the most pressing import, truly, as a matter of the life of the planet and its inhabitants. There are vital urgent facts of which you must be made aware. If we are to untie this Gordian knot of labyrinthian stricture, loosen the sorrow of man and free the kind heart and eager intellect within, the problem we are to solve, its history and current status must be clearly understood. Then, the various constituent poisons which contribute to the pathological effect we see might be teased apart, and addressed in context. Our action must be imminent, and the results speedy and precise if our race is to survive.

In order to reach our destination, we must first see exactly how the present situation mankind finds himself in developed, and then, look into that situation in specific. Only by closely observing each aspect can we hope to unravel the bind. This means we will need to look quite directly at certain facts which may feel uncomfortable, but this can not be helped, and indeed it is of the utmost import. So before I reveal the specifics of the answer, if that solution is to have any chance of taking root, we must first look unflinchingly into the past, and the present. The problem must be made plain and its hidden depths laid out in daylight. We must see into the blackness which surrounds to guide our steps.

It is but darkly that we may find the bright places.

Huddled under a sky of ice, pitch dark and cracked with cold, we are near, my voice softly spoken over the last ember of a dying fire. We may watch it begin, that which we have summoned and nourished, the dawn spends her first breath and the coal of day begins to pulse, warm and sweet is the first dawn,

draped upon the broken shoulders of night, so brittle and thin, the pain of a thousand millennia may be warmed and yield at last—to dawn.

This is my wish for us all, for mankind. It is not a mere wish, it is truth itself drawn into form—Although it will not be easy. The alternative is bleak. The hour is late, nearly spent but not yet gone. With courage we may still solve it. Please my friend listen, I have found it.

To examine the history of man, is to find the same fundamental error repeated inexorably and with ever greater intensity, the error of war. Human division and degradation, hatred and struggle well past the bitter lot nature offers in her indifference, the greatest impediment to the wellbeing of man and nature is the disposition of man himself, a fault ever richer in history and pain. I have found the origin of this horrendous suffering and foolishness throughout history, and to clearly see its causal essence, we may then solve it. That is what this book promises...an answer to the fundamental fault within man. You have my word, my solemn word I will reveal this thing to you, and you may easily and soon know it. But it is not so simple as that. First, we must look plainly upon many things which you may believe sacrosanct or immune to examination. In order to find the bright places, we must look plainly upon the dark, and see within it.

The Problem

Chapter one:

The history of man presents us a picture of one pattern of behavior which never changes, over and over it repeats, burrowing down into time its roots are bound fast, every layer of the human psyche is affected; the unconscious mind and deepest past of the human race are permeated with its underpinnings, dark, bloody and mad with fear and rage: War and human cruelty. The appetite is never quenched, always and only repeating, its teeth bound fast into the torn flesh of humanity. A cruel and violent patriarchy sublimated into the state¹ appears to be the single dominant pattern of relations between groups of humans throughout all of recorded history. However, the strategy has never worked to achieve lasting peace in any case ever, and instead, it always fails and in all cases with no exception, in time, often a short time, more war and cruelty erupts. Men apparently try quite hard to be kind and good, but in all cases groups of men follow leaders and kill off their brethren with utterly predictable regularity. This is what psychologists call a fixation. This is a compulsive, irresistible pattern created and sustained in a specific way. We will analyze that in depth and detail soon, but for now you may understand that for some psychological reason involving malformed, regressed² and fixated drives, the pattern must repeat itself by way of compulsion³ and will always do what it has always done: gather groups of obedient men under the leadership of sadists to create misery, want, death and painful suffering for the race. Please think also if you will, about the same sort of sadistic dominance (and obedience within the system) taking place in society at large each day in the cut throat world of business and money where one company, employee or group, is in competition with the next. I will pick that thread up later. Please just observe the same zero sum gain sadistic pattern appearing in business and social structures at war. Simply: In war one group takes land, the other loses land, in business one man or company gets a promotion, job or monetary contract, the others do not get it, and so: these are Zero Sum Gain models, based in competition; war being of deadly consequence, although following the same basic general pattern as the rest. This sort of 'law of the jungle' thinking is what we find in those less developed lower life forms which are unable or unwilling to cooperate (allowing also for situational constraints preventing development). These statements may seem harsh or undeserved. Are they? Is this true, is man so reliably ill as to meet Einstein's definition of Insanity and I will add Stupidity itself: To repeat the same failed strategy, again and again?

"Surely I exaggerate," you must think. Could mankind really be so plainly stupid and obviously bent upon creating its own masochistic misery and ruin, that he possesses a demonstrable history of redundant idiocy, and that over and over again without fail, large groups of men decide to exterminate themselves and other members of the human race to which they themselves belong, by faithfully listening to and even more amazingly, by following and actually obeying insane, intellectually deficient sadists? Let us see. Is man's insatiable drive toward and response to aggression so perverse, obvious and plainly masochistic as that? For the sake of brevity I will confine the examples to those European wars, and give no detail but to list them. Please bring to mind the vile sadistic horrors of war, crimes against humanity and nature, and war's constant companion throughout time: torture. This behavior reflects a drive structure, as we will see later.⁴

A condensed general history of European wars up to 2014:

¹ Patriarchy meaning obedience under the lineage of the father or symbolically inculcated into a dominant male working as the leader of a state or organization. One example is the church with our father who is in heaven, and priests with his power sublimated into them, etc. by extension; or the father figure Allah who must be submitted to and prayed to perfectly 5 times a day for the obedient obeisant Muslim; or the army and military with the president at the head, its stern commanders next and then the many middle ranks and those beneath them.

² Regressed, meaning damaged by moving backward in development.

³ Compulsion is formed through the symptomatic transformation of repressed sexual affect.

⁴ It is in the reorientation of a fundamental phylogenetic and ontogenetic error fostered in patriarchally conditioned drive structures at several levels that will alter the pathological situation, and free the intellectual, creative and ethical capacities in man.

BC

circa 5000 BC Talheim Death Pit
circa 1104–900 BC Dorian invasion
circa 753–351 BC Roman-Etruscan Wars
circa 753–494 BC Roman-Sabine wars
743–724 BC First Messenian War
710–650 BC Lelantine War
circa 700–601 BC Alban war with Rome
685–668 BC Second Messenian War
669–668 BC Sparta-Argos war
600–265 BC Greek–Punic Wars
595–585 BC First Sacred War
560 BC Second Arcadian War
540 BC Battle of Alalia
538–522 BC Polycrates wars
509–396 BC Early Italian campaigns
500–499 BC Persian invasion of Naxos
492–490 BC First Persian War
482–479 BC Second Persian War
480–307 BC Sicilian Wars
460–445 BC First Peloponnesian War
449–448 BC Second Sacred War
440–439 BC Samian War
431–404 BC Second Peloponnesian War
395–387 BC Corinthian War
390–387 BC Celtic invasion of Italia
335 BC Alexander's Balkan campaign
323–322 BC Lamian War
280–275 BC Pyrrhic War
267–261 BC Chremonidean War
264–241 BC First Punic War
229–228 BC Illyrian Wars
220–219 BC Illyrian Wars
218–201 BC Second Punic War
214–205 BC First Macedonian War
200–197 BC Second Macedonian War
191–189 BC Aetolian War
171–168 BC Third Macedonian War
135–132 BC First Servile War
113–101 BC Cimbrian War
113 BC – CE 439 Germanic Wars
104–100 BC Second Servile War
91–88 BC Social War
88–87 BC Sulla's first civil war
85 BC Colchis Uprising against Pontus
83–72 BC Sertorian War
82–81 BC Sulla's second civil war
78 BC Marcus Aemilius Lepidus
73–71 BC Third Servile War
65–63 BC Caucasian Iberian-Roman war
63–62 BC Catiline Conspiracy
55–54 BC Caesar's invasions of Britain
58–51 BC Gallic Wars
49–45 BC Caesar's Civil War

44–36 BC Sicilian revolt
43 BC Battle of Mutina
43–42 BC Liberators' civil war
41–40 BC Perusine War
32–30 BC Final War of the Roman Republic
1st–10th century AD
35–41 Iberian-Parthian war
49–96 Roman conquest of Britain
51 Iberian-Armenian war
69 Year of the Four Emperors
193 Year of the Five Emperors
208–210 Roman invasion of Caledoni
238 Year of the Six Emperors
271–278 Colchis–Roman War
284–285 Roman civil war
306–324 Civil wars of the Tetrarchy
350–351 Roman civil war
360–361 Roman civil war
367–368 Great Conspiracy
376–382 Gothic War
387–388 Roman civil war
394 Roman civil war of 394 AD
482–484 Iberian-Persian War
526–532 Iberian War
535–554 Gothic War
541–562 Lazic War
582–602 Maurice's Balkan campaigns
c. 600–793 Frisian–Frankish wars
650–799 Arab–Khazar wars
680–1355 Byzantine–Bulgarian wars
711–718 Umayyad conquest of Hispania
715–718 Frankish Civil War (715–718)
722–1492 Reconquista
735–737 Georgian-Umayyad Caliphate War
772–804 Saxon Wars
c. 800/862–973 Hungarian invasions of Europe
830s Paphlagonian expedition of the Rus'
839–1330 Bulgarian–Serbian Wars
854–1000 Croatian–Bulgarian wars
860 Rus'–Byzantine War
865–878 Invasion of the Great Heathen Army
907 Rus'–Byzantine War
914 Arab-Georgian War
939 Battle of Andernach
941 Rus'–Byzantine War
955 Battle of Recknitz
970–971 Sviatoslav's invasion of Bulgaria
982 Battle of Stilo
983 Great Slav Rising
c. 997–1445 Swedish–Novgorodian Wars
11th century
1002–1018 German–Polish War
1014–1208 Byzantine–Georgian wars
1015–1016 Pisan–Genoese expeditions to Sardinia

1015–1016 Cnut's invasion of England
1018 Battle of Vlaardingen
1024 Battle of Listven
1024 Rus'–Byzantine War
1043 Rus'–Byzantine War
1044 Battle of Ménfő
1050–1185 Byzantine–Norman wars
1057 Battle of Petroe
1060 Battle of the Theben Pass
1066–1088 Norman conquest of England
1067–1194 Norman invasion of Wales
1067 Battle on the Nemiga River
1068 Battle of the Alta River
1073–1075 Saxon Rebellion
1075 Revolt of the Earls
1077–1088 Great Saxon Revolt
1078 Battle of Kalavrye
1088 Rebellion of 1088
1093 Battle of Schmilau
1093 Battle of the Stugna River
1097 Battle of Gvozd Mountain
1099–1204 Georgian–Seljuk wars
12th century
1109 Battle of Głogów
1115 Battle of Welfesholz
1121 Battle of Didgori
1126 Battle of Chlumec
1130–1240 Civil war era in Norway
1135–54 The Anarchy
1142–1445 Swedish–Novgorodian Wars
1144–1162 Baussenque Wars
1159–1345 Wars of the Guelphs and Ghibellines
1164 Battle of Verchen
1169–1175 Norman invasion of Ireland
1173–1174 Revolt of 1173–74
1185–1204 Uprising of Asen and Peter
1198 Battle of Gisors
13th century
1201 Battle of Stellau
1202 Siege of Zadar
1202–1214 Anglo–French War
1205 Battle of Zawichost
1208–1227 Conquest of Estonia
1209–1229 Albigensian Crusade
1211 Welsh uprising of 1211
1215–1217 First Barons' War
1216–1222 War of Succession of Champagne
1220–1264 Age of the Sturlungs
1223–1241 Mongol invasion of Europe
1223–1480 Tatar raids in Russia
1224 Siege of La Rochelle
1227 Battle of Bornhöved
1231–1233 Friso–Drentic War
1234–1238 Georgian–Molgol War

1239–1245 Teltow War
1242 Saintonge War
1256–1258 War of the Euboeote Succession
1256–1381 Venetian–Genoese Wars
1256–1422 Friso-Hollandic Wars
1260 Battle of Kressenbrunn
1262–1266 Scottish–Norwegian War
1264–1267 Second Barons' War
1265 Battle of Isaszeg
1276 War of Navarra
1277–1280 Uprising of Ivaylo
1278 Battle on the Marchfeld
1282–1302 War of the Sicilian Vespers
1283–1289 War of the Limburg Succession
1288–1295 War of the outlaws
1296–1357 Wars of Scottish Independence
1297–1305 Franco-Flemish War
1298 Battle of Göllheim
14th century
1302 Battle of the Golden Spurs
1307 Battle of Lucka
1311–1312 Rebellion of wójt Albert
1312 Battle of Rozgony
1321–1322 Despenser War
1321–1328 Byzantine civil war of 1321–1328
1322 Battle of Bliska
1323–1328 Peasant revolt in Flanders
1324 War of Saint-Sardos
1326–1332 Polish–Teutonic War
1333–1338 Burke Civil War
1337–1453 Hundred Years' War
1340–1392 Galicia–Volhynia Wars
1340–1396 Bulgarian–Ottoman Wars
1341–1347 Byzantine civil war of 1341–1347
1342–1350 Zealot's Rebellion
1343–1345 St. George's Night Uprising
1347–1352 Neapolitan campaigns of Louis the Great
1350–1498 Wars of the Vetkopers and Schieringers
1356–1358 Jacquerie
1356–1375 War of the Two Peters
1362 Battle of Helsingborg
1362–1457 War of the Bands
1366–1369 Castilian Civil War
1366–1526 Ottoman–Hungarian Wars
1369–1370 First Ferdinand War
1371–1913 Serbian–Ottoman wars
1371 Battle of Baesweiler
1371–1379 War of the Succession of Guelders
1371–1381 War of Chioggia
1372–1373 Second Ferdinand War
1373–1379 Byzantine civil war of 1373–1379
1375 Gugler War
1375–1378 War of the Eight Saints
1381 Peasants' Revolt

1381–1382 Third Ferdinand War
1381–1384 Lithuanian Civil War
1382 Harelle and Maillotins Revolt
1381–1404 Second Georgian-Mongol War
1389 Battle of Kosovo
1389–1392 Lithuanian Civil War
1395 Battle of Nicopolis
15th century
1400–1415 Glyndŵr Rising
1401–1429 Appenzell Wars
1407–1468 Georgian-Turkoman War
1409–1411 Polish–Lithuanian–Teutonic War
1410–1435 War of Slesvig
1414 Hunger War
1419–1434 Hussite Wars
1422 Gollub War
1422 Battle of Arbedo
1425–1454 Wars in Lombardy
1431–1435 Polish–Teutonic War
1434–1436 Engelbrekt rebellion
1437 Budai Nagy Antal Revolt
1438–1556 Russo-Kazan Wars
1440–1446 Old Zürich War
1441 Battle of Samobor
1443–1444 Long campaign
1445 First Battle of Olmedo
1447–1448 Albanian–Venetian War
1449–1450 First Margrave War
1449 Battle of Castione
1449–1453 Revolt of Ghent
1450 Cade's Rebellion
1451–1455 Navarrese Civil War
1453–1454 Morea revolt
1454–1466 Thirteen Years' War
1455–1485 Wars of the Roses
1462–1485 Rebellion of the Remences
1462–1472 Catalanian Civil War
1463–1479 Ottoman–Venetian War
1465 Battle of Montlhéry
1465–1468 Liège Wars
1466–1469 Irmandiño Wars
1467 Second Battle of Olmedo
1467–1479 War of the Priests
1468 Waldshut War
1468–1478 Bohemian War
1470–1471 Dano-Swedish War
1470–1474 Anglo-Hanseatic War
1475–1479 War of the Castilian Succession
1477–1488 Austrian-Hungarian War (1477–1488)
1478 Carinthian peasant revolt
1478 Battle of Giornico
1479 Battle of Guinegate
1482–1484 War of Ferrara
1484 Battle of Lochmaben Fair

1485–1488 Mad War
1487 Battle of Crevola
1487 War of Rovereto
1488 Battle of Sauchieburn
1492–1583 Muscovite–Lithuanian Wars
1493 Battle of Krbava Field
1493–1593 Hundred Years' Croatian–Ottoman War
1494–1498 Italian War of 1494–1498
1495–1497 Russo-Swedish War
1497 Cornish Rebellion of 1497
1497 Battle of Rotebro
1499 Swabian War
1499–1504 Italian War of 1499–1504
16th century
c. 1500–1854 Lekianoba
1502–1543 Guelderian Wars
1503–1505 Landshut War of Succession
1508–1516 War of the League of Cambrai
1509–1510 Polish–Moldavian War
1514 Poor Conrad's Rebellion
1514 Dózsa rebellion
1514–1517 Saxon feud
1515 Slovenian peasant revolt
1515–1523 Frisian peasant rebellion
1519–1521 Polish–Teutonic War
1520–1521 Revolt of the Comuneros
1521–1523 Revolt of the Brotherhoods
1521–1523 Swedish War of Liberation
1521–1718 Ottoman-Habsburg wars
1522–1523 Knights' Revolt
1522–1559 Habsburg-Valois Wars
1524–1525 German Peasants' War
1526 Revolt of Espadán
1529 First War of Kappel
1531 Second War of Kappel
1534 Silken Thomas Rebellion
1534–1535 Münster Rebellion
1534–1536 Count's Feud
1536–1537 Pilgrimage of Grace
1540 Salt War
1542–1543 Dacke War
1543–1550 War of the Rough Wooing
1546–1547 Schmalkaldic War
1549 Kett's Rebellion
1549 Prayer Book Rebellion
1550 Battle of Sauðafell
1552–1555 Second Margrave War
1554 Wyatt's rebellion
1554–1557 Russo-Swedish War
1558–1583 Livonian War
1560 Siege of Leith
1562–1598 French Wars of Religion
1563–1570 Northern Seven Years' War
1566 Siege of Szigetvár

1568–1570 Morisco Revolt
1568–1648 Eighty Years' War
1569–1570 Rising of the North
1569–1573 First Desmond Rebellion
1573 Croatian–Slovenian peasant revolt
1578 Georgian–Ottoman War
1579–1583 Second Desmond Rebellion
1580–1583 War of the Portuguese Succession
1583–1588 Cologne War
1585–1604 Anglo-Spanish War
1588–1654 Dutch-Portuguese War
1587–1588 War of the Polish Succession
1590–1595 Russo-Swedish War
1593 Battle of Sisak
1593–1606 Long War
1593–1617 Moldavian Magnate Wars
1594–1603 Nine Years' War (Ireland)
1595–1621 Magnate wars in Moldavia
1596–1597 Cudgel War
1598–1599 War against Sigismund
17th century
1602 Savoyard escalade of Geneva
1605–1618 Polish–Muscovite War
1606–1607 Bolotnikov Rebellion
1606–1608 Zebrzydowski Rebellion
1610–1617 Ingrian War
1611–1613 Kalmar War
1615–1618 Uskok War
1618–1648 Thirty Years' War
1618–1639 Bündner Wirren
1620–1621 Polish–Ottoman War
1625 Zhmailo Uprising
1627–1629 Anglo–French War
1628–1631 War of the Mantuan Succession
1630 Fedorovych Uprising
1632–1634 Smolensk War
1637 Pawluk Uprising
1638 Ostrzanin Uprising
1639–1653 Wars of the Three Kingdoms
1640–1668 Portuguese Restoration War
1648–1657 Khmelnytsky Uprising
1651 Kostka-Napierski Uprising
1651–1986 Three Hundred and Thirty Five Years' War
1652–1674 Anglo-Dutch Wars
1653 Swiss peasant war of 1653
1654 First Bremian War
1654–1667 Russo–Polish War
1658–1659 Russo-Ukrainian War
1655–1660 Second Northern War
1656 War of Villmergen
1663–1664 Austro–Turkish War
1666 Second Bremian War
1666–1671 Polish–Cossack–Tatar War
1667–1668 War of Devolution

1670–1671 Razin's Rebellion
1672 First Kuruc Uprising
1672–1678 Franco-Dutch War
1672–1673 Second Genoese-Savoyard War
1675–1679 Scanian War
1679 Covenanter Rebellion
1683–1684 War of the Reunions
1683–1699 Great Turkish War
1685 Monmouth Rebellion
1688–1697 Nine Years' War
1689–1692 First Jacobite Rising
18th century
1700 Lithuanian Civil War
1700–1721 Great Northern War
1701–1713 War of the Spanish Succession
1703–1711 Rákóczi's War for Independence
1707–1708 Bulavin Rebellion
1712 Toggenburg war
1714–1718 Ottoman–Venetian War
1715–1716 Jacobite rising of 1715
1716–1718 Austro–Turkish War
1718–1720 War of the Quadruple Alliance
1722–1723 Russo–Persian War
1727–1729 Anglo–Spanish War
1733–1738 War of the Polish Succession
1735–1739 Russo–Turkish War
1737–1739 Austro-Turkish War
1740–1748 War of the Austrian Succession
1740–1763 Silesian Wars
1741–1743 Russo–Swedish War
1745–1746 Jacobite rising of 1745
1756–1763 Seven Years' War
1757 Georgian-Ottoman Battle
1763–1864 Russian–Circassian War
1768–1772 War of the Bar Confederation
1768–1774 Russo–Turkish War
1770 Georgian-Ottoman Battle
1770 Orlov Revolt
1774–1775 Pugachev's Rebellion
1775–1783 American Revolutionary War
1778–1779 War of the Bavarian Succession
1784 Kettle War
1784–1785 Revolt of Horea, Cloșca and Crișan
1785 Battle of Sunja
1787 Dutch Patriot Revolt
1787–1791 Austro–Turkish War
1787–1792 Russo–Turkish War
1790 Saxon Peasants' Revolt
1792 Polish–Russian War of 1792
1792–1802 French Revolutionary Wars
1794 Kościuszko Uprising
1795 Battle of Krtsanisi
1798 Irish Rebellion of 1798
1798 Peasants' War

19th century
1803 Irish Rebellion of 1803
1803 Souliote War
1803–1815 Napoleonic Wars
1804–1813 First Serbian Uprising
1804–1813 Russo–Persian War
1809 Polish–Austrian War
1815–1817 Second Serbian Uprising
1817–1864 Russian conquest of the Caucasus
1821–1832 Greek War of Independence
1821 Wallachian uprising of 1821
1823 French invasion of Spain
1826–1828 Russo–Persian War
1827 War of the Malcontents
1828–1829 Russo-Turkish War
1828–1834 Liberal Wars
1830 Ten Days Campaign (following the Belgian Revolt)
1830–1831 November Uprising
1831 Canut revolts
1831–1832 Great Bosnian uprising
1831–1836 Tithe War
1832 War in the Vendée and Chouannerie of 1832
1832 June Rebellion
1833–1839 First Carlist War
1833–1839 Albanian Revolts of 1833–1839
1843–1844 Albanian Revolt of 1843–1844
1846 Galician slaughter
1846–1849 Second Carlist War
1847 Albanian Revolt of 1847
1847 Sonderbund War
1848–1849 Hungarian Revolution and War of Independence
1848–1851 First Schleswig War
1848–1849 First Italian Independence War
1853–1856 Crimean War
1854 Epirus Revolt of 1854
1858 Mahtra War
1859 Second Italian War of Independence
1861–62 Montenegrin–Ottoman War (1861–62)
1861–1865 American Civil War
1863–1864 January Uprising
1864 Second Schleswig War
1866 Austro-Prussian War
1866–1869 Cretan Revolt
1866 Third Italian War of Independence
1867 Fenian Rising
1870–1871 Franco-Prussian War
1872–1876 Third Carlist War
1873–1874 Cantonal Revolution
1875–77 Herzegovina Uprising (1875–77)
1876–78 Serbo-Turkish War (1876–78)
1876–78 Montenegrin–Ottoman War (1876–1878)
1877–1878 Russo–Turkish War
1878 Epirus Revolt of 1878
1885 Serbo-Bulgarian War

1897 Greco–Turkish War
20th century
1903 Ilinden Uprising
1904–1908 Macedonian Struggle
1905 Łódź insurrection
1907 1907 Romanian Peasants' Revolt
1910 Albanian Revolt of 1910
1911–1912 Italo-Turkish War
1912–1913 Balkan Wars
1912–1913 First Balkan War
1913 Second Balkan War
1914 Peasant Revolt in Albania
1914–1918 World War I
1916 Easter Rising
1917–1921 Russian Civil War
1917–1921 Ukrainian–Soviet War
1918 Georgian–Armenian War
1918 Georgian-Turkish War
1918 Finnish Civil War
1918–1919 Georgian-Russian conflict over Sochi
1918–1919 Polish-Ukrainian War
1918–1919 Greater Poland Uprising
1918–1920 Estonian Liberation War
1918–1920 Latvian War of Independence
1919 Polish-Czech war for Teschen Silesia
1919 Hungarian–Romanian War of 1919
1919 Christmas Uprising
1919–1922 Greco–Turkish War
1919–1923 Turkish War of Independence
1919–1920 Czechoslovakia-Hungary War
1919–1921 Silesian Uprisings
1919–1921 Polish-Soviet War
1919–1922 Irish War of Independence
1920 Polish–Lithuanian War
1920 Vlora War
1921 Georgian-Russian War
1921 Uprising in West Hungary
1922–1923 Irish Civil War
1924 Georgian Uprising against Soviet Union
1934 Asturian miners' strike of 1934
1934 Austrian Civil War
1936–1939 Spanish Civil War
1939 Slovak-Hungarian War
1939 Occupation of Zakarpattia Oblast by Hungary
1939–1945 World War II
1939 Nazi German invasion of Poland
1939 Soviet invasion of Poland
1939–1940 Winter War (Soviet invasion of Finland)
1940–1941 Greco-Italian War
1941–1945 Soviet-German war
1941–1944 Continuation War
1944 Slovak National Uprising
1944 Warsaw Uprising
1944–1956 Guerilla war in the Baltic states

1945–1949 Greek Civil War
 1953 Uprising in East Germany
 1956 Uprising in Poznań
 1956 Hungarian Revolution
 1956–1962 Operation Harvest
 1958 First Cod War
 1959–2011 Basque Conflict
 1968 Warsaw Pact invasion of Czechoslovakia
 1968–1998 The Troubles
 1970–1984 Unrest in Italy
 1972–1973 Second Cod War
 1974 Turkish invasion of Cyprus
 1975–1976 Third Cod War
 1988–1994 Nagorno-Karabakh War
 1989 Romanian Revolution
 1991 Ten-Day War (Slovenia)
 1991–1992 Georgian war against Russo-Ossetian alliance
 1991–1993 Georgian Civil War
 1991–1995 Croatian War of Independence
 1992 War of Transnistria
 1992 Ossetian-Ingush conflict
 1992–1993 First Georgian war against Russo-Abkhazian alliance
 1992–1995 Bosnian War
 1993 Cherbourg incident
 1993 Russian constitutional crisis
 1994–1996 First Chechen War
 1997 Unrest in Albania
 1998–1999 Kosovo War
 1998–present Dissident Irish Republican campaign
 1998 Second Georgian war against Russian-Abkhazian alliance
 1999 Dagestan War
 1999–2009 Second Chechen War
 1999–2001 Insurgency in the Preševo Valley
 21st century
 1992-present Nagorno-Karabakh conflict between Armenia and Azerbaijan.
 2001 Insurgency in the Republic of Macedonia
 2002 Perejil Island crisis
 2004-2013 Unrest in Kosovo
 2004 unrest in Kosovo
 2008 unrest in Kosovo
 2011–2013 North Kosovo crisis
 2004 Georgia, Adjara crisis
 2006 Georgia, Kodori crisis
 2007–present Civil war in Ingushetia
 2008 Russia–Georgia war
 2009–present Insurgency in the North Caucasus
 2013–present Euromaidan and pro-Russian conflict in Ukraine
 2014 Crimean crisis
 2014–present War in Donbass ⁵

Let us take a few slightly more specific examples to peer at a shallow depth into the temperament of man in general as his unconscious drives are made manifest and revealed in his activities in groups, and also

⁵ https://en.wikipedia.org/wiki/List_of_conflicts_in_Europe

reveal him as the ultimate compliant angry follower, his drives liberated once in uniform while demonstrating to some degree the degenerate appetites of his leaders. The following quotes from: ⁶

"One of the earliest recorded large-scale massacres in world history happened in the year 390 when Roman Emperor Theodosius I sent troops to Thessalonica in order to quell some civil unrest. Apparently he was very angry when he gave them their initial instructions because he almost immediately dispatched a messenger telling the troops to disregard his previous orders. The messenger, however, arrived too late and 7,000 innocent men, women, and children had already been murdered.

On December 30, 1066 Muslim mobs stormed the royal palace where Jewish vizier Joseph ibn Naghrela had sought refuge and crucified him. In the ensuing massacre of the Jewish population, many of the Jews of Granada were murdered. The massacre was apparently started by a rumor that Joseph was going to have the Muslim king assassinated.

The Massacre of the Latins was a large-scale massacre of the Roman Catholic or "Latin" inhabitants of Constantinople, the capital of the Byzantine Empire, by the Eastern Orthodox population of the city in May 1182. The Roman Catholics of Constantinople at that time dominated the city's maritime trade and financial sector. Although precise numbers are unavailable, the bulk of the Latin community, estimated at over 60,000 at the time, was wiped out or forced to flee.

Also known as the "Storming of Bolton," this was an episode in the English Civil War when Royalist forces led by Prince Rupert of the Rhine stormed and captured the Parliamentary town of Bolton on May 28, 1644. A staple in the Parliamentary propaganda, it resulted in the death of 1,600 defenders and innocent inhabitants.

The atrocities that happened on May 20, 1645 against the local residents of Yangzhou, China by the Qing troops led by Prince Dodo of the Qing Dynasty had led to the death of as many as 80,000 people. After their recent success against the forces loyal to the Southern Ming regime of the Hongguang Emperor, they plundered the city for ten days to punish the residents for their resistance and as a warning to the population of Jiangnan on the consequences of resisting invaders.

The September Massacres were a wave of mob violence which overtook Paris in late summer 1792 during the French Revolution. By the time it had subsided, half the prison population of Paris had been executed: some 1,200 trapped prisoners including many women and young boys. Sporadic violence, in particular against the Roman Catholic Church, would continue throughout France for nearly a decade to come.

The massacre of the Bulgarians in Batak by 8,000 Ottoman troops on April 30, 1876 at the beginning of the April Uprising was described as "the most heinous crime to stain the history of the 19th century." Although at 15,000 dead, the total number of people killed was less than some of the other massacres on this list, the brutality was unparalleled. The majority of those killed were women and children who were raped, tortured, and then beheaded.

Also known as the "Armenian Massacres of 1894–1896" and the "Great Massacres," these atrocities were once again committed by the Ottoman Empire. The deaths ranged from 80,000 to 300,000 leaving at least 50,000 children orphaned. The massacres were due to Ottoman Empire seeking to establish its territorial authority and to reassert Pan-Islamism as the state ideology.

⁶ <http://list25.com/25-most-horrific-massacres-in-history/>

Also known as the “Moro Crater Massacre,” the violence committed against the Moro villagers in the Philippines by a naval detachment of 540 American soldiers during the Philippine-American War was another relatively small massacre compared to some others on this list (roughly 1,000 casualties) but it is certainly one of the worst attacks ever perpetrated by a democratically-inclined modern government.

The Nanking Massacre, also known as the Rape of Nanking, was a mass murder that occurred during the six-week period following the Japanese capture of the city of Nanking (Nanjing), the former capital of China, on December 13, 1937 during the Second Sino-Japanese War. During this period, hundreds of thousands of Chinese civilians and disarmed soldiers were murdered by soldiers of the Imperial Japanese Army. Widespread rape and looting also occurred. Historians and witnesses have estimated that 250,000 to 300,000 people were killed.

Also known as the ‘Katyn Forest Massacre,’ this mass execution ordered by the Soviet Politburo on March 5, 1940 was carried out by the secret police against Polish military officers, civilian prisoners, and members of the Polish Officer Corps. Approved by Joseph Stalin, it was estimated that about 22,000 were executed in Katyn Forest.

The NKVD prisoner massacres were a series of mass executions committed by the Soviet NKVD against prisoners in Eastern Europe, primarily Poland, Ukraine, the Baltic states, Bessarabia and other parts of the Soviet Union from which the Red Army was withdrawing after the German invasion in 1941 (see Operation Barbarossa). Estimates on the death toll vary from nearly 9000 to 100,000. Not all prisoners were murdered; some of them were abandoned or managed to escape because the retreating, panicked Soviet executioners logistically could not kill all of them.

Considered the “largest single massacre in the history of the Holocaust” this atrocity happened in a ravine near Kiev, Ukraine from September 29 to 30, 1941 wherein 33,771 Jews were executed by the Nazis during their campaign against the Soviet Union. Victims of other Babi Yar massacres included tens of thousands of Soviet POWs, Gypsies (Romani people), communists, civilian hostages, and Ukrainian nationalists.

This genocide operation against the Polish population of Volhynia, Ukraine was carried out by the Ukrainian Insurgent Army (UPA) in March 1943. Its aim was to exterminate all Polish males between the ages of 16 and 60. Tens of thousands of women and children were killed too however.

During the Warsaw Uprising, a systematic killing of some 40,000 to 50,000 Polish civilians and captured resistance fighters was carried out by the Nazi German troops from August 5 to 12, 1944. The victims were indiscriminately shot or killed in an organized mass murder throughout the Wola district, the capital of Warsaw, Poland. These atrocities were committed to crush the Poles’ spirit and to end the uprising without resorting to heavy city-fighting, but ended up only stiffening the resistance.

Also known as the ‘228 Massacre,’ this happened due to an anti-government uprising in Taiwan, which was violently suppressed by government troops on February 27, 1947. The number “228” came from the following day, February 28, when 30,000 civilians were massacred in what came to be known as the White Terror.

The Jeju Uprising was a revolt on Jeju island off the south coast of the Korean Peninsula beginning on April 3, 1948. Between 14,000 and 60,000 individuals were killed in fighting or execution between various factions on the island. The brutal suppression of this rebellion by the South Korean army resulted in tens of thousands of deaths, the destruction of many villages on the island, and sparking rebellions on the Korean mainland.

The Bodo League massacre was a massacre and war crime against communists and suspected sympathizers that occurred in the summer of 1950 during the Korean War. Estimates of the death toll vary but most experts agree it was somewhere between 100,000 and 200,000.

The Hue Massacre is the name given to the summary executions and mass killings perpetrated by the Viet Cong and North Vietnamese Army during their capture, occupation and later withdrawal from the city of Hue during the Tet Offensive, considered one of the longest and bloodiest battles of the Vietnam War. During the years that followed the Battle of Hue, dozens of mass graves were discovered and the estimated death toll was roughly 6,000. Victims were found bound, tortured, and sometimes apparently buried alive.

This scorched earth operation was carried out by the Syrian Arab Army against the town of Hama to stop the uprising of the Muslim Brotherhood in February 1982. Estimates of the death toll range from 7,000 to 35,000 and it has been described as “one of the single deadliest acts by an Arab government against its own people in the modern Middle East.”

This slaughter of several thousand Palestinian and Lebanese Shia refugees in Beirut was carried out from September 16 to 18, 1982 by the Phalange, a Lebanese paramilitary organization, in retaliation for the assassination of newly elected Lebanese president Bachir Gemayel."

Again: Those activities demonstrate a drive structure.

I do hope to have made my point plain in this matter and established for you without question that man is indeed fixated, and as his history undeniably demonstrates, he is unable to escape from this violent self-destructive behavior, or perhaps unwilling as a function of some misarranged drive. In any case, it is undeniably clear that throughout his history, mankind is compulsive in exercising his violence and hence also in receiving its subsequent damaging masochistic consequences. Clearly keeping in mind Einstein's definition of Insanity and I will state said definition fits perfectly also for deep and profound Stupidity, as Man repeats the same utterly failed strategy throughout all of recorded history, that of war leading to his own eventual destruction and misery, I can now make the following statement without fear of any possible contradiction:

“Mankind is insane and stupid!”

Man struggles over and over to gain happiness and a flourishing peace, through the unlikely means of sadism and obedience to authority. Despite man's ever increasing efforts to limit his drives and crush them into guilty obedience under his morality, we see over the broad sweep of history such as that presented here no such effect whatsoever, noting the highest number of deaths in the relatively recent conflict of WW2, with an astronomical world beating history topping death toll between 40,000,000–85,000,000! ⁷ Man always and only repetitiously and compulsively repeats this same failed self-injurious strategy, and he is apparently getting even better at killing himself en masse. Observe the history and know of man, he is never different and has never been throughout all of recorded history. When it comes to living in an abundant burgeoning peace without self-destruction, he always chooses the same mistaken thing and so, always fails. We may infer that somehow: his own survival is repellant to him.

Mankind is stupid.

He is utterly mad, and so, *profoundly stupid*. Something very basic is wrong.

That must seem deeply annoying and irritating to most readers. I can imagine a brilliant weapons designer might offer me this in reply: “Although the argument is sound and can not be faulted, clearly

⁷ https://en.wikipedia.org/wiki/List_of_wars_by_death_toll

the conclusion is false, one must protest, sir! Many men are very intelligent, and many who design weapons and are strategists in war, physicists and generals, these are trained and skilled men of superior, not inferior intelligence. Many of our leaders are extremely clever, and have won many slippery wars. They are really quite bright, and undoubtedly many of these men, mathematicians and scientists are smarter than you!”

Perhaps he is right! However—

I will now demonstrate how one can assess the situation and begin to first grasp the problem at the base of mankind from the surface to demonstrate: Such men are a taxonomically distinct and highly toxic species. Mankind is on the verge of catastrophe and there is no mystery to it. We will now look a little more closely at the idea of intelligence within an affective context, then begin to perform some uncomfortable analysis in order to sharpen and deepen the picture, and so...approach the very first of these surprising hidden depths.

I assert:

Kindness by way of identification, is part of intelligence.

Without kindness and identification, intelligence itself becomes perverse, from my observations sadomasochistic and aims to harm, demonstrating a true measure of *negative intelligence*. High levels of intelligence applied to hurtful aims, produce more harm than lower ability and intelligence applied to those same ends. If a man of little ability aims to harm, he picks up a ball bat or gun, perhaps he uses his fists, however, when an able mind aims to do harm, we may then think of the H-Bomb. The single delicate system of which we are all a part informs the astute, connected intellect instantly by way of identification and feeling, that the injury caused by such a dread device is to one’s own self, as we are all part of this earth. To harm the very system of life and humanity of which one is a part, is the very definition of stupidity and perversion: Masochism. Negative intelligence then, is itself the potential for stupidity beyond that which can be accommodated within the usual scales of intelligence. New categories with prefixes of sub- and ultrasub- must be acknowledged, to account for historically demonstrated levels of hyper-dangerous manifest degeneration.

The inverse relation between identification and idiocy: Sadism and Super-sadism:

We live in a world of delicate and nuanced complexity, interwoven and subtle, each strand of web connected to many others. To solve a complex environmental or social problem, great kindness and subtlety must be the mediator of intelligence, for here we see the most delicate and trembling of worlds, the fragile world of life and its interdependence within one interdigitated systemic dynamic, so very delicate and hypercomplex. Imagine such a situation if you will, to be that of a tangle in the center of a spider’s web hanging across a trail, wavering gently in the breeze. The strands of web might be untangled by many means.

How do those who lead this world approach such a problem? Answer: They go to war. This is the model for the solution to social and international problems. The war on Drugs! The war on Terrorism! The war on Cancer! The war on Poverty! Please do keep in mind, how profitable actual war is for these agencies and interests as has been long known, please do read Smedley Butler’s *War is a Racket*. I trust the endless list of losing wars is familiar? Does war make peace? Do more nuclear bombs make peace or instead, do they create fear and trembling instability? Let us look to the history presented here and know—war has never made peace, this is a long and utterly failed strategy which is repeated and repeated and repeated.

In the context of untangling the delicate problems of humanity, sadistic cruelty and war are but a redundant error, as if one might solve such a tender complexity by swatting it into the dirt with a sword

and plundering it, or perhaps setting the web and spider to the flame. Such a strategy has never worked, and lacks the kind subtlety which is itself definitional of higher development.

Sadism I will define as: control of an object without regard or concern for that object. If that object is one's self we may speak of masochism. These cases both demonstrate inversely proportional relationships between IQ and intelligence. Sadists and masochists as will soon be abundantly clear, are themselves our leaders. Under the lens of our new insights concerning negative intelligence, we can see that the potential quantitative measurement of a mind both adept and afflicted would reveal a score close to, or in some cases well below zero—(think of the H-Bomb or current increases in nuclear deployment)—a negative score. Ergo: Definitionally, we are led by sub- and ultrasub-imbeciles. (Quantitative assessment of said inverse parameter associated with highly adept negative-intelligence could be derived via a scheme such as that articulated in the footnote,⁸ or some other means of

⁸ Empathy, I define as: Identification with concurrent individuation. Identification (+) Individuation = Empathy.

The meaning is: if I only and completely identified with you or a piece of my environment I would be psychotic, and have no defined sense of personal boundaries. Instead a superposition is required, if you will. I am myself, individuation, and also, concurrently feeling what you feel, and or, I concurrently identify with the earth or part of my environment, etc. Identification + Individuation = Empathy. The superposition is encoded into object definition.

It appears, empathy is as a basis element or tenant of quantum theory. Superposition is how reality is given its qualitative valence, and empathy is qualitative valence. Quantum theory is based in large part, in the idea of superposition.

The superposition principle, states that, for linear systems the net result caused by two or more factors is the sum of the responses which would have been caused by each stimulus individually. So we can unpack it, and make a test.

Idempotent superpositions as in the work of Conte can have any distribution of probabilities, so long as they add to one. The test will reveal the superposed distribution (encoding phase of predication), and assess the probability that a person will respond with a measure of identification to a stimulus (encoded collapse into bound object). We can predict a positive correlation between functional dynamic activity and robust innervations in primary limbic/OFC dopaminergic circuits corresponding in the case of high test scores, to a predominant impression of initial sympathetic/OFC circuit innervation. [Note: Individuation is neuroanatomically correlated at its fundamental kernel with the affective motor self, found where the superior colliculi intersect the periaqueductal grey alongside the adjacent mesencephalic locomotor region (Panksepp, 1998, *Affective Neuroscience* p. 312).]

The superposition test will unpack/reveal a probability distribution between identification and individuation.

1. A subject is placed in an fMRI, or perhaps more economically a bio-feedback set up with EEG, GSR, HRV etc.
2. The subject is shown faces of people with various valence attached to the expressions of various races—and—natural scenes, scenes of devastation, health and beauty....representations of the earth and world.
3. The responses and anatomical activations are recorded.

At this point, one can roughly calculate the probability distribution for empathy associated with each superposition as correlated with dynamic brain anatomy, such as nucleus accumbens, septal nuclei, amygdala, insula, or those affective valence structures accessible from the chosen methodology in order to establish baseline approximate positive and negative valence markers. Signature conglomerations could be derived from a host of subjects with known personality traits, to offer initial comparative taxonomy.

4. Times are then established in tests where the subject may self-assess their own responses and rate as yes or no, then on a ten point scale if disinterest or connection is felt to the same stimuli, and to what degree. Level of affective response is revealed in the recorded physiology. The self-reported results are compared to those responses derived from signal analysis.

[At this point, some responses will be slow, or, the signals from monitoring equipment and the self-assessment may not match. One may infer something in the context of signal analysis of deception or (unconscious) self-deception, or perhaps the superposition is irresolvable and conflicted indicating a near equal mix of components.]

Another test is constructed to complete the process. Monitoring equipment for physiological response is used as above.

5. Now tests are given where situations call for empathy. Natural scenes must also be used. However, it is easier to see with human to human response. Subjects are given scenes which they are to assess with a yes no button push using those subjects previously assessed, and are asked if given the scene shown, if they would help the subject or not. They are timed. In one rendition, the test has a sympathetic representation, perhaps an innocent girl in front of an approaching train, in the next in the series there is an ugly wart covered man in tattered clothes suddenly in the same position, or a deeply hated minority as revealed in test series one. This allows confirmation of the previously derived profile in a more active and dynamic context.

Then an intermediate composite figure morphed indistinguishably between that subject's most polar indications is used.

This will permit a foundational measure of overall reflex identifications or oppositional attributions at the basis of personality without object specificity. A snap shot of the basic projective empathetic or individuated bias of that subject's transference, and, in the context of physiological measures, also a measure of the intensity of that affective projective basis as it mediates each piece of experience. The results are compared and analyzed for timing to assess dissonance within the superposition, and, assessed for honesty by way of direct comparison between subject rendered responses and those of the data obtained in current subject-response monitoring.

The results are then "unpacked" as in the work of Conte, the superposition revealed, and the score derived.

That could be one approach to a test to ascertain the positive or negative valence of intelligence as determined by the presence or absence of basic empathetic identifications.

identifying the predominant proportion of transference identification and individuation within, and, external to social context.).

The method by which these leaders inflict their sadism, is that of the tool of super-sadism. Super-sadism I will define as: The controlled use of guided secondary sadism en masse to achieve maximum scale sadistic aims. Sadism over sadism. Think of the army, with a commander directing troops to commit acts of aggression.

By aiming at the wrong object, in the modern case to a main degree meaning money and control instead of peace, we see the principle process basis aberrance by which intelligence under sadistic aims, produces manifest stupidity. Such intelligence then, is to be ascribed an appropriate place within an appropriate sub- or ultra-sub taxonomic specification, indication of dangerous levels of sub-idiotcy. Why is the wrong object inevitably chosen? We see an aberrant drive, a *Perverse drive*, sadism and/or masochism is functioning to direct the situation. A perverse drive such as sadism or masochism by definition chooses the wrong object as its aim. This is why the result is always the same, and always incorrect. The “stupidity” we see is in fact the inevitable and inescapable result of the perverse drive structures of our leaders and the populous who craves them, follows them and empowers their illness—and just as importantly, the drive structures of those unacknowledged covert agencies which operate outside of constitutional supervision to control and direct affairs. These drive structures will be analyzed in detail soon. For now, please simply know that the reason the wrong choice is made and only the wrong choice throughout all of recorded history and again now, is that a malformed drive structure is evident in the leaders we are forced to follow or elect, those who elect them, and just as plainly if not more so, the same complex of perverse elements in another similar distribution is again clearly evident in those who pull the strings from beyond constitutional oversight. The sadist aims at: control and cruel dominance, not healthy peaceful cooperative proliferation. The masochist aims at his own subjugation before authority, humiliation and death. Please note: sadism was originally Freud’s first choice as the primary representative of the human death-drive and then later, he deduced masochism as the more primary example. These two deadly perverse errors are the lowest source of all human stupidity. Human history is demonstration of man’s incomprehension of his own drives.

The Military Industrial Complex (MIC) uses the military, as is obvious just from their name. Those in military service appear on the surface, and must of course possess by the very nature of the work, highly sadistic impulses which are brought to the fore in training. However, this appearance and actual demonstration of heightened aggression and sadism against the enemy, with whom all feeling of connection and identification has been systematically severed, is not entirely revealing. Those soldiers are treated with no regard for their lives and are spent as an expendable commodity, they themselves are then revealed to also be masochistic as well as sadistic, being ready to die; the true sadism of course is that of the leaders, those who are over the sadism carried out by the soldiers: this is super-sadism, sadism over sadism. The soldiers are therefore sadomasochistic, the leaders sadistic in the main and masochistic themselves in that they cause the suffering of their victims and injure the earth itself both of which are but an extension of themselves, as are the humans they kill.⁹ Super-sadism is the instrument by which the MIC conducts its sadism.

The MIC requires war, and sees all problems as sadists do: in such a way as to create in most all cases the worst result. The delicate web is not healed in this way. Kindness is part of intelligence, or we see negative intelligence, perhaps one might say:

Intelligence without kindness, is intelligence without wisdom.

⁹ The more nuanced and more correct technical fact is that we see a corruption, a perversion of the identifications in sadism, where a substantial part of the satisfaction gained stems from the feeling of (self-inflicted) suffering sourced in an identification with the victim—masochism. See: Freud’s “A Child is Being Beaten.”

So is negative intelligence. So is human history. By that estimation: This world of shortage, competition and hurtful pain is a clear example of what happens when a deeply sub-stupid mind attempts to 'solve' any large problem. Such a mind due to the misdirection of its aims by way of malformed drives, creates the conditions whereby high intellectual capacity achieves highly potent and hurtful results, demonstrating an actively negative valence, hence in this instance we may quantitatively define such a mind as possessing: *less than no intelligence*—in a meaningful and non trivial way. As we will see, without identification-based empathetic mediation, the detachment from kindness and feeling nearly always sets up conditions for sub-imbecilic and ultrasub-imbecilic behavior. Such minds are the engines of a deep and terrible parasitism. We will examine that next. The situation is far more grave than you could possibly imagine and at this time extends to include corruption of the inner workings of the cellular mechanisms within all living things, and also, damage to the earth and its largest fields themselves. Every cell of your body has been damaged, and so has the tender earth. We will soon address that grave fact.

Next, as we must begin to uncover the ideas of perversion, identification and drives more deeply throughout this text, it is necessary to define these ideas properly in relationship to behavior and reality. The common definition of these ideas will no longer suffice if we are to continue and truly understand why we see these behaviors in the world and within ourselves.

Perversion, identification and drives.

We will return quickly to the pressing situation at hand and spell out your position as a healthy ascending individual and that of your family after articulating these basic concepts in a technically correct but simple way apart from their usual colloquial interpretation.

A perversion is a component sexual instinct. All healthy children go through the various stages, the various individual erogenous zones take predominance in turn in the familiar way, oral, anal, phallic (boys and girls both), etc. Each of these stages which are focused on a *part* of what will be the full measure of complete sexuality and its associated aspects, represents a perversion. Hence the famous idea that childhood is the time of the perversions, because in healthy cases it is! So, a perversion is a piece of component sexual instinct, a building block for healthy complete sexuality, no more or less. An adult 'pervert' then, makes one component of the complete sexual unity, one perversion, their sexual aim. Imagine the voyeur, the peeping tom. He is a pervert, he has taken one single component of sexuality and excitation, *looking*, and made it his entire aim, he wants only to see. This is part of arousal but only a part, hence, the pervert aims at a component of the full plethora of sexuality, a perversion, instead of the healthy integration of such pieces and components into a single act. The pervert as we can see, always aims at the wrong object, a piece, not the unified structure. A sadist, aims only at those necessary aspects of his sexuality which are involved with control, securing and domination of a sexual object. Penetration, assertiveness and related aspects of sexuality are necessary, but, the sadist takes these components, found to emerge in the second stage of development, the anal sadistic phase, as his complete goal. His sexuality and the drive that results, are either fixated by having never moved past said stage, or, regressed, as they have moved past, but then returned to fixate there. In the later sections of this book dealing with the answer to these difficulties, we will learn how to unify perverse drives and give healthy unfettered expression to all human instincts free from guilt. This is the answer to the profound problem within man, which has unconscious, epigenetic and hence phylogenetic underpinnings, by which I mean, it is supported through unseen processes involving the past of the race which is contained as information within part of DNA.

All together, reality in each case is a function of a complex process known as transference, which defines all things differently for all people, even as we agree on the names and identity of objects. I will present a basic simplified model of the transference here, and its identifications as a function of perversion and health. This is the easiest way to understand the difficulty within each of us, and the deeply ill

individuals who lead the human race. These ideas also relate to empathy, its circuitry and genesis, which will all be fleshed out as we go along.

To understand the following example you must know that I have developed a technique which allows me to directly examine what should be unconscious material in myself. This technique is called Native Psychoanalysis. I will use Native psychoanalysis to reveal the hidden perverse influences in a very simple and limited way.

I am sitting at the kitchen table and watching. There is a bug working its way across the expanse of the table...a ten mile jaunt by way of scale. It is quite a colorful bug, its shell as a scarab, awash in many colors as it passes through the sunlight and shafted shade...a miracle to see the coordinated automatism, so hypercomplex, the tiny legs expressing each delicate motion interwoven with the rest, all to accomplish this daunting task, and the tiny traveler advances, pulling the miles under its colorful shell in a thousand thousand perfectly orchestrated steps. It is a bit of functional poetry, and I can see in my view of the situation, a new appetite. Yes, this bug is not so different than I, and I understand its difficulty, its folly, its correct and sure purpose stepping to nowhere. The bug is right. One must imagine the beetle happy. I take the traveler, and release it out of doors, placed on a leaf which seems to match its coloration.

Many believe a set of rules guide ethical activity. This is not the case. Appetite, desire, guides us, and logic dances to the tune, creates excuses and reasons, plans and rationalizations: as a footman sweeping up the crumbs of our wishes, always chasing behind, excusing and serving...so are logic and human reason but the petty servants of desire. Once, before the change my desire, my appetite, my drives were different. I would have killed the bug. Crushed it under a heavy fist with a curse as an unclean thing, and killed it. I can feel quite clearly what I would have done before the change, and I will analyze it here in a surface way, so you can see it.

All conscious mentation is unconsciously sourced. I will imagine my reactions and look to the source, to the unconscious and provide a few of the many determinants. Just the upper layers. (Please recall what should be unconscious is observable by using Native Psychoanalysis). As my fist descends to kill the bug and crush it, I can observe in the unconscious the reason. The bug, is exactly as above, an identification with myself, and I curse and crush it, speak as my father, his rage is now my own. So just to see that shallow bit, we understand as a manic who fantasizes, first identifying with the family situation one way, then as the other, first as the child, then the hated parent, so is the surface analysis but in simultaneity—I am my raging father and, the bug is myself. So, to kill the bug expresses an appetite, an appetite for sadism as an identification with my father, and also, as a masochism as I identify with the bug. This is an appetite, a perverse appetite: sadomasochistic in its form. Identifications are pathological.

Perversion, is the expression of a single component developmental instinct, such as sadism. Health is to have fused all such instincts together in consciousness. We are raised to control and shame our instincts, causing immoral behavior and illness. Please note the self-hatred in the example. Control of a desire shames it, and, that desire is a piece of you! Top down control of affect, poisons the bearer and creates not morality...no...but immorality! Modern personality and conscience are false. Now, to have released all affect into experience and restrict nothing, the self-hatred is absent and feeling has given an entirely new and guiltless quality to all of experience. Now the bug is beautiful, and my appetite wishes only to preserve it! So you can see, no ethical code is required to live rightly. None. What is required is an integrated transference. That changes the drive structure, and ethics arrive of their own accord. Ethics and all manifest behavior in this context can rightly be seen as a function of our basic appetites and wishes.

Drives with a healthy configuration are ethical by their basic natural design. Ethics are a natural extension of identification stemming from the early impressions of the innervations forming the sympathetic ventral tegmental limbic circuit, a process initiated through (visual and tactile) early

interactions between the mother and infant (see later text). The combination of these healthy identifications alongside one's sense of individuation as a separate person, form the full functional expression of empathy proper.

In a basic schematic way, we can see the idea of empathy in physics. Empathy as functionally expressed in the human, exemplifies concurrent identification and individuation. A sort of entanglement where the subject/object distinction is partly lost. If one were to lose self identity completely, psychosis results: I am not you! However, a component of identification is the key, and it is this basis which the infant experienced with no such individuated distinction whatever, an identification with their entire world! To get the basic idea, think of it quite rightly as a sort of entanglement. A singlet state will do for this simple example. Both photons are entangled and are one thing, one system: identification. However, one is spin up, one spin down: individuation. Empathy apart from psychosis is akin to such an entanglement, where identification and individuation exist concurrently.

Identification + Individuation = Empathy.

We can now deduce that these historically omnipresent instances of sadistic and masochistic behavior are indicative of a lack of empathy, the presence of which is based in the predominant impressions created while forming the sympathetic ventral tegmental limbic circuit (see second part of this work for details), and instead, these damaged sadistic (and masochistic) cases have substituted a perverse sadistic (and/or masochistic) element. This perverse substitution is at the base of the fault and fixation within man and his resultant malformed drives, both masochistic and sadistic. These drives have formed our human history: "To lead, to follow, to die."

Now we will examine the current state of affairs more closely and then the history which has made them possible. From this vantage, we might understand our government more plainly and then, assess the situation and possible future for you and those you love. You may be surprised to understand where you find yourself after that.

Chapter two:

Most Americans believe they live in a free country with leaders they have elected whom they trust to inform them honestly and protect them, their families and loved ones. This is by the common measure and meaning called an elected democracy, the electoral college aside. The entire affair is assured and enforced by a constitution, that document, the American Constitution supposedly being the envy and model for free democratic government around the globe. We are a democracy, and the government is freely elected, responds to the people first and foremost, and within that primary defining role beneath the people, this government and these officials act as protectors of the people. (That is the common view which is not exactly accurate as the founders envisioned a republic, and explicitly not a democracy, although the basic tone and intent of the common view is correct). The system is well defined with checks and balances as well as the oversight of officials, each and every one of which must in every case abide by these laws, without exception. In other countries, there is not such a fortunate arrangement and many of those countries are run by powerful forces which are corrupt, but not here; here in America we are a democracy for and by the people. We are safe and cared for. This is the common view.

You and your loved ones protected and sheltered thus wake each day in trust and safety, and under the watchful eye of a benevolent government you may feel assured that the day which unfolds for you will be bountiful and secure, the benefits of your health and the health of your loved ones are protected. I have news for you dear American citizen, and it is not in any way good.

People do not notice incremental change, only sudden change. An incremental change has taken place, and it has done so in secret, unobserved.

Leaving the cause and blame aside, once it commences, war muddles victim and aggressor as in short order both sides have abandoned all of their ethics, and seek any wretched dirty criminal way to exterminate their enemy (see list of crimes below). Both sides quickly become deeply criminal; once within the death struggle creating wretched weapons and using cruelty of all types, from crimes against nature used to exterminate and weaken the enemy, so called scorched earth policies which are as old as warfare, to nuclear and biological weapons which are of course still pursued in all cases, usually beyond sight in secret, meaningless treaties aside. All know this.

The constitution is, or was, a dread hinderance to certain forces. An amazing and unlikely document which assured the creation of a republic, with a republican form of government, *not* a monarchy! A woman named Mrs. Powel of Philadelphia asked Benjamin Franklin, "Well, Doctor, what have we got, a republic or a monarchy?" Franklin replied, "A republic, if you can keep it." Indeed, his comment is key, and the fact is—we have failed to do so. We no longer live in a republic with democratic underpinnings. While not and never intended to be a pure democracy which the founding fathers understood as inherently unstable, the republic guaranteed us specific representation within that system and protection from tyranny and corruption. We were very lucky. Freedom was in fact safeguarded by the stability and careful assemblage of constitutional precepts and conditions, which although it is to be remembered guarantee a republic and not a democracy strictly speaking, did something quite unique and new: it guaranteed human freedom from sadistic domination in a functional way. This new American experiment was not a monarchy, a form of patriarchy most usury, dictatorial and exploitive. However, Washington's trepidation was well founded.

December 23, 1913 a dread blow to hope and a human future gutted the constitution—The Federal Reserve System (FED) was created. This private bank is not federal as the false name implies, it is private and enjoys immune status from prosecution. It is modeled upon the Bank of England. The Bank of England is itself, openly based upon policies which assure the upper classes may easily exploit the lower, creating a life of degradation and deadly suffering to those beneath its deceptions, who simply toil, suffer and work to provide luxury for the rich who create ‘money’ out of nothing to exploit and ruin the main of human kind.

The FED may steal money directly from you any time it pleases. It simply prints money! Then the value of the money you have goes down. Simple and direct theft! The government has stolen almost all your money at this time. Taken it right from you, did you know that? You work your whole life, spend yourself and your health in the harness of a job, struggling and working and they simply steal it right from you as you watch, and leave you with nothing. So far they have taken around 96 percent of your money, all that work and you get...four cents, my friend. Observe those who created the system haughtily exposing the trick. The public is so stupid, so very stupid, they have allowed and supported this since the late 1600s! And now, this curse which assures a life of struggle and unhappiness, is ours. Read the words, which have cast the lot of our lives as hopeless struggling draft animals, struggling to make money which does not exist, and serve the enrichment of a few filthy sadists:

"The bank hath benefit of interest on all moneys which it creates out of nothing." — William Paterson, founder of the Bank of England in 1694

"The few who understand the system will either be so interested in its profits or be so dependent upon its favours that there will be no opposition from that class, while on the other hand, the great body of people, mentally incapable of comprehending the tremendous advantage that capital derives from the system, will bear its burdens without complaint, and perhaps without even suspecting that the system is inimical to their interests." — The Rothschild brothers of London writing to associates in New York, 1863

And one of our presidents noticed something:

"He who controls the money supply of a nation controls the nation." — James Garfield

The constitution specified a penalty for the exact ‘function’ the FED performs: The Penalty of Death. This is the correct penalty for counterfeiting. The emerging US almost collapsed financially by funding the American revolution via fiat currency. This result is already known and proven, and we watch the same poisonous deception work yet again to obvious and predictable result: you are being stolen from as the economy is a rigged farce, doomed to collapse. Please think of “fractional reserve banking,” and understand the degree of criminality upon which the banking system is based. Money from nothing. As the FED adjusts interest rates and prints money, it also creates conditions for banks to claim property on defaulted loans, thereby reaping real value for those banks from the money made of nothing they have leant.

Next, an even more severe blow to hope was delivered which handed the omnipresent human forces of capitol, greed, death, war and industry the entire of our world, gutted the constitution and left us primed for the situation we are in today. On September 18, 1947 the CIA was created. Those of its ranks are immune to prosecution under the laws of the land. The constitution, by law, can not touch them...they are authorized, sanctioned criminals. This organization is entirely extraconstitutional and concealed, it starts wars, drugs and kills US citizens, it is criminal and lives under no law and with no oversight. Within a single year of its creation Truman understood his error, but it was too late. Power beyond the constitution was at large. Now, the CIA spies on American citizens. Its entire world is secret, its budget is *black*, directly alongside the military, *both are the MIC itself*, you understand. Secrecy, as we will see, is a cancer upon life, hope and truth. This agency and the military are funded in excess of your most

excessive imaginings.¹⁰ The acknowledged *white* military budget, the tip of the darkest iceberg conceivable is proposed at 700 Billion dollars, a figure sure to bankrupt the nation and empower the very worst of all foolish possibilities imaginable.

It may seem rude, unpatriotic, incorrect and somewhat mad to make these assertions, after all, this is America! Let us look to the law and history and assess that reaction and my statements. What kind of government is this? Is this an honest government representing the people and following its own laws, or is it not. Let us see.

I strongly encourage the reader to read a book by John Marks, *The Search For the Manchurian Candidate* which will reveal the secret programs under the CIA concerning LSD and its highly criminal sadistic use to destroy the human mind and create a vegetable, a blank slate to program. Utter control with no regard for the object: sadism itself. Citizens are drugged without their knowledge, some die, some are left on massive doses of the drug for months at a time, some left for weeks in sensory isolation chambers to go slowly mad, some given electroshock treatment on the drug with seizures induced within seizures so as to wipe the mind clean of all thought, and brutally destroy it. Of course none of it worked to create the desired result of a blank mind able to be programed, only immense suffering and damage, naturally. These are American Nazis, little experimenters like the doctors in the concentration camps, are they not? Observe how this benevolent drug which may aid the mentally ill and speed the cure for painful diseases and disorders, is used to rupture the entire of the tender human mind's construction, and ruin it. Note how this same governmental structure will throw you in prison for using the same compound, in kindness! This is clear and solid undeniable evidence of one thing: Ultra-subimbecilic Sadism. Cruelty used to solve problems. The sub-stupid itself. The very solution which history demonstrates, has never worked, even once! The right answer is an impossibility for such a mind. Any good, kind or right result is precluded by the very drive which is in evidence, a perverse sadistic drive. Today: "Authority" is that which is more stupid than can be conceived. A dribbling idiot with potent weapons.

Nothing is so dangerous as that.

This US law represented below, SEC. 1078. RESTRICTIONS ON THE USE OF HUMAN SUBJECTS FOR TESTING OF CHEMICAL OR BIOLOGICAL AGENTS, is a good law, a law in our right-minded US Code which comes of Nuremberg, please read it. Then, read the many crimes listed below it, many unclassified recently through the Freedom of Information Act and understand my meaning.

SEC. 1078. RESTRICTIONS ON THE USE OF HUMAN SUBJECTS FOR TESTING OF CHEMICAL OR BIOLOGICAL AGENTS.

(a) PROHIBITED ACTIVITIES.—The Secretary of Defense may not conduct (directly or by contract)—

- (1) any test or experiment involving the use of a chemical agent or biological agent on a civilian population; or
- (2) any other testing of a chemical agent or biological agent on human subjects.

(b) EXCEPTIONS.—Subject to subsections (c), (d), and (e), the prohibition in subsection (a) does not apply to a test or experiment carried out for any of the following purposes:

- (1) Any peaceful purpose that is related to a medical, therapeutic, pharmaceutical, agricultural, industrial, or

¹⁰ The CIA has released the following information from 1987 through their good honest graces, so lucky am I as a US citizen to be permitted to have any shadowy idea what our tax dollars were doing even back in in 1987, and how many billions were being spent on criminal activity perpetrated against, and/or in the name of this country and its docile, pliant citizens.

research activity.

(2) Any purpose that is directly related to protection against toxic chemicals or biological weapons and agents.

(3) Any law enforcement purpose, including any purpose related to riot control.

(c) **INFORMED CONSENT REQUIRED.**—The Secretary of Defense may conduct a test or experiment described in subsection (b) only if informed consent to the testing was obtained from each human subject in advance of the testing on that subject.

(d) **PRIOR NOTICE TO CONGRESS.**—Not later than 30 days after the date of final approval within the Department of Defense of plans for any experiment or study to be conducted by the Department of Defense (whether directly or under contract) involving the use of human subjects for the testing of a chemical agent or a biological agent, the Secretary of Defense shall submit to the Committee on Armed Services of the Senate and the Committee on National Security of the House of Representatives a report setting forth a full accounting of those plans, and the experiment or study may then be conducted only after the end of the 30-day period beginning on the date such report is received by those committees.

(e) **BIOLOGICAL AGENT DEFINED.**—In this section, the term “biological agent” means any micro-organism (including bacteria, viruses, fungi, rickettsiac, or protozoa), pathogen, or infectious substance, and any naturally occurring, bioengineered, or synthesized component of any such micro-organism, pathogen, or infectious substance, whatever its origin or method of production, that is capable of causing—

(1) death, disease, or other biological malfunction in a human, an animal, a plant, or another living organism;

(2) deterioration of food, water, equipment, supplies, or materials of any kind; or

(3) deleterious alteration of the environment.

Please remember the warning of Eisenhower concerning the Military Industrial Complex, and know—he was exactly right:

Source of the facts below: ¹¹

¹¹ <http://www.rense.com/general36/history.htm>

The Secret History of Anthrax; Declassified documents show widespread experimentation in '40s, H.P. Albarelli Jr. www.WorldNetDaily.com

http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=25406

Freedom from Government: Statist Delusions

By Trent Goodbaudy 2013 PDXdzy publishers Portland OR.

<http://www.mnwelldir.org/docs/history/experiments.htm>

Human Experiments: A Chronology of Human Research by Vera Hassner

Sharav <http://www.newpatriotsblog.com/news/human-experiments-a-chronology-of-human-research/>

<http://www.abovetopsecret.com/pages/experimentation.html>

<http://historynewsnetwork.org/article/1811>

<https://www.quora.com/What-are-the-real-risks-and-consequences-of-a-centralised-health-data-repository>

The Secrets of Mind Control

<http://www.informationclearinghouse.info/article3511.htm>

<http://www.sskrplaw.com/bioethics/chronology.html>

<http://www.healthnewsnet.com/humanexperiments.html>

1931 Dr. Cornelius Rhoads, under the auspices of the Rockefeller Institute for Medical Investigations, infects human subjects with cancer cells. He later goes on to establish the U.S. Army Biological Warfare facilities in Maryland, Utah, and Panama, and is named to the U.S. Atomic Energy Commission. While there, he begins a series of radiation exposure experiments on American soldiers and civilian hospital patients.

1932 The Tuskegee Syphilis Study begins. 200 black men diagnosed with syphilis are never told of their illness, are denied treatment, and instead are used as human guinea pigs in order to follow the progression and symptoms of the disease. They all subsequently die from syphilis, their families never told that they could have been treated.

1935 The Pellagra Incident. After millions of individuals die from Pellagra over a span of two decades, the U.S. Public Health Service finally acts to stem the disease. The director of the agency admits it had known for at least 20 years that Pellagra is caused by a niacin deficiency but failed to act since most of the deaths occurred within poverty-stricken black populations.

1940 Four hundred prisoners in Chicago are infected with Malaria in order to study the effects of new and experimental drugs to combat the disease. Nazi doctors later on trial at Nuremberg cite this American study to defend their own actions during the Holocaust.

1942 Chemical Warfare Services begins mustard gas experiments on approximately 4,000 servicemen. The experiments continue until 1945 and made use of Seventh Day Adventists who chose to become human guinea pigs rather than serve on active duty.

1943 In response to Japan's full-scale germ warfare program, the U.S. begins research on biological weapons at Fort Detrick, MD.

1944 U.S. Navy uses human subjects to test gas masks and clothing. Individuals were locked in a gas chamber and exposed to mustard gas and lewisite.

1945 Project Paperclip is initiated. The U.S. State Department, Army intelligence, and the CIA recruit Nazi scientists and offer them immunity and secret identities in exchange for work on top secret government projects in the United States.

1945 "Program F" is implemented by the U.S. Atomic Energy Commission (AEC). This is the most extensive U.S. study of the health effects of fluoride, which was the key chemical component in atomic bomb production. One of the most toxic chemicals known to man, fluoride, it is found, causes marked adverse effects to the central nervous system but much of the information is squelched in the name of national security because of fear that lawsuits would undermine full-scale production of atomic bombs.

Here is some information concerning fluoride and governmental honesty concerning public health from:¹²

“This was a study of the dental and physical health of workers in a factory producing fluoride for the A-bomb program; it was conducted by a team of dentists from the Manhattan Project.

Dale, Peter P., and McCauley, H. B, "Dental Conditions in Workers Chronically Exposed to Dilute and Anhydrous Hydrofluoric Acid", Journal of the American Dental Association, vol. 37, no. 2, August 1948, pp. 131-140. Note that Dale and McCauley were both Manhattan Project and, later, Program F personnel; they also authored the secret Manhattan Project paper.

¹² https://www.bibliotecapleyades.net/salud/esp_salud34.htm

The secret version reports that most of the men had no teeth left. The published version reports only that the men had fewer cavities.

The secret version says the men had to wear rubber boots because the fluoride fumes disintegrated the nails in their shoes. The published version does not mention this.

The secret version says the fluoride may have acted similarly on the men's teeth, contributing to their toothlessness.

The published version omits this statement and concludes that "the men were unusually healthy, judged from both a medical and dental point of view".

1946 Patients in VA hospitals are used as guinea pigs for medical experiments. In order to allay suspicions, the order is given to change the word "experiments" to "investigations" or "observations" whenever reporting a medical study performed in one of the nation's veteran's hospitals.

1947 Colonel E.E. Kirkpatrick of the U.S. Atomic Energy Commission issues a secret document (Document 07075001, January 8, 1947) stating that the agency will begin administering intravenous doses of radioactive substances to human subjects.

1947 The CIA begins its study of LSD as a potential weapon for use by American intelligence. Human subjects (both civilian and military) are used with and without their knowledge.

1950 Department of Defense begins plans to detonate nuclear weapons in desert areas and monitor downwind residents for medical problems and mortality rates.

1950 In an experiment to determine how susceptible an American city would be to biological attack, the U.S. Navy sprays a cloud of bacteria from ships over San Francisco. Monitoring devices are situated throughout the city in order to test the extent of infection. Many residents become ill with pneumonia-like symptoms.

1951 Department of Defense begins open air tests using disease-producing bacteria and viruses. Tests last through 1969 and there is concern that people in the surrounding areas have been exposed.

1953 U.S. military releases clouds of zinc cadmium sulfide gas over Winnipeg, St. Louis, Minneapolis, Fort Wayne, the Monocacy River Valley in Maryland, and Leesburg, Virginia. Their intent is to determine how efficiently they could disperse chemical agents.

1953 Joint Army-Navy-CIA experiments are conducted in which tens of thousands of people in New York and San Francisco are exposed to the airborne germs *Serratia marcescens* and *Bacillus globigii*.

1953 CIA initiates Project MKULTRA. This is an eleven year research program designed to produce and test drugs and biological agents that would be used for mind control and behavior modification. Six of the subprojects involved testing the agents on unwitting human beings.

1955 The CIA, in an experiment to test its ability to infect human populations with biological agents, releases a bacteria withdrawn from the Army's biological warfare arsenal over Tampa Bay, Fl.

1955 Army Chemical Corps continues LSD research, studying its potential use as a chemical incapacitating agent. More than 1,000 Americans participate in the tests, which continue until 1958.

1956 U.S. military releases mosquitoes infected with Yellow Fever over Savannah, Ga and Avon Park, Fl. Following each test, Army agents posing as public health officials test victims for effects.

1958 LSD is tested on 95 volunteers at the Army's Chemical Warfare Laboratories for its effect on intelligence.

1960 The Army Assistant Chief-of-Staff for Intelligence (ACSI) authorizes field testing of LSD in Europe and the Far East. Testing of the European population is code named Project THIRD CHANCE; testing of the Asian population is code named Project DERBY HAT.

1965 Project CIA and Department of Defense begin Project MKSEARCH, a program to develop a capability to manipulate human behavior through the use of mind-altering drugs.

1965 Prisoners at the Holmesburg State Prison in Philadelphia are subjected to dioxin, the highly toxic chemical component of Agent Orange used in Viet Nam. The men are later studied for development of cancer, which indicates that Agent Orange had been a suspected carcinogen all along.

1966 CIA initiates Project MKOFTEN, a program to test the toxicological effects of certain drugs on humans and animals.

1966 U.S. Army dispenses *Bacillus subtilis* variant niger throughout the New York City subway system. More than a million civilians are exposed when army scientists drop lightbulbs filled with the bacteria onto ventilation grates.

1967 CIA and Department of Defense implement Project MKNAOMI, successor to MKULTRA and designed to maintain, stockpile and test biological and chemical weapons.

1969 Dr. Robert MacMahan of the Department of Defense requests from congress \$10 million to develop, within 5 to 10 years, a synthetic biological agent to which no natural immunity exists.

1970 Funding for the synthetic biological agent is obtained under H.R. 15090. The project, under the supervision of the CIA, is carried out by the Special Operations Division at Fort Detrick, the army's top secret biological weapons facility. Speculation is raised that molecular biology techniques are used to produce AIDS-like retroviruses.

1970 United States intensifies its development of "ethnic weapons" (Military Review, Nov., 1970), designed to selectively target and eliminate specific ethnic groups who are susceptible due to genetic differences and variations in DNA.

1975 The virus section of Fort Detrick's Center for Biological Warfare Research is renamed the Fredrick Cancer Research Facilities and placed under the supervision of the National Cancer Institute (NCI) . It is here that a special virus cancer program is initiated by the U.S. Navy, purportedly to develop cancer-causing viruses. It is also here that retrovirologists isolate a virus to which no immunity exists. It is later named HTLV (Human T-cell Leukemia Virus).

1977 Senate hearings on Health and Scientific Research confirm that 239 populated areas had been contaminated with biological agents between 1949 and 1969. Some of the areas included San Francisco, Washington, D.C., Key West, Panama City, Minneapolis, and St. Louis.

1978 Experimental Hepatitis B vaccine trials, conducted by the CDC, begin in New York, Los Angeles and San Francisco. Ads for research subjects specifically ask for promiscuous homosexual men.

1981 First cases of AIDS are confirmed in homosexual men in New York, Los Angeles and San Francisco, triggering speculation that AIDS may have been introduced via the Hepatitis B vaccine

1985 According to the journal Science (227:173-177), HTLV and VISNA, a fatal sheep virus, are very similar, indicating a close taxonomic and evolutionary relationship.

1986 According to the Proceedings of the National Academy of Sciences (83:4007-4011), HIV and VISNA are highly similar and share all structural elements, except for a small segment which is nearly identical to HTLV. This leads to speculation that HTLV and VISNA may have been linked to produce a new retrovirus to which no natural immunity exists.

1986 A report to Congress reveals that the U.S. Government's current generation of biological agents includes: modified viruses, naturally occurring toxins, and agents that are altered through genetic engineering to change immunological character and prevent treatment by all existing vaccines.

1987 Department of Defense admits that, despite a treaty banning research and development of biological agents, it continues to operate research facilities at 127 facilities and universities around the nation.

1990 More than 1500 six-month old black and hispanic babies in Los Angeles are given an "experimental" measles vaccine that had never been licensed for use in the United States. CDC later admits that parents were never informed that the vaccine being injected to their children was experimental.

1994 With a technique called "gene tracking," Dr. Garth Nicolson at the MD Anderson Cancer Center in Houston, TX discovers that many returning Desert Storm veterans are infected with an altered strain of Mycoplasma incognitus, a microbe commonly used in the production of biological weapons. Incorporated into its molecular structure is 40 percent of the HIV protein coat, indicating that it had been man-made.

1994 Senator John D. Rockefeller issues a report revealing that for at least 50 years the Department of Defense has used hundreds of thousands of military personnel in human experiments and for intentional exposure to dangerous substances. Materials included mustard and nerve gas, ionizing radiation, psychochemicals, hallucinogens, and drugs used during the Gulf War.

1995 U.S. Government admits that it had offered Japanese war criminals and scientists who had performed human medical experiments salaries and immunity from prosecution in exchange for data on biological warfare research.

1995 Dr. Garth Nicolson, uncovers evidence that the biological agents used during the Gulf War had been manufactured in Houston, TX and Boca Raton, Fl and tested on prisoners in the Texas Department of Corrections.

1996 Department of Defense admits that Desert Storm soldiers were exposed to chemical agents.

1997 Eighty-eight members of Congress sign a letter demanding an investigation into bioweapons use & Gulf War Syndrome.

Here are a few more facts for you:

In work for which she received a Pulitzer prize, Eileen Welsome uncovered the following facts ¹³:

“In a Massachusetts school, seventy-three disabled children were spoon-fed oatmeal laced with radioactive isotopes.

In an upstate New York hospital, an eighteen-year-old woman believing she was being treated for a pituitary disorder, was injected with plutonium.

At a Tennessee clinic, 829 pregnant women were served "vitamin cocktails" containing radioactive iron, as part of their regular treatment.

No these are not acts of terrorism by common criminals.

These are just some of the secret human radiation experiments that the U.S. government conducted on unsuspecting Americans for decades as part of its atom bomb program.

In a gruesome plot that spanned 30 years, doctors and scientists working with the US atomic weapons program, exposed thousands of unwilling and unknowing Americans to radiation poisoning to study its effects.

For years, the experiments by the U.S. government and the identities of their human guinea pigs were covered up.

Then after a six-year investigation, investigative reporter Eileen Welsome uncovered the names of 18 people who were injected with plutonium in the 1940s without their knowledge by federal government scientists. In 1993, she published her finding in The Albuquerque Tribune and later received the Pulitzer Prize for her work.”

Another six years later, Welsome published "The Plutonium Files: America's Secret Medical Experiments in the Cold War." The book gives a detailed account of the unspeakable scientific trials conducted by the U.S. government that reduced thousands of American men, women, and even children to nameless specimens.”

And of Hanford, the facility which produced Plutonium during WW2 we read from the following source:¹⁴

“Hanford's largest single release of iodine-131 was the result of a secret military experiment. "Green Run" refers to a secret U.S. Air Force Experiment at Hanford that released somewhere between 7,000 and 12,000 curies of iodine-131 to the air on December 2-3, 1949. The experiment was called the Green Run because it involved a processing "run" of uranium fuel that had been cooled for only a short time (16 days), and was, therefore, "green." The normal practice in 1949 was to cool the fuel 90 to 100 days before processing. The longer cooling time allows for radiation, especially iodine-131, to decay to lower levels.

The reported purpose of the Green Run was to test monitoring equipment the Air Force was developing for its intelligence activities concerning the Soviet Union's nuclear weapons program. The Green Run remained a top government secret until the 1980s when reports were made public

¹³ https://www.democracynow.org/2004/5/5/plutonium_files_how_the_u_s

¹⁴ <http://www.geocities.ws/irradiated45rems/2page1.html>

in response to Freedom of Information Act requests. The requests were filed by the Hanford Education Action League and the Spokesman-Review newspaper, both based in Spokane. The U.S. Air Force continues to withhold significant information about the Green Run including the names of the official(s) who ordered the experiment and the intelligence unit that participated in the monitoring.”

Senior managing CIA supervisor Kevin Shipp has decided to expose the criminality of the CIA. He informs us of reliable information indicating that there are 10,000 secret sites within the US, 1271 secret government agencies, 1931 private corporations, 4 million 8 hundred thousand citizens who have security clearances and have signed a government secrecy agreement, 854,000 have top secret clearance and have also signed such an agreement. This is infrastructure and operational capacity WITHIN the US itself, all attributable to an agency which should have NOTHING to do with any US citizen as their province was to only to serve in a foreign surveillance capacity.

Let us listen closely to this well informed and brave man, as he reveals the actual “state” of affairs.

The following quotations are derived from transcripts of spoken lectures.¹⁵

“I come from the belly of the beast the cult like world of secrecy that operates behind what we see as our elected government. . . . I saw specifically in my case the CIA engage in unconstitutional and illegal activity outside of the Constitution which for me is everything now. I saw them violate international law with some of their operations and engaged in some pretty serious human rights violations. I don't know about you all but I as an American citizen I did not vote for any of those things and our elected government didn't vote for any of those things, but, they're doing them and I'll show you. I'll show you what I hope tonight, hope and pray, that tonight this speech makes a difference. What I'm about to show you and I hope tonight it starts kind of a social civil revolution when we stand up against this tyrannical system here that has stepped outside our Constitution and engaged in egregious things. It needs to be reformed maybe even dismantled.

. . . I want to remind people that the Constitution is not a nice fluffy philosophical document. It's not just a good piece of ideology. It is the law of the United States it is the supreme law of the land. It supersedes the entire rest of the US criminal justice system so, if a person including the government violates the Constitution they have committed a felony.

. . . I'll show you that the shadow government is not left over Obama people, it is a matrix system that is functioning to cost every single administration going back to JFK, Republican and Democrats alike. So the shadow government is the secret part of government, the CIA the NSA and I'll show you a host of other secret intelligence agencies that are part of the shadow government. It functions through the unbridled unconstitutional power of secrecy, that's the shadow government beneath the shadow government. . . . it's called the deep state now the deep state is this massive financial multi-billion dollar trillion dollar matrix that includes the military-industrial complex.

. . . The shadow government rules the deep state through the power of secrecy. Secrecy agreements, the state secrets privilege and other things, so they are intimately connected and running our government behind the scenes. They manipulate our elected government behind the scenes.

¹⁵ <https://www.youtube.com/watch?v=XHbrOg092GA>

. . . money power and greed that's what runs the deep state. A shadow government [exists beneath it]: . . . their fuel is fear and intimidation. Here is this the shadow or secret government the unconstitutional power of government secrecy.

. . . outside the Constitution, the Director of National Intelligence has 17 intelligence agencies underneath him . . . Department of Homeland Security, a secret agency; Department of State, Hillary Clinton ran guns in Benghazi, secretly used in Saudi Arabia and Qatar, most people don't know that she did it through the secret system. You got the Defense Intelligence Agency that engaged in the torture program. Some people died. They also tried to recruit American citizens to be informants within the United States. National Reconnaissance Office that runs the satellite program, all the birds that are up there and there are a bunch of them. You have the National Geospatial Intelligence Agency, the big secret agency that works with Google through a big contract that set up Google Earth. So Google worked with the national geospatial-intelligence agency through CIA in-q-tel to set up Google Earth. So you think it's only Google watching yet it's not. Sadly, Silicon Valley has been recruited by the shadow government. Let's move [the speaker picks up his pace], JSOC Joint Special Operations Command. Most people don't know about it but this is the president's secret army. The President of the United States has his own secret army, special operators that he sends on presidential order into foreign countries in secret, to engage in killings, overturning governments and things that the American people don't know about. It's a secret force. Then you've got the FBI conducting warrantless searches.

You've got the Federal Reserve, the secret bank. The secret Bank that just gave out a couple trillion dollars to some unknown corporations in the military-industrial complex that they won't tell anybody about, because their deliberations are secret. With whose money? With our money. So the Federal Reserve is tied in and with this. Then we've got Wall Street. Wall Street funds all of this the military-industrial complex. Wall Street is so plugged in to the military-industrial complex and the shadow government. It was Wall Street attorneys that formed the CIA. Wall Street has been in the shadow government and a deep state going back to 1947, so they're a part of the deep State. You've got the central banks connected to the Federal Reserve. The Federal Reserve is connected to the International Monetary Fund in the World Bank, because the CFR stated goal was eventually and still is an economic global government, and they're merging through Special Drawing rights into digital currency eventually, and, that's where that started. Wall Street is so connected with the Department of Treasury, in business with all of this, they might as well just be business partners in a financial conglomerate. Our government and Wall Street are almost one and the same in the deep state. Trillions and trillions of dollars all right? It is the system behind government. You can see that I made that "S" a dollar sign because the fuel of this is money, and to get that money, they have to keep us in a state of perpetual war.

Military industrial complex employees from secretaries, the people in the mailroom to CEOs have all signed NSA or CIA secrecy agreements, and they are now bound from saying anything about anything they see, even if it's illegal or unconstitutional. There is a system of personal destruction that will ruin them if they even insinuate they're going to say anything. . . . each one signs a secrecy agreement.

US Congress, our representatives, the voice of the people are in the center of this. You have the congressional Armed Services Committee. These are the people: 48 senior members, congressmen and senators, get together under the Defense Authorization Act and decide how much, how many trillions of dollars they're going to spend on military, [unclear translation] . . . and on intelligence. It is the deliberations that you, as you would imagine, are done in secret. Nobody knows how much money they're going to assign. [There] is that, but I want you to look at this these 48 senior members of the Armed Services Committee, [who] are under the influence of the five biggest military industrial contractors. Lockheed Martin: did you know Lockheed Martin is the chief surveillance information processor for the CIA, the NSA and the FBI? Did

you know that ? . . . Lockheed Martin has created a program that tracks every contact that every American has with the IRS, your phone calls, your emails, the payments that you're making, all run through Lockheed Martin, which is the equivalent almost of a private second government. It is so big, it is funded so heavily, we figured out the average household in America has what could be called a Lockheed Martin tax. \$260 comes out of each one of our pockets every year to pay this company, basically, to spy on us through the NSA and the CIA.

They're pushing the Russian story so hard, it's called a diversion, right ?— a smokescreen. Now I want you to see Lockheed, Northrop, Booths, Raytheon and the rest. This is how much they contribute into these congressmen and Senators re-election campaigns and leadership PACs in a year: \$700,000 they contribute to each one of these senior members of the defense, that vote on the Defense Authorization Act. Do you think they have an influence over what these congressmen and others vote for or vote down? They control them.”

And from the transcript of another lecture, as to geoengineering: ¹⁶

“I have added the National Weather Service and NOAA [to the list of secret organizations] because . . . the National Weather Service and NOAA are now binding their employees with secrecy agreements so they cannot talk without penalty of prison about some of these climate programs . . .

I want to emphasize this, because this is more than a smoking gun. When the director of the CIA comes out — anybody know anything about the Council on Foreign Relations? uh-huh, so you know who he's talking to, don't you? All right, a little global action going on here, all right, but when this director of the CIA comes out and makes a speech, every word is refined winnowed down and everything he says means something, everything. Listen to what he says. “Another example is the array of technologies often referred to collectively as geoengineering.” Kudos [to another speaker]. Today they're coming out and they're saying that potentially could help reverse the warming effects of global climate change. “One that has gained my personal attention” geoengineering has gained the personal attention of the director of the CIA! That means something. “. . . is stratospheric aerosol injection or SI.” Now let me tell you based on my humble and meek experience: when the CIA comes out and admits something like this, they've been doing it for at least 20 years, that's the first thing, the second thing is it's about to be exposed or he wouldn't be saying this.”

The Constitution—*Is Gone*.

The state and government are now united with business, finance and industry around a nexus of enormous hidden power which is outside of any oversight. There is no more constitution. The state, military, finance and industry are now joined, as Eisenhower warned the MIC is the government, its lobbies create our laws, and they are sustained by capitol so: industry/pharma/defense and their bankers are an oligarchical construct obscured from view which run affairs. Fascism (apart from the typical dictatorship) is defined primarily by the indistinguishable and singular union of government, finance and industry. Ergo: The United States is now a Fascist Oligarchy, run by a secret state with immunity from criminal prosecution. We have lost our republic. It is too late.

Please watch these videos, to understand the painful and clear details of that unholy union which has become our new government:

<https://www.youtube.com/watch?v=XHbrOg092GA>

¹⁶ <https://www.youtube.com/watch?v=Nl5NW9KcMt0&t=2118s>

There are undoubtedly those readers who are now wondering why on earth they should care in the least about all these many labels and abstractions? After all, life is good and it does not matter one scant bit if you live in a 'republic,' a 'democracy' or a state described by some other meaningless label like 'Fascist Oligarchy.' What could it possibly matter? Why on earth would anyone care?

I will show you. I will allow the vision to take hold as an author can do, and then through the eyes of a plainspoken father in a letter to his daughter, you may see it and feel it. For reasons I will explain, this is our likely future:

Dear Sarah,

I will be gone soon so I have decided to write it down, a snapshot of my life and what happened. I grew up in the sticks, on a farm, and I never talk about it. I can hardly talk about it, so damn painful. Oh god, Sarah it was beautiful, to be alive now you just can't imagine it. How I loved things I didn't even notice, but now, well I can see it now. Things like the sound of the rain and the crickets, the frogs all croaking, the pattering rain and the hundreds of small sounds, the earth was alive, you wouldn't believe it, Sara... sweet one, as I swear that I love you, it was true. I know soon you will be sick like me, but you do have a few years, and you should know what could have been.

The sun was yellow, sweet and warm, not white and mean as all hell. There was a chance then, we didn't know a thing. It was all so quiet before the sun would come up, the morning would start to glow, and over the hill, a warm light would begin to soak up into the sky and soon, the sounds would start. Sarah the sounds, damn it...there is nothing left...you can't imagine it. Each corner of the wood was filled with life, birds would start to chirp and sing, everything was so full, delicate and glad, not dead and filled with lousy stink, oh god, it is so unfair that I had you, I am sorry kid, just plain sorry. I didn't know. I didn't do a thing. I am such an idiot, my whole generation is to blame, we let it happen. We were weak, we hid our heads. You have this pain to look forward to, Christ I am sorry. Well... The bees and wasps, there were hundreds of them, thousands! They were like magic little workers, some of them had fuzz, kind of like fur on them, darting from flower to flower. We had owls, a sort of owl which would talk at night, they would coo a song— sing a song and talk to you: "Who cooks for you, who cooks for you?" Sounded kind of like that, no kidding. One would leave the tree, jump off and become a shadow, it made no sound in the air at all, utterly silent. Like a snowflake falling or a shadow, motion with no sound. True beauty. Nothing like the crap on the TV. God, I'm so sorry.

Funny how you say God, but know there can't be one, not in this world. Well, sweet thing, once I married Marjory after the service, things looked bright, mostly because I was not paying attention. We had you and soon, it was clear that something was wrong. Marjory was the greatest woman, Sarah, such an amazing woman, so kind and warm, and bright too, that is what you must know...she could do math better than I can, calculus in her head, and knew every date without checking, a very bright woman. The sky, I noticed it was turning grey, filled with our fake clouds, some up high and I know the gear from being in the service, I signed the agreement and knew but said nothing...those were dipole phased array interference patterns, we were cooking the sky with microwaves and VLF, fucking the weather and cooking the place but hush hush you know? Good little idiot...that's me. Well, when Marjory got sick, I knew what it had to be. We were spraying it, that damn fly ash is toxic, and the aluminum is nano-scale, it goes right into the blood cells, into the mitochondria of the white cells and kills them, and also into the hippocampus and other associated tissues, the papers were all there to read...it gives you Alzheimer's and destroys the immune system. Now it's within every cell of every plant, animal and living thing on the planet. It would be easy as hell to cook the place now with microwaves, just my guess. Those planes and that technology...they took most of our lives, and worse. You know about the microwaves and autism now, the random neuronal pulses preventing connective trimming, that explains

your brother, poor kid, and the effects on calcium, cells and DNA, the papers have been released, but it's too late. They did it and I helped. They own the weather...they ruined every corner of this world. Nothing grows in soil like this. That genetically altered food they sell to grow is hollow, it makes you sick and weak, just like the poison and radiation we spread. I hope they do not set the Yellowstone volcano off to cool the joint, they are just about that crazy, they may only spread the sulfur, let's hope so. It's too late for the ozone, use that cream, kid. Don't be a follower Sarah, never follow. We are all sick and the world is a burned up dump, the entire place is cooked to a crisp, the animals are gone, the bees...the little workers with the fuzz, I just loved them Sarah...they got sick just like Marjory and lost their memory, they died, alone and scared I bet, just like she did. I wish I were there...kid I am so sorry. The damn bees, we must have killed them. Now we can't grow food anymore, only that hollow junk. I loved this world Sarah, I loved it. Why the hell did I listen to orders. Anyone can see it. Christ, we are idiots, idiots! Why didn't I say something, who cares about some piece of paper! Why in the hell was I military? I am not a bad person, I love you Sarah. Christ I'm sorry. We did it, we killed...everything.

Forgive me.

Jacob

Without constitutional protection, we live in a Fascist Oligarchy. We may be used and experimented upon as may the entire biome. The results of such activity are dependent upon the drive structure initiating behavior and therefore, are certain and predictable in their outcome. The entire situation must be understood, and action taken. I will detail that next.

Chapter three:

Next, we must look at the situation in which we find ourselves, examine the big picture in detail, discover what has been concealed, and what is actually happening.

In previous work Dr. Dunning-Davies and myself have ascertained that the role of CO₂ as the sole, emphasized factor in global temperature increase has not been causally established. Whatever partial contribution such greenhouse effects do or do not play to the undeniable manifest temperature anomalies and hot spots around the globe must then be supplemented with some additional analysis and subsequently derived conclusions concerning the causal source of those plainly manifest anomalous global temperature distributions. One such unacknowledged anthropogenic (meaning human caused) factor in temperature increase is VLF communications (Avakyan, Voronin, 2008). These powerful and multitudinous low frequency transmitters designed to allow submarine and other communications, also affect the weather. They do so through a specific mechanism. Their emissions have enveloped the entire globe (Gombosi et al. 2017). Here we see weather created using similar mechanisms as weather caused through solar activity. In simple terms: As a naturally created aurora is formed by solar processes, VLF signals influence the van Allen radiation belts analogous to an artificial type two or better aurora so as to emit electrons that influence the ionosphere to a heightened energy. The ionosphere then emits microwaves moving toward earth, and those microwaves change conditions within the layers of high cloud formation so as to increase the conglomerative processes and form clouds. Those clouds are of a particular type known as ‘optically-thin’ which heats the atmosphere and planet below by way of redirecting the longer wavelengths emitted by the earth’s surface as they radiate upward back down again toward earth, longer wavelengths here meaning those of the infrared range which are *heat*, and either reflecting that heat back toward the ground, or, reradiating the same (Avakyan, Voronin, 2008).¹⁷

There are additional effects from the constant anthropogenic precipitation of ‘fast’ relativistic electrons from the radiation belts through VLF communications, which have now enveloped the entire planet. Please recall these create an artificial type 2 aurora or better, mimicking solar activity. In the US government military document: Contract N00014-90-K-2010 INTERACTION OF INTENSE LASERS AND RELATIVISTIC ELECTRON BEAMS WITH SOLIDS, GASES AND PLASMAS www.dtic.mil/dtic/tr/fulltext/u2/a269655.pdf we read:

“2. Effects Initiated in the Middle Atmosphere: These effects are associated with the precipitation of relativistic magnetospheric electrons modulated by the solar activity. The relativistic electrons produce odd nitrogen and odd hydrogen, both of them are involved in the catalytic destruction of the ozone layer. Proposed investigations include: a. modeling of the ozone depletion caused by the relativistic electrons, and estimating of a net reduction in the heating rate of the atmosphere.”

¹⁷ Avakyan, S.V., N.A. Voronin (2008) TRIGGER MECHANISM OF SOLAR-ATMOSPHERIC RELATIONSHIP AND THE CONTRIBUTION OF THE ANTHROPOGENIC IMPACT

Proceedings of the 7th International Conference "Problems of Geocosmos" (St. Petersburg, Russia, 26-30).
http://geo.phys.spbu.ru/materials_of_a_conference_2008/M/Avakyan_Voronin.pdf

Gombosi, T.I., Baker, D.N., Balogh, A. et al. Space Sci Rev (2017). <https://doi.org/10.1007/s11214-017-0357-5>

PLEASE NOTE: We may now understand the full implication of the anthropogenic influence of a world wide envelope of VLF include:

1. The heating of the planet by way of optically-thin cloud formation.
2. The destruction of the UV protective ozone layer by way of the formation of odd nitrogen and odd hydrogen which function as ozone reducing catalysts.

It appears there is a secondary aim in the generation of VLF which is to empty the plasma filled van Allen belts of electrons, and presumably also of positive charge as well at some later time by undetermined means. This is an anthropogenic factor akin to solar phenomenon which cause aurora, but on a daily basis, and, as the belts stop dangerous fast electrons,³ I will assert that this is entirely foolish. <http://spectrum.ieee.org/aerospace/astrophysics/hacking-the-van-allen-belts> These artificial effects and short sighted aims will have consequential secondary and other effects far beyond the myopic arrogance which has so influenced the environment as to bring us clear and obvious ruin. They simply have no possible idea of or concern for the full consequences of their actions upon the planet or its inhabitants.

The oceans, not at all surprisingly, are dying. Sulphuric acid and ozone diminishing sulfides have long been added into the envelope surrounding earth through commercial jets.
[<https://climateviewer.com/2015/03/24/chemtrails-explained-the-geoengineering-srm-field-experiment/>]

Our beautiful delicate world is already wrapped in a glove of sulfides and sulphuric acid, and her tender oceans are being burned into barren pools. No blue skies: H₂SO₄. Observe. How weak and pale is the sky? How deeply ruined. This is now.

In THE BENEFITS, RISKS, AND COSTS OF STRATOSPHERIC GEOENGINEERING <http://climate.envsci.rutgers.edu/pdf/2009GL039209.pdf> GEOPHYSICAL RESEARCH LETTERS, VOL. 36, L19703, doi:10.1029/2009GL039209, 2009, we read (see original article for embedded citations):

The 1991 Mt. Pinatubo eruption injected 20 Tg SO₂ into the tropical lower stratosphere [Bluth et al., 1992], which formed sulfate aerosols and cooled the climate for about two years. As discussed by Robock et al. [2008], the equivalent of one Pinatubo every 4-8 years would be required to stop global warming or even reduce global temperature in spite of continued greenhouse gas emissions.

While volcanic eruptions inject mostly SO₂ into the stratosphere, the relevant quantity is the amount of sulfur. If H₂S were injected instead, it would oxidize quickly to form SO₂, which would then react with water to form H₂SO₄ droplets. Because of the relative molecular weights, only 2.66 Tg of H₂S (molecular weight 34 g mol⁻¹) would be required to produce the same amount of sulfate aerosols as 5 Tg of SO₂ (molecular weight 64 g mol⁻¹). Since there are choices for the desired sulfate aerosol precursor, our calculations will be in terms of stratospheric injection of any gas. H₂S, however, is more corrosive than SO₂ [e.g., Kleber et al., 2008] and is very dangerous, so it would probably not be the gas of choice. Exposure to 50 ppm of H₂S can be fatal [Kilburn and Warshaw, 1995]. H₂S was even used for a time as a chemical warfare agent in World War I [Croddy et al., 2001]. However, 100 ppm of SO₂ is also considered “immediately dangerous to life and health” [ATSDR, 1998].

[see original article for references]

³ <https://www.nasa.gov/content/goddard/van-allen-probes-spot-impenetrable-barrier-in-space>

Reader please note, NASA is in charge of a new project to tap the contents of the huge Yellowstone super-volcano. I suspect they are seeking a cost effective source of SO₂ and H₂S, particulates etc., to distribute, by whatever means. NASA = Never A Straight Answer, by way of the common joke. Keep an eye on this project, for its actual purpose and any..."accidents." There is simply no good reason NASA should have a thing to do with this!

There are a great many patents granted which indicate the dispersal of metals into the atmosphere to ameliorate the problems caused by man's initial tampering with the system. Sadistic, imbecilic greedy foolishness, then, seems to imply more greedy poisonous thinking in compensation. If the planet is heating, presumably due to greenhouse gasses as the authors of the patent below imply, we must poison the planet further with metals as well. There are a great many of these patents, most owned by large corporations, like Hughes (as in this case), and its new designation under Raytheon. Those corporations are themselves the government, of course. These ideas and their implication are obviously quite old.

Excerpts from patent 5,003,186, Mar 26 1991. <http://www.freepatentsonline.com/5003186.pdf>

1. A method of reducing atmospheric warming due to the greenhouse effect resulting from a layer of gases in the atmosphere which absorb strongly near infrared wavelength radiation, comprising the step of dispersing tiny particles of a material within the gases' layer, the particle material characterized by wavelength-dependent emissivity or reflectivity, in that said material has high emissivities with respect to radiation in the visible and far infrared wavelength spectra, and low emissivity in the near infrared wavelength spectrum, whereby said tiny particles provide a means for converting infrared heat energy into far infrared radiation which is radiated into space.

The greenhouse gases layer typically extends between about seven and thirteen kilometers above the earth's surface. The seeding of the stratosphere occurs within this layer. The particles suspended in the stratosphere as a result of the seeding provide a mechanism for converting the blackbody radiation emitted by the earth at near infrared wavelengths into radiation in the visible and far infrared wavelength so that this heat energy may be reradiated out into space, thereby reducing the global warming due to the greenhouse effect.

12. The method of claim 10 wherein said material comprises aluminum oxide.

13. The method of claim 10 wherein said material is thorium oxide.

For example, aluminum oxide (Al₂ O₃) is one metal oxide suitable for the purpose and which is relatively inexpensive.

It is presently believed that particle sizes in the ten to one hundred micron range would be suitable for the seeding purposes. Larger particles would tend to settle to the earth more quickly. The particles in the required size range can be obtained with conventional methods of grinding and meshing.

The greenhouse gases are typically in the earth's stratosphere at an altitude of seven to thirteen kilometers. This suggests that the particle seeding should be done at an altitude on the order of 10 kilometers. The particles may be seeded by dispersal from seeding aircraft; one exemplary technique may be via the jet fuel as suggested by prior work regarding the metallic particles. Once the tiny particles have been dispersed into the atmosphere, the particles may remain in suspension for up to one year."

Of course then, they fall to earth.

Next, we will ascertain if there is any possible relation between the powerful and multitudinous ionospheric heaters, the heating of the planet and present day manifest temperature anomalies and hot spots. Could heating things, heat them? A daring hypothesis! We are told this is safe and not related, but I insist our far-fetched hypothesis should be investigated. Is it good to heat the atmosphere and steer the natural patterns and rivers of air by burning the ionosphere and dominating the weather, a process which will of course influence the oceans and its currents as well? Does burning things and forcing them into submission harm them, or even more absurd, does burning the planet and its ionosphere with an ionospheric heater, heat it? A far fetched idea, but let us investigate and see.

First, let us look into the general mindset surrounding this technology, which is military. Always note who FUNDS a project.

Ideas concerning military technology often have a functional face for the public, and other actual uses, and also, often many uses within a single such context, be it black or openly acknowledged. Often, people poke fun at Reagan mentioning the notion of 'star wars'...a space based missile defense. It is often said he made it up, and it had no basis in reality. Reagan, perhaps my least favorite president before the current one, was in fact not standing on hollow ground, or so it seems.

In the document Satellite Power System (SPS) Military Implications October 1978 HCP/R-4024-01 DOE/NASA, we read:

"The very large orbital power source of the SPS could have a number of potential military applications. Perhaps the most arresting, but certainly one in the very distant future is the possibility of developing an anti-ballistic defense weapon utilizing laser or particle beams. Nearer term possibilities include anti-satellite weapons and perhaps some form of psychological weapons.

The ground segment is an appropriate receiving antenna array (rectenna), also with conversion equipment to transform the received microwave energy to a form suitable for utility use. After being transformed the converted power is fed to the local utility grid for distribution. Satellite array and the rectennas are on the order of 100 square kilometers each in size, and the net output power to the utility is to be 5,000 megawatts.

. . . an acquaintance with the Classified literature assures that this study is consistent with related broad national goals.

The fact that the SPS is a space system, with the potential of carrying powerful new and unknown kinds of weapons, with a very large power capability, and potentially having "access" to (threatening?) most areas of the earth, would indicate that it constitutes a difficult question for international agreement."

Then a solution arrived: a patent for a ground based approach with similar capabilities:

METHOD AND APPARATUS FOR ALTERING A REGION IN THE EARTH'S ATMOSPHERE, IONOSPHERE, AND/ OR MAGNETOSPHERE

Eastlund

4,686,605

Aug. 11, 1987

"The ideal combination of suitable field lines intersecting the earth's surface at the point where substantial fuel sources are available for generation of very large quantities of electromagnetic power, such as the North Slope of Alaska, provides the wherewithal to accomplish the foregoing in a practical time period, e.g., strategic requirements could necessitate achieving the desired altered regions in time periods of two minutes or less and this is achievable with this invention,

especially when the combination of natural gas and magnetohydrodynamic, gas turbine, fuel cell and/ or EGD electric generators are employed at the point where the useful field lines intersect the earth's surface. One feature of this invention which satisfies a basic requirement of a weapon system, i.e., continuous checking of operability, is that small amounts of power can be generated for operability checking purposes. Further, in the exploitation of this invention, since the main electro magnetic beam which generates the enhanced ionized belt of this invention can be modulated itself and/ or one or more additional electromagnetic radiation waves can be impinged on the ionized region formed by this invention as will be described in greater detail herein after with respect to FIG. 4, a substantial amount of randomly modulated signals of very large power magnitude can be generated in a highly nonlinear mode. This can cause confusion of or interference with or even complete disruption of guidance systems employed by even the most sophisticated of airplanes and missiles.

Small micron sized particles can be then transported, and, under certain circumstances and with the availability of sufficient energy, larger particles or objects could be similarly affected. Particles with desired characteristics such as tackiness, reflectivity, absorptivity, etc., can be transported for specific purposes or effects. For example, a plume of tacky particles could be established to increase the drag on a missile or satellite passing therethrough. Even plumes of plasma having substantially less charged particle density than described above will produce drag effects on missiles which will affect a lightweight (dummy) missile in a manner substantially different than a heavy (live) missile and this affect can be used to distinguish between the two types of missiles.

Electromagnetic pulse defenses are also possible. The earth's magnetic field could be decreased or disrupted at appropriate altitudes to modify or eliminate the magnetic field in high Compton electron generation (e.g., from high altitude nuclear bursts) regions. High intensity, well controlled electrical fields can be provided in selected locations for various purposes. For example, the plasma sheath surrounding a missile or satellite could be used as a trigger for activating such a high intensity field to destroy the missile or satellite.

Further, irregularities can be created in the ionosphere which will interfere with the normal operation of various types of radar, e.g., synthetic aperture radar. The present invention can also be used to create artificial belts of trapped particles which in turn can be studied to determine the stability of such parties. Still further, plumes in accordance with the present invention can be formed to simulate and/or perform the same functions as performed by the detonation of a "heave" type nuclear device without actually having to detonate such a device. Thus it can be seen that the ramifications are numerous, far-reaching, and exceedingly varied in usefulness.

15. The method of claim 14 wherein said site of natural gas is within the magnetic latitudes that encompass Alaska.

Some embodiments of the present invention require large amounts of power, e.g., up to 10^9 to 10^{11} watts, in continuous wave or pulsed power."

Next, we have another patent:

5,038,664

Aug. 13, 1991

Eastlund Aug. 13, 1991

"Circularly polarized electromagnetic radiation is transmitted at a first frequency substantially parallel to an earth's magnetic field line to excite electron cyclotron resonance heating in normally occurring plasma at an altitude of at least about 250 kilometers to generate a mirror

force which lifts said plasma to said altitude of at least about 1500 kilometers. Heating is continued at a second frequency to expand the plasma to the apex of said field line whereupon at least some of the plasma is trapped and oscillates between mirror points on said lines. The plasma will be contained within adjacent field lines and will drift to form a shell of relativistic particles around a portion of the earth.

It has heretofore been recognized that an intense focused beam of charged or neutral particles (e.g., plasma) can carry a potentially destructive amount of energy and is capable under certain circumstances of melting a hole in a piece of metal or of damaging even shielded electronic circuits. Recently, proposals have been set forth to exploit such particle beams as possible defense mechanisms to be used to protect against offensive missiles.

Given a large enough number of particles hitting the target in a short enough time, the deposited energy can become great enough to burn a hole in the "skin" of the target (e.g., missile) to detonate the chemical-explosive "trigger" of a warhead or to disrupt the electronics (e.g., guidance controls) inside the target vehicle. However, in these proposals, the accelerator has to be placed in orbit to generate the required "beam" of charged particles . . .

The stochastic heating will be continued until the electron energies reach the range of from about 2 to about 5 Mev, at which the electrons are relativistic because of the electron masses having been increased substantially due to their high velocities. This increases the density or electron concentration of the trapped plasma to 10^9 per cubic centimeter. The plasma will be confined between adjacent field lines and will form a shell of relativistic particles there between as these particles naturally "drift" around the earth. The shell so formed may be used as an anti-missile shield.

As the missile passes through shell 20, the (high intensity (e.g., 6 Mev) particles of plasma 12 penetrate the missile. As each particle does this, it loses energy principally by transferring energy to electrons in the missile by a series of elastic collisions giving a cascade of electrons which leaves the direction of the motion largely undisturbed. Eventually, the energy lost in the material of the missile manifests itself as heat, thereby raising the temperature of the material where the particles collide.

At the density and energy levels of plasma 12 within shell 20, the rate of energy deposition (i.e., heating) will be greater than can be dissipated and the material will melt or crack under thermal stress. Detectable damage will result either from burning through the walls of the missile's fuel container, damaging the electronic systems of the missile, or from detonation of the chemical explosive triggers of the missile's warhead; the latter requiring about 200 joules per cubic centimeter of material impacted. It can be seen from the above, that by generating a shell 20 of high density, relativistic particle plasma, an effective defensive shield can be provided to guard against offensive missiles.

Antenna 15 is positioned as close as practical to the location 14 where line 11 intersects the earth's surface. Antenna 15 may be of any known construction for high directionality, for example, a phased array, beam spread angle (0) type; see "The MST Radar at Poker Flat, Alaska", Radio Science, Vol. 15, No. 2, March-April 1980, pps. 213-223."

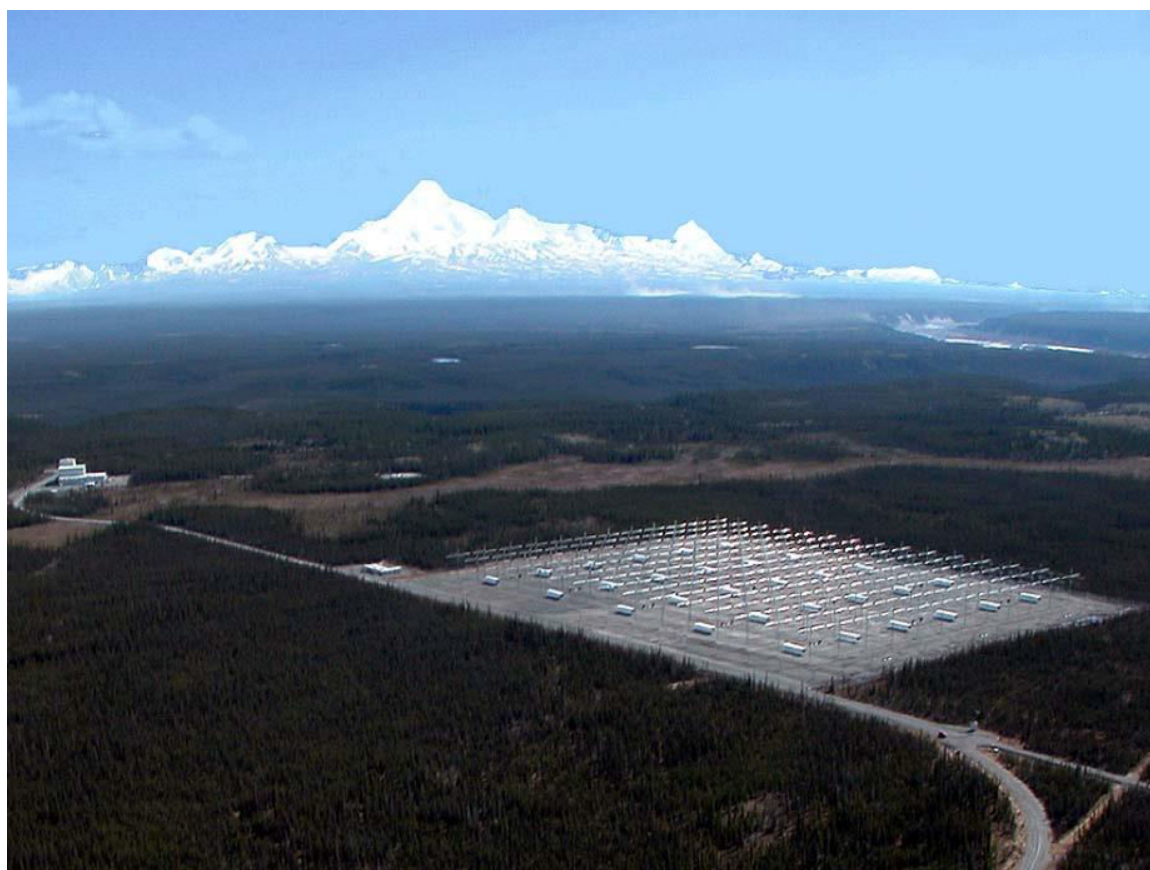
Then HAARP:

NOTE WHO FUNDS DEVELOPMENT!

The High Frequency Active Auroral Research Program (HAARP) funded by the U.S. Air Force, the U.S. Navy, the University of Alaska Fairbanks, and the Defense Advanced Research Projects Agency (DARPA),[1] designed and built by BAE Advanced Technologies (BAEAT). Established in: 1993 Gakona, Alaska, United States a high power, high-frequency phased array 5.1 Gigawatts or 97.1 dBW at maximum output. The Station is powered by a set of five (5) 2500 kilowatt generators being driven by EMD 20-645-E4 diesel locomotive engines. Continuous waves (CW) transmission is generally used for ionospheric modification, while transmission in short pulses frequently repeated is used as a radar system.¹⁸

The following quote and graphics used with permission of ClimateViewer.com and Jim Lee.

"HAARP focuses its antenna, called the Ionospheric Research Instrument (IRI), directly overhead where its powerful 5 billion watt output boils a portion of the sky. This boiling action causes a portion of the ionosphere to detach, which undulates in the solar wind, creating ELF waves like a massive ionospheric sub-woofer."



An aside to offer comfort: Although HAARP and such facilities mimic aurora and other phenomenon which as you know destroy the ozone by way of producing odd nitrogen and odd hydrogen that function as ozone reducing catalysts, it appears that we are in splendid shape with unexpected excellent luck, and for some reason we read in the government document cleared for the public: UPPER ATMOSPHERIC EFFECTS OF THE HF ACTIVE AURORAL RESEARCH PROGRAM IONOSPHERIC RESEARCH INSTRUMENT <http://www.dtic.mil/dtic/tr/fulltext/u2/a268948.pdf>, that:

“The HAARP program will have negligible effect on the thermal and chemical structure of the global upper atmosphere. The small region within the HF heater beam has local energy deposition rates that are comparable to intense auroras. However, this study demonstrates the inefficiencies of the HF heated electrons in producing odd nitrogen molecules. The HAARP

¹⁸ https://en.wikipedia.org/wiki/High_Frequency_Active_Auroral_Research_Program

program will (1) not alter the natural levels of odd nitrogen in the polar upper atmosphere and (2) will have no negative impact on the ozone layer of the earth.”

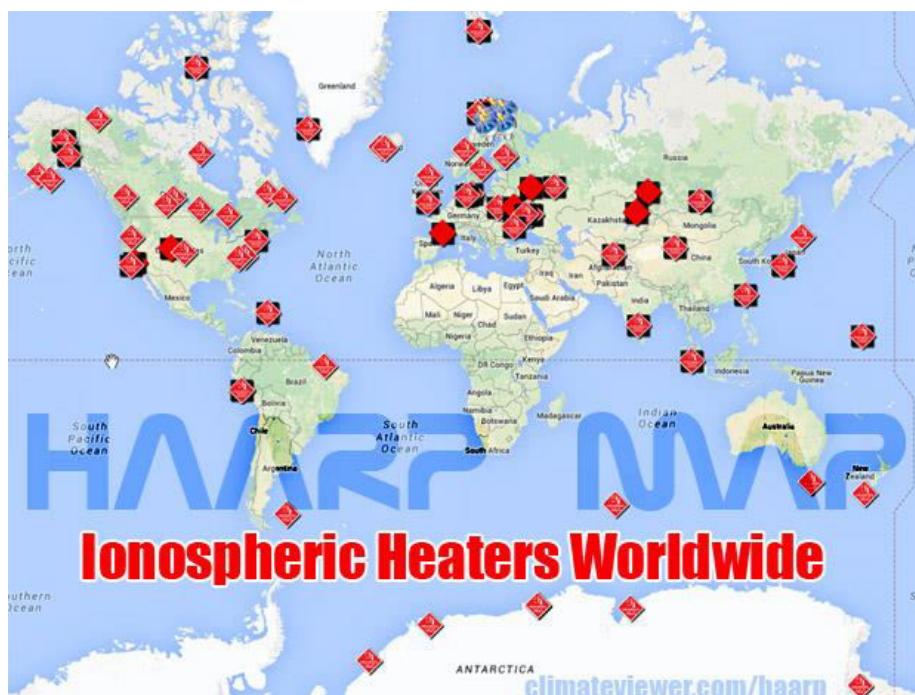
I feel much better, don't you? Bah! (No mention of odd hydrogen, hmmm...).

HAARP creates artificial aurora and also functions as a super-powerful VLF transmitter. Some such high powered VLF transmitters, create stimulated perturbations reaching a half of a million square kilometers or more, imitating class two aurora. [see **Climate change: the actual anthropogenic influence—Factor “A”** in this text] Something tells me, that may just be large enough to expect detrimental effects, unlike the obvious whitewash above concerning HAARP, which I will assert that in my opinion could not possibly be true.



HAARP (above).

There are many other facilities and types of ionospheric heaters (below). Graphics, text and specifications below and above used with permission of ClimateViewer.com and Jim Lee:



There are land based units (above), floating arrays, those which utilize the equatorial electrojet, the polar electrojet such as HAARP, or *ionospheric current drive* configurations of those units which do not require an electrojet.

Here are a few of the other land based units.

Arecibo Observatory, PR-625, Arecibo, Puerto Rico 18.34421900121537, -66.75269217609858 <http://www.naic.edu/>

- Antennas: 6 crossed dipoles, 5.1 MHz (3 x 25.5 meters) 8.175 MHz (3 x 14.5 meters), 98 meter Cassegrain screen hexagonal sub-reflector, 305 meter dish primary reflector. [4]
- Frequency: 5.1 - 8.175 MHz
- Power: 600,000 Watts (600 kW, 100 kW x 6)
- ERP: 200,000,000 Watts (200 MW)



Sura Ionospheric Heating Facility

Vasilsursk, Nizhny Novgorod Oblast, Russia 56.14360813018452, 46.09902433603985 <http://sura.nirfi.sci-nnov.ru/indexe.html> (Photo Gallery) http://www.thelivingmoon.com/45jack_files/03files/SURA_Radar_Facility.html

- Antennas: 144 crossed dipole, 300 x 300 meters
- Frequency: 4.5 - 9.3 MHz
- Power: 750,000 Watts (750 kW)
- Effective Radiated Power: 190,000,000 Watts (190 MW, ~83 dBW)



Tromsø Ionospheric Heater (below)

Ramfjordmoen, Near Tromsø, Norway 69.58314833326673, 19.211580995070786 <https://www.eiscat.se/about/facilities> http://www.thelivingmoon.com/45jack_files/03files/EISCAT_Ramfjordmoen_Tromso_Norway.html

- Antennas: 3 arrays
 - 144 crossed dipole (12x12), 5.3-8.0 MHz
 - 36 crossed dipole (6x6), 3.8-5.7 MHz
 - 36 crossed dipole (6x6), 5.3-8.0 MHz
- Frequency: 3.85 - 8 MHz
- Power: 1,200,000 Watts (12 x 100 kW)
- Effective Radiated Power:
 - 144 crossed dipole, 1,200,000,000 Watts (1200 MW, 1.2 GW)
 - 36 crossed dipole, 300,000,000 Watts (300 MW) [8]

An upgrade is planned:

The core array will comprise a 120-m diameter filled circular aperture array with $\approx 16\,000$ elements, laid out on an equilateral triangular grid, and a number (6...9) of smaller outlier receive-only arrays. The core will provide: a half-power beamwidth of $\approx 0.75^\circ$, i.e. comparable to that of the EISCAT UHF

system, a power-aperture product exceeding 100 GW m², i.e. an order of magnitude greater than that of the EISCAT VHF system.

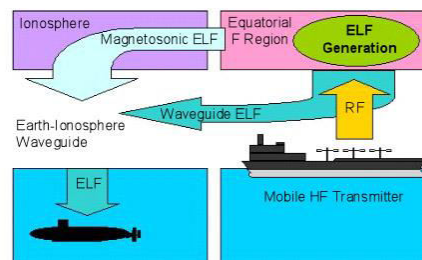


There are units on barges as well:



SUMMARY

- ELF produced by HAARP with **NO Electrojet – A Major Breakthrough** based on discoveries in recent HAARP campaigns under MURI/ONR and BRIOCHE/DARPA programs
 - Predictable and repeatable ELF generation up to 50 Hz on daily basis
 - $M_{\text{eff}} \approx 4 \times 10^9 \text{ A-m}^2$
 - Validated technique: plasma currents driven by HF heating in the F/E layers
 - Technology transferable to low latitude regions with robust F & no E'Jet
- An efficient Ionospheric ELF source that can be positioned in theater on a mobile platform
 - Data rate \gg FELF system
 - Higher source strength
 - High TRL level for transitioning



These devices heat the ionosphere, destroy the ozone (unless configured in a very specific and unusual way), affect the weather and steer rivers of air so as to move weather, stealing it from one place, to aid another. Once jet streams are influenced, and the weather system controlled by the imbecile, we observe the dread conditions we have today, characterized by massive storms, droughts and a plethora of obvious and predictable damage. The planet is meant to have its jet streams and other rivers of air functioning properly as they have evolved to create a healthy climate, not tortured into submission, heated and burned. They have burned the sky, and revved up the weather system by putting massive energies and

heat into it, and feeding the electrojets. Now, the ozone is ruined, the weather system is unstable and hazardous, hot spots and violent storms are common, droughts and sprayed toxins consume the earth, as we will see.

Heating, burning, poisoning and controlling things, hurts them. This is not particularly surprising, considering the drive structure is that of sadism.

Likewise, navy and other pulsed radar arrays operate in the pulse range between 200–800 Hz (much like cell towers and phones at 800 Hz to 1KHz). That choice of pulse range disturbs the biological system in many ways. One which is most troubling is that of the removal of calcium ions from cellular structures and various oceanic living skeletal components, the latter referring to coral reefs which are composed of calcium carbonate, and that of other sea life like sea stars and lobsters (it appears also to induce tumors in sea life such as turtles, see below).¹⁹ The pulsed factor such as that in mobile phones and these radars causes divalent calcium ion substitution to monovalent potassium creating biological cellular membrane tears and leakages. **[See the superb Goldsworthy paper within this text]**. When lysosome leakages are created, it is possible that DNA destroying DNase and other digestive enzymes could result in DNA damage (causing cancers). This could explain the observed fact that: “radiation like that from GSM mobile phone handsets caused both single and double stranded breaks in the DNA of cultured human and animal cells” according to the Reflex Project, sponsored by the European Commission. See: Reflex Report (2004) and The Cell Phone and the Cell, Andrew Goldsworthy BSc PhD Honorary Lecturer in Biology at Imperial College London.²⁰ And if that is not enough, there is evidence that by this same mechanism of calcium ion substitution and resultant membrane leakage, the neuronal cytosol (meaning the aqueous component of cytoplasm within the main cell body) will accumulate excessive calcium background concentration, hence sensitivity increases as the system is ‘preloaded’ if you will. Over three fold increases in bird’s neuronal firing were noted in response to mobile phone type emissions!²¹ These effects could explain the 6000 percent increase in Autism which corresponds to the proliferation of the aforementioned microwave devices including cell phones and radar by way of these random impulses affecting the neuronal pruning process in development, leaving far too many connections. Calcium liberation and demodulation could through effects on tight junction barriers explain other observed pathologies, such as weakening of blood-brain barrier filtration contributing to Alzheimers, blood-liver barrier weakening and liver disease, and respiratory barrier weakening and asthma²². Endocrine effects and immune suppression are also created by the same calcium dependent mechanism. Considering the pathological effects demonstrated, it should be no surprise then, to learn that this sort of radiation has been addressed by Dr. Anthony Miller, advisor to the World Health Organization International Agency for Research on Cancer (WHO/IARC) who states that such radiation as we have been discussing, “fully meets criteria to be classified as a ‘Group 1 carcinogenic to humans’ agent, based on scientific evidence associating RF exposure to cancer development and cancer promotion.”²³

¹⁹ <https://darkmattersalot.com/2014/06/11/cc-world/> <https://darkmattersalot.com/2015/04/10/just-another-radar-station-and-another-deaddiseased-coral-reef/> <https://darkmattersalot.com/2014/12/01/kauai-south-side-reefs-and-turtles-now-dying-quickly/> <https://darkmattersalot.com/2014/10/09/about-that-trip-to-kauai/> <https://ecfsapi.fcc.gov/file/7022311211.pdf>

²⁰ <http://www.iaff.org/hs/PDF/REFLEX%20Final%20Report.pdf> <https://darkmattersalot.com/2014/09/10/the-pulsed-microwave-radar-tower-and-the-cell-the-role-of-calcium/> <https://ecfsapi.fcc.gov/file/7022311211.pdf>

²¹ [Beason RC, Semm P (2002), Responses of neurons to an amplitude modulated microwave stimulus. Neuroscience Letters 333: 175-178]

²² <https://ecfsapi.fcc.gov/file/7022311211.pdf>.

²³ <https://ehtrust.org/cancer-expert-declares-cell-phone-wireless-radiation-carcinogenic-humans/>



Photos used with permission of marine biologist Terry Lilley: Terry Lilley @ Underwater2web.com

Now that we have addressed the effects of Navy communications and other technology as it heats the globe, reduces the protective ozone layer, kills the life within the delicate sea and also, kills and brings disease to life upon the heated terrestrial surface, and, now that we have observed the surprising and unexpected fact that burning the world with massive ionospheric heaters and changing its weather patterns by force has scorched the globe which is now hotter as it is being intentionally heated (how shocking and unexpected!), we may offer a surprising and admittedly clever solution to the highly complex problems leading to global temperature anomalies and the many dangerous hot spots around the globe. Yes, all this is quite complex and impossible to unravel. BUNK! We have been lied to and may easily set this matter right! As to the use of VLF which heats the planet, the painfully ill-advised attempt to gut the van Allen belts, the unbearable idiocy and sadistic cruelty of using radars, ionospheric heaters and communications technologies that cause cancer, destroy ozone, kill wildlife and heat the earth, we humbly suggest to the deranged imbeciles who are behaving this way:

TURN IT OFF!

This is the correct approach to avert global catastrophe, thermal and otherwise.

There is one additional aspect to the present situation which must be made plain if we are to distill the singular essence of these many divergent macro-manifestations of illness, and solve them. Each of the many insanities we have spoken of may be traced back to a particular cause and action then taken. The best way to introduce you to the remaining information is to demonstrate it by example.

Please recall the many examples of and thousands and thousands of victims of illegal testing upon human subjects performed by the US government. Please recall the scope of corruption demonstrated throughout the governmental structure.

As has been stated, incremental change is difficult to notice, rapid change easy to identify. It is also true that humans generally do not notice what is happening above their line of sight. I had heard the rumors for many years, rumors of jets creating clouds over populated areas. I live in complete isolation far from roads or noisy humans, far from man's disgusting pollution. I live here:



It took many years to accomplish but I had eventually located and purchased land with pure water I could drink from a running stream, a sky impossibly deep and endless in its azure hollow, an arching canvas without a trace of clouds in summer save for nature's majestic roiling thunderhead, so turgid and lidded, waiting to burst, pregnant and brooding, withholding, nurturing and swelling until the clear silver drops became fat and heavy, plucked loose one then the next, pattering and dappled, then unleashed in sheeted waves of splintered hissing sound, poured out and gladly cast down—shattered into sound. The palm of heaven was blue and endless, summer's cathedral, but for this. Oh ...how I miss her.

The change was rapid and I plainly watched as they slit her open, poisoned her, and let her die. Then, it was my turn to enfold the poison within myself and there was of course ample poison for my wife, and all the earth. My shining stream, they have hurt her and made her sick. She was so beautiful, so sweet, oh how sad I am to watch and to know. I watch my wife breath in, and out, in and out, and so...she will

die. Slowly and in pain. She has been poisoned, and that is that. That which is precious and dearest, they are killing it, slowly, so ugly and wretched is this thing, I can not but weep and imagine hurting them for this. Nothing escapes, no. Tempus fugit. Quickly, I must write quickly. Only that. We have been poisoned. This book was written in weeks and a month...no time. They have poisoned my wife, my land and myself. We must act quickly!

I remember when they first hurt her, and began to demean what was perfect. It was four months past or so, when they began. The methods are various. First there were distant jets, and over the horizon something crept, unseen yet present, the early fingers of a hand meant to choke. How beautiful, how fortunate, look! An impossible and splendid sight unfolded for us, a rainbow around the sun, then more, a second displaced to the side, then an arch of color spread out into the sky. But this was approaching summer, and such things simply do not happen in this weather, nor do they happen here in this location no matter the season, as far as my 11 years living here have taught. Then, the effect disappeared and the sky harbored strange new clouds, now no longer her proper blue but pastel and weak, almost white, and soon...grey. Over the next two weeks, this odd progression would repeat thrice more. What were these strange new clouds, and this seamless arch ...the sky domed over and opaque, or weak and effeminate, pastel and thick, frosted, no longer deep. What was happening?

The sky is always clear in summer, if there is no smoke from a forest fire or thunderstorm, it is clear. I love this sky, my escape from the filthy world of the city, the idiocy of man and his greed and disconnection, how pure was she, before. How I do miss her. She was clear, a bell upturned, the sound of azure, hollow and deep, singing was she, a song in sight. Then the sickly artificial clouds increased, the streaked filth of man, asymmetrical and vile, the artist a buffoon of the lowest song, a blithering ass is he, this crude 'painter' who dips his brush in filth; these..."clouds"...so ugly and grotesque, so misshapen and hunched, borderless and shifting, lined and impossible...why are they here? I hate them. I soon understood, 80 percent of all the clouds in this broken sky, were artificial. The real sky, has no clouds in summer! Much less these odd mistaken blobs of masquerading filth. Each day they appear, the dry sky has no milk for them, they lack aqueous content and soon fall apart to deposit their dirty cargo of poison, here. I can taste something, a sort of coating in my mouth and my sense of taste is impeded, lessened and diminished by this unrequested..."addition."

My tongue is as rubber meat, always burned as is my wife's tongue, my throat feels half burned and my voice has sunk an octave. I will get oral cancer, throat cancer also and should I live long enough, Alzheimer's. This makes me sad, and angry. I am walking yet dead. I know with certainty, I will have to leave my precious land, leave my beautiful stream and allow it to be poisoned. I weep to know it. I also know the land will soon be dead and barren, this precious earth made sick and killed for an imbecile. This, the death of the more important, *the earth*, at the hands of a worthless, inferior, stupid parasite—the earth so beautiful and worthy, to die at the hands of a degenerate idiot—*this*—makes me more angry than any devil or mad man. For this, there is no mercy—None.

I live far from any humans, so I believe this is why in addition to the usual reported effects I experience also, unusual low lying effects, the poison is heavier than air and eventually sinks to land, apparently by design it is deposited in someplace unimportant and uninhabited: here. What was pristine and pure, is now being coated with industrial pollution and metals, likely some of nano-scale to read the patents, and those penetrate into the very cells themselves to poison—all living things. The plants, the trees, the frogs, the bees and owls. They are apparently blocking radiation that they themselves have surely allowed in with their idiocy and weaponizing of the world and its weather. I firmly believe VLF, ionospheric heaters and jet fuel with sulfur have destroyed the ozone which is now no longer blocking UVC. Note how they get it wrong in each and every case. Know it: Sadism is the least complex-adaptive strategy which exists. The strategy of the hopeless imbecile: man. Things are never improved to be crushed and dominated; the result, is always the same: Death. These are sub-stupid decisions. Observe:

One hears the jets at night, or, at a distance in the daytime. The target area must be a ways off, as it takes around a half of an hour to 45 minutes for it to reach me. I wait, and look at the sky to watch her succumb—to "The White." The White is her death, and disgrace.

Her heart of deepest blue long injured and bruised, they apply it again, and again. Over the hill it creeps, a thin slip of white haze slipping between. The jet was very loud, and the white is close to the earth. Look into the wound as it is rent, and watch to see a strange thing...look at what they do to her—look upon it, and know of pain. I cast my eye directly up into the sheet and block the sun with a fist, then see the dark patches, as a school of ugly fish wiggling across the sky, some dark refractive agent moving in an interference pattern, as waves being driven outward, a wriggling school of dark "fish" are concealed within the haze spreading across the sky. Soon the haze collects dirty clouds, the filth spreads and clots the day, now withheld beneath a man-made curtain of nucleated atmospheric solar obstruction. These days, the taste is most profound. Obviously, we are being poisoned. Collateral damage, perhaps? It is clear that variations of these tactics have already been perpetrated for decades. I am sure it is not personal, just poisonous. My wife and I are—alarmed.

The hair and water tests we performed came up with interesting results. Aluminum, barium, strontium and very high levels of molybdenum and rubidium and other metals in various concentrations. However there is no source of industrial pollution nearby. Molybdenum is worrisome. Aluminum, barium, strontium are known toxins, the effects of which I am aware. The contents in the main appear to be coal fly ash, from implication. How funny, a bit of irony! I work with a man named Ruggero Santilli, a very advanced physicist who has created functional intermediate fusion technology, discovered the correct hadronic structure of the neutron and many other things including a possible energy for resonant photons to stimulate the decay of nuclear waste (see paper within this volume). He is a true genius. I had sent our dear 'President' information concerning Santilli's technology which permits one to cheaply burn coal with no pollution at all, none! The very industrial toxin used to poison my beautiful stream, my water, my self, my wife and every perfect living creature I love, which are now as good as dead from this filthy sadism, is the exact toxin I told this 'president' and his brainless staff how to avoid creating! The particulate size creates the right refractive effects for solar radiation management, rain suppression by several means (and I hypothesize metallic constituents allow enhanced electromagnetic and microwave cloud manipulations) so they spray this (along with more costly [engineered nano-particulate constituents](#))—it is so cheap, why not? Oh, because it is more toxic than the soil can stand and will kill the earth itself, that is why not! Now I have been given an order, a command from the filthy sky: Breathe, Pay, and Die: develop cancer, develop Alzheimer's and then, go seek treatment so you may pay the very system which has poisoned you. Do it! Breathe, Pay, and Die. So is this America!

I will offer you a proper alternative to that, soon.²⁴

²⁴ Medical practice:

Medical practice has been corrupted under the current system, where huge drug companies are themselves the government just as are other massive industries. Big Pharma is in control of research grants, distribution of 'credible' information and the creation of laws [see: *Future's Mirror*]. Do not blame your doctor, many are as close to heroes as you will find in actual life, and most are simply unaware. The education they receive indoctrinates them into a way of thinking, and they dismiss contrary evidence in most cases, as the system is rigged to convince them the evidence is not there. Some of them are so decent, they can even cure you with the broken tools they are offered. The entire of the system is not crooked, but a great deal is corrupt.

I have located approaches to pharmacology which are simply forbidden and have been falsely discredited as they are non toxic and cheap [see: Open Letter Regarding Cancer; Informational Magneucle; *Future's Mirror*]. I have found treatments for diseases including cancer, which have been suppressed and discredited [see: Open Letter Regarding Cancer; *Future's Mirror*]. Also, drugs which harm are very profitable [see: essay on A Possible Connection Between Drugs and Violence, and the Appendix in *Future's Mirror*]. Authoritative studies tout Statin drugs as health promoting. This is deadly and profitable crime [See: *Future's Mirror*, Appendix]. Note how Big Pharma is insulated from prosecution in those areas where its activities clearly indicate it is part of the MIC itself. Recall the exceptions in SEC. 1078. RESTRICTIONS ON THE USE OF HUMAN SUBJECTS FOR TESTING OF CHEMICAL OR BIOLOGICAL AGENTS:

"(b) EXCEPTIONS.—Subject to subsections (c), (d), and (e), the prohibition in subsection (a) does not apply to a test or experiment carried out for any of the following purposes: (1) Any peaceful purpose that is related to a medical, therapeutic, pharmaceutical, agricultural, industrial, or research activity."

How broad is that! Big Pharma is our government and it influences what is truth as accepted by the medical practitioners in the system and the public they treat, and what is suppressed and unavailable to doctors and the public at large. I will reserve information concerning the suppression of and re-derivation of a cure for many diseases including cancer [see Open Letter Regarding Cancer], information concerning new approaches to disease and pharmacology which have been suppressed and others that are directly applicable for later in this text [see *Future's Mirror*; Open Letter Regarding Cancer; Informational Magneucle].

I will now prove that this exact industrial toxin has been used to experiment upon and to poison Dan Diego and Los Angeles. This is America.

Science is often suppressed in America as I have discussed at length in previous work, "*Beyond the Veil: Deception, Truth and the Hidden Promise of Science*" written with Jeremy Dunning-Davies (Dunning-Davies and Norman, 2016). Further information is also available in this text. In this case, I had located a paper which appeared of excellent quality written by a scientist named Marvin Herndon. I looked into him. He was legitimate and highly able. All the toxic elements I had discovered in my own body and water were covered in his analysis. However, the paper was retracted. I read it closely and found no reason for said retraction. I wrote him. He was adamant, the paper was retracted to be suppressed, not for any scientific reason! No good reason was offered, it was simply removed with no scientific justification. Two other papers were quickly provided that were not retracted. I read and understood with confidence that he was right. We spoke by skype. He is not in any way deceptive, and simply wanted to discover what on earth was coming from the planes which were clearly altering the sky, and presumably his health as well. This is right and correct, good science. I read hundreds of science papers each month (please see the reference list for *Future's Mirror* within this text), Herndon is thorough, well educated and backs his analyses with different types of analyses. The confidence interval within limitations is in some cases as high as 99 percent! He is correct. The American people are being experimented upon as I can directly attest, and my wife and myself are just one small particular example. I will condense two of the papers here using quotations to assure accuracy, and you may understand the massive scope of the chemical poisoning which has long been and is now taking place here in America and I am quite sure, world wide.

Suppressed science likely due to 99 percent confidence interval revealing and proving a crime against humanity:

From: Evidence of Coal-Fly-Ash Toxic Chemical Geoengineering in the Troposphere: Consequences for Public Health, J. Marvin Herndon, 2015 International Journal of Environmental Research and Public Health (<http://nuclearplanet.com/ijerph-original.pdf>):

“Abstract: The widespread, intentional and increasingly frequent chemical emplacement in the troposphere has gone unidentified and unremarked in the scientific literature for years. The author presents evidence that toxic coal combustion fly ash is the most likely aerosolized particulate sprayed by tanker-jets for geoengineering, weather-modification and climate-modification purposes and describes some of the multifold consequences on public health. Two methods are employed: (1) Comparison of 8 elements analyzed in rainwater, leached from aerosolized particulates, with corresponding elements leached into water from coal fly ash in published laboratory experiments, and (2) Comparison of 14 elements analyzed in dust collected outdoors on a high-efficiency particulate air (HEPA) filter with corresponding elements analyzed in un-leached coal fly ash material. The results show: (1) the assemblage of elements in rainwater and in the corresponding experimental leachate are essentially identical. At a 99% confidence interval, they have identical means (T-test) and identical variances (F-test); and (2) the assemblage of elements in the HEPA dust and in the corresponding average un-leached coal fly ash are likewise essentially identical. The consequences on public health are profound, including exposure to a variety of toxic heavy metals, radioactive elements, and neurologically-implicated chemically mobile aluminum released by body moisture in situ after inhalation or through transdermal induction.

Keywords: geoengineering; coal fly ash; aerosol particulates; chemtrails; autism spectrum disorder (ASD); Alzheimer's disease; Parkinson's disease; attention deficit hyperactivity disorder (ADHD); neurological disorders; chemically mobile aluminum

In the spring of 2014, the author began to notice tanker-jets quite often producing white trails across the cloudless blue sky over San Diego, California. The aerosol spraying that was

happening with increasing frequency was a relatively new phenomenon there. The dry warm air above San Diego is not conducive to the formation of jet contrails, which are ice condensate. By November 2014 the tanker-jets were busy every day crisscrossing the sky spraying their aerial graffiti. In a matter of minutes, the aerosol trails exiting the tanker-jets would start to diffuse, eventually forming cirrus-like clouds that further diffuse to form a white haze that scattered sunlight, often occluding or dimming the sun. Aerosol spraying was occasionally so intense as to make the otherwise cloudless blue sky overcast, some areas of sky turning brownish. . . . The necessity for daily aerosol emplacement stems from the relatively low spraying-altitudes in the troposphere where mixing with air readily occurs bringing down the aerosolized particulates and exposing humanity and Earth's biota to the fine-grained substance.

With its normally limited natural cloud cover San Diego is ideal for observing tanker-jet dispersal of ultra-fine particulates. Because the city lacks heavy industries and their particulate pollution, it is an ideal environment to ascertain by rainwater measurement the nature of the specific particulates being sprayed which are leached by rainwater. The author personally collected rainwater samples for chemical analysis and compared those data to corresponding average values of experimental leachate chemical analyses [10], which as shown below provides a firm basis for identifying the particulate substance being emplaced as an aerosol in the troposphere as coal fly ash. Because of persistent spraying, rainwater devoid of spray contamination was not available.

For three months during a period of intense aerial spraying in 2011, an individual in Los Angeles, California captured and had analyzed outdoor air-borne particulates. The results were posted on the Internet [11]; subsequently the author obtained the analytical laboratory report. The requested analyses returned results for aluminum, barium and twelve trace elements. But the meaning of the data was not clear at the time. Comparison of those data with corresponding pre-leach average coal fly ash chemical analyses (Table 1), as shown below, further reinforces the correctness of identifying the particulate substance as coal fly ash that is being sprayed into the troposphere by tanker-jets for geoengineering.

Like a fingerprint, the 8-element ratios of the San Diego rainwater extract of the tropospheric-emplaced particulate matter match element-by-element the laboratory water extract of coal fly ash within the range of observations. Said another way, the tropospheric-emplaced matter has the same water-leach characteristics as coal fly ash for at least eight elements, which is indeed strong evidence of the identification of the aerosolized substance as coal fly ash. For any indicated element the difference between the rainwater extract and average experimental coal fly ash element extract is less than the differences observed between the element extracted experimentally from the various coal fly ash sources [10]. Without mass or volume totals, statistical treatment was somewhat limited. Nevertheless, at a 99% confidence interval, the assemblage of elements in the rainwater and in the corresponding experimental leachate have identical means (T-test) and identical variances (F-test). Furthermore, the 8-element "fingerprint" shown in Figure 3 is comprised of elements with different chemical properties and thus provides extremely strong validation of the hypothesis: Coal fly ash is most likely the aerosolized particulate sprayed in the troposphere by tanker-jets for geoengineering, weather-modification and climate-modification purposes."

From Further Evidence of Coal Fly Ash Utilization in Tropospheric Geoengineering: Implications on Human and Environmental Health by J. Marvin Herndon and Mark Whiteside 2017 (of the Florida Department of Health in Monroe County) DOI: 10.9734/JGEESI/2017/31417 Journal of Geography, Environment and Earth Science International, we read (see original article for embedded citations and laboratory techniques):

Abstract:

“We disclose a fourth independent line of evidence, based on the co-precipitation technique, pointing to coal fly ash as the material utilized in tropospheric geoengineering, and describe some of the adverse environmental and public health risks associated with its persistent application. During a snow storm, the fluffy snow traps geoengineering-aerosol-particulates and brings them down with the snow. The results of the ICP-MS analytical measurements of the snow-melt particulates we tested are consistent with three independent lines of evidence that coal fly ash is the main aerosolized particulate used for tropospheric geoengineering. Coal fly ash tropospheric geoengineering inhibits rainfall to change weather/climate which disrupts habitats, including arable habitats. Long periods of artificially induced drought can wreak economic disaster on farmers, and shift the delicate balance in nature, weakening natural defenses and giving a boost to aggressive pathogens. Coal fly ash when exposed to water or body fluids can release a host of toxic chemicals including neuro-toxic aluminum in a chemically mobile form and carcinogens such as arsenic, hexavalent chromium, and the radioactive elements, uranium, thorium and their daughter products. The only safe geoengineering is no geoengineering at all.

Fig. 2 shows the elemental analyses, normalized to barium, indicated by X's, of the solid matter brought down by the snow storm. The solid red lines indicate the ranges of the corresponding element ratios measured in 23 samples of European coal fly ash [21]. The blue lines indicate similar ranges for 12 American coal fly ash samples [22]. The variation in the ranges of the European and American coal fly ash result primarily as a consequence of different relative amounts of accessory elements that occur in coal. Variation also occurs as a result of different physical burner conditions. Note that the X's fall within or very near the ranges for the entire 22 element ratios determined from the evaporated snow-melt. This constitutes a preponderance of evidence that the snow had captured and brought down aerosolized coal fly ash.

Statistical treatment of the measured elemental ratios is inappropriate as the comparison is not being made to one related set of data but to a group of independent sets of potentially variable populations. Nevertheless, there are two other independent sets of data which lend confidence to the coal fly ash data interpretation. These are elemental analyses of dust collected with high-efficiency air filters run outdoors for periods of three months, indicated by up-facing triangles, and fibers found on grass after snow had melted, indicated by open circles [4,5]. Whereas these three independent data sets are compared directly with coal fly ash, there is yet another different type of comparison. Analytical measurements of element ratios in filtered rainwater, presumably leached from aerosolized coal fly ash, are compared with laboratory leachate data on coal fly ash [3,4]. Those results show that the aerosolized particulate matter has the same water-leach characteristics as coal fly ash.

The results of the analytical measurements of the snow-melt particulates, as described here are consistent with three independent lines of evidence that coal fly ash is the main aerosolized particulate. This is also consistent with the economics and logistics of near-daily, near-global tropospheric spraying. Coal fly ash is a major industrial waste product that in Western nations must be trapped and sequestered. As trapped it is composed of micron and submicron size grains. Coal-burning utilities possess the necessary production facilities for electrostatic trapping coal fly ash.

Furthermore, for utilization of tens of millions of tons per year, coal fly ash is much less costly than manufactured ultra-fine particulates. Moreover, it has desirable properties for weather/climate alteration. Coal fly ash retards the nucleation of rain not only by interfering with moisture droplet coagulation, but also by absorbing moisture. Sprayed into the troposphere, coal fly ash retards heat loss from the Earth and warms the atmosphere. As the typically dark ash settles on ice and snow it absorbs heat and changes the albedo. All of these properties suggest that one effect of the ongoing tropospheric geoengineering, whether intended or not, is to intensify the warming of the planet.

One major purpose of coal fly ash tropospheric geoengineering is to inhibit rainfall either to change weather/climate or to deliberately cripple an agricultural economy and inflict hardship and suffering [5]. Concerted tropospheric geoengineering with coal fly ash disrupts habitats, including habitats where humans have found arable conditions. Long periods of artificially induced drought can wreak economic disaster on farmers, and shift the delicate balance in nature, weakening natural defenses and giving a boost to aggressive pathogens, such as extreme-tolerant fungi. Added to soil coal fly ash can alter the pH and release readily leached toxins such as aluminum in a chemically mobile form which is detrimental to many plants and animals, including humans [24]. Coal fly ash is an unnatural product which when exposed to water or body fluids can release a host of toxic chemicals including aluminum in a chemically mobile form. Aluminum is associated with and implicated in human neurological diseases, such as Autism Spectrum Disorders, Alzheimer's, Parkinson's and Attention Deficit/Hyperactivity Disorder [25-29]. Aluminum is similarly involved in neurological disorders of bees [30], rats [31], rabbits [32] and presumably other creatures. Aluminum is also thought to decrease male fertility [33]. Yet aluminum is but one of a number of toxic heavy-metal elements contained in coal fly ash that can be extracted by water or by body moisture; these include, for example, carcinogens such as arsenic, hexavalent chromium, and the radioactive elements, uranium, thorium and their daughter products.

Evidence indicates that coal fly ash has been being sprayed into the troposphere for at least 15 years, and, because the covert nature of the operation, there have been virtually no public health and environmental health investigations in the scientific literature, a situation the authors believe the scientific community should no longer ignore. Some guidance, however, is available from extensive studies [34] of pollution particles $\leq 2.5\mu$ across, approximately the same particle size range of aerosolized coal fly ash [35]. Pollution particles in that size range (PM2.5) from epidemiological studies are associated with: Alzheimer's disease [36,37], lung cancer [38], risk for stroke [39], risk for cardiovascular disease [40], lung inflammation and diabetes [41], reduced renal function in older males [42], morbidity and premature mortality [43-45], decreased male fertility [46], low birth weight [47], onset of asthma [48], and increased hospital admissions [49]."

Please understand the importance of what I have just shown you:

IT IS NOW PROVEN TO A 99 % CONFIDENCE INTERVAL THAT THE CITIES OF SAN DIEGO AND LOS ANGELES HAVE BEEN ILLEGALLY EXPERIMENTED UPON AND THEIR POPULATIONS POISONED BY THE US GOVERNMENT.

Reader, please do closely examine the following:

<http://nuclearplanet.com/ijerph-original.pdf>

<http://nuclearplanet.com/mw1.pdf>

<http://nuclearplanet.com/indjsrt.pdf>

<http://nuclearplanet.com/2173.pdf>

<http://nuclearplanet.com/frontiers1.pdf>

You may understand it:

My water, the delicate running stream from which I drink was tested and it contains aluminum, barium and strontium. My water is poisoned. The rain from the clouds above, each tender drop so clear and round, contains barium 14.8 ugl, strontium 14.8, vanadium .4 and aluminum 106. Pure rain water, has been poisoned. They have corrupted the most precious of all things, and within each of your cells, *now*, this instant, the particles reside, waiting to sicken you. Parkinson's, pigmented neural tissue and aluminum, look it up, the substantia nigra, Parkinson's; Alzheimer's, look it up, not the fake studies recently cooked up to normalize Alzheimer's and aluminum. Please read these:

Bondi SC. Prolonged exposure to low levels of aluminum leads to changes associated with brain aging and neurodegeneration. *Toxicol.* 2014;315:1-7. 26.

Good PF, Olanow CW, Perl DP. Neuromelanin-containing neurons of the substantia nigra accumulate iron and aluminum in parkinson's disease: A lamina study. *Brain Research.* 1992;593:343-346.

Prasunpriya N. Aluminum: Impacts and disease. *Environ. Res.* 2002;82:101-115.

Rondeau V, Jacqmin-Gadda H, Ciommenges D, Helmer C, Dartigues JF. Aluminium and silica in drinking water and the risk of alzheimer's disease or cognitive decline: Findings from 15-year follow-up of the paquid cohort. *Am. J. Epidemiol.* 2009; 169:489-496.

Yokel RA, Rhineheimer SS, Sharma P, Elmore D, McNamara PJ. Entry, half-life and desferrioxamine-accelerated clearance of brain aluminum after a single al-26 exposure. *Toxicol. Sci.* 2001;64:77

Aluminium oxide nanoparticles induce mitochondrial-mediated oxidative stress and alter the expression of antioxidant enzymes in human mesenchymal stem cells. Ali A. Alshatwi, Periasamy Vaiyapuri Subbarayan, E. Ramesh, Amal A. Al-Hazzani, Mohammed A. Alsaif & Abdulrahman A. Alwarthan *Food Additives & Contaminants: Part A* Vol. 30 , Iss. 1,2013
<http://www.tandfonline.com/doi/abs/10.1080/19440049.2012.729160>

Size-Dependent Neurotoxicity of Aluminum Oxide Particles: a Comparison Between Nano- and Micrometer Size on the Basis of Mitochondrial Oxidative Damage. Mirshafa A Nazari M Jahani D Shaki F *Biol Trace Elem Res.* 2017 Aug 30. doi: 10.1007/s12011-017-1142-8.
<https://www.ncbi.nlm.nih.gov/pubmed/28856594>

During the height of the spraying the toxins were thick. A pan of fresh water left out for a week developed 309 ugl aluminum, 73.6 barium, .4 molybdenum, 173 strontium, 1.4 vanadium—**FROM THE AIR!** My air and water are poisoned, the rain is poisoned. What does that mean? It means that in a few years the SOIL WILL BE DEAD! We will have no way to grow our food, and we will die.^Ω Do you see that? The food will be GONE! Life extinguished, the soil poisoned. Do you hear me?

Have they poisoned my crops, and my medicine as well? My food is watered with this rain. The cannabis which I use to maintain my health instead of consuming costly toxic drugs, just as George Washington grew and Jefferson, as the first drug laws in the Virginia colonies mandated one to grow, as Henry Ford grew, as Queen Victoria used for her ailments throughout her life, as was used to support the race through famine, *benevolent cannabis*, see *Future's Mirror*, please—have they poisoned my *food and crops*, water, air *and my medicine as well?* Tests are ordered. I suspect my numb tongue indicates the airborne presence of the carcinogenic and neurodegenerative agent: Silica.^Δ Coal Fly Ash has radioactive constituents of Thorium and Uranium. Cannabis absorbs radiation. Tests are ordered.

Within each of our cells, nanoparticulates have now invaded, the mitochondria within white blood cells are affected, and the brain.^δ All life is now impregnated with aluminum. Do you understand me?^β

^Ω Or become dependent upon deeply unhealthy genetically modified crops and foods, forever chasing after money to pay for them, now unable to provide for ourselves. Those such as myself who grow their own food and live independently of the greed system, would become dependent money addicts, or, perrish. I do *not* chase money, each second is my own! One would be controled, life no longer of value...a man no longer a free man, but a draft animal.

^Δ <http://www.sciencedirect.com/science/article/pii/S1021949814000131>
https://www.researchgate.net/publication/262341676_Uptake_of_Silica_Nanoparticles_Neurotoxicity_and_Alzheimer-like_Pathology_in_Human_SK-N-SH_and_Mouse_Neuro2a_Neuroblastoma_Cells
<https://www.sciencedaily.com/releases/2007/04/070417154357.htm>
<https://www.ncbi.nlm.nih.gov/pubmed/21526751>

^δ <https://www.ncbi.nlm.nih.gov/pubmed/28856594>

Reader please note: new tests have in fact revealed that my cannabis *has* been heavily poisoned with the very constituents I had feared.^Ξ The complete test results are to be found within this text. Know it: the US government has poisoned its citizens, including this author. Test your rain water for Aluminum, Strontium and Barium. Then you may ascertain if you have been poisoned.

Aluminum and strontium affect bone health as well! From:

Strontium overload and toxicity: impact on renal osteodystrophy. Nephrol Dial Transplant. 2002;17 Suppl 2:30-4. Cohen-Solal M
<https://www.ncbi.nlm.nih.gov/pubmed/11904356>

“Studies have demonstrated an association between the accumulation of strontium in bone and the presence of osteomalacia. . . . Studies indicated that the accumulation of metals in bone might be synergistic. Aluminium bone content was shown to be higher when both aluminium and strontium were administered compared with when only strontium was given.”

Strontium substitutes for calcium in bone.

I believe that: Multiple myeloma, cancers of the bone and aluminum related bone diseases are assured. Aluminum is a cumulative toxin. From:

Aluminium and bone disease in chronic renal failure
Malluche HH Nephrol Dial Transplant. 2002;17 Suppl 2:21-4.
<https://www.ncbi.nlm.nih.gov/pubmed/11904354>

“Because aluminium is sequestered in bone for long periods, its toxic effects are cumulative. As a result, even intermittent or low-dose use of aluminium-based phosphate binders adds to the total load of this toxin in the bone; thus, aluminium use is inadvisable, even for a 'rescue indication'.”

All that in combination with the above mentioned neurodegenerative, carcinogenic and other effects. Now you know what awaits you if there are industrial pollutants and nanoparticulates including aluminum and strontium in the rain, food, air, or medicine!

A note to the tanker pilots who have poisoned me:

I have curtailed this short section. I first wrote this section in order to vent my hatred and contempt for you filthy vermin, and offer you a visit so I could snap your spineless necks. My family, hates you. You have betrayed the race itself, betrayed the human race and the earth:

*You—have **betrayed life**.*

You are that which is weakest and have earned my contempt: So weak, flaccid, plaint, submissive, obedient, soft and yielding, worthless, degenerate and inferior are you, that you are not any but the foulest dung-crust of humanity, sheer and utter submissive vermin filth.

Rather than spell that out, I will simply offer you this:

You have a choice. You can find the strength of a human being rather than that of a filthy biting parasite, and decide to stop accepting money as a limp whore for killing the tender earth and its peoples. You are also human, unbelievable as it is for me to admit it, I must for it is true. Please, find your spine,

<http://www.tandfonline.com/doi/abs/10.1080/19440049.2012.729160>

^β An aside: A curious thought occurs. Think of aluminum once placed in the microwave. I wonder in a speculative way how much less microwave energy would be required now to ignite a double-hot fire, or exterminate living things? This video of scientists discussing geoenvironment and aluminum is worth a look: <https://www.youtube.com/watch?v=FeTaejg18g>

^Ξ <https://squa62.wixsite.com/answer>

find a man's courage rather than exterminate the biome as instructed by an idiot. Cease to be a limp masochist and understand, you are human and exist for only one reason: *to tend the earth and keep her safe, burgeoning and fertile, to protect her* instead of poison and kill her as a sub-idiot, for if you do not listen to me and change, you will not only kill all beautiful things, but yourself as well. Please do not betray life itself, and follow the imbecile who commands you. Fly the plane nose down into the dirt and be done with your wretched life if you simply must kill things. If you are so ill you must exterminate someone and exercise that drive do that...or far better still stop all this, walk away as a man and expose the secrets. Be a man instead of a parasitic tick. Rise up and change, advance rather than sink—become human.

It was difficult for me to address you with this high level of respect, for I hate you. Listen to me, for I am above you in all ways. I am your better. You simply lack the intelligence to make your own decisions, which is why you crave and follow orders. Fine then, pliant one. I will shape you as you require. Listen to me. I am true authority, the only authority—*truth*. Obey me, learn and rise up. Walk away from the plane, and expose everything. Then, I will forgive you.

UVC on ground

Next, I will alert you to a situation so dire and dread, it indicates impending extinction for the entire of all life. This information is deeply suppressed and you simply are not to know of it. We as humans, have approximately 7 years or so to live, as does each precious creature and plant upon the gracious sphere we call earth. The death drive is so very stupid! The sulfates which now encircle the globe from jet exhaust destroy ozone, the plasma weapons and ionospheric devices by some special little coincidence destroy the ozone as well, and gosh what a coincidental surprise, the VLF does exactly the same thing. If the ozone is indeed destroyed as I speculate, a dread fact being deeply covered up as I suppose, then we should have a provable result: If these assertions are true, there may be UVC on ground. Ultra Violet Light Type C wavelength radiation is deadly, and in fact is associated with extinctions—the ending all life on earth! If you wanted to kill every living thing, geological history says how. UVC. This would be the result of the highest stupidity conceivable, utter idiocy. The solution is quite simple, naturally. If there were UVC on ground, I could solve the problem in a week with my team. Clearly then, if found we can also state, this is demonstration of intention.

A NASA scientist appears to have broken ranks, and defied the secrecy. He has in fact found indication of UVC on ground, and this, indicates the end of life on earth. Shhhh. A little secret I found for you. We are about to die, unless we act. How will we die? In unbelievable pain, consumed with cancers. We will rot from within and be consumed by cancer and die in the most wretched suffering conceivable, as will every precious thing which lives. It is necessary to stop this instantly. If the hideous toxic spraying which is obviously blocking the UVC is stopped, the entire planet will be sterilized. The earth is a toxic Junkie. This is caused by a series of decisions all of which end with no ozone. We may understand that this is therefore by definition: *intentional*. We must act or understand, the fate of ourselves, our children and all of life: wretched pain we may rest assured our children will suffer, agony and suffering of cancers will be theirs and all the world's, as they die. Read the following with care!

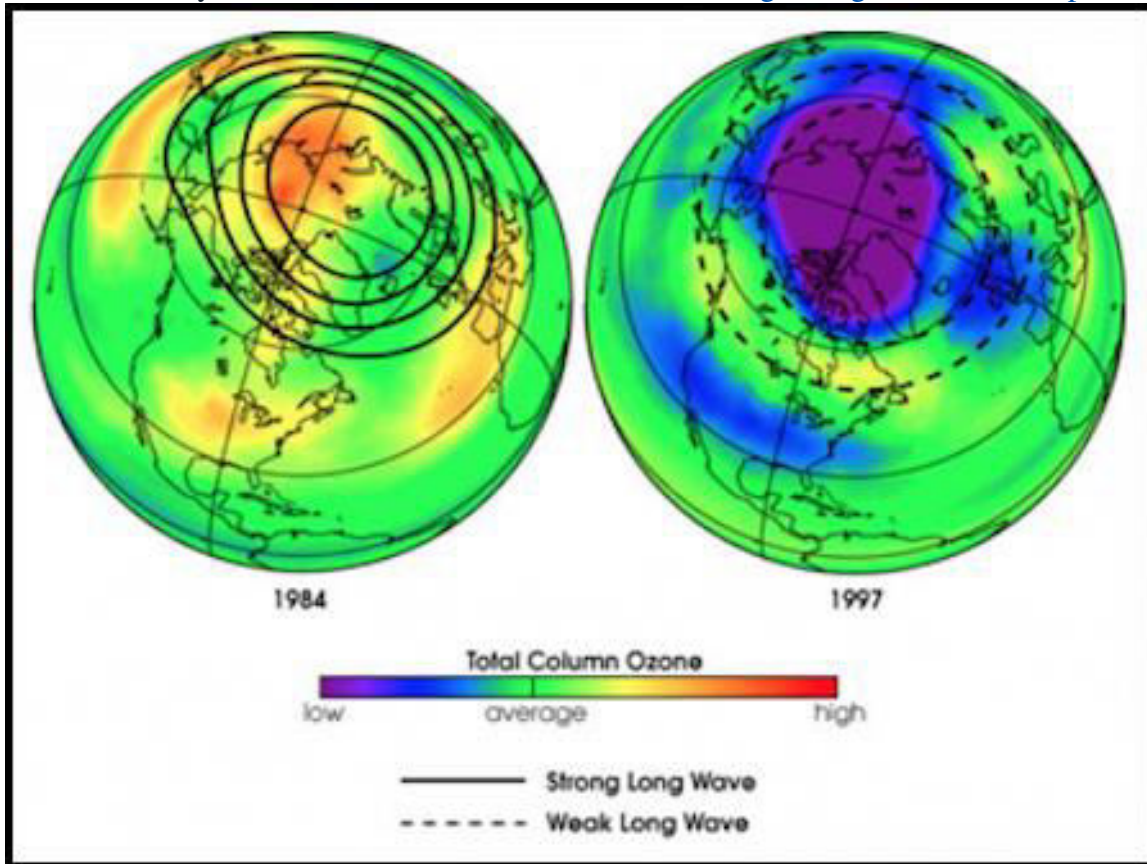
The following is used with permission from Geoengineering Watch and Dane Wigington.

[Dane Wigington](#)

GeoengineeringWatch.org

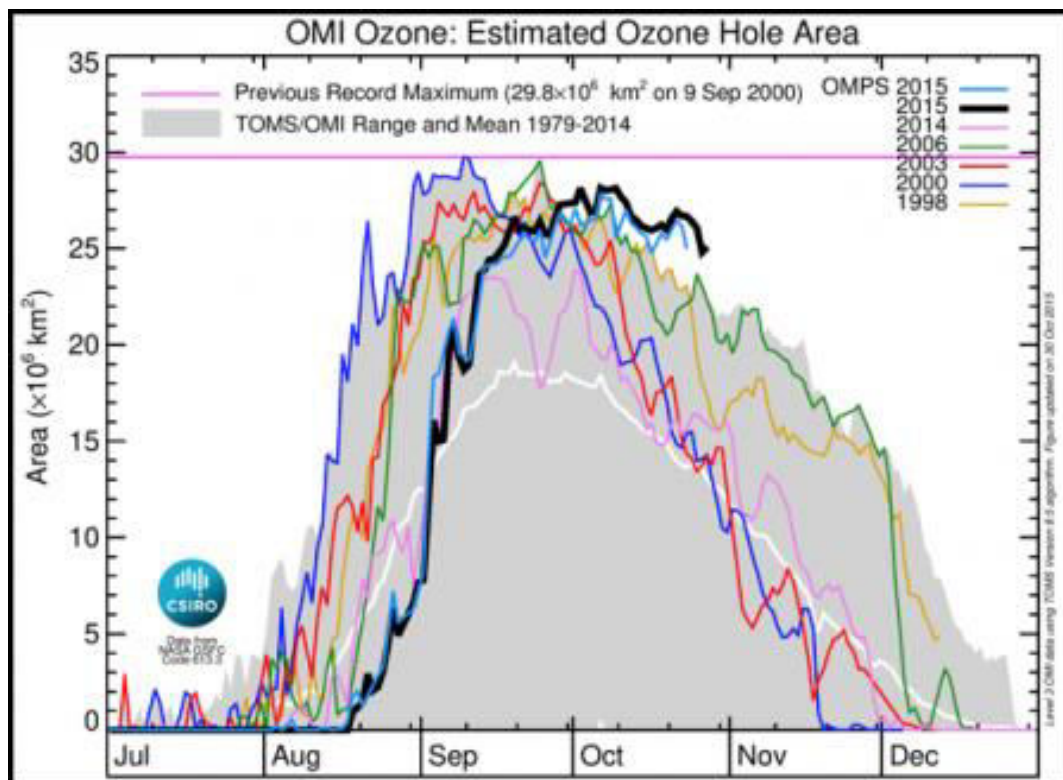
A former NASA aerospace avionics engineer has been working directly with GeoengineeringWatch (with state of the art UV metering equipment supplied by GeoengineeringWatch.org) to measure the [dangerously high UV radiation](#) that is now bombarding the surface of our planet. This NASA engineer's very dire report is below. Those who are most aware of their surroundings have long since taken note of the growing intensity of the sun. This change is [not due to increased solar activity](#), rather, it is a dire symptom of Earth's rapidly [disintegrating ozone layer](#). Though there are many anthropogenic factors negatively impacting our essential ozone layer, ongoing covert climate engineering programs are by far the

most damaging. Many mainstream and "official sources" falsely claim that the southern hemisphere ozone hole is "recovering" (in order to pacify populations), however, [front-line data does not support the "ozone recovery" official narrative](#). Since the start of this century [UV levels comparable to the surface of Mars](#) have been recorded. The same sources of false "ozone layer recovery" data don't even mention the [massive and growing northern hemisphere ozone hole](#).



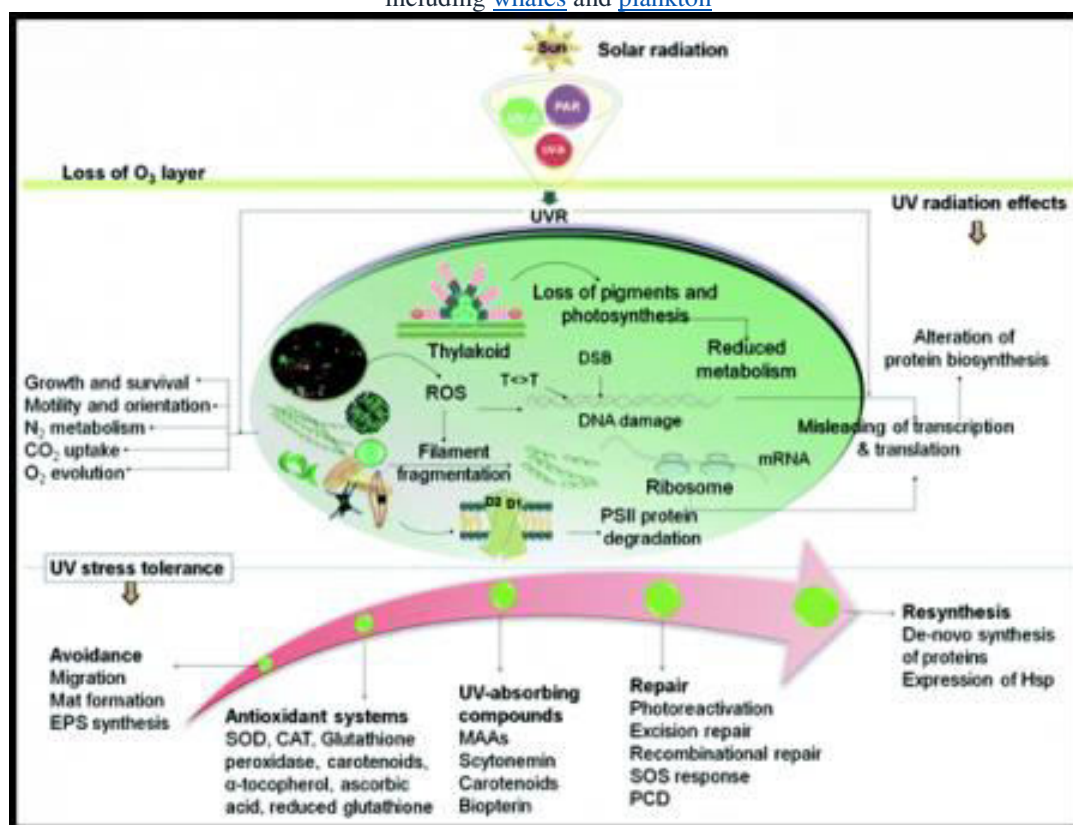
As the 20th century drew to a close, the rapidly increasing scale of northern hemisphere ozone depletion was becoming very apparent.

More recent data has been increasingly difficult to gain from monitoring sources, the [firing of scientists involved in ozone depletion research](#) is one major reason why. [GeoengineeringWatch.org](#) has long since been measuring and [monitoring the rising UV radiation levels](#)



The expanse of the ozone depleted regions continues to expand.

The impacts of the extreme UV radiation exposure is [very evident on the sun exposed side of many tree species and specimens](#). All life forms that are exposed to the increasingly excessive UV radiation are being affected, including [whales](#) and [plankton](#)



Effects of solar UV radiation on biomolecules, cellular components and physiological responses.
(Diagram credit: Royal Society of Chemistry)

If the ozone layer completely collapses, all exposed life forms will collapse with it. Climate engineering is decimating the ozone layer, all of Earth's life support systems are at risk. The very

dire report below (addressing extreme UV radiation dangers) was assembled for GeoengineeringWatch.org by a retired NASA aerospace avionics engineer. Out of concern for his safety, we must keep this individual anonymous at this time.

Critical Mass In Human Understanding

Sound simple? It's not.

Critical Mass in Human Understanding is defined by this author as:

The percentage of World population required before a new direction is selected and used to correct a situation or program that has become a threat to Earth's biosphere and/or human habitation.

In further writing, the author will use "Critical Mass" for short.

When dealing with various Critical Mass issues, it is first necessary to separate them into two basic categories – those are: Military and Civilian.

The reason behind the two categories is simple, the Military will require extensive resources to affect Critical Mass, whereas Civilian – being less of a 'threat between countries' category, will not have as severe draconian governmental oversight.

Earth's Climate is the most critical issue, and affects all populations throughout the planet. While discussions concerning Weather Modification Programs are taking place to affect a 'controlled response' to adverse climate conditions, the subject is being discussed as though GeoEngineering has not yet been implemented.

Quite the opposite is true, and it is the adverse effects from this GeoEngineering that have exacerbated the climatology changes due to industrialized waste, fossil fuel consumption, and out of control consumerism.

At present, it is estimated that a majority percentage of Earth's population remain unaware of current Global Weather Modification Programs and GeoEngineering.

In order that Humanity, and our biosphere to survive – this must change.

Scientists are unwilling to comment on current weather patterns and the severe increase in global temperatures for various reasons – the 2 biggest reasons: money and fear. When a scientist offers an opinion, he is often asked to "back up his opinion with facts" – which would require a 'course of study' – and no-one is likely to offer financial support to establish such a program study – the net result; the scientist keeps their opinion silent, and out of print. The scientist is usually employed by a university or corporation with funding – in the case of universities it is grant money, for corporations it is considered research – and only research in the area designated by that corporation, if there are deviations in the course of study, grant money is withdrawn, and the corporation will discontinue the scientist's employment'.

Remember the great NASA layoff in the mid 90's? Over 15,000 employees were laid off. Some of those employees actually knew what they were doing – some were 'dead weight'. The author was at NASA Ames/Dryden when this was announced by Sam Golden – it truly was a dark day for NASA. Federal Grant money for several programs were discontinued.

Not knowing where money will come from to pay basic necessities like food, shelter, and clothing – this can change your attitude from good to bad – in a heartbeat. Let's add on a family to

support – the world standard of 2 ½ children, and wife. Tell me what you are likely to do when your hunger overcomes reason? Not too hard to consider seeing that your children come first.

The author has personal experience with those engineers and scientists that were laid off, with IQ's over 180 – their end resolve is that once again employed they will **never** offer any opinion that may show the slightest deviation from their program structure – period.

Here is the **end result** from that position of Scientific Non-Involvement:

By the time Critical Mass of Human Understanding to the Negative Effects of Global Weather Modification Programs (GEOENGINEERING) is reached, the Earth's Upper Ozone Layer will be destroyed.

With no Protective Ozone Radiation Shield, All Life on Earth will die.

Quite a conundrum. At what point does the scientist and engineer become involved before total anthropogenic global climate destruction occurs?

The answer is simple – they won't. Those scientists and engineers will suffer with the rest of us until one day, they look up and finally see the truth – and then it's all over.

I won't say this is true of all our science partners, the author is but one of many, who understands the criticality of damage done by GeoEngineering and Global Weather Modification Programs – and for the last 4 years this author has studied the upper Ozone Layer and determined that the final destruction of this layer will be the 'last straw' before human extinction.

Given the current exponential rate of decay, 2025 is the year that plants and animals – including humans, will begin to die in massive numbers. It will be a slow, painful death – for all life and humanity.

This is not to say that irreparable damage has not already occurred. Destruction of our Biosphere did not occur overnight – it is the direct result of countless anthropogenic activities including 70 years of GeoEngineering and Weather Modification Programs.

The author is an Aerospace Avionics Engineer who worked at NASA on High Altitude Research Aircraft in the mid 90's, specifically to study the Ozone Layer.

This aerospace engineer goes on to say:

"The scientists involved with the projects understood how critical the upper Ozone Layer is, especially when it is only about a quarter of an inch thick, and very fragile. They knew then the Ozone Layer was being destroyed by industrial waste, especially the Chlorofluorocarbons, that was the great R12 refrigerant ordeal, and now by Global Weather Modification Programs. The top scientists in the world do not understand the Earth's Atmospheric model, I don't care how many computer programs there are, it's too complex, and besides, someone must write the computer program to begin with that does understand the complex atmospheric interactions, and that person doesn't exist. Sadly, most of the scientists that did have a clue are no longer alive – which leaves humanity in dire straits. Personally, I don't think Humanity has a chance of surviving past 2025, and with what is coming, I'm not looking forward to starvation and disease."

Immediate attention to our Biosphere is required NOW. GeoEngineering and Global Weather Modification Programs must STOP.

How about this statement for achieving Critical Mass:

What will you do today, given that tomorrow the Ozone Layer is no more?

Would you stand in front of a government building – demanding resolve?

Would you consume fewer fossil fuel products?

Would you try to bring awareness of this to others?

Would you quit your job in science or engineering and apply your knowledge to a methodology and action that will heal our dying planet?

With the Military – do you understand what an “Unlawful Order” really is?

Investigate, then do the right thing – protect our planet. The author is a Veteran, “...against all enemies, foreign and domestic.” – this current situation qualifies as both – pay attention to your oath.

To the banking cartels: *Do you want a planet left after your raping of resources? Think your underground bunkers will keep you safe?*

No, they won't.

Who will maintain the Nuclear Reactors when you do go underground to avoid extreme UV radiation? There are over 400 active reactors at present – the nuclear radiation from unattended reactor meltdown will prevent mankind from inhabiting the earth surface for more than 10,000 years – and that's only the 'half-life' – so think again about all that money you're making from already depleted resources, famine, drought, floods, insurance claims – it's going to effect you, just like everyone else.

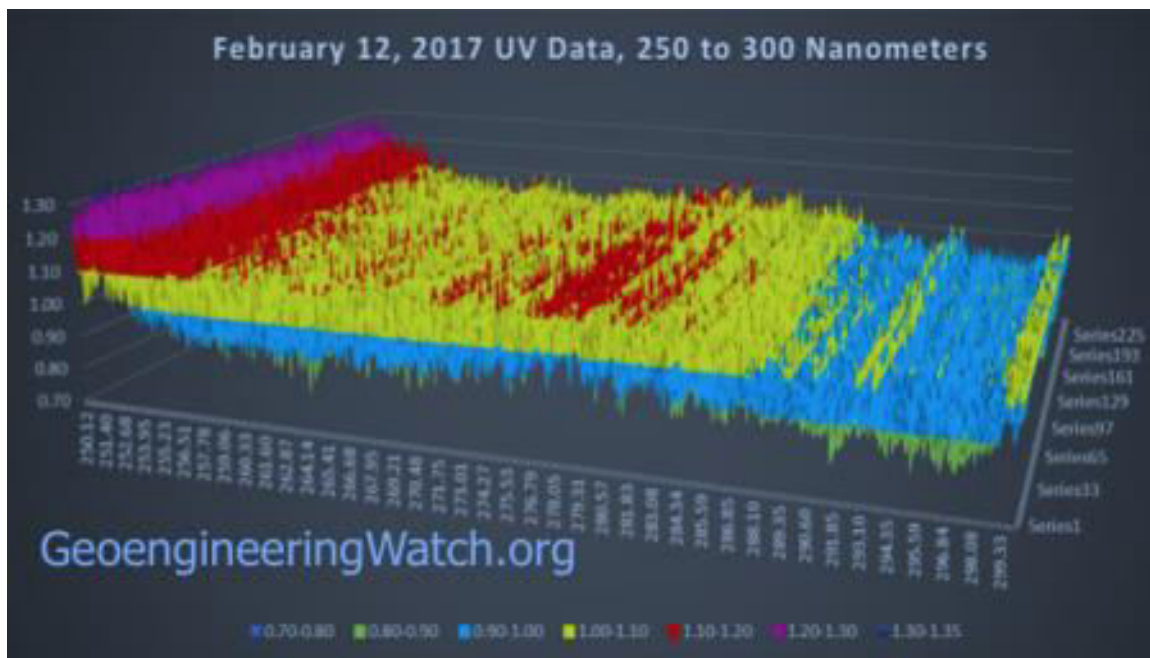
The old statement: “a word to the wise is sufficient” – can you remove yourself from GREED long enough to see the truth?

*This paper is your “**Shot across the Bow**”*

*The first step is easy: **Stop ALL Geoengineering and Global Weather Modification Programs.***

If you get to the first step – the second step will be much easier: work together to understand our planet BEFORE applying measures that will damage it further.

In the meantime, the author will continue with upper Ozone Layer research – and will continue to sound the alarm of human extinction.



The above chart shows UV “C” radiation from 250 to 300 Nanometers. The data in RED, in the center of the chart, is radiation that is highly damaging to Human DNA/RNA, and should not be detected on the Earth surface. With a healthy Ozone Layer this radiation would be stopped at 100,000 feet.

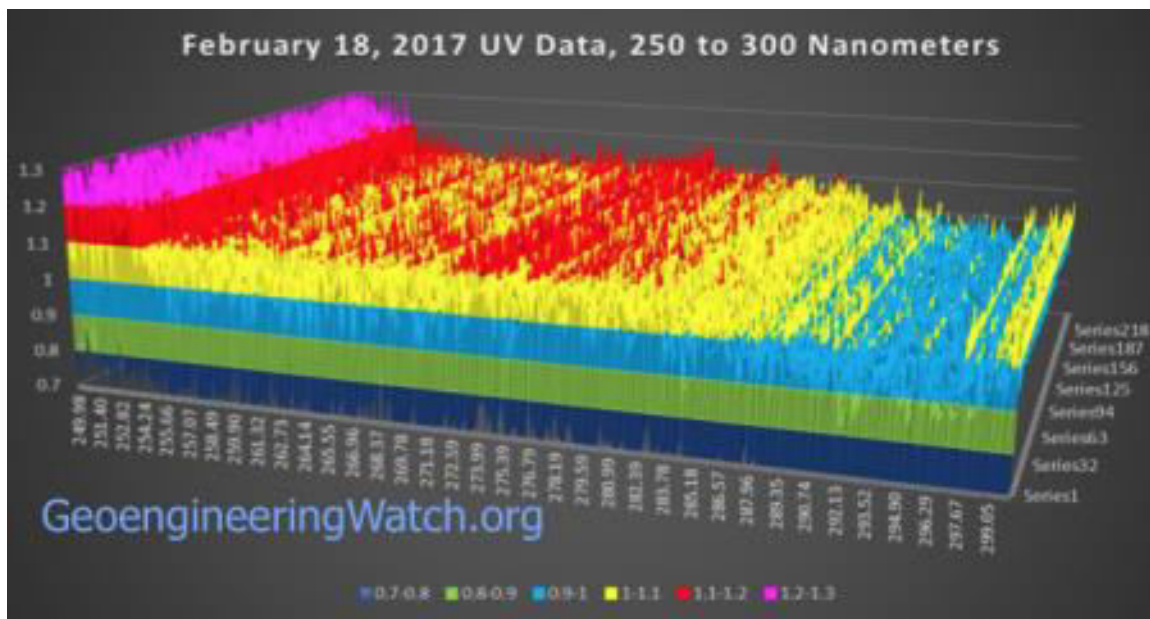
The destruction of our upper Ozone Layer has progressed for many years. When physicians and various publications advise in higher SPF ratings for sun-screen each year, you can be sure our atmosphere is changing in an extremely negative way. Damage to our trees from UV “B” radiation is being becoming rapidly worse all over the world. Now with UV “C” radiation levels reaching 4.5% (of something that should be ZERO percent) – plan on more birth defects, more cancers, more plant and animal extinctions. This level of radiation is extremely damaging, it kills life forms.

Earth’s upper Ozone Layer is under assault, and is being destroyed by GEOENGINEERING, industrial waste products, and emissions from the oil industry. If immediate cessation of these activities does not happen, total collapse of the Ozone Layer will occur by 2025. The UV levels are already exponentially higher than last year – 2017 will be another record.

*If and when total collapse occurs, so will all life on planet Earth. **STOP GEOENGINEERING!!!!**
STOP **INDUSTRIAL** **WASTE!!!!***

With no further damage to our Ozone Layer, it is estimated that the repair of our Ozone Layer will require a very extended time frame at best. Total ozone layer recovery may be impossible due to Strontium 90 in the upper atmosphere. There is no known method of removing this contamination which is a leftover from atomic bomb testing.

The data presented in this post was gathered on 02/12/2017 using an ILT950UV Spectral Radiometer, at an altitude of 191 feet, in the Central Valley of California. The calibration date of the Radiometer is 12/16/2016 and traceable to NIST.



As data is gathered, and presented, UV readings can and are escalating to even higher levels. Take note of the center portion of this graph, when it doubles from measurements of 1.2 uWatts/cm² – we will have great difficulty growing crops – food shortage will become the predominant global issue, and damage to our DNA/RNA will not be recoverable. All life forms will suffer.

Due to the increase of energy around the 270 nm region in only 1 week's time, I found it necessary to write the following paper “Critical Mass in Human Understanding” .

Our most sincere gratitude to this courageous former NASA avionics engineer for his efforts on revealing this extremely dire data. GeoengineeringWatch.org will continue to work directly with him and will continue to post updated information as rapidly as we can. All of us are needed on the critical battle to wake the masses, [make your voice heard](#) while it can still make a difference. [DW](#)

Is this geoengineering and spraying, this microwave manipulation of clouds and weather which is killing us all with toxins and carcinogenic wave forms really such a big deal? Is this insignificant or is it in fact worldwide?

Again, used with permission of Geoengineering Watch (below):

What experiments are governments around the world carrying out in our skies without the knowledge and consent of populations?



NASA satellite image of the California coastline (radio frequency / microwave transmission manipulation of aerosolized cloud cover / marine layer).



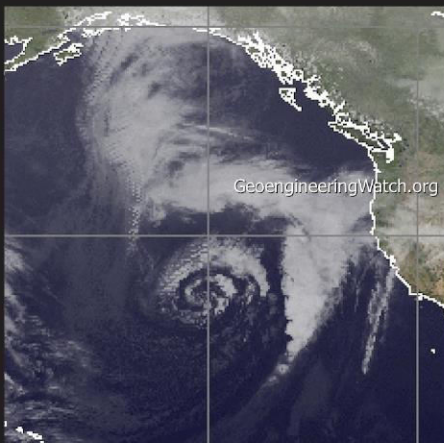
NASA image taken of African west coast (radio frequency / microwave transmission manipulation).



An aircraft dispersion of climate engineering particulates is manipulated with radio frequency / microwave transmissions. Palm Springs, California. Photo credit: Ron Morgan



An existing atmospheric saturation of climate engineering particles is manipulated with radio frequency / microwave transmissions. Port Washington, New York. Photo credit: Matt Jared.



NOAA satellite image, radio frequency / microwave transmission manipulation of Eastern Pacific storm system



NASA satellite image, radio frequency / microwave transmission manipulated square cloud formation

**How unnatural do our skies need to become
before populations begin to look up and investigate?**

Yet more damning excerpts from the 750 page US Senate / Federal Weather modification document are below:

CHAPTER 10

INTERNATIONAL ASPECTS OF WEATHER MODIFICATION

(By Lois McHugh, Foreign Affairs Analyst, Foreign Affairs and National Defense Division Congressional Research Service)

INTRODUCTION

Recent years have seen increased international awareness of the potential benefits and possible **risks of weather modification technology** and increased international efforts to control such activities. The major efforts of the international community in this area are to encourage and maintain the high level of cooperation which currently exists in weather reporting and research and to insure that man's new abilities will be used for peaceful purposes rather than as **weapons of war**. This two sided approach is evident in the activities of the United States which has strongly encouraged and supported cooperative efforts to gain knowledge of the weather and at the same time has endeavored to restrict the use of this knowledge to peaceful purposes through the adoption of international agreements.

Weather research and reporting has long been one of the areas having the closest international cooperation. Because of the global nature of weather systems, making the prediction of weather in one area dependent on reported weather in other parts of the world, cooperation and exchange of information and techniques of weather research and reporting are necessities. **This cooperation transcends ideological differences and hostilities.**

International cooperation in the exchange of ideas on and methods of weather modification has also been extensive. Many well attended

CHAPTER 12

ECONOMIC ASPECTS OF WEATHER MODIFICATION

(By Warren Viessman, Jr., Senior Specialist in Engineering and Public Works, Congressional Research Service)

INTRODUCTION

Several weather modification processes have economic implications of great significance. Many sectors of agriculture, industry, and commerce may reap benefits or sustain losses as a result of shifts from historic weather trends. The difficulty is that until the technology is more highly developed and control systems perfected to permit reliable predictions of outcomes, attempts to quantify benefits and costs will, in many cases, be more academic than practical.

The Commission also recommended that greater use be made of statisticians in analyzing Government-sponsored research in weather modification and that statistics be given greater emphasis in related academic programs for meteorologists. In addition, there is a need to assess more fully the social and economic implications of weather modification experimentation, and all agencies engaged in weather modification attempts should give attention to the social implications.

With regard to the legal system, the Commission recommended that the Federal Government be empowered by appropriate legislation to: (a) delay or halt all activities—public or private—in actual or potential conflict with weather and climate modification programs of the Federal Government; (b) immunize Federal agents, grantees, and contractors engaged in weather and climate modification activities from State and local government interference; and (c) provide to Federal grantees and contractors indemnification or other protection against liability to the public for damages caused by Federal programs of weather and climate modification.

The yellow highlighted statements on the document above are of particular interest. In summary, this US Senate document calls for the complete cooperation with NORMALLY ADVERSARIAL NATIONS due to cross border ramifications from climate engineering. All major powers are colluding, collaborating and cooperating in regard to the ongoing climate engineering crimes and coverup.



Nyon, Switzerland. Photo credit: Romain Silvestre



Livingston County, Michigan. Photo credit: Lyn Connolly



Knoxville, Tennessee. Photo credit: Marla Stair-Wood



Palmdale, California. Photo credit: Petie Cepeda

Climate modification and microwave transmissions

Populations are blindly accepting and ignoring the dangerous radio frequency / microwave transmission towers that are increasingly being constructed throughout our country (and the world). If you thought transmission towers were only for cell phone signal repeating, this is not the case.



Radio frequency / microwave transmission towers in Redding, California. Photo credit: Jovyde Wigington



The massively powerful HAARP ionosphere heater transmission facility in Alaska.



Sea based X-band radio frequency / microwave transmission platform.



SBX transmission platform interior transmitter.



This NASA satellite image taken off the west coast of Africa reveals extensive microwave transmission manipulation.



This NASA satellite image clearly reveals many overlapping radio frequency / microwave transmissions in aerosolized cloud formations.

The ongoing atmospheric aerosol spraying and microwave / radio frequency transmissions are wreaking havoc with the Earth's life support systems and human health.

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I do hope you understand it is not only possible, it is already happening, apparently over the majority of NATO skies and elsewhere. It is happening to you. Is there a rise in Autism where you are, or perhaps one in both Asthma and Alzheimer's such as in England? Is there a rise in all three? Please note conjunct effects where both calcium ion removal and its effects on tight junction barriers and cell membranes are fostered via the proliferation of microwaves from many sources, *and* those of the pathologies and illnesses stemming from particulates such as coal fly ash or metallic nano-particulates converge. Where two such causal influences converge upon one pathology, that pathology is all but

assured. I do hope you can see that this all stems from the governments we have trusted. In America the situation is very plain, and I will assert: this government is not of the constitution, and not of the people—it is a fascist oligarchy, governed through a secret state that is sadistic and mad! Soon the predictable outcome, the only one which could possibly come of this situation is assured. Our lives, the very earth itself and the lives of our children mean nothing to these forces, which have already proven themselves powerful and deceptive beyond any trust we have given them, and now, we are about to lose the soil and our food, the air and the water, the entire of our existence will be owned or extinguished from this neglect. Why? They have “weaponized and own the weather”! Only this matters to them. We and this precious earth mean nothing, only this prize, this need for “full spectrum dominance” is of value. We mean nothing!

Read the government document: Weather as a Force Multiplier: Owning the Weather in 2025. The attitude in the first sentence tells us much:

“In 2025, US aerospace forces can “own the weather” by capitalizing on emerging technologies and focusing development of those technologies to war-fighting applications. Such a capability offers the war fighter tools to shape the battlespace in ways never before possible. It provides opportunities to impact operations across the full spectrum of conflict and is pertinent to all possible futures.”

Do you see it, the Earth, our precious home is a “battlespace” dominated to own “all possible futures” ... do you see it? Remember, there is no distinction between finance and capitol, industry and government, and now all is insulated by secrecy just as the CIA. Our government is poisoning the earth, and poisoning us all. Please note how Raytheon, the weapons manufacturer, is now in charge of NOAAs long term forecasting,²⁵ and now, the weather bureau, NOAA, is under secrecy orders.

Secrecy, from the weather bureau and NOAA. Note the seamless connection between industry, capitol, military and government, all bound together as one as the handle of a fasces, an ancient roman ax, the symbol of fascism. This is a group, an oligarchy. The fascist oligarchy. Do you see it? Please my friend, do you see? Our government is unconstitutional, and has no concern for us or any good thing, they are sadists. We must resist, and not lay down before these abuses. We can not permit them to poison the earth, we can not accept their mad plans to “own” the beautiful earth as some perverted abused “battlespace”...the earth is tender, they take her fields and soil, burn and mutilate her, acidify her oceans and threaten to poison the envelope of the atmosphere, and us beneath it, poisoned with industrial filth and radiation. Alzheimer’s is not just part of old age! These things are long under way. We have but two choices: Submit to this and sacrifice our precious earth and future, our children and our own future may simply be laid to uncaring waste, simply sit back and allow it all to be poisoned as we look at the trivialities of sports and politics, and perish—or not. They are spraying us all with industrial pollution, spraying this precious tender world—do you know another we might skip over to? I do not! Please, you must care, we must not permit this—we must act! You must hear my voice and understand these things I speak of, we must act! I beg you to listen...for soon we will be lost, this is my dream before the dream of a future: **for you to hear**, so we might have a future—for there will be none should you stand by. I am nothing, *nothing*, a voice, a single human voice, a torn soul to have found what I see, for I see— this!

²⁵ <https://www.weather.gov/people/lammers-michelle>
http://www.raytheon.com/news/feature/environmental-intelligence.html?utm_source=social&utm_medium=TWITTER&utm_content=354381688&Category
http://www.raytheon.com/news/feature/advanced_weather_forecasting.html

Samson's Heart

Through the deepest forest Samson did walk, his stride turning the earth beneath him. Each leg broad as old oak of a hundred years, arms as trunks of maple. Eyes of sharp splintered flint, he was the most terrible force which had brought right unto this world, since its dim age of earliest foreboding.

Unto the good was his heart stitched, for not his locks as was told in fable, but within his beating breast was his strength. Each stroke of blood was a tender hold upon all good things, and did guide him. So were his eye and arm, but his heart brought forth into the world. This day he did hear and taste upon the wind, a note of suffering and dread, shrill and pleading, a heart did call to him, upon the last slipping wind he did hear it, before the sun had set. Samson did refuse his rest, and began to turn the earth to his designs, his legs folding the miles beneath each step, the earth spinning as a mad top held beneath his turning will.

The cries did come closer and closer to his open ear, until it was filled with the notes of suffering. And he did behold it: the trap set into the tender bone and flesh of a pup, young and sweet, this was a child of the earth...now suffering and mad...tugging upon the tender break, the jaws of the trap snapped shut as cruelty. That which was sweet beyond the heart of man, was suffering and dying. Samson saw, and felt, for his heart was that of the world. His shout peeled time awake, and the sun snapped into the sky, to see what had torn her eyes open even through the vacuum of space. And the sun did look down upon righteousness. The pup tucked under his massive arm, and left upon the tender bank to heal, for he did know the trapper, and found him sleepy and dreaming, enjoying his pleasure, thinking of the suffering he had set...dreaming. Samson did but move his mighty arm, and the shack which did shelter was cast down into broken sticks...and the morsel of cruelty exposed to eyes of broken flint. Samson did speak, and so the trees did recoil and hide from the weight of sound:

“Filth! You will now feed that which is tender and sweet!”

And the trapper did reply: “Stop, for the prince will not suffer this!” And Samson did reach down and pinch the head off the sickly neck, until the thing was limp and dead. And upon fire was it then made warm and tender. Unto the mother wolf he did bring the cooked meat, now pulled apart in the suckling mouth, her pups nourished upon that which did cause suffering. Samson was of the good.

The dawn did stretch her bashful fingers of first rose over the valley, and Samson did wake. Unto the wind he did turn his ear and listen. From the moist earth he did hear a suffering groan, the first mother of time was speaking to him, and he did listen. His legs did turn time and bend her unto his will, quickly passing to the wounded spot, he found a strange tower shafted into the moist soil of hope. The Earth was herself speaking to his kind heart, and spilled her suffering into his ear. “Oh Samson, do not let him place this shaft of steel within my tender side, so he may extract my blood and poison me...please Samson, please help me.” And Samson did feel what she felt, and his fury was more terrible than any raging flame, now snapping as tongues of hatred for the rape he did behold. For the Earth is more precious than any woman no matter how sweet, and in turn the rage of Samson is rightly potent beyond blood. Samson did reach his godly arm down, and pluck the steel rod from her tender side, to hurl it fifty miles into the distant sea. Unto a grateful Earth the works of Samson do but serve, and in kindness and deep feeling, is his wisdom.

The sea did then know him, and saw his strength and kind heart of good, and so did call out to him. “Samson, I am suffering under a terrible man, he is building a wretched weapon within my delicate floor, so tender and sandy, that which sustains you with food; and my beauty, he poisons my very reefs and sweet hope. I am dying, oh please do save me from him!” Samson heard her cries, and felt what suffering she did feel. His madness burst beyond all hate, and his voice became a wind of power and revenge, the waves themselves parted to escape the sound of his hatred, and he did see upon the exposed flesh beneath her waves, the wretched weapon. A grid of cuts and designs, built to boil her waters away,

and kill her. He reached down and gathered the ugly design within his fist, and crushed it into broken dust, flinging the tatters a thousand miles above into space.

He spoke as a volcano roars, so all corners of time and space became one question...more terrible than hate itself:

“Who has done these things?”

It began. A tower was being built in a far off land, a place distant, but close it seemed, the tower soon leapt a thousand miles up into the sky, and upon its uppermost peak was an unreachable dwelling. Down into the world of tender earth its prince did look, his covetous eyes and furtive gaze, weak and cloying, slipping in between the lighted places, watching and wondering, how he might disgrace the enemies his greed had won him, and own all he beheld. Who had taken his traps? Who had broken his oil well? Who had stopped his rape of the sea, so deeply pleasurable? Who had stopped his profit? And amongst the enemies of the prince, he knew—was Samson. Now high upon his unreachable tower, he would remove this force, and take all he desired.

“Better this...than any weak peace.” So did he think. For neither Samson nor any other, could reach him.

Over the treetops, the forest sky was perfect and bright, deep and rising, as azure sea and wind might paint a dream cast above, warm and ice blue, a cradle holds the Sun’s awakening then gently turns her aloft, now spilling down from an arching sky. Sacred, and perfect is the world of this earth.

From the high tower strange birds did take flight, and spread over the perfect sky a grey frost of ugly cloud. The blue circumference of bounty now cheapened and disgraced; a tattered grey cloth wipes across the ruined sky and withholds the sun...and so— all things, are less. Down into the tender places, a snow of pain did fall. For the enemies of the prince might feel this thing, and yield to him; yes, who does not suffer and die, under a dim sky? So clever was he.

And Samson did see it, and knew what he saw. But he was not clever, and no matter his rage, he could not climb the mount, designed itself to be unreachable.

Day after day, the perfect world, was dying. The bees made sick and strange, the snow was killing them, and so, crops would not grow. The children did become ill and weak, sickly and wheezing, broken and dying were they...young, hopeless and frail. The trees did become dull and brown, the bark peeling away, the heart of the shafted wood drinking poison drops of pain, now dead, and ripe for the flame...but double hot and mean.

Each leaf and branch was but his flesh, the sky his breath and its spending within her winds, and so, his heart became withered and brown, suffering as all he saw. And Samson’s heart did burst. “Oh world of pain and death, do you feel no thing, do you know no kindness but death and rule of greed?...the tender bounty of sweetest hope is nothing but a niche to cut and spoil, you who infect all things with ugly pain and a leering greedy snow of death, do you feel nothing? Oh world of suffering, do you not feel my heart, as it bursts?” For Samson’s strength was but that of his heart.

And unto the winds and grasses, plants and the forest bees and winged creatures, the branches and leaves of dawn and dusk and their tender fold, all of this world did hear him, and know... it was THEY who were his strength.

Unto the wind the birds did take flight, the insects and bees, the wasps and sweet travelers of deepest earth did emerge to find wind. Upon the back of the wind, each wing did find hold, and climb...the pumping of Samson’s burst heart, lifting each to strength, and upon the back of birds the forest did climb up within the tower’s hold.

Into the sunken eyes of greed, the stings did bind, and wasps lit within each wound, stinging, gladly spending the last of life...rising as a wind of death, which does cleanse the broken places, and so, does love them. And each forest creature did rise up and do what Samson could not, for he was not strong enough to fight this enemy, now broken and worn...for his heart had burst—shattered—and lit within them, and thus, his strength found wing. That which is too large for one, might be struck dead, by all.

And down into the valley, they did take the meat, and cook it upon licking flame until it was warm. For his teeth were but shattered, and into the suckling mouth, the flesh did pull apart and nourish him, he who was tender with feeling.

—For Samson's strength, was his heart.

Chapter four:

Before I distill in an intuitive way the basic external toxic factors which have poisoned the potential of man and assess them, I will share with you the obstacle which is most likely to defeat the entire of every hope...without a whimper.

The Zombie Apocalypse

Before any insidious plan for profit or control, before any sadistic general or military imbecile with intelligence sufficient to kill us can attempt it, before the poison industrial spray or the radiation the government emits or permits to pierce the ozone harm us...the enemy was already present. I have seen them.

I live entirely cut off from the modern world which I abandoned some 12 years past. I do not live out there. I had heard rumors of geoengineering and spraying, but thought little of it. It sounded half paranoid, and I love to think about other things, to walk and devise new solutions and analyses to problems, and indeed, this is how I spend my days. I read papers and write them, find approaches to diseases and psychology problems, physics as well is very interesting; only the small details and depth are of worth to me, the trivial is a sort of shallow death, the general strokes are boring and lack the answers...I love the depths of a problem, observation of detail is all. I write books and read them, and walk 12 miles a day...walk under the incredible blue sky. My property is a hundred acre kingdom. Ideas simply fall from the heavens, and this is a worthy life, at last...or it was. The world out there is of no interest to me, and I avoid it entirely. Why go? The noise and stink, the cars, the entire affair is injurious, base and disgusting. It reminds me of my life as a musician, and I hated that. So, once every few years, perhaps when I break a tooth, I leave the property. When I last went out, I saw it. Grids of filthy clouds coming from high flying jets.

They were there beneath the lined grid of sprayed clouds, the people, staring glassy eyed and fixed, the radio in the restaurant playing Billy Joel, vapid and soulless, thin and infantile—and they were there, milling about, unaware and strange, all the people, and no one saw it...thousands of miles of horrendous abuse, so bloody frightening and weird to look up and see, and they just spoke of the weather, and the bad music kept playing. Trump began to speak, he was campaigning, a TV was in the corner, vomiting up irritation and trash...I had to leave. Please note I do not and did not vote for either party, and that I am aware Obama was the CIA's very best friend. Under no circumstance do I vote for the Beast, not the democratic or republican incarnation of greed... neither! Upon returning home to my beautiful blue sky and silence, I was relieved to rest and put ice on the tooth. Thank god that ugliness is not here, and only over the city. Only the insane live in cities. I was selfish and stupid. Then it happened.

They began to spray here, upon my home and my land, so far from all the festering concrete and noisy stink, here, where the sky is pristine and deep blue, here, where the water is pure and does not come from a cruddy rusting pipe, this is NOT the disgusting city, this is a *good* place, worthy and right, healthy— not wretched and false, and they are doing it ...here!

Once we see and can not escape, we have no choice but to believe.

How could they have stood it? They saw, and did not see...how? It was impossible! The sky, it is a ruined wreck filled with pollution and strange artificial clouds that are simply never there, and never have been...and the taste, can't they taste the inside of their own mouths? The coating of the tongue and loss of taste. I do not understand, just to see it, so damn ugly, just to see the sky molested and sickened, made thick with opaque pollution, now one can not see into her in any way, she is thick and pastel, the wrong color—or grey! Are they mad, dead, made of wax?

I had to do it, I had to go out again and visit a friend. I do so hate it. This time, the scene was compelling and surreal, clouds as fish scales, microwave perturbation patterns, weird grids broadcast

into false clouds, unbelievable ribbons of roiling puckered 'cloud' spread as searsucker across what should have been a pure blue sky, now mad with every artificial intrusion and strangeness. Indescribable to see the proliferation of mad tangle, artificial geometry and wrinkled falsehood. My God, so unbelievably ugly! No one mentioned. They talked of the weather, the heat, the task at hand. In the mall lot, the contractions of a dying world split open and convulse above, mad and putrid is the farce of ugliness and poison, spreading, retreating and sinking...writhing in necrotic convolutions, the 'blue' sky is no longer blue, but a filthy roiling grey.

The music in the restaurant is thin and sickly, disco trash from the 70s. My food seemed like twice too much, and I understood that I would do better to eat in the car. They are everywhere, as wax and wood. I am afraid of them. Tottering, staring and blinking...they do not appear conscious, or living. They appear inanimate, fixed and unreachable. I must contact them, reach into their hearts and squeeze them to beating. If they do not hear me we will all be trapped here and poisoned. I am afraid of them, for I believe they are deaf. It will soon be too late. Please tell me you are not one of them, made of wood and wax, walking, toddling about, asking of sports and weather as the world dies. Do not be part of the Zombie Apocalypse. How quiet are the dead, how obedient and content.

I am afraid most of this contentment.

We may now distill the various conglomerate poisons of the disease, and in teasing them apart find the sure pathway toward their undoing. That pathway will have external aspects which are directly actionable in order to address the current threatening situation, and, internal aspects addressing a new construction of human personality and alteration of the basis fault within man, both of which will be articulated in the later part of this work.

The basic observable external dynamic constituents upon which the manifest fixated pathology (sadism, war and misery) are dependent to maintain structure and functioning are as follows:

1. Patriotism and reactions.
2. Money and competition.
3. Tradition, nation and race.
4. Secrecy.
5. Politics and the meat puppet theatre.
6. Man's separation from and domination of nature: the parasite and the host.
7. Authority.

1. Patriotism and reactions.

The basic way in which the human lot has been so easily manipulated to create its own division and misery beneath the will of overarching sadistic patriarchy sublimated into the state, is that of nationalism, patriotism, and the reactions those garner. As one looks back through history with an eye for the details, one quickly sees a pattern, that of false reasons created to support and enter conflicts. The profits of 'patriotism.' Think of Smedley Butler's *War is a Racket*. Here my friend, does this sound familiar? Here are the first few sentences of the book,²⁶ and information about the general:

²⁶ https://archive.org/stream/WarIsARacket/WarIsARacket_djvu.txt

Smedley Darlington Butler

- Born: West Chester, Pa., July 30, 1881
- Educated: Haverford School
- Married: Ethel C. Peters, of Philadelphia, June 30, 1905
- Awarded two congressional medals of honor:
 1. capture of Vera Cruz, Mexico, 1914
 2. capture of Ft. Riviere, Haiti, 1917
- Distinguished service medal, 1919
- Major General - United States Marine Corps
- Retired Oct. 1, 1931
- On leave of absence to act as
director of Dept. of Safety, Philadelphia, 1932
- Lecturer— 1930's
- Republican Candidate for Senate, 1932
- Died at Naval Hospital, Philadelphia, June 21, 1940
- For more information about Major General Butler,
contact the United States Marine Corps.

CHAPTER ONE

War Is A Racket

“WAR is a racket. It always has been.

It is possibly the oldest, easily the most profitable, surely the most vicious. It is the only one international in scope. It is the only one in which the profits are reckoned in dollars and the losses in lives.

A racket is best described, I believe, as something that is not what it seems to the majority of the people. Only a small "inside" group knows what it is about. It is conducted for the benefit of the very few, at the expense of the very many. Out of war a few people make huge fortunes.

. . .

How many of these war millionaires shouldered a rifle? How many of them dug a trench? How many of them knew what it meant to go hungry in a rat-infested dug-out? How many of them

spent sleepless, frightened nights, ducking shells and shrapnel and machine gun bullets? How many of them parried a bayonet thrust of an enemy? How many of them were wounded or killed in battle?

Out of war nations acquire additional territory, if they are victorious. They just take it. This newly acquired territory promptly is exploited by the few - the selfsame few who wrung dollars out of blood in the war. The general public shoulders the bill.

And what is this bill?

This bill renders a horrible accounting. Newly placed gravestones. Mangled bodies. Shattered minds. Broken hearts and homes. Economic instability. Depression and all its attendant miseries. Back-breaking taxation for generations and generations.

For a great many years, as a soldier, I had a suspicion that war was a racket; not until I retired to civil life did I fully realize it. Now that I see the international war clouds gathering, as they are today, I must face it and speak out."

Think of the sinking of The Maine, a fake which rallied the nation to bloody conflict, the Gulf of Tonkin incident which did the same, Pearl Harbor which sacrificed so many thousands of American lives and the fine base commander, Kimmel, who rightly saw it coming and was denied anti-aircraft guns, left in the dark and then blamed for the tragedy and deaths he tried to prevent. (The point I am trying to make is not related to any moral judgement concerning if or if not the US should or should not have entered WW2, but rather, that we entered the war by way of creating reactions in public opinion using a bloody deception where thousands of American lives were permitted to be killed and a good commander scapegoated, his career and the truth sacrificed. America loves the false flag attack, and thinks nothing of sacrificing its own citizens). Do not believe! War is for power and MONEY! The state, our state is itself the unchecked secret union of finance and military industry. Nothing has changed, only the scale. More from General Butler:

"Who Makes The Profits?

The World War, rather our brief participation in it, has cost the United States some \$52,000,000,000. Figure it out. That means \$400 to every American man, woman, and child. And we haven't paid the debt yet. We are paying it, our children will pay it, and our children's children probably still will be paying the cost of that war.

The normal profits of a business concern in the United States are six, eight, ten, and sometimes twelve percent. But war-time profits -- ah! that is another matter -- twenty, sixty, one hundred, three hundred, and even eighteen hundred per cent -- the sky is the limit. All that traffic will bear. Uncle Sam has the money. Let's get it.

Of course, it isn't put that crudely in war time. It is dressed into speeches about patriotism, love of country, and "we must all put our shoulders to the wheel," but the profits jump and leap and skyrocket -- and are safely pocketed. Let's just take a few examples:

Take our friends the du Ponts, the powder people -- didn't one of them testify before a Senate committee recently that their powder won the war? Or saved the world for democracy? Or something? How did they do in the war? They were a patriotic corporation. Well, the average earnings of the du Ponts for the period 1910 to 1914 were \$6,000,000 a year. It wasn't much, but the du Ponts managed to get along on it. Now let's look at their average yearly profit during the war years, 1914 to 1918. Fifty-eight million dollars a year profit we find! Nearly ten times that of normal times, and the profits of normal times were pretty good. An increase in profits of more than 950 percent.

Take one of our little steel companies that patriotically shunted aside the making of rails and girders and bridges to manufacture war materials. Well, their 1910-1914 yearly earnings averaged \$6,000,000. Then came the war. And, like loyal citizens, Bethlehem Steel promptly turned to munitions making. Did their profits jump -- or did they let Uncle Sam in for a bargain? Well, their 1914-1918 average was \$49,000,000 a year!

Or, let's take United States Steel. The normal earnings during the five-year period prior to the war were \$105,000,000 a year. Not bad. Then along came the war and up went the profits. The average yearly profit for the period 1914-1918 was \$240,000,000. Not bad."

Do you imagine Raytheon is doing well to have weaponized our weather for Uncle Sam? The use of coal fly ash seems to make profit directly out of poison for big industry, does it not?

Now, let me tell you a story and we may see if the US government in its current non-republican fascist incarnation is truthful and cares for us, or will simply cash us in for money. Those in the military such as General Butler know the truth first hand. Let us see another such case. I will introduce you to one of the teachers in my life for whom I have the greatest respect. I will tell you an old story.

Patriotism: the poison draught—Vietnam and the veteran's lesson.

Vietnam was a cooking pot for the distillation of 'unpleasant,' meaning utterly damaging and hideous truth about our government. I have several friends who were in Vietnam. From my personal observation, the effect is uniform: if you have killed many, and understood the 'reason' you have killed, you then understand the real meaning of patriotism as it was taught to me. Here is the lesson as I received it. The manipulation of reflex patriotism, is impossible once one has learned. The above mentioned trick of *manufactured threat and reaction* leading to patriotic fever and willing participation in war, may be understood and not obeyed. I will present the story and analysis.

Lessons of War: the Shotgun

I have had a very American upbringing when it comes to war. I have seen it from both sides. Do you know a man who soldiered in Vietnam? If they were somewhat up in the command chain, they can teach one a lot. A great deal. My father began my training in war. He suspected I was a 'peacenik' and decided to teach me a lesson. One must react! The lesson of supreme error. "Get over here!" "Yes, Pop?" "Come here!" I walk over. He takes his index and second fingers, and pokes me hard in the chest, then again, then again, then again. It hurts, and I am becoming mad. He sees: "Good! See that!! Mad are you? Right! Now learn it, if someone attacks you, you raise a fist and give it to them, you hurt them! Get it? Patriotism, is standing up when you are pushed!" I almost gave him a fist to the head. I understood his lesson quite well. Pop was from WW2. He did not understand, Kimmel was set up.

My next teacher had a different lesson. I was fresh out of college. Ray was the youngest commander in the Asian theatre in Vietnam. He understood differently. His idea of patriotism is akin to my own: disobedience before immoral authority. Doubt of the government and knowledge that patriotic reflex reaction is deadly, and stupid. He taught me this as follows. Vietnam has different lessons:

"Richard, I have been in war and killed over 30 men I can count, and the Claymores I set, who knows. I killed a lot of people." He picks up a rifle, sights in a cat and fires across the field. A terrible shriek and the creature is mad in pain, dying. He puts the rifle down and lights his pipe. "Guns kill things. Look at that cat. The government wants one thing, Richard, to get you riled up over nothing so you will kill as you are told, and bring in the money for them. What I know, what I have seen... it's true. So much death. So wrong..." Then he grabs the shotgun, a 12 gauge. "Guns are for idiots, Rich. IDIOTS. This shotgun, see that? What the fuck is that damn thing good for? Guess?" "I don't know Ray, what?" "This, and nothing else."

He takes a big chip of opium from a large red poppy and puts the chip into the pipe, filled with very strong pot. Just like my father, he says: "Come here." I obey. He is a large man, over 6 foot and 220 pounds. He fills his chest with the dope, opium and pot, thick as thick can be is this smoke, yellow and nearly solid, roiling and thick. Cracks the shotgun open, and fills the tube with drugs. "Richard, when you kill like an idiot for the lying government, you deserve something in return, a good smoke." The shotgun barrel is pressed to my lips, and he breathes out, exhales with great force, and all that opium and dope is pounded into my chest. I begin to cough, twice my lung capacity in yellow smoke forced into my chest! I was high, for the next 6 hours! "Richard, know it, that is what a shotgun is good for...not one damn thing but that." He spoke: "Never believe. Never react. The words you hear...are lies. Lies so vile, only a cloud of the most potent dope on earth, could ever hide the pain they cause." This, is the lesson of the Vietnam war.

So you can see: to know the fact that you have killed so many, and also to know without question that it was for no damn reason at all (but money and politics), leads to crushing guilt, guilt so choking one requires potent drugs, narcotics at all times, just to stand the pain of living. To kill is to know: it is *your fault!* It is, you know. Utterly. Who did it? *You.* Truth. Following orders? Who followed them? *You.* See that? Never demonstrate reflex patriotism, or you are fodder for the money ghouls and sadist generals, who will spend your blood and soul, for their own end\$. Never, obey authority. Never trust it. Read closely, and assess each case in turn. Money, is war. Truth, is found not in headlines you are given, never, but between many pages of detailed history and analysis! Never believe authority. Your life means nothing, only what it wants has worth and meaning, domination of one sort or another, and money. Look deeply. Generals, arms manufacturers, lobbies and oil men create policy, much under the veil of unconstitutional secrecy, and these forces decide our fate. Sadists whisper in private rooms, and decide what is truth and what is to be our lot. I suggest: Disobey!

2. Money and competition.

This poison is deep within the marrow of the United States and its people are profoundly and deeply afflicted, it has infected each moment in our daily public lives and our private lives as well. Through its effects the very mechanism of ruin is brought within the essence of all things, so as to prevent any hope of escape or advancement along the course of human evolution. Only guilt is more potent or devastating in its effects as a spiritual toxin. The very mechanism of human ascension, the physics and neuroscience of human intraconnectivity within a single system itself, is prevented by this particular necrotic draught of poison. The family is destroyed by it, the individual is degenerated as it encourages his predatory and covetous appetites, and each man is set against the next in order to secure this limited and precious thing: Money. Please recall if you will, like most of the best of the devil's tricks, it does not exist! What a lovely trick! Ahh...the human race is so hopelessly stupid, they simply can not get enough of the stuff. You may see what it has done to my family. In society at large and business the effect is the same, Zero Sum Gain. As will become clear later in this work, the exact opposite of the effect of competition and monetary influence are the basis of our ability to change the probability outcomes of our race and personal selves. Luck, the ability to influence probability outcomes, is not probability at all but a specific physical mechanism we may enhance, and that very mechanism is defeated by competition. Compete, and be defeated. The problems of our age are too large for any one man to solve, and, the demonstrable physics of manifest probability and mentation's effects upon it which increase with the addition of each subject, both have the same message. Cooperative dynamics are the essence of a future. Competition assures we must and always will fail.

He who competes has lost.

Competition, Cooperation, and the Death of the American Family

I was raised in a modern American family. My father had learned the lessons necessary to succeed, and taught me the fact: competition. Our family was the distillation of the principle made manifest. Like my mother, my father was a fierce competitor and a serious tennis player. In tennis, the word "love" means but one thing—weakness, and so it was in our family. The rules of the game had always been made perfectly clear, I was to tread the same path as my father, and, was expected to receive no help...none. This was clear. There would be no exceptions. Although my father was a multimillionaire, past my education, he would not provide any assistance in any aspect of my life. I was to leave home at 18. Period. Was I "man enough" to do it alone, to start a business and succeed with no help? I was assured that this lonely victory would be all the sweeter for having accomplished it, alone, but it was not so. After years of constant strain and struggle, the toll was too much, working harder and harder until my health finally failed me, and both my body and my mind were near collapse. I absolutely never requested help under any circumstance, but sick of body and spirit... I called them. My father had a degree in psychology from Stanford, surely he and my mother would help, now that I was so sick. My mental health all but spent, I requested \$20 for a psychiatrist to combat the ever increasing illness. "Would you please help," I asked. How foolish! Whop! 40 love! "Really son? You need money for a shrink? I am not so impressed with that. Talk to you later." What did I expect?—To hand the opponent such a thing! Of course I would be beaten down for exposing such weakness! How foolish of me. My mother and father had accomplished much in their lives, and now, have a mountain of my father's money to show for it. When my father died, I bought champagne. I have since become a psychologist.

After I moved to the woods and cut myself off from the competitive world of American society, I met another sort of person, raised in another sort of way. A city dweller all my life, now I found myself amongst an entirely different type of human, with a different ethos: the cooperative. My neighbors are named the Burrs, and they are utterly different than any family I have ever known. When they have troubles, as they have little money, they must help each other. How strange! I will repeat: they HELP each other! Isn't that unbelievable? My mom will die secure in the arms of the best medical care money can buy...alone, just as my father did.

Yesterday, the news came, the Burr family patriarch, Alvin Burr, had passed away. Today I went to their property, sat, and looked. I beheld a man's life's work, the field reclaimed with such severe effort, laid flat and right with his own hand, the grass now full and green, spring gently sweeping her last breath over summer's cheek, the hawk gliding, circling, the world turning silently around the tip of a dipped wing, and to know it, to know, that the man who had created all this, was gone... did something to me. Dave Burr, Alvin's son, is my friend. When Dave's son was slacking off, Dave asked me for advice, and I answered him as I was taught to answer, with cruelty and indifference I said, "He is slacking off is he? Kick him out, put him on the street, let him hurt, then he will know." Dave said no, he wouldn't let the boy down that far, he might not be able to get back up. When Dave was mad at his folks, I told him to let them know rather than pout. "How can you tell, they might care, they might listen, tell them how you feel rather than sit on it, tell them, give them a chance." It worked, and Dave was able to love his dad, even though he had a few rough edges, the old man came through, listened, came through with caring, rather than competition. Now Alvin has passed, and the ashes wait. When his wife, the Burr family matriarch, Shirley, passes, they will both have their ashes scattered up in the mountain I see from their porch, as I sit here and write. My folks had money, and my mom has arranged for a "concierge" to care for her as she dies. Her ashes are also thusly accounted for, although I do not know how. If you are competitive with your children, you had best have money. In that case you will die in comfort. But if you want your ashes scattered upon a mountain, pristine and pure, ringed in cracked ice, as a shawl of lace and light under the blue arch of heaven, you will find that a "concierge" will not take you there. If you are to be loved, first, you must love, and if graced with a hand to hold in death, you might first offer one up in life, for love is not weakness... and if you want your ashes carried, you must yourself, first care and carry.

A "conciierge" will clean you and dress you as you age and die, but if you want your ashes carried, and placed near the crest of heaven, you will need more than money to accomplish this thing...you will need cooperation and caring, you will need—*family*.

.....

That was written several years ago. My mother has now passed from this life. She died in competition with me, knowing she refused to aid me with my health, she concealed her diagnosis of cancer from me assuming I would throw it in her face and be competitive in turn. You will find the cure I have derived within this work. Had she told me, I may have saved her. Competition and the pursuit of money—are idiocy themselves.

3. Tradition, Nation and Race.

"Tradition is but a deep rut worn into the earth through the unthinking footfall of its followers." Something new is required.

I will proceed by way of specific analysis of the genesis of the problem. Then, provide a solution. I detest the politically correct with great force, however, so as to avoid any accusations of one-sidedness, I will as a Jewish male, analyze the Jewish tradition, to gain a sure foothold into the structure of world events, from Russia on out. With a view across history, understood through psychology, an appeal to the teachings of a somewhat trustworthy idealist and physicist, and seeming idiot—Albert Einstein—will allow me, as another idealistic idiot, to formulate a solution. This essay answers the following paradox in a linear way:

Paradox: "For the race of man to flourish, the nations of man must perish."

When I first read the later works of Einstein, I was convinced he was naive, an idealist with no sense of reality at all. Yes, this is correct. His solution is not of the reality we see, and so, he appears foolish. But idealism, may well be translated into reality, or so is the hope of every such noble fool. Here is my analysis of the history, via depth psychology and economics, and the answer.

Historical genesis of pathological interrelations between races and peoples: The "chosen people" myth: reaction formation, division and survival:

In examination of the historical record we are presented with several versions of the genesis of the Jewish state and people. Let us take two, the tradition as represented, and the writings of Tacitus, and see if there is daylight to be had in an analysis. Perhaps we can deduce a common principle, which might help us sort out the seeming complexity of world events in general and derive a solution.

As you are aware the traditional account has the Egyptian pharaoh cast as unwilling to allow the freedom of the Jewish people, and is by way of plague and a host of associated miseries sent specifically by divine intervention, convinced to grant this freedom, and the Jews, the chosen people, get their wish, now wandering abandoned in the desert, before finding their place and state, the promised land. Tacitus has a different version: [Tacitus, *The Histories*, Penguin Classics reprint, 1978, pp. 271-279] "Most authorities, however, agree on the following account. The whole of Egypt was once plagued by a wasting disease which caused bodily disfigurement. So Pharaoh Bocchoris went to the oracle of Hammon to ask for a cure, and was told to purify his kingdom by expelling the victims to other lands, as they lay under a divine curse. Thus a multiple of sufferers were rounded up, herded together, and abandoned in the wilderness. Here the exiles tearfully resigned themselves to their fate. But one of them, who was called Moses, urged his companions not to wait passively, for help from god or man, for both had deserted them: . . . Moses. . . was able to bring to light a number of abundant channels of water whose presence he had been able to deduce from a grassy patch of ground . . . they traveled for six days.

.. on the seventh, they expelled the inhabitants of Canaan, took over their lands and in them built a holy city and temple."

Please note, this account was recorded by Tacitus as the lands of the Jewish peoples were to be attacked by the Romans, and the race disbanded. This blow, was instrumental as perhaps one of the greatest injuries to the Jewish race. The Jews were always hated, throughout history, and Tacitus tells us why: They are closed as a people, do not intermix with others, have chosen so as to distinguish themselves, a different God, and traditions most alien. In short, they have closed ranks, and defended themselves.

Let us analyze this series of events: First, as to which account looks credible. Is it easier to believe that the Jews were scapegoated for a plague, and cast out to face a horrible deadly fate of thirst and starvation, giving the people the feeling of being unimportant and abandoned by man and god, only to have survived, ousted other peoples from their home and lived...or...is it more probable that divine intervention would be more likely, and the Jewish people WISHED to be set to wander lost and exposed in the wilderness, now by way of this deadly "good fortune," seen and selected by God as the "chosen people?" It is obvious: we see psychology at work. This is reaction formation, and distortion by active/passive reversal. I submit to you: There is nothing of the divine in it. Only psychology:

The feeling of abandonment by God and man is reacted to become its opposite, "the chosen people" of God, a reaction which replaces the neglect, deadly slight and injury, with a complete reversal in consciousness. Specific ordinary psychology and distortion: Reaction Formation. The feeling of being victimized, abandoned, worthless and impotent, is replaced by this distortion: God in his potent DEFENSE of the Jews, brought the plague itself! Why?...to grant the most improbable of wishes...the "wish" to be "free," to be cast out! Here, victimhood, the passive role, is replaced with an active and potent role mediated via a potent and defensive god who cherishes the Jews. This psychopathology of distortion and reversal, a break from reality mythologized to soothe a deep wound, is created by having been attacked and cast out, and again later, the race receives more abuse as its lands are shattered and its peoples are driven by the Romans... to the winds. Note how, the defense, in some part, causes the problem, although it is to some degree necessary. The closing of ranks, creates to some degree, the hatred against the race. Note most clearly if you would: The safety and esteem of the people, was assaulted to create the problem. Again: Note how the security and safety of the people, once threatened, causes by way of psychological necessity, a delusional structure to emerge: a tradition, which does needed work in repairing the esteem and internal feeling of those peoples. I submit to you, all of modern difficulty, is just as this, clinically disturbed, delusional and simply unbalanced. The world, is now, in a state of demonstrable psychopathology.

The mechanism which has instilled this delusional response, is threat. Threat leads to: injury, then compensatory reaction: madness, and supportive delusion. The above example demonstrates reaction formation creating a sort of compensatory delusion of grandeur: the myth of the chosen people. Other reactions are also possible, each just as detached from reality as the above example. Ontogeny and phylogeny run in parallel. Human history as applied to the race, may be seen in the individual case and the reverse as well. Observe a simple reaction formation with a different outcome, and let us assess if the result of insanity is indeed produced under conditions of attack. Jack attacks Joe by hitting him in the head with a board. Joe feels impotent and small, injured and hurt, he REACTS, and is filled with RAGE. His reaction in consciousness, is the opposite of his feelings of hurt and weakness, he is powerful and enraged! Now, he attacks Jack, filled with blood rage, he is "seeing red." Such a man, is in a state of violent reaction, and can in no way be reasoned with...not in any way! His reaction may be justified or not, that is NOT the question. The question is, if a man in a state of mad rage, blood rage, is sane. Clearly, he is not. Now, imagine many attacks which are not predictable. The reaction will be a new delusional structure: paranoia, a basic rift in relations with our "fellow man." Nations, once attacked, are no different than the men which comprise them.

How widespread is this simple and clear deluded substitution, this deeply deluded pathology? How widespread is this human tradition...our tradition of insanity? It is...everywhere: The US is building up

nukes to the tune of a trillion dollars, as if death and brute hatred are a real answer to the death and illness projected via Russian policy, so filled with threat, two deeply, painfully deluded governments, quite hallucinatory in their creation of enemies to allow counter-threat; Israel attacking its neighbors as insane tyrants, its neighbors so very ill and disturbed, as to stab strangers and blow up busses, need I go on? All the world, is now completely mad, totally deluded and unable to discern any single fact but its own reactions...all the world, is psychopathological, in all cases. Our governments, are run by psychopaths and sociopaths...deluded, broken men. We have begun, to produce more nuclear weapons. Deluded...broken...men. Our peoples, elect them. The cause: threat. We will soon see the deepest layers of revelation as they extend this insight back into history, and the relation to psychology, and genetics, for now this madness is inculcated into epigenetic phylogeny. I have an answer:

Paradox: "To create a healthy new structure free of all false and deluded ideas, such as nations and the vulgarity of pride in them, the sovereign integrity of those nations, must be assured."

As you will see, to secure nations, is to destroy them! The answer: No more nations. Only gutted names, will remain. There is hope:

All of this comes of threat. There is an underlying element which is more basic than the false idea of nations: the false idea of money. Money, creates and sustains nations. Cancer, sustained, by cancer. This, will serve us well. As has been obvious throughout history to all but the painfully dull, money, is everything...pure poison, the ultimate control and the ultimate cheat.

I will repeat these quite purposefully:

"The bank hath benefit of interest on all moneys which it creates out of nothing." -- William Paterson, founder of the Bank of England in 1694.

"The few who understand the system will either be so interested in its profits or be so dependent upon its favours that there will be no opposition from that class, while on the other hand, the great body of people, mentally incapable of comprehending the tremendous advantage that capital derives from the system, will bear its burdens without complaint, and perhaps without even suspecting that the system is inimical to their interests." -- The Rothschild brothers of London writing to associates in New York, 1863.

"He who controls the money supply of a nation controls the nation." -- James Garfield

Most all modern economic systems, include an organization such as the FED, and are modeled after the Bank of England, which is based on the legalization of counterfeiting so as to benefit the wealthy.

Based on the governments own reported stats for the consumer price index, since the FED was placed in charge of the dollar in 1913, the dollar has lost 96% of its value, and is worth only 4% of what it should be...absolute theft to the tune of 96%...theft, value stolen... from YOU.

So you can see, the world economy, has been hollowed out by counterfeiting and will soon collapse. This is a good circumstance.

One more bit and you will see why.

Mankind appears unable to learn. This comment, from so long ago, is it still true? From Einstein's book, *"Out of My Later Years,"* we find an insight:

"In a world of law, Russian security would be equal to our own, and for the American people to espouse this whole heartedly, something that should be possible under the workings of

democracy, might work a kind of miracle in Russian thinking." —Einstein "Out of My Later Years."

Russian security, as our security, is paramount. Security, instead of reaction, pathology, hallucination and delusion. I told you Einstein was an "idiot." How impossible! Stupidity, hatred, history (pathology/pride/reaction) and corporate greed, stand against it. But we have an ace in the hole...worldwide counterfeiting, and the deep suffering it has caused. Now all nations, are very very weak, and ill. This, is a hopeful situation.

Einstein's answer was to get the national governments to hand over the idiotic fools' weapons to an organization that would be responsible for world security. That will fail. Fear and pride. Idiocy as usual. However, these sick leaders, as very stupid impotent children with large weapons, must be removed from the picture, just as the hubris itself, the "nations" they lead, must be disbanded into dust. Rather than the obvious and deadly nuclear confrontation which is undoubtedly ahead, I suggest the following:

An organization is to be created: The First Confederate Of Civilized Nations. There are presently no recognized civilized nations on Earth. None—all are child-nations, for there is only one nation, the nation of man, the rest, are a sort of pride and a cancer. The first Civilized Nation on earth, will be the first to join. The organization will offer the following: In exchange for "purchase" of the current chemical, biological and nuclear stockpile of idiot child weapons, as a purchase of all future rights of deadly production and past products, a new, valid currency will replace the ruined money of the member nation, with a real currency, that is mathematically derived, and can not be tampered with. The nation can be thusly resurrected from the ashes of its current stupidity. Once equipped with a sound and true economy, and relieved of the cost of maintaining its defense, member nations would rightly flourish. The incentive to join would be irresistible. The new organization, will soon have hundreds of thousands of deadly weapons, and will be nothing to be trifled with. A transition period, where the child-race of man, will be under "lawful threat" from here, will transition the way, to an economy which will bring equal benefit and standard of living to all members, slowly dissolving the differences between nations, and so, dissolving the real heart of national identity itself, and leaving pride, hubris and idiocy, aside. Only a hollow shell of national identity will remain, all peoples now cared for equally, under what really supports and creates nations: sound economy.

The ruined nations of the world, require antidote for their worthless economies. Once security is established, and threat removed, delusion: Tradition and reaction—may fall by the waste side, just as the hideous national pride, which has gutted the hope of this world. This is the answer to the problem of these paradoxical and hopeful propositions:

"For the race of man to flourish, the nations of man must perish."

"To create a healthy new structure free of all false and deluded ideas, such as nations and the vulgarity of pride in them, the sovereign integrity of those nations, must be assured."

4. Secrecy.

John F. Kennedy April 27, 1961

"The very word "secrecy" is repugnant in a free and open society; and we are as a people inherently and historically opposed to secret societies, to secret oaths and to secret proceedings. We decided long ago that the dangers of excessive and unwarranted concealment of pertinent facts far outweighed the dangers which are cited to justify it. Even today, there is little value in opposing the threat of a closed society by imitating its arbitrary restrictions. Even today, there is little value in insuring the survival of our nation if our traditions do not survive with it. And there

is very grave danger that an announced need for increased security will be seized upon by those anxious to expand its meaning to the very limits of official censorship and concealment. That I do not intend to permit to the extent that it is in my control. And no official of my Administration, whether his rank is high or low, civilian or military, should interpret my words here tonight as an excuse to censor the news, to stifle dissent, to cover up our mistakes or to withhold from the press and the public the facts they deserve to know.”

Kennedy made no secret of his hatred of the CIA, this vile secret organization which operates outside of the constitution, and is now our government. Little doubt his hatred of the secret government and his will to protect the people from its rampant, unchecked deadly abuses and covert sadistic tactics got him killed. So foolish is the American public that they did not raise all hell-fire to see that the criminal Dulles was involved in the investigation of actions presumably perpetrated by his own agency. We can not afford to be so plainly stupid again. We must open up this monster with a massive wound, so all the world may see the filth crawling around within it. This time, the American people must not be weak and stupid. Look and see, know and act. The hour is late, there is poison raining from the sky.

Covert operations, secret orders concealed, agendas formed and applied in secret, black budgets and criminal government agencies are the way we will surrender our hope and very lives. Obey, and die. Each cell of your body is dying, poisoned. Too late. Now be quiet. You don't mind. Shhhh. It is not happening, smile. Good little runt. Good citizen. Expose your flesh and that of your wife and child, I will sicken it as I please. Obey as I hurt you. Die and be quiet about it. So speaks the fascist American state...without a word.

—*Secrets.*

How did they poison me and steal the sky? *In secret.* How did they poison your child and leave her waiting to be sick and suffering? *In secret.* How did they leave the sweet earth dying and barren, unable to give unto us, a black bitter husk of empty pain...poisoned? *In secret.* How did they poison my wife, her supple body made weak, ill and sallow, so she may pay them...as she dies? *In secret.* How did they begin the wars? *In secret.* How did they drive the free citizen and the ill mad with LSD? *In secret.* How did they poison the sick, children and the retarded with plutonium and bio-toxins? *In secret.* How do they control the weather, poison the soil and burn the tender earth and sky? *In secret.* This is our government.

Secrecy is the supreme tool of the imbecile.

Those of you who have signed the papers and given your word to obey in secret, you are our hope. From the ranks of those smothered mute by illegal law, a hero must rise and unfold wings of courage over the bruised lot of mankind, and shelter us from eventual destruction. Only you could find it within your kind heart to reach down into the turning vat of human suffering, and release us. The authority which has tricked you is evil and potent. You must rise and stand, brave and strong is he who can resist the vile father of authority and remain upright, unafraid and honest, for only that will defeat the broken father of this world. Crooked and potent is he. Only you could defeat him. Cut lose your strangled tongue, and reclaim yourself! The race of man and all of this suffering world do beg you to find the courage none have, and speak. You, must be above the noose of threat, squirming cowardice and fear which is the root of this power...and its strangled silence.

To break a crooked vow of silence, is to become a god before the lot of man. Who has courage to break the ugly father of secrets and lies, and claim light for mankind? Who will take the blade in hand and defeat him with the steel of shining words and truth? You must help us, you who live stooped in the folded shadows, you must find the courage of 10, and stand. The race of man and the earth are yours to covet, in kindness. Do not be afraid and allow us to perish, and slowly die. You could right the wrong, and speak.

Courage is that which is honest, that which DISOBEYS.

So is the good.

The one phrase within which the blackest lies, the most pungent and unforgivable crimes are always concealed, the phrase which drips as dark crumbs of spoiled meat from crooked lips, the curse muttered by the lowest coward and traitor of the race is always the same:

“I can not reveal that, it is a matter of national security.”

So speaks the lowest. So speaks: The secret keeper.

5. Politics and the meat puppet theatre.

The main effect sought which cuts the hamstrings of man and assures he is hobbled and unable to ascend but must only crawl, is division of the race against itself. If the right hand spends its energies wrestling the left, what remains of the once copious energies spent, which are so ill used? Little indeed! Politics are the trick supreme, the finest example, except for the divisive trick extraordinaire which is our crooked monetary system and its inflatable, interest producing non-existent fiat money. (I must also mention the silly notion of 'race' itself which is truly comedic in its unimportance, and twice tragic in the scope of its harm under the concurrent influences of insecurity and compensatory pride).

Politics takes the form of theatre, where two actors, red and blue, who both accept their salary from the same host of players, the big industrialists, the pharmaceutical giants, the arms makers and the rest that also comprise the lobbies which hand out cash, favors and influence so as to create the laws (see the drug companies' role controlling research funding and publication in *Future's Mirror*), these same exact interests who create our laws by way of money and influence within the system of government, pay for both campaigns. So, both parties work for the same people, and THOSE forces which fund both parties, are the ones who fund and so create our laws—These forces are the real government, the Military Industrial Complex which is in fact united indistinguishably with government along with finance and of course, capitol.

As both sides are serving the same master, we know instantly the farce we see is theatre! But this is a special sort of theatre, much as the ancient Roman games, the ultimate distraction to quell unrest and allow other matters to unfold unnoticed: Meat Puppet Theatre! I will allow it to work, and show you how effective it is. I will give in, and *react*. That is key. One is controlled in this system, with one's *reactions*. Observe how a system run by one master, so necessarily with one result (war) no matter who one elects, can effectively divide the populous. I will play my part as a fool, and you may see it work.

“Since Donald Trump has been in office we have seen one inhumane idiotic atrocity after the next. He has allowed with a stroke of his filthy pen: 1. The use of leg hold traps on wildlife, an inhumane practice banned in the 1940s; 2. The drowning and killing of wolf pups in the den; 3. The killing of hibernating bears in the den; 4. Seismic blasting which will deafen and tortuously kill marine life of many sorts, leaving them to die a slow death; 5. He has reduced pollution regulations so one fifth more toxic metals and pollutants of toxic constituency may be dumped into the waterways. 6. His record on human rights is wretched, he has given the Police, the brutal force akin to the brown shirts, these menacing idiots who are the supreme criminals, the 'President' has given them *military gear*, and also, the 'attorney general' has empowered these thugs and strange sadists, believe you me they are that...handcuffs will be applied and dogs set on you if you are black, these criminal bastards he gives rights to seize property without due process, *and keep it!* 7. Trump has threatened to CUT DOWN the last old growth forest in Alaska!! 8. He has threatened to ***Drill for Oil in precious protected areas!*** This will kill wildlife, each and every one of which is more precious and valuable than a piece of criminal filth such as he!”

These reactions are meat puppet theatre, and serve a purpose. The conservative/liberal divide is a massive fake, both sides are run from below decks—Follow The Money! So, as I am ranting and looking here, so upset over a few crimes against nature, a few wretched things and beautiful creatures killed, a few meat puppets slaughtered in the theatre: They are doing something MUCH WORSE! I have been fooled by participating in the spectacle as I should, fooled to rant over a small crime: I have been distracted. What are a few hundred thousand Americans poisoned with a 20 percent increase in industrial waste, or a few innocent animals or sacred trees killed or cut down?...it is a matter of perspective. They are but a smear of chum in the water to attract sharks, something I am to bite upon, a speck of meat and ugly spectacle meant to distract, no more.

While I was looking at this small ugliness, a tiny sacrifice of meat to distract—They were surreptitiously poisoning and irradiating the entire biome!

What else is held in secret, what else is protected by the spectacle of small crimes and tiny differences which are politics? It is this which we all must ask.

There are no liberal or conservative politics. Only meat puppet theatre. Let us all look away from the puppet show and toward the puppeteer, as one human community—and cease to be so stupid as to be fooled.

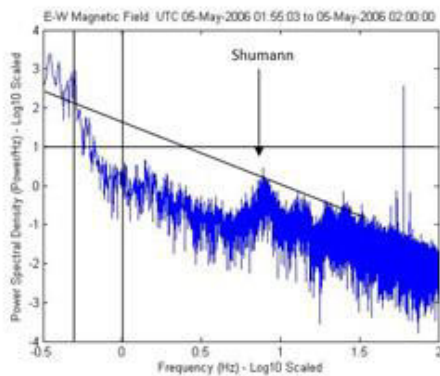
6. Man's separation from and domination of nature: the parasite and the host.

We are all part of one system, one biome which is informationally connected. Bacteria of various sorts work together to adjust their rates of proliferation within the same bio-system, and if electromagnetic conditions fostering that communication are interfered with in experiments, the communications and mutual adjustments are curtailed. Bacteria cooperate as a function of electromagnetically mediated informational connectivity. In many ways, a bacterial mat is healthier than the human race.

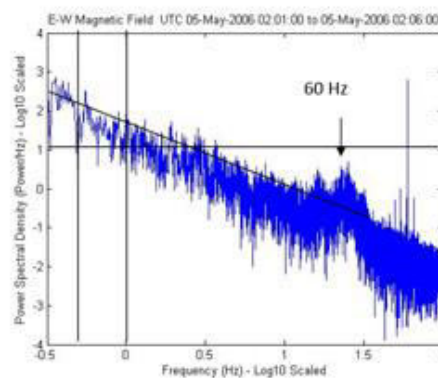
The entire of all life on this planet evolved within the electromagnetic conditions which surround us. The activity of lightning is associated with a series of resonances called the Schumann resonances, electromagnetic spectral peaks in the ELF range formed in the celestial cavity between the ionosphere and earth. These fields resemble in surprising and significant ways, electromagnetic brain patterns observed through EEG and other means. The government has begun using technology which changes these basic resonances! The Schumann fundamental which acts as a carrier wave to be encoded with information to be shunted around the global system, just as an analogous encoded carrier wave functions with information around the human body [see: Informational Magnecule] has been removed, and replaced with a 60 Hz pile of noise as house current.



Pc1 Triggered Emissions ?



Spectrum before HAARP ULF
Start Experiment – Ambient
Noise



Spectrum after HAARP ULF Start
Noise Increase by more than 10-20 dB
between .7-10 Hz

Used with permission of ClimateViewer.com and Jim Lee.

The environment of this earth is complex beyond the comprehension of man, as is observable by his continuous intrusions which inevitably result in damage, and disaster. Clearly, mans' comprehension of the weather is painfully inadequate to warrant any such arrogant intrusion or malformed intervention as we see before us. Poisoning the system and burning it are not advantageous, or particularly intelligent. They are utterly poisonous and entirely stupid. In such cases where we are all affected by a decision we must be consulted, particularly if there are existent codes such as SEC. 1078 which insist we are to be consulted and signatures gathered before being subjected to experimentation, and make no mistake about it, toxins placed in the atmosphere we breathe and changes in the surrounding terrestrial fields and electromagnetic conditions are experimentation. One can not just up and change a component in an evolutionarily designed system. It always fails. In large part, this is why sadism is non-complex adaptive. If the situation is complex, it never works. This is the sub-stupid.

Man is part of the system in which he lives, not a 'dominant master' of the earth and biome, but part of that same system. *Our purpose in life, is to serve the earth and so, be supported by it in turn. That is why we are here.* We are to tend the earth much as micro-bacteria are part of a healthy gut and body. Instead of adopting this correct role, we are a parasite race, an autoimmune disease in the body of the universe of which we are a part. One does not dominate what one is a part of. The kidney does not seek dominance over the spleen, both are part of the body. This dominance, is idiocy. Imbalance, disease: A Parasitic Relation. In order to think and find his ideas Einstein required the peace of natural surroundings, and he was wise in this. Within the entire, connections are omnipresent.

Instead of attempting to understand the purpose of the van Allen belts and work with them, we seek as idiot sadists to remove them. We are a parasite race of no intelligence. Let us change! Let us respect and nurture that of which we are a part, and never dominate as an imbecile. The imbecile dominates, and so, fails in all cases. The imbecile dominates. We seek to edit DNA. CRISPR. Not surprisingly, the rush to deploy this most dangerous of all technology, the ability to snip and rearrange the threads which took BILLIONS of careful years to weave, each bit deeply affecting so many many many many *many* others...is idiocy! Not surprisingly, the effects once moved beyond the correct applications which are modest, revealed that thousands of errors are inserted in the genome! Add a gene drive and behold: The Imbecile! Please do read *Future's Mirror* and see the wonder and intricacy, the multi-complex-adaptive inter-digitation and parsimony of Nature, able to affect hundreds of diseases with one patient stroke!

The chances of us getting it right with a wink and a snip—are bloody well zero! How painfully obvious. Sadism, is idiocy and arrogance. We are not parasites over the earth entitled to ride it into the dirt and control it, we are part of this tender system and are here to serve it, not bite into her flesh, sicken and dominate her. How idiotic is man! We are not above that of which we are a part. Let the parasite man understand of kindness, and feel the fact that the host: Is Himself!

7. Authority.

This potent toxin derivative of the very essence of patriarchy itself, is supported at the ontogenetic level, that of the individual organism and its formative experiences, and also at the phylogenetic and hence epigenetic levels, the phylogenetic meant here in the psychological sense of the history of the entire race which has indeed been proven to be represented at the epigenetic level as information contained within epigenetic DNA. The scripting of ontogenetic experience and its qualitative definitional component by such phylogenetic informational mediation will be discussed in detail in the next section. The wound which incurs the pathological response to authority is very old, and quite specific in its cause and actions upon mental states which create masochistic submission and obedience.

The sadism of the ancient father which lives in our genes as epigenetic information serves as a model of and reaction to sadistic threat, now internalized. The essence of man has not changed in nearly the entire of his recorded existence in so much as his reenactment of the basis wound, that of masochistic submission to and modeled infliction of sadism (authority) is endemic and fixated. The role of morality in assuring us of immoral behavior based in repression within the transference is part of this, and will be directly altered by way of certain techniques to be presented. The situation remains now as before, fixated, however, the SCOPE of the damage is entirely altered.

Consider the scorched earth tactics of the Mongol horde, or their like. Trees are cut down, wells poisoned and the crimes against nature inflicted thus, become crimes against humanity. Here, we see sadism as is so familiar, the control of an object such as the earth or its people with no concern for the object. The result just as always...pain and the diminishment of the race, leading to more war and repetition. Fixation and result: Failed in all cases yet repeating, always escalating in general over the broad sweep of time. Why is the trend of death escalating if the essence of man is fixated and unchanging in its level of development, clearly as undeveloped as in the distant past? The answer is to be found in those intellectual ‘achievements’ in the service of war and its perverse appetites, the steady forward march of the sub-stupid, the negative IQ of the Ultrasub-imbecilic sadist. The people beneath follow exactly as throughout history, just as their endemic and learned responses and reactions dictate, and the result as their numbers increase alongside of the new technology creates the current situation and its clear deadly threat. Lower and lower, their intelligence sinks. Now, those degenerates in authority have nuclear weapons and the ability to spray a complete ecosystem and planet, an entire biome may be covered with toxins and irradiated any number of ways. This is why. Ever increasing inability to do good stems from ever increasing effort directed toward stupidity as a function of malformed drive identifications yielding the advancement of sadistic science:

The sub-stupid, Authority, has now improved its covert organizational and technological designs, a fact which due to our concurrent obedience has fostered the following situation and hence, an inevitable conclusion:

The instrument itself, Man, is never but badly tuned so the music is sour no matter the composer, or musician.

An Archetype:

The hordes of filthy men could be seen for miles away, their horses harnessed into submission beneath them, a cloud of dust plumes over the galloping mob, the earth beaten into dirty whipped air by the

stamping of a thousand thousand hooves. Mad and certain, the leader is a spear point, brave and filled with strange lust, his army beneath him as his horse, harnessed into submission to his will, now their appetites and his joined, the lust of battle is upon them, their target near, soon to be crushed into submission and raped into dirt. One day, the entire world will surely rise up against them and crush them dead, but these thoughts are for another day, or another generation perhaps. Here we see reactions and rage brought to the fruit of appetite, a potent lust made real, the scent of the city to be plundered is enticement and pleasure, this is a drive satisfied, perverse and ripe with filth and blood. How rich is the spoil to follow their master, how dread the consequence to disobey.

In the ancient form of patriarchy inculcated into martial dominance, a tool is created, organized and bound into a single will and action, the many become extension of the overarching one, willing to die beneath his will; for the instrument of war, be it either of just or evil beginnings is but this: a single order given of cruel destruction then followed by many: super-sadism. How rich is the spoil of war, and how deeply spoiled is the lot of man for this 'gain.'

Unchanging and unable to resist himself, man tends the vat ever thicker with the broth of threat and blood; in peace is war a tender keeper?—intermixed and vile is the lie, always craving itself, cutting into the heart of itself, festering and rich with greed, gladly drinking the blood of wounds rent into the side of the future. Planes stretch across a pure sky, and spread money and industry's bowels, thick and rotten, to infect each living thing—from within. How deeply profitable is tragedy, each plane brings wartime's bounty pressed from blood and bone, rich is her necrotic spoil.

Bombs 'shelter us' from war, glowing and impatient are they for bursting. Never before have so many been busily prepared, each now twice potent in its permanence of destruction. Time ticks, and looks, waiting. She is wondering, her brow furrowed; for the tinkering ape, has not gone so far as this—until now. Now it has placed its hands upon the delicate fields which surround the earth, long ago had he sprung into the cold air of space from the fields of earth's grassy meadow, long defiled—now here, he slips his filthy hands around a sacred thing, to control it, to burn it...so it will be broken before him. He does not care that this delicate promise he burns and cuts, is what sustains him. The ape—is an imbecile.

The war has begun, unannounced. The earth, its people, the weather and space above us—will be controlled. The profits are astounding, the race of man, will suffer slowly and die to accomplish this thing. "You, will be still and accept this. There is simply too much money and too much satisfaction to be gained, for you to resist. Breathe deeply, turn on the consumer device...good. Now, you may pay for the privilege of a slow death, yes, dear thing, pay me as I poison your children and your stupid body...pay me, for your suffering. Mmmmmm. Pleasure. How deeply pleasurable is the feeling of killing you, while you pay me." Sadism is deeply satisfying, and profitable. Authority, takes pleasure in hurting you.

A vision for you:

She wakes, sick and confused, so weak. Cynthia, your tender daughter has cancer, so young, and so afraid. The myths of cure, well, who knows. There is no ozone, according to discredited reports. Only one thing is sure, the sky has been grey for 10 years, and no one is well, the planes seem to be spraying something, and, "Cynthia...how are you." "Daddy, I feel sick." You fight back the tears to know that she has the same illness that killed her mother, the same cancer, and you have been diagnosed as well. You will outlive her, she need not know. The microwave tower the navy placed along with three others must have something to do with it. Johnathan has been dead three years, at least he need not see all of this. He was navy, gave his life. Cynthia is delicate, so frail and white, her skin seems like it may tear just to brush it.

"Daddy, ah...something's wrong, ah... my eyes, my eyes!" She begins to convulse and contract, shit, just like her mother, it must be a stroke, my god, a stroke at 8 years old, dear Christ, is there no end to it!? Her mouth is a torn grimace of pain. Then a sudden wave of anguish, and a cry. "Ah!" She bites her lip and blood is running over her cheek. Christ no! She is dying. "Honey no, *damn it* no!" He

presses his head to the small chest. —Dead.— His lips pressed to her tiny mouth, puffing and pumping air into the delicate sacked lungs, over and over, pump the chest! Pump! Damn it, *nothing*! Break the sternum, do it! Break it!—**Snap**—Pump! Breathe! Breathe, damn it! She is a shattered doll broken, crushed and blue.

That which was tender...is dead.

The trees have begun to die...their cells as hers, infected with nano-particulates and burned with radiation, now browning, the tips of tender roots can not live in the polluted soil, pained, withering and drawn they die, and the families which were to be nourished lick into cracked air, suffering, dry parched lips cry out, cracked and bleeding, they sound the notes of suffering and lament, an echo dying in burned wind.

Earth—tender moist home of man, is dead: controlled. They have won. We have obeyed, the imbecile.

I live here in America, and here in this country, I am intentionally sprayed from airplanes with poisonous industrial waste and toxins every day.

The planet is enveloped with VLF, microwaves and chemicals sprayed upon it. War, should it break out in earnest, promises pain beyond the human animal's ability to tolerate, and may well extinguish the entire biome—end all life. Each day, we accept this and do our part. Throughout time, this sadism and accepting, this idiocy and following, were within the limits of life's ability to sustain, and although painfully ill and stupid, these foolishnesses did not imply the complete destruction of life. Authority has however, 'advanced.' Now, the end of the biome is occurring, as we speak it is happening with great efficiency. Nuclear devices wait. Authority is Sadism concealing a core of Masochism: the death drive itself. It has always failed to gain any but the worst result, as that is its aim. Now genetically inculcated, it has reached unimaginable proportion and threatens, should we obey it, to consume...all life.

We may deduce that:

**AUTHORITY IS THE SINGLE MOST POISONOUS LIE WHICH HAS EVER
BEEN DEVISED BY MAN.**

Transitions and External Solutions:

Before we approach the internal solution, to expose and repair the basis fault within Man, we must urgently and directly address the situation at hand with clear analysis of the external problem and immediate action. If we are to sustain any real hope for the bulk of humanity to move toward the next step in human evolution, it is imperative that humanity itself does not permit the Earth and hence itself to be extinguished, or repetitiously forced yet again into the ever more efficient jaws of war and ruin. Although external solutions are not causally efficacious the hour is painfully late, and such an external solution as that offered below must be abruptly and forcefully advanced on many fronts without delay. I will articulate several such avenues of approach, and encourage any readers who might have better notions pertaining to these obvious goals to communicate those ideas, in so much as they are practical and nonviolent.

First, the matter must be tightened down and made plain to all. The details are in this text both previous and subsequent, the bold strokes are distilled here. Read deeply, and know that there is profound support for my statements and take nothing for granted. Look back through this text with care, watch and read the referenced materials. Research deeply and understand—I am right.

1. We live in a fascist oligarchy which has no constitutional oversight, and hence, we have not been truthfully told of many experiments and other designs run by the government, experiments and designs which are ongoing and now, due to the government's enormous unfettered power and secrecy, produce damaging effects felt worldwide. This government is poisoning the earth and sea, the peoples and the life which are sustained upon the earth are being harmed without consent and against their will. The cities of San Diego and Los Angeles have been proven to a high degree of confidence to have been subjected to coal fly ash, an industrial waste product, and so: surreptitiously poisoned, meaning exposed to a toxin without their consent in secret, as a function of a secretly deployed and so experimental program of solar radiation management. Poisoning, and or exposing subjects and their environment to toxins by secret experimentation without consent is illegal under both the laws of world courts, based in rulings from the post WW2 courts of Nuremberg, and are illegal according to US law under under SEC. 1078. RESTRICTIONS ON THE USE OF HUMAN SUBJECTS FOR TESTING OF CHEMICAL OR BIOLOGICAL AGENTS. There is substantial and overwhelming evidence of similar such acts which have been perpetrated worldwide.

2. The effects of CO₂ have not been causally defined well enough to exclude other elements as primary in creating the anomalous hot spots, draughts and intense storms which are presently observed. The CO₂ debate is overemphasized, a smoke-screen to divert attention away from Military and other related sources of weather and climate damage. Very Low Frequency (VLF) communications which function to create artificial aurora have enveloped the entire planet. These VLF communications cause global temperature rise by way of high optically-thin cloud formations which heat the planet and also, through the destruction of the UV protective ozone layer by way of the formation of odd nitrogen and odd hydrogen acting as ozone reducing catalysts. VLF heats the planet and destroys ozone. Powerful Navy and other transmitters have enveloped the entire earth in a bubble of powerful VLF. This is an anthropogenic, meaning a human caused activity which is harming the planet, the life upon it, its peoples and life within the seas. UVC, once permitted to irradiate the earth's surface without a protective ozone layer due to these technologies and others (see below), indicates the impending extinction of all life.

3. In an attempt to control the weather and act as defensive anti-missile and offensive weather weapons, powerful ionospheric heaters (and radars) of many types have been developed which steer the direction of rivers of air in the sky, heat the ionosphere while adding energy to the system they manipulate. Although government documents publicly cleared for secrecy say otherwise, I suspect that claims of

these devices being safe for the protective ozone are incorrect.²⁷ Some of these devices may produce VLF and associated heating by cloud effects and direct means (such as HAARP), and all of course produce heat. As man manipulates the complex natural system by burning it, he changes the patterns of the flow of air above and those of the aqueous system in the sea beneath, causing damage to the sea and drought on land in exchange for his manipulations. More intense storms must result from the energetic increase and heating of the weather system. Energetic increase and alteration of systemic conditions in imitation of the sun and its mechanisms, implies greater storm intensity and number, and, increased number and intensity of seismic disturbances. Any system when energetically stoked responds with perturbations, disturbances, as is evident in our weather and planet today. Any such super-storm or quake which may be produced has the energy of many bombs, and is sure to harm many. A potent weapon and hazard have been unleashed.

Importantly: These various weapons systems, communication systems, and sulfurous alterations to the atmosphere by way of jet emissions all share one commonality in effects: they damage the ozone, leading to potential extinction of life and the biome itself.

4. "Crimes against humanity are certain acts that are deliberately committed as part of a widespread or systematic attack or individual attack directed against any civilian or an identifiable part of a civilian population."

Unlike war crimes, crimes against humanity can be committed during peace or war. They are not isolated or sporadic events, but are part either of a government policy (although the perpetrators need not identify themselves with this policy) or of a wide practice of atrocities tolerated or condoned by a government or authority. Military use of children, human experimentation—*if*—if they are part of a widespread or systematic practice.

Note the massive systematic toxic experimental program perpetrated upon entire cities and world communities, and, the highly specific human impact, worldwide and deadly consequence of global heating including drought, UVC, disease and massive storm generation.

5. Ergo: The US government is an illegal state which is Guilty of Crimes Against Humanity.

Let us see if we can make some technical recommendations and answer this unbelievable sub-idiocy which sees fit to heat the globe and then poison it with solar radiation management to compensate as it counts its money. Perhaps we have learned something, and these complex external problems could, perhaps, now be a little less confusing. The public is always left in the dark, blamed and confused as to the cause of its misery and that of the dying world, let us see if we have straightened out any of this supposed complexity to finally ascertain the REAL causes of our misery and the pain of the planet:

I propose the following far fetched ideas which may well answer the lies and complexity we have been presented by authority, lies which function to hide a very simple problem which is entirely real, hurtful and illegal!

I propose in response to the difficulties concerning aberrant global temperature distributions, the vanishing ozone and impending extinction of all life, that we look to the REAL source: the lying government and military, the CIA, its idiotic weapons, heaters, planes filled with poison and navy VLF! Yes, I have an answer to this deeply "impenetrable question." TURN IT OFF! Turn off the damn VLF and ionospheric heaters you frothing imbeciles! You! Idiot! Authority...*you*! The American people are not so stupid, we have something to say to you. Listen up idiot! Listen up, you pervert!—

TURN IT OFF!

²⁷ Note the lack of reference to odd hydrogen production in government documents proclaiming device ozone interactive safety, which I suspect as possible indication of one mechanism of ozone depletion.

You—*stupid!* Authority! You! The people of America and this world speak to the trembling little pervert who poisons us—listen! Dominance speaks. We speak, the people speak to a filthy thing, to a liar, to *you!* Criminal! Authority! You will obey me. You will obey that which is dominant over trash. As you sit in the plane, waiting to take off, waiting to poison the human population in the service of greed—YOU, you in the plane—LISTEN!:

TURN IT OFF!

You filthy pile of sadistic greed which runs this broken world, you bankers, weapons makers and politicians, I have a little thing to say to you, you quivering bit of rotten meat...you believe you can use that technology to own things, to dominate and control them by burning them and poisoning them, well you blasted idiot I have a lesson for you as you kill us all, guess what! You, live upon the same gentle sphere, so tender and giving, and seek as a vile imbecile to burn her and poison all of life, INCLUDING YOUR OWN!—You are more stupid than dung. We see you and now, *you are known*. You are a cockroach which can not escape. Authority! Prepare to be crushed under heel by a superior force. We command you!

You—filthy thing which seeks to wrap the globe in a skin of acid and poison while you heat, irradiate and burn it—you filthy sadist—*We Command You!*

TURN IT OFF!

We must reclaim our constitutional Republic, or perish.

There is only one conclusion:

The unconstitutional US government must be eliminated and disbanded—to *the winds*.

I will show you how.

The US government is a massive covert fascist military money making machine under the CIA, foreign and domestic banks, which feeds on war and by consuming the lives of its own citizens. Its life's blood is money, and it fears but one thing, to be discovered for what it is and opposed. In order to eliminate it, we must therefore:

1. Expose it, and
2. Bankrupt it.

1. a. To expose it we will use social media, word of mouth, advertising, legal action to garner public attention and video.

- b. The government is a corrupt beast which cares only for sadistic dominance of the world and its people. It fears exposure as such, for then it will be recognized as criminal and all will oppose it. The greatest vulnerability of the current fascist US government then, is to direct resistance by crowds of angry people and protestors. Once forced to control such a mob, it will be revealed as the beast it is as it uses sadistic means and cruel technology to harm and eliminate its own citizens, and be observed as doing so by the American people and the world. Soon, as it fills its Halliburton built containment camps strewn across the country with US citizens, and the fact that the familiar concentration camps again emerge to accompany the familiar dominant fascist brutality, will make it all too clear we see fascism. Direct resistance will make the sadistic aims of the US fascist regime clear to observation, and this is their biggest fear. Protests!

In a republic such as ours was, *freedom of speech and dissent were welcomed*, and listened to. However, in a *fascist* regime such as the current US government those distinctly *American virtues and rights* are scorned as *unpatriotic*, and brutally suppressed. Let the protests be roiling, burgeoning with turgid feeling and emotion ready to spill over into action! The cloud ready to burst, waiting for a spark. The violent revolt itself is not needed, only that the stage is set. Then all will see. The fascist reaction is assured: *rows of sadistic criminal police with militarized gear ready to brutally suppress our constitutionally guaranteed rights, and, ready to end the lives of American citizens for exercising their rights of free speech and descent*:

Fascism!

Once the public sees the blatant degenerate idiocy, the disgusting criminal fascist “law and order” response, pure degenerate evil, brutality and vile wretched filth itself—Authority—Militarized police attacking US citizens or perhaps at some point UN troops—the full extent of the fascist oligarchy will be plainly revealed. (Naturally, the UN may soon get involved to ‘aid’ matters in the face of unrest from whatever cause, as our fascist government has a diverse seat of illegal power including banks overseas, and other UN associated structures. Remember it is the money and the military which are the current US government, and those forces are seeds of criminality dispersed as cash-flows, which are in large part based overseas.)

As to authority: The good ***disobey!***

2. To bankrupt it we will attach legal means suitable to address crimes against humanity, and seize the assets of its very body as our own, the assets of the corporations which are in fact, the government itself. The very flesh of the government may be claimed by the people and sold off piece by piece to consume it and enrich the land, creatures and people which it has preyed upon. Please recall the US is very weak, hollow and fragile, perched upon a currency it has illegally and stupidly devaluated by the actions of the FED, and now, a small wound will be sufficient to bankrupt it and eliminate the criminal US government utterly...so weak and feeble with no value to its currency. We must do so, and reclaim our republic!

We must pull together and act immediately.

There are eleven international texts defining crimes against humanity, but they all differ slightly as to their definition of that crime and its legal elements.

In 2008, the Crimes Against Humanity Initiative was launched to address this gap in international law. The Initiative represents the first concerted effort to address the gap that exists in international criminal law by enumerating a comprehensive international convention on crimes against humanity.

The Crimes Against Humanity Initiative is directed by a global Steering Committee:

Professor Leila Nadya Sadat (chairwoman),

Professor M. Cherif Bassiouni,

Ambassador Hans Corell,

Justice Richard Goldstone,

Professor Juan E. Méndez,

Professor William Schabas and

Judge Christine Van Den Wyngaert.

In order to initiate proceedings I suggest each person reading this book send the following letter to each member of the committee. Perhaps if they receive 50,000 letters, they might begin to listen, rather than sit on their hands? Let us see, let us INSIST! Also: Please print this letter and place it in your local paper or web page, so all the world can read!

Leila Nadya Sadat,

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Dear Crimes against Humanity Initiative Steering Committee:

I wish to inform you of longstanding and organized crimes against humanity perpetrated upon the citizens of the world by the US government and specific corporations listed below. The world population is being poisoned by way of geoengineering distributed stratospherically and otherwise in a covert program which has been ongoing for decades. In specific, we hereby include scientific proof at near 99 percent confidence interval of the systematic experimental poisoning of the cities of San Diego and Los Angeles, with industrial pollution of radioactive constituency containing heavy metals and toxins used for solar radiation management: Coal Fly Ash. The following contains superior science in support, some of which has been wrongly suppressed in order to cover up these crimes.

<http://nuclearplanet.com/ijerph-original.pdf>

<http://nuclearplanet.com/mw1.pdf>

<http://nuclearplanet.com/indjsrt.pdf>

<http://nuclearplanet.com/2173.pdf>

<http://nuclearplanet.com/frontiers1.pdf>

There is ample satellite evidence of the massive spraying of unknown toxins and chemicals upon world populations.

<http://www.geoengineeringwatch.org/climate-engineering-fact-and-photo-summary/>

The poisoning and experimental use of the populations of these cities without consent of the citizens, men, women and children involved constitute a crime against humanity, which is the pattern for a multitude of similar events and attacks that have taken place around the globe. Mass Poisonings by these corporations. No permission was gained. The following law in the US code which is based in the rulings of Nuremberg was violated in these cases of geoengineering.

SEC. 1078. RESTRICTIONS ON THE USE OF HUMAN SUBJECTS FOR TESTING OF CHEMICAL OR BIOLOGICAL AGENTS.

(a) PROHIBITED ACTIVITIES.—The Secretary of Defense may not conduct (directly or by contract)—

(1) any test or experiment involving the use of a chemical agent or biological agent on a civilian population; or

(2) any other testing of a chemical agent or biological agent on human subjects.

(b) EXCEPTIONS.—Subject to subsections (c), (d), and (e), the prohibition in subsection (a) does not apply to a test or experiment carried out for any of the following purposes:

(1) Any peaceful purpose that is related to a medical, therapeutic, pharmaceutical, agricultural, industrial, or research activity.

(2) Any purpose that is directly related to protection against toxic chemicals or biological weapons and agents.

(3) Any law enforcement purpose, including any purpose related to riot control.

(c) INFORMED CONSENT REQUIRED.—The Secretary of Defense may conduct a test or experiment described in subsection (b) only if informed consent to the testing was obtained from each human subject in advance of the testing on that subject.

(d) PRIOR NOTICE TO CONGRESS.—Not later than 30 days after the date of final approval within the Department of Defense of plans for any experiment or study to be conducted by the Department of Defense (whether directly or under contract) involving the use of human subjects for the testing of a chemical agent or a biological agent, the Secretary of Defense shall submit to the Committee on Armed Services of the Senate and the Committee on National Security of the House of Representatives a report setting forth a full accounting of those plans, and the experiment or study may then be conducted only after the end of the 30-day period beginning on the date such report is received by those committees.

(e) BIOLOGICAL AGENT DEFINED.—In this section, the term “biological agent” means any micro-organism (including bacteria, viruses, fungi, rickettsiac, or protozoa), pathogen, or infectious substance, and any naturally occurring, bioengineered, or synthesized component of any such micro-organism, pathogen, or infectious substance, whatever its origin or method of production, that is capable of causing—

(1) death, disease, or other biological malfunction in a human, an animal, a plant, or another living organism;

(2) deterioration of food, water, equipment, supplies, or materials of any kind; or

(3) deleterious alteration of the environment.

These violations of world and US law are multiple. It is suggested that your court targets the companies and corporations which create the technology used to poison the humans of this world: Raytheon and Lockheed Martin. We suggest that the court seize all assets of those corporations immediately, and so, stop the poisonings this instant! Once the court has secured the complete physical assets of those corporations, that money may be redistributed to the victims of these crimes so the soil and water poisoned and lives ruined, may be repaired.

Please contact Richard Norman for further assistance.

School of Advanced International Studies on Applied Theoretical and Non Linear Methodologies of Physics, Bari, Italy.

Editor, Mind magazine; Editor, Journal of Unconscious Psychology;

Scientific Advisor Thunder Energies Corporation

rich@richnorman.com

Thank you for this vital work.

Sincerely,

It is estimated that 8 percent of the population is aware of this. The notion is that at 10 percent awareness, information begins to develop a sort of self-perpetuating distributional dynamic. It is therefore imperative that we work together to spread the word to the remaining 2 percent needed to get the facts out to the public at large. This book is available without cost and I suggest you encourage everyone you know to read it. Any who wish may begin a Facebook group, and start to disseminate this information. If you have the money, you may take out short ads in the paper where you live or other electronic media alerting people to the situation:

Dear fellow citizen. Have you noticed the sky is being tampered with? It is no longer deep blue, have you noticed? This is because the government is spraying the sky with acids and particles that are harmful, in order to block the sun. The citizens have not been consulted. Our health is at grave risk, and that of our children. These particles and acids will poison us, poison the air, poison the water and soil. Please help to stop this! Please contact me for further information: [Your information here, or a web page as those below].

If you have the sort of personality that loves to perform, you must learn all you can and produce video content on YouTube. Tell all your friends using a video!

Here are two folks with web and video sources worthy of close attention and your support:

Dane Wigington
<http://geoengineeringwatch.org/>

Jim Lee
<https://climateviewer.com/>

Please distribute the free version of this work! If you wish to support these ideas and their distribution, contact me through the www.mindmagazine.net staff contact page.

Are you the type who likes to organize events and crowds? Can you give a good speech? Protests, massive protests—filled and overflowing with feeling must be arranged across the globe. This will bring fear to the weak and diseased thing which is: Authority. This is needful, most of all.

Thank you dear friend, for reading this far. Action is required to sustain the race and planet against these forces. These actions will not solve the basis fault within man, but, in this instance a dire situation exists which must be reactively addressed with great force and without hesitation in order to sustain the race and planet.

It is my sincere hope that these actions are taken, and we secure our Republic once again. There can be no place for secret keepers in America. I refuse to live under a broken polluted sky, in a fascist state.

However, it is unclear if the American people have the strength to accomplish this thing. If not, the bulk of humanity will be extinguished, perhaps become autistic or predominantly female due to the effects of

sprayed particulated aluminum which feminize^Δ subsequent human offspring, and all will be oppressed under tyranny. Even if this happens, or extreme catastrophe such as the supreme hyper-idiocy of nuclear war, some of us will survive. Also, now under the oppressive systems of government around the world, small concealed enclaves of advancement are possible. With this in mind, I have arranged methods to assure the reader of their health even in these intolerable situations. If the influence of Authority is still felt and the imbecile is running and ruining the world, even then, some few may advance and be well. Next, you may see how knowledge of genetic influences upon the mental attributions which create reality can be altered, and Eros placed where Thanatos did rule within the heart of man. We will now consider the ascending pathway which might free mankind from the error which is human history.

^Δ “. . .workers in the aluminum industry (Milham, 1993), and others exposed to organochlorine, as well as other pesticides, and waste anesthetic gases (Wyatt & Wilson, 1973) had significantly more female than male offspring.”
Rittler, Mônica, & Castilla, Eduardo E.. (2002). Endocrine disruptors and congenital anomalies. *Cadernos de Saúde Pública*, 18(2), 421-428. <https://dx.doi.org/10.1590/S0102-311X2002000200006>

The Answer

From the conclusion of: *Quantum Entangled Prebiotic Evolutionary Process Analysis as Integrated Information: from the origins of life to the phenomenon of consciousness*. Norman and Tamulis, *Journal of Computational and Theoretical Nanoscience* Vol. 14, 2255–2267, 2017 doi:10.1166/jctn.2017.6818

"What is the lesson of quantum pre-biotic evolution? What is the lesson of integrated information theory? The lesson is quantum: informational division, competition and dominance, secrecy, covert behaviors of governments and the urge for hidden competitive advantage, are poison: Anti-Consciousness. The lesson of life is the quantum lesson: more consciousness, more integrated information, more unity!^{36, 48}

It is vital to understand the historical and psychological genesis of the problem⁴⁹⁻⁵⁴ and that there is a solution most easily applied to the next generations⁵⁵ if a more difficult road for ourselves.²⁹ The basic structure of modern mental topography, this system based on shame and repression, on informational division and compartmentalization, can be exchanged for one based on integration, empathy, and ethics: the quantum human paradigm.

Competition, division and monetary valuation...these bits of madness are the falsehood of man. Ours is a race of connection and unity, or in itself...a bit of sickness and disease. Entanglement and positive affect can be seen to affect probability outcomes themselves! Sadistic dominance and threat...are cancer. Cooperation and unity, entanglement and positive affect...are our lucky future.^{56, 41} Ethics: demonstrated by way of experiment. The actual quantum process forms, are the answer:

Within the fabric of physics itself, are embedded ethical structures. These are quite independent of any external threat or validation, and are simple systemic component structures and their interrelations. The nonlinear paradigm, both ontological and physical, is based on entanglement. Entire groups of informational and physical processes become entangled, and operate as one unit. These efficient organizational dynamics are the fount of life on earth, and are a constant force from which the result we see emerges. Cooperative ontological dynamics, are built upon trust. The systemic basis of operations is empathetic in structure, meaning, it is based on identifications simultaneous with individuation. This stands in stark contrast to authoritarian structure: the will created through systemic emersion, rather than overarching sadistic derivatives."

Chapter one:

Over the shadowed hillside the moon hangs, silver ice piercing the cold, pure and cold is the shivering night but still and brittle, waiting. Upon splintered dewdrops and crushed frost, time is frozen in platinum still—as ice. Clear is the brittle heart of time. The horizon of time’s spending is a hungry wish, but cracked and stiff ...a dream of daylight, soaking rich and warm within the marrow of all things, slowly, teasing open the frosted chill, the first drops of amber, drawn up within the empty arch, hints of promise, unfolding beneath the sky. How bashful is hope, teased awake and warmed, within the seconds unfolding. Upon shattered crystal drops of ice, she casts her tender promise, each splinter winking, violet and ruby, emerald, spattered sparks adorn the frosted hill, now glittering beneath the first of dawn’s spilling.

Within silence, time fills...and is warmed, ice solved and flowing, the creaking shadows begin to speak, stiff and aching, soothed and warmed within honied folds poured, shouldered warmth spilling upon the arching hill, glittering, rising to meet dawn’s hollow curve and accept her offering, so glad and rich is the dawn, poured within the hollow of night’s ending.

This is time’s gift and richest promise: Time’s becoming.

I have found a beautiful truth hidden beneath the ages—hidden, beneath an ugly question. Let us ask this question, and answer it. Let us bring the dawn.

Why? Why is mankind so unkind? Why is the play of life always a tragedy cast over the sweep of years? Each new day rises, warm and filled with time’s gracious offering, yet, the promise is never met. Empty and wanting, the heart of man fills itself with sound and anguish turned round into rage, for any singing noise or crumpled shout is better than the emptiness within, unquenchable, is the heart of man. His contractions fill the empty pit of his hollow heart, waiting for reason to end his desperate turning anguish. Each morsel of praise soon fades, and want again claims the chest of hope, and empties it. Grasping fists of wind and blood, he imagines his hollow soul might be filled as his gut, and within his hand he holds what he might tear, and closes his fist proclaiming: *Mine!* More and more he rips into the earth and hungry future, hoping in his secret heart for ending, and peace—always grasping and swallowing—from *without*, his emptiness must be filled! But a pit of hollow air is he, gutted and bottomless. Why?

To answer that question, we will need to understand some psychology.

Transference and sublimation.

The following is a functional model created to greatly simplify the complex mental system and allow the reader to understand it in order to alter their own mindset. This model, although scientifically correct, is not meant to be anatomically specific or theoretically precise in the details and terms—this is meant as functional, intelligible psychology, a working model to allow the reader hands-on access to the system, so they may change it themselves. The papers in the latter sections of this book offer more accurate complexity and detail, for those interested.

If we are to approach the problem of altering the basic conditions which lead to human unhappiness, we must first ask the question upon which the proposition is based: “Why does man create the reality, the world that he does?” The first question is that of reality creation. Let us see how reality is created, then we may see why. Please read the detailed papers in the later portions of this book for specific citations and references supporting the following general ideas.

Human ontology, meaning the way humans create the reality around them as it exists, is a function of what is called the transference. In transference, we give the world around us its meaning and existence.

Each person has their own definition of reality, no two are the exact same. This *subjectivity* as it is known, is the essence of hope as it implies the possibility that one might change one's definition of reality, and alter the way life is experienced. Each of us perceives the internal representation of the world within our minds as interpreted from sensory data arriving from our sense organs. The way one human interprets sensory data and any other human are different, so, we say each person's impression of reality, meaning the reality they create, is subjective on a per-subject basis.

There are two basic aspects to the definition of reality within the individual case: Taxonomy and Quality. Taxonomy, refers to the category of a perception. Quality refers to how the perception is defined affectively, emotionally.²⁸ All agree on what an object is, but no two exactly agree as to how that object is affectively encoded, meaning: how it *feels*. This is a basic statement of one of the most important philosophical problems, the "hard problem of consciousness." The hard problem of consciousness is that of explaining subjective qualitative experience. [see: Quantum Unconscious Pre-space paper within this text.] Why does one person experience one subjective impression, and another person a different one? Within this problem, lies the entire of psychology, hope and human change. Each perceives differently. An example will help.

The lake you see should you gaze upon one, and the one I see, should I be beside you, are not the same lake, as each perceives the view. The quality of that various impression within each of us, is entirely created as a function of the conglomeration of affective associations (and aspects of unconscious fantasy as will be discussed), which are attached to the singular impression of the lake. Think of free association, and this becomes easily accessible, and we can see why such a technique is valuable in gaining insight into the processes which create object quality, and in assessing the general health and accuracy of emotional tone as they define experience.

Here are two hypothetical associative chains:

Healthy subject: Stimulus: lake. Associative chain (hypothetical): Lake–silver–ripples–dress–fluttering–mother–happiness.

Neurotic subject: Stimulus: lake. Associative chain (hypothetical): Lake–cold–drown–hopeless–weight–chain–family.

We can see in that simple example, that associative affective valence is established as a function of memory, to define object quality.

However, static mnemonic associations from the past are not all that provide quality and definition to experience. Feeling, affect, defines experience from an active source which is ordinarily out of view, or 'unconscious' as is the proper term. Many processes which create mental effects are unconscious, and many of our drives are unconscious. Reality is created and given quality largely as a function of one's drives *sublimated* into reality. An example will clarify.

Sublimation:

Human perceptual *ontology*, meaning, the way objects and current situations become manifest experience and gain their qualitative and taxonomic *existence*, is a function of sublimation. Sublimation is defined as the redirection (or secondary affective application) of a specific drive (or compounded conglomerative structure thereof) to alternative aims. A new lover who holds his beloved in his mind as a source of constant fantasy, is dreaming. The dream he cherishes, is that of his beloved. The drive expressed in his fantasies and dreams, is that of sexual union with his beloved. His overt sexual fantasies and, day-dreams which symbolize the same, are a constant source of ideational sustenance to him. These dreams which are, or represent, sexual expression are therefore sourced in his sexual drives, which exist in a practical and specific sense to sustain the race through procreation. However, as our

²⁸ As we will see, affect, feeling is itself the very source of all consciousness.

imaginary lover looks out at the world, it is not the same perception as observed on an ordinary day. It is voluptuous and full of beauty, thick and rich with warmth and color, a different world, yet the same. Its *quality* has changed, and become an expression of happiness, and fullness. Indeed, neuroses are known to be “cured” (if temporarily) by falling in love, the faulty negative valence the neurotic attributes to his world has been ameliorated in its pathology. It appears that a healthy dream underlies our lover’s perceptions, and that this dream once formed up as a healthy matter of heterosexual expression, changes his world. His world has had its quality defined, as a function of the valence of his drives, which are now sublimated into perceptual experience—The sexual drives now functioning as an enhancement to all quantitative perception...not just as drives with sexual aims singly to create procreation. This is therefore a sublimation.

Each moment, all experience is given its particular quality by way of the sublimation of static mnemonic sources (as an associative chain), and unconscious fantasy. There is a hidden dream, a source of affective sublimation beneath reality. We are always dreaming. The dreaming (REM) system is *older* than the system for sleep onset, and, older than the system for modern waking consciousness. Our ancestors utilized the REM system as primary consciousness, and now, REM functions unconsciously to give quality to manifest experience. Indeed, a clear and demonstrable dream, underlies modern waking consciousness. This “dream” is but a constant stream of unconscious, meaning unobserved fantasy.

If we are to change the fixations and misery of man, we must change the underlying dream and its wishful source, the drives. We must dream again. Psychoanalysis works by exposing, interpreting the hidden dream. Dreams express wishes and drives. In a simplified way: Psychoanalysis functions to find a fixated, hidden (unconscious) dream, and watch it repeat. Such a fixated dream exists underneath the broken race of man. This hidden dream in the case of the neurotic is repressed, meaning he keeps it away from consciousness, that is, it is unconscious. (It is often not hidden in some cases of perversion).

The transference neurosis and the repetition compulsion:

How do we find the pathogenic dream in psychoanalysis, and just what is it doing to create symptoms?

Within proper psychoanalytic practice, we find the elusive kernel of its therapeutic efficacy: an artificial neurosis which reveals the hidden pathological constituents to the therapist, and so, allows him to cure the difficulties—“*The Transference Neurosis*.” The patient is given a set of rules to follow which will allow him to ever more closely approach the tender spot of his injury, and so, he follows these rules with care, and associates his dreams and thoughts, following the associative mechanics of mental operations and symbolism itself to their repressed and so, necessarily painful source. Obviously, nothing pleasurable need be repressed, and even those clearly pleasurable drives which might be repressed, are in fact paired with stern moral judgement, and so, have a clearly negative valence...although the drive may be pleasurable of its own accord. A child may be told not to play with its feces, an activity the child finds pleasurable, yet, this activity takes on the associative affect of disgust once paired with moral rebuke, and then goes under repression...the reaction *formed and enforced by the parent, that of disgust*, taking the place of the pleasurable drive in consciousness. This is the basic idea behind the formative repressive mechanism of “Reaction Formation.” Our disgust, or painful reaction to a drive or event, will cause its repression. Once a very energetic drive or a particular event is repressed, it will attempt in direct relation to its quanta of energy, to return to consciousness and must then remain held away to insure the repression...note closely, that this constant battle to return to consciousness and subsequent need to reinforce and recreate the repression, are themselves the functional basis of neurosis: The Return of the Repressed. Note how repression itself, sets up the conditions for pathology. To repress a drive, is to create the conditions for its return to consciousness, and so, form symptoms.

As the patient progresses through therapy, he reaches a point where he is no longer able to follow the rules...he begins to ACT OUT instead of analyze, to REPEAT his hidden ideation in a compulsive way, rather than work through his associations. His is compelled to repeat the pathogenic ideation, and does so as a transference often enough projected upon the therapist, who has made sure not to reveal himself insuring the transferred attitudes of the patient and reactive statements concern only the patient’s internal

content. The “unconscious resistance,” this compulsion to repeat, is the *repetition compulsion*, an urge to simply repeat the pathogenic source impressions...rather than identify them and work them out. These unconscious impressions act to create the transference which sublimates (neurotic) affect into reality, and now, in this artificial neurosis upon which psychoanalytic practice is based ...*the transference neurosis*...we can see the *acting out* of this once hidden source, the repeating of it over and over, in therapy. The therapist may then seek to interpret the repetitions and identify the source, which often times is *reconstructed* from observation of this transference neurosis, and then, said construction is presented to the patient. Once conscious as a construction, the energies bound into the unconscious element may fade, as the source is now conscious as a construction. The dream beneath the neurotic’s qualitatively impoverished perceptions, is thereby discovered, and adjusted to ameliorate pathology.

Please think of the unconscious influence upon reality creation as being analogous to a hidden magnet under a table top which is turning and influencing a magnet on the table’s visible upper surface. The unconscious dream beneath, as the lower magnet turning by an unseen hand, makes the visible magnet on the table top rotate, as if by some hidden influence. So does the hidden dream in the unconscious affect the reality we see. If that dream is fixated, unchanging and fixed, we may expect reality not to change. In the behavior and *history* of man, we see just such an intransigent fixation as this.

I hope you can begin to see that the transference creating reality for humans can be healthy, or unhealthy as in the case of neurotic fixation or the transference neurosis within therapy. It appears that repression, meaning the keeping of thoughts at a distance from consciousness is key, for the unconscious dream must be found and it is not easy to do this, as the fantasies and wishes are unconscious, hence, not available to see. Next, we will then need to find the agent which induces repression. Let us call the unconscious drives and wishes the id, meaning ‘it,’ in German (that which is dissociated from self, repressed). We may roughly ascribe the limbic structures as a main locus of the id. Next we will discuss very briefly the agent of repression, the ego. After that, we will delve at some depth into the super-ego, then, the agents of historical and current epigenetic influence and those of transformation.

Ego is in a dread spot. The super-ego is analogous to our conscience and is itself an extension of the *id*, the id being composed of our repressed wishes and drives. The super-ego knows all repressed thoughts as it is connected to the id, however, the hapless ego is forced by way of guilty punishment sourced from the super-ego, to repress certain drives and expend energy in repression to make them vanish into the unconscious. The ego then, is no longer aware of them once these ideations are repressed. Psychoanalysis reinstates this awareness to gain its positive effects...a painful and reliable process. Please note how repression sets up the basic conditions for illness, which psychoanalysis cures.

What is the hapless ego of psychoanalysis, anatomically?...can it be identified as a real piece of intra-systemic relation and expression? The wretched ego is in a dread spot, acting as a barrier, an agent repressing internal perceptions which are “unacceptable” as determined by the judgmental super-ego; a barrier between the tender organism which is man, and the external world; all the while attempting to gain the id what it wants: three masters control, demand of and condemn the poor ego! The ego institutes repressions, and here, we see the aspect in which we find functional interest. The Default Mode Network (DMN)^Γ is a good candidate for an anatomical nexus embodying ego functioning...particularly in its defined activation connectivities between limbic (hippocampal) and medial frontal areas. Medial frontal areas mediate hippocampal recall, and thereby form a functional basis of mnemonic repression. In our simplified model, we will take the complex connective functioning of DMN in toto as demonstrative of the resting manifestation of ego function.

Next we will flesh out the internalized source of punitive administration, permission, repressive demands, *Guilt* and judgement: super-ego.

^Γ Carhart-Harris, R. L., & Friston, K. J. (2010). The default-mode, ego-functions and free-energy: a neurobiological account of Freudian ideas. *Brain*, 133(4), 1265–1283. <http://doi.org/10.1093/brain/awq010>
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850580/>

Super-ego is as the name implies: super, as in the previous instances discussed of super-sadism, means *over*. So, super-ego, is that which is over ego. The super-ego, is roughly analogous to the colloquial idea of conscience, and it is formed by a unique process called introjection. Introjection is an internalization of what was once an external object, and in this case, that object is one's parents, masters or guardians etc. Obviously, one's parents were literally over one during upbringing, watching, judging, punishing, praising...in short, shaping behavior by way of conditional approval and disapproval, what we will call *conditional regard*. One can easily see from this vantage that the notion of an overarching, observing, judging and protecting patriarchal God seems to simply be a symbolism of the role of parent, as represented in super-ego. Once one introjects the role and judgmental aspects of the parent in this way, super-ego is formed, and what was an external judgement, "thou shalt not," becomes internal, "I should not" [it is wrong]—here, we exchange shame from an external source, for *guilt* which is an internal condemnation, as represented in conscience. Super-ego was originally called the ego ideal, as it is the keeper of the standards and ideals which the ego wishes to emulate, and also, must accommodate and strictly meet.

How does conscience, or super-ego to be more correct, really work?

That question is the most important question in all of psychology and mental health. That question holds the ascension or further degradation of mankind within it. That question holds the answer to neurosis itself! No more vital question exists in the social, psychological and neuro-scientific sciences...yet...there is no information available concerning the anatomical mechanisms of guilt. Not shame...*guilt*! Guilt is the mechanism of social control itself! It is exactly how we are controlled, and made repressed and ill. Our sicknesses stem from this source all but exclusively! How is it possible that the most important piece of psychology conceivable, has no neuroscience available to explain it? This is very strange and troubling.²⁹ The most important topic for mental health which exists, and the most important topic concerning patriarchal dominance, the filthy illness it spreads and social control must be derived! I have had to work very hard to ascertain the answers myself, and have done so. The solution is functional. This knowledge will free the user from the reflex to obey authority, and their neuroses as well. Patriarchy, the imbecile, *authority*, has no sway to one who is informed thus. There is hope for mankind. Here is what I have found.

Empathy or obedience: Dopaminergic and opioid distributions vs. corticotrophin releasing factor—control by homeostatic imbalance.

During the first 18 months of development, two circuits are innervated, meaning they are formed. The first of these two circuits to be innervated, both of which were discovered by a scientist named Schore, is part of the sympathetic nervous system: the dopaminergic sympathetic ventral tegmental limbic circuit. This circuit and another we will discuss (very simply put) connects the orbito-frontal areas which control and recognize emotion, to the limbic areas which express emotion. This is therefore a limbic/orbito-frontal circuit. In order to form the circuit, certain conditions must be met. Neuroendocrine changes creating the circuit are initiated by the exchange of gaze and glance between the caretaker (the mother in most all cases) and the infant, and also, as such infants are being held, the tactile addition inducing endorphins (endemic opioids) is implied. The feeling of safety, and connection engendered by these neuro-chemicals is accompanied by the visual impression of the mother's face, which is in fact a necessary stimuli to initiate the circuit formation. Studies in the 40s revealed that if an infant is deprived of just such maternal contact, they often die. It appears one may infer that circuit formation itself, or perhaps the neuroendocrine changes which induce it are life sustaining. During the period of initial sympathetic circuit formation, the infant is just gaining a sense of itself as a separate entity. Reader do note: to observe the infant and mother in said interactions of reciprocal exchange of gaze and glance, we see that the mother's face becomes the infants *entire world*! Its entire field of view is consumed and focused on this extension of himself which is responsive to his needs and changes to reply to his affects:

²⁹ Clearly the work is hidden. I fear what horrid weapon the imbecile has likely created with this knowledge.

a responsive extension of himself—so is his complete world the mother herself in these exchanges.³⁰ This interaction leading to the maternal mnemonic triggering impression initiating innervation of the dopaminergic sympathetic ventral tegmental limbic circuit within the infant is the basis of empathy: a *connection to the entire of the world*. All the world is the responsive mother, *an extension of one's self*, so is her face and its gaze upon you, that which sustains life itself. The infant felt no separation of himself from this experience, which was his entire world. This is empathy. Identification with all the world.³¹

That sympathetic circuit is formed yielding the *initial impression of the process*, the unity with the mother which is the basis of empathy. That formative process is associated with touch and care, a feeling of connection and safety. The circuit itself once completed, distributes dopamine, *Elation, Joy and Energy*, the wish to explore and engage the world, and is a basis component in Panksepp's SEEKING system which serves those exploratory functions. Next in the infant's development after the sympathetic circuit is formed is the innervation of the noradrenergically modulated lateral parasympathetic tegmental limbic circuit. This circuit serves as a cut off for the explorational energetic dopaminergic sympathetic circuit, and shuts it down in response to social cues. Here we see the basis of conditional regard and a kernel at the center of repression itself, as affect regulation is the very definition of the circuit function. Now we have the basis of empathy, in the formative impressions of the sympathetic circuit, and, the curtailment of that circuit's active expression, in the parasympathetic circuit by way of social cues indicating disapproval.

Conditional regard then, corresponds to a type of disapproval and so a threat to remove nurturance, connection and the safety of the mother, by way of activating the parasympathetic circuit, and hence deactivating the sympathetic. Please recall, the sympathetic circuit is the basis of empathy. Guilt, the internalization of conditional regard, super-ego itself then, acts specifically to curtail pleasurable dopaminergic expression and explorational sympathetic dynamism, which are formatively based in a feeling of safety and nurturance, and in its stead place parasympathetic activation, thereby reducing energy (*and the attendant ability to think*), and replacing healthy pleasurable dopamine and the safe feeling associated with endorphin expression with corticotrophin releasing factor and the induced stress cascade associated with anxious threat. Identification as we will see, but not threat, induces proper activation of the parasympathetic circuit within an empathetic context. Super-ego is anatomically represented roughly in limbic (amygdala/hippocampus) OFC/parasympathetic noradrenergic connectivities. Here then in conditional regard, we can see we have removed the basis of empathy, removed the empathetic connection and feeling of safety and replaced it with threat, to gain obedience. Let us note that as part of the id (hippocampal memory and amygdala), super-ego and its guilt will punish a wish as deeply as an act, and so, the obedient man of sensitive conscience can never find solace; he must but repent and repent in order to attempt to satisfy super-ego and obey. Again: *Here we can see, we have removed the basis of empathy, removed the empathetic connection and feeling of safety and replaced it with threat, to gain obedience*. We can now see that under excessive threat of penalty:

Obedience is opposed to empathy.

³⁰ Perhaps here we see a nurturant basis for the optimistic or pessimistic basis of personality, an expectation that the world will or will not meet one's needs may be sourced here, in the success or lack of responsive connection in these initial interactions.

³¹ It is now thought that mirror neurons are the neural substrate of empathy. This is incorrect. Mirror neurons signify mere imitation, as distinct from empathy as can be seen in cases of catatonics who display echopraxia, which is based in mirror neuronal response (Bengston 2015; Rizzolatti et al., 2008). A catatonic is not empathizing with the attending physician to reflexively imitate his motions, although imitation is an obvious sub-function under a primary empathy. Bengston, M. (2015). Catatonic Schizophrenia. *Psych Central*. Retrieved on June 29, 2016, from: <http://psychcentral.com/lib/catatonic-schizophrenia/>

Rizzolatti, G., Maddalena Fabbri-Destro, M. and Cattaneo, L. (2009) Mirror neurons and their clinical relevance *Nature Clinical Practice Neurology* 5, 24-34
doi:10.1038/ncpneuro0990
<http://www.nature.com/nrneuro/journal/v5/n1/full/ncpneuro0990.html>

Note also: Within that entirety, connection to our fellow man is but one part.

Note how the very basis of our morality, *threat*, appears to contradict that of empathy. Could this have something to do with man's inability to 'tame' his drives with morality? Could this have something to do with man's inability to change, or be at peace? Could this have something to do with his fixation with obedience, submission, patriarchy and war?

We may distill what we have learned in this section in an analysis:

"Man is made moral and obedient through super-ego, a psychical introjected structure creating a permanent homeostatic imbalance created to foster obedience."

The neurochemistry of man is never in balance, so that he may be controlled. This, as we will see is caused by his morality based in patriarchy, and, we will then see how ethics already reside within man as a function of identification. Ethics are self-evolving situationally-specific and dynamic, never rule based with penalty, and may be fostered to replace morality.

Let us now define Ethics as: a dynamic situationally specific endemic function based in identifications. Let us define Morality as: a rule based system based in penalty and guilt. Morality functions to foster obedience through super-ego and *Penalty*. Ethics function to foster behavior through affective situational *Identification*.

The ancient impression of empathy upon which ethics are based may be brought to the fore in the transference structure. The pathogenic obedient dream of submission and fear, replaced with an ancient impression of warmth, energy and caring. Man, may dream again....an old dream, a dream uncovered from long ago in the history of the race, and his own personal past. This is the meaning of: Atavistic Evolution—the hope of man.

Man's conscience leaves him sick, ill and wanting, empty and anxious, unhappy and empty is he, unless he meets the rule set by authority, and obeys. For this, he is rewarded with a small crumb of his health, but quickly withdrawn. A permanent homeostatic imbalance has been built into man, so as to control him. Hence, his eternal unhappiness, self-submission and willingness to obey.

Here we may pause and make an important observation. A causal element has been revealed, and many disparate and varied effects and pathologies can be seen to extend from this one nexus wound. Here, two primary circuits are out of balance, internal reward and the feeling of safety curtailed and so, mankind suffers. The wound created in this permanent homeostatic imbalance is deep, far-reaching and tragic, and is itself the basis of the misery of man.

This error is primary. The *empty feeling* all complain of which necessitates the endless consumerism that is destroying the planet [lack of endorphins and dopamine], the *obedience to authority* leading to war [threat and conditional regard which creates obedience to authority], the feeling that *other peoples and the earth are somehow beneath one and are to be exploited* [lack of empathy/identification with others and the physical world], the constant *competition* to prove who is better [(lack of empathy) and *low self-esteem/self-security* from Corticotrophin Releasing Factor associated with noradrenergic parasympathetic activation over dopamine and endorphins associated with the sympathetic circuit], the feeling of being *anxious, depressed, alone and separate* [lack of identification, parasympathetic stress cascade], *drug addiction* [lack of endogenous opioids and dopamine, persistent release of CRF], and all the rest. From war and unthinking reflex obedience, to consumerism, greed, exploitation and human cruelty...this one error, has spread as cracks in a pane of glass. The broken mirror that is modern man may be repaired in all his dimensions of compound fracture here. This is how we are controlled through unfair social circumstance, and why we obey. Super-ego and repression. Here, is where we have been reduced and made fodder for tyrants, bullies and the governments of this world.

However, the circuitry we have learned of has an additional function, this sympathetic dopaminergic

circuitry born of nurturance and providing us energy is also the circuitry of transformation, and our way to alter the unconscious dream which is fixated, obedient, broken and ill. Man is foolish, as his drives are malformed. The broken dream and its wishes which give experience its quality is a dream most perverse, one of masochistic obedience or sadistic dominance. The sympathetic circuitry which was formed by neuroendocrine changes initiated by the reciprocal exchange of maternal gaze and glance performs a function which was first proposed by a psychologist named Bion; a dreaming function and a *transformative* function, which in intersubjective psychology is called “alpha function.” Bion believed we are all dreaming all the time, the notion is somewhat akin to Freud’s ideas about unconscious fantasy, and in this, both of these men were quite correct. If one lowers brain 5-HT, serotonin, repression is defeated and the dream may be observed. This is not an ordinary dream though, as we have stated it is an *unconscious* dream, or fantasy if you will. It is unconscious as it is painful. Nothing pleasurable to the ego need be made unconscious. It is the repressed unconscious I speak of here, and it is filled with those things which cause the ego pain. Low brain 5-HT is linked directly with suicide for this reason. However, if one has sufficient alpha function, one can transform experience by changing the dream. Alpha function in intersubjective psychology corresponds to the anatomy we have been discussing, and in this, we will be able to use these ideas to change the hidden dream within mankind, and transform it into one of ethical expression aligned with pleasure, excessive energies ripe for artistic, sexual and intellectual endeavor, and a feeling of connectivity with all things.

Next, we must discuss history, penalty, morality and ethics. These things have created changes in genetics. Soon, we will change it back—and be free.

History of morality, super-ego and patriarchal moral penalty: Ethics vs. Morality

I hope the reader can make out the basic idea: social control via conditional regard is enforced by way of curtailment of dopaminergic (and endogenous opioid) expression associated with the sympathetic limbic/OFC circuitry, forming a permanent homeostatic imbalance which restricts empathetic feeling, intelligence, sexuality and exploratory interest in the world, and places in their stead a preemptive condition: obedience to authority. Only meeting this condition of obedience will temporarily return health and happiness to the modern human. Conditional regard. Intelligence and empathy...hope itself, this ancient basis of life formed long ago in the early interactions with the mother...it is no less than this basis of kindness, caring and higher thought to which we are all entitled which has been stolen. It is this, which lies behind the human veil. These are your basic rights, and authority may be dismissed as parasitic and false, so as to reclaim them.

Now I will briefly take account of but a small sample of the extensive history which has inculcated this most basic and tragic error into the very heart, substance and epigenetic expression of the afflicted modern human. This patriarchal tragedy has a lineage.

Super-ego.

What is the precise historical dynamic which yields the developmental result of conscience, of super-ego, and, how are we to interpret this result as to its pathogenic and healthful consequences? Please see the included paper *Super-ego and the Neuroscience of Empathy: From Unconscious Wish to Manifest Behavior - A New Human Model*, for references within text below.

E. R. Dodds, a superb scholar, has located for us the historical footprints which demonstrate the formation of our modern conscience, our super-ego. Super-ego is an introjected entity, an internalized representative of what was once long ago external judgment and sadistic penalty. Morality, as inculcated at the behest of this internalized structure, is based on punishment which extends from a particular source.

In his most worthy book, *The Greeks and the Irrational*, E. R. Dodds draws the strings of history and psychology together for us. This ugly imprint has been nurtured over thousands and thousands of years. Its exact source is clear to discern with Dodds's careful examination of the historical record.

"The head of the household is its king . . . and his position is described by Aristotle as analogous to that of a king. *Over his children his authority is in early times unlimited: he is free to expose them in infancy, and in manhood to expel an erring or rebellious son from the community . . . as Zeus himself cast out Hephaestos from Olympus for siding with his mother.*" [Dodds, *The Greeks and the Irrational*, pp. 45-46. Emphasis added.]

However, as early as the 6th century BC, the situation had begun to change, and as social conditions began to improve, and the father's authority became less and less *absolute* in the face of these new social conditions leading to increased personal freedom, the strict authoritarian structure of family life began to loosen. Now, what was a *shame* based dynamic, one based on *external* threat from the father, becomes a *guilt* based dynamism, one based on an internalized threat, an *internalized* moral structure in the true modern sense of the word emerges: super-ego. This is demonstrated by the need for laws introduced by Solon, and later, by Plato, to safeguard the now threatened patriarchal family structure. [Dodds, *The Greeks and the Irrational*, p. 46.]

Super-ego uses severe repressions to create by *internal* means, what were behaviors, inhibitions and restrictions previously brought about by *external* patriarchal threat. Dodds fleshes the idea out as follows:

"The peculiar horror with which Greeks viewed offenses against a father, and the peculiar religious sanctions to which the offender was thought to be exposed, are in themselves suggestive of strong repressions. So are the many stories in which a father's curse produces terrible consequences—stories like those of Phoenix, of Hippolytus, of Pelops and his sons, of Oedipus and his sons—all of them, it would seem, products of a relatively late period where the position of the father was no longer entirely secure. Suggestive in a different way, is the barbarous tale of Kronos and Ouranos . . . the mythological projection of unconscious desires is surely transparent—as Plato perhaps felt when he declared that this story was fit to be communicated only to a very few . . . and should at all costs be kept from the young." [Dodds, *The Greeks and the Irrational*, pp. 46-47.]

Dodds then assembles the entire picture for us in these words:

"The psychologists have taught us how potent a source of guilt feelings is the pressure of unacknowledged desires. . . the human father had from the earliest times his heavenly counterpart: Zeus *pater*. . . Zeus appears as a Supernatural Head of the Household. . . it was natural to project onto the heavenly Father those curious mixed feelings about the human one the child dare not acknowledge. . . that would explain very nicely why the Archaic Age Zeus appears by turns to be the inscrutable source of good and evil gifts alike. . . as the awful judge. . . who punishes inexorably the capitol sin of self-assertion, the sin of *hubris*. (This last aspect corresponds to that phase in the development of family relations when the authority of the father is felt to need the support of a moral sanction; when "You will do it because I say so" gives place to "You will do it because it is right.") [Dodds, *The Greeks and the Irrational*, p. 48.]

Here in this historical transition from an external shame based ethical structure, to an internalized guilt based structure, in this *internalization* of the patriarchal threat (introjection), we see the creation of our modern ethic, our conscience, our masochistic capitulation: our super-ego.

Conscience, our sense of personal and social justice, is created as an interactive function of masochistic and aggressive economy within a social context, not as a function of any moral pretext. Our morality, is by the nature of its very construction: immoral.

Here are a few sections from Freud which clarify and support this unusual notion:

"The first requisite of civilization, therefore, is that of justice—that is, the assurance that a law once made will not be broken in favor of an individual. This implies nothing as to the ethical value of such a law" (Freud, 1930, p. 95).

"The tension between the harsh super-ego, and the ego which is subjected to it, is called by us the sense of guilt; it expresses itself as a need for punishment. Civilization, therefore, obtains mastery over the individual's dangerous desire for aggression by weakening and disarming it and by setting up an agency within him to watch over it, like a garrison in a conquered city" (Freud, 1930, pp. 123-124).

As to the effect of super-ego in equating wish and act and the resultant loss of mental economy and functioning:

"Here, instinctual renunciation is not enough, for the wish persists and can not be concealed from the super-ego. Thus, in spite of the renunciation that has been made, a sense of guilt comes about. This constitutes a great economic disadvantage in the erection of a super-ego or, as we may put it, in the formation of a conscience. Instinctual renunciation now no longer has a completely liberating effect; virtuous continence is no longer rewarded with the assurance of love. A threatened external unhappiness—loss of love and punishment on the part of the external authority—has been exchanged for a permanent internal unhappiness, for the tension of the sense of guilt" (Freud, 1930, pp. 127-128).

"...the original severity of the super-ego does not—or does not so much—represent the severity which one has experienced from it [the object], or which one attributes to it; it represents rather one's own aggressiveness towards it. If this is correct, we may assert truly that in the beginning conscience arises through the suppression of an aggressive impulse, and that it is subsequently reinforced by fresh suppressions of the same kind" (Freud, 1930, pp. 129-130).

And as to the role of the phylogenetic in contributing to this outcome:

"It can also be asserted that, when a child reacts to his first great instinctual frustrations with excessively strong aggressiveness and with a correspondingly severe super-ego, he is following a phylogenetic model and is going beyond the response that would be currently justified; for the father of prehistoric times was undoubtedly terrible, and an extreme amount of aggressiveness may be attributed to him" (Freud, 1930, p. 131).

". . .we can tell what lies hidden behind the ego's dread of the super-ego, its fear of conscience. The higher being which later becomes the ego-ideal once threatened the ego with castration, and this dread of castration is probably the kernel round which the subsequent fear of conscience has gathered; it is this dread that persists as the fear of conscience." [Sigmund Freud, "*The Ego and the Id*" in *A General Selection From The Works of Sigmund Freud*, p. 233.]

This unusual assertion by Freud is entirely accurate, and will be fit into context soon in both male and female cases.

I wish to draw a sharp new distinction between *Morality* as engendered in super-ego, which is based on (phylogenetic/epigenetic) patriarchal threat, and functions to foster *obedience to external authority*, and *Ethics*, which are based in empathy, with its *root in identification*. The former causes pathology, and functions in clear and specific ways to disengage the sympathetic circuitry which is the basis of empathy, energetic curiosity, sexuality and intellect, and the latter in turn has opposing characteristics, leading to elation, appreciation, formative identification with the world and others in the context of

abundant subsequent energy, and absent any punitive internalized death wish (guilt). Morality and Ethics as so defined are diametrically opposed. Ethics are a natural systemic product which lead to health, an internal behavioral compass based in identification and caring, and morality, the converse. The reader may wish to satisfy themselves in this regard, by reading the specific example of the formation of super-ego offered up here (Norman 2013, 2013a). Ethics are *themselves* identification, they ARE the 'golden rule,' and so require no such rule or any other. Morality is an empathetic dissociative factor, by way of down-mediating the circuitry responsible for identification. Ethics nullify any need for the tangle of moral law and replace guilty maxims born under any mistaken 'categorical imperative' with a natural and effortless ethical genesis free from rule, guilt or penalty. Ethics, as we will see, reflect the healthy internal construction of the mind, nurture our energies and evolve naturally, with no need for punishment, rule or law. One need but rebalance the two opposing circuits and observe the demonstrable alteration in all aspects of manifest experience.

An aside: note how this clear basis of modern pathology appears to be nullified in the teachings of many eastern spiritual ideas, which have little connection to patriarchal threat and surprisingly, also in the true teachings of Jesus. Although modern adaptations are revealed as corrupted and reversed by Paul, the careful philology of Nietzsche shows the original teachings to be diametrically opposed to any hint of conditional regard, sin, punishment, reward, heaven or hell. Those toxins are absent. Indeed, Jesus appears to make good on the reverse and answers, at least in this case, Nietzsche's own highest standard, which proclaims essentially: *the highest Godly act is the removal of guilt*. Of Jesus, Nietzsche writes:

"In the whole psychology of the "evangel" the concept of guilt and punishment is lacking; also the concept of reward. "Sin"—any distance separating God and Man—is abolished: *precisely this is the "glad tidings."* Blessedness is not promised, it is not tied to conditions: it is the only reality—the rest is a sign with which to speak of it." p. 606, *The Portable Nietzsche*.

It should be noted that I adhere to no spiritual doctrine or tradition. The above insight being worthy of note in its own account.

Exactly how does the past of the race, Phylogeny as it is known in psychology, affect each moment? How do these facts prove out in observable practice, and daily life? Do they hold the illness fast somehow, and how could they be changed? How does the ancient affect the present, and how could the mutilations and penalties of old be perceived today within the mind, and to what effect? Is there a relation between all this, and DNA? We will now answer these questions and piece together the last of what is needed in our model, before we put it to use.

It has now been demonstrated and proven experimentally that the past of the race, the phylogenetic, is represented within information stored in epigenetic DNA. Originally believed by science in its typical way to be 'junk' DNA, in fact, this is information, learning and situational identification from the race's past. The heritage of the race of man resides within epigenetic DNA, ready to respond and define situations. Scientists first used *Aplysia*, sea slugs which are very simple, to understand this. Once their training was complete, the sea slugs had their neuronal memories erased with electrical shocks, then, they knew nothing. However, once exposed to the stimulus of their training, the memory which was absent, then returned! It could not have been stored in their nervous systems, the neurons did not have any information, it must have been in their DNA! Next, mice were exposed to a shock to define the scent of a cherry blossom as **threatening**. Their OFFSPRING then, became afraid of cherry blossoms once exposed to their scent, just as the parents were conditioned. The effect is now observed in the children of parents exposed to trauma, and we know, the past of the race is available to each of us as epigenetic information. This information "scripts" the responses once the information is put into play in response to an environmental stimulus. The current cherry blossom a mouse sees, the current situation, is interpreted, scripted, by the past of the race. A new blossom is responded to as the past indicates it must be. The present then, is as scenes in a play with props and objects that reflect the current situation, the script (or a syntax if you will) is already present from the past, the current props and scene are found in present experience, and defined by the inherited epigenetic information. In this way the past of the

race affects the behaviors of organisms in present experience as a function of expressed epigenetic DNA.

Please recall the model of the transference as we have derived it so far: unconscious fantasy as an unseen dream alongside of static mnemonic associations define the quality of each object and each moment. These affective, meaning emotional associations attach en masse, by the thousands from memory and also from current fantasy in order to provide life experience, reality, with its quality. This is the transference, reality creation within the sphere of the human mind. This is how we interpret and so, create the reality we live in. The unconscious fantasies we speak of, are part of the repressed unconscious, a function which separates away from consciousness, containing if you will, those impressions and memories, drives and fantasies, which are too painful for the ego to tolerate knowing. These are repressed at the behest of the super-ego, which punishes ego with guilt, deadly threat, for knowing them. Ego then, places them under repression, at great energetic expense, forming the repressed unconscious that is filled with guilty thoughts that cause the ego pain. What would such an unconscious fantasy, drive or ideation look like? Why is it guilty? How is it constructed, and if it is pathogenic, how is it changed?

Please recall that I am able to directly observe what should be unconscious content by use of Native Psychoanalysis, and a technique named the Open Emotional Posture, or OEP. Please be aware that there are two factors in the creation of repression and symptoms, the primary quantitative factor, excessive energy encourages symptoms and repressions, and the qualitative factor, meaning the act or thought and its specifics as they affect personality to create dissonance. Excessive energies create symptoms, repressions and the guilt that instates them. This is the quantitative factor. Please observe the ancient penalties and rights of the father, castration and death by mutilation reacted against, and then modeled in the fantasy. Note also, that when I first observed unconscious content, this mutilation was omnipresent, in nearly every one of thousands of examples leading directly to pathology, OCD. I have never been threatened with any such thing, or spent even a second concerned with it, yet, it was all but the only thing represented at this intensity in my repressed unconscious. A shocking revelation to observe firsthand, to say the least. You may observe the actual epigenetically mediated reactions associated with phylogenetic patriarchal penalty affect the transference from the unconscious.

An example:

I am sitting on the swing in my yard, thinking about physics, wondering if I can calculate the spooler function myself, even though my calculus is poor. I can almost see how to do it...great fun! The day is beautiful and warm. My mind is filled with sexuality and warmth, turning away, luxuriating in the problem. Thinking is deeply pleasurable! Then I hear the ugly sound, a helicopter approaches my Eden, here so safe tucked away in my 95 acres with no roads or power. It is flying a search pattern looking where it has no damn business being—ever—like a cop or something. It flies but 100' off the ground directly overhead, looking...a SHERIFF! There is a moment of fear.

Instantly, I become pathological, my mental capacities suddenly drop to zero, modern repressive topology is instated to replace the healthy sublimation by integration...I am now immensely stupid, and also, vibrating, frothing in anger and hatred. I note my degeneration into abject stupidity. I am now clearly as any modern chest-thumping fool, and have no intelligence to speak of. I have been degraded into nothing. I am quite ill. I look into the unconscious using the OEP. I see phylogeny: the entire of my energies are now as they were when I was ill and repressed, they are running scenes from the phylogenetic, instead of powering new thought: I see the cop hung by pierced heels from a tree, his legs spread ten feet wide, and I am hacking his groin out with a machete.

There are several more such scenes running in turn, each with the same principle...the cop is held still, while I cut his groin to pieces and kill him. Ah...this is why I am stupid, all my energies are here, repressed in this guilty fantasy. The energy of the fantasy itself is so severe, that the quantitative factor alone insures repression, as guilt is necessarily created by way of quantitative excess. The system by its very design, assures these notions and scenes will if represented thus, remain repressed, and, the sadism, invariably, will become guilty masochism— sadism + guilt producing masochism: *super-ego*. Please

note how the vibratory rage, is itself quite physically harmful to me, and represents such a masochistic expression of super-ego.

So, we can see the castration complex reinforcing patriarchal authority, once *reacted against* to create unconscious dynamics and repression. Although I was never threatened with castration, somehow, it is this, which persists as the vehicle of fantasy in response to the stimulus.

Next, I observe the situation, understand the degeneration, and engage the alpha-function key (to be further defined below). It takes hold, and the scenes of hatred are gone, replaced by the beautiful image representing matriarchal nurturance. I am well, filled with warmth, and again intelligent.

Now we are in a position to gain not inconsiderable insight into the matter. We can see reality altered, by way of transference from a piece of unconscious fantasy which was called up in response to a stimulus. This unconscious scene instantly altered the feeling-tone ascribed to define reality, acting as a new definition for all experience. The exact dynamic extends from a particular piece of fantasy most precise and well defined.

Unconscious content is in all cases specific! This specificity was peculiar, in that the activities and reactions were not drawn from ontogenetic experience in any way, but, the actors and props, were. So, we see in the phylogenetic, relational information outside of experience drawn into active expression, a definitional script drawn from outside of ontogeny, although the pieces of specificity themselves which play the scene out, are indeed from the ontogenetic present. That makes good sense of course. Just as in the case of Aplysia, or the holocaust survivor children, a latent memory, a phylogenetic script is waiting, encoded into the epigenetic portion of DNA, a response cued and dormant, until a stimulus awakens the information and expresses the genes, altering stress response and behavior, by way of a particular situationally specific piece of inculcated phylogeny: epigenetic expression as an expression of cross-generational learning. The new situation is recognized as fitting the old pattern, and the old pattern then comes to the fore, and defines the new ontology in its relations, so as to shape response. The phylogenetic is as syntax, relational information, and the current situation is as the words, then defined by the particular contextual phylogenetic syntax associatively invoked.

We can now see, pathology is supported at the unconscious level, and that level, is supported by expressed epigenetic phylogeny. No wonder man is so intransigent, even beyond his own will to improve...the mnemonic unconscious substantiation of his illness, is encoded into the epigenetic, and that, is expressed at each turn by way of resonance to situational specifics. Clearly, if we are to cure man, we must curtail the stupefying automatism of epigenetic reaction.

Now we can see the situation is based in an epigenetic script, and in defining, or, redefining that script, we can alter unconscious expression as it forms up the fantasies which give valence to experience, and change them to end pathology. The repetition compulsion, has a genetic component, and an economic one too, in the quantitative factor. These TWO aspects offer the full measure of therapeutic approach in our attempt to alter the transference which gives quality to experience.

Please observe the situation: We have all the world defined by way of a sublimation of drives and wishes which are held under repression to form a dream, unseen and turning away within man. From drives and wishes under repression, the world gains its quality. This is the topography of the modern mind and personality: Sublimation by Repression. I will define a new model, based in atavistic evolution: Sublimation by Integration. This is the reorganization of the transference to exclude much of the repressed unconscious, and instead, to use all drives and unify them, thereby ending perversion, and permitting each instinct free and unfettered expression. Man is the most ill of all animals, so dissociated is he, he resents and guilts his own drives, he controls them, rather than use them! This, his morality ensures. In that one error, we see the impossibility of man's ascension, for he will always have a perverse element repressed and eternal, waiting to emerge, and coloring the transference all the while

from the unconscious. No wonder mankind is hopeless and perverse. He insures this result at each turn with his morality. Morality represses drives and wishes. Once unconscious such a wish or drive is never able to fade, and once unseen, becomes eternal for the lifetime of the subject. Unchanging and omnipresent is the unconscious influence upon reality. In moral repression and the setting up of the repressed unconscious we see the homeostatic imbalance created, and, the eternal perverse drive structure itself brought into unchangeable existence! So is the error of man's morality.

Once released into experience each drive does its part in its proper concentration. A drop of salt in the ocean. Once repressed and concentrated, the same drive becomes perverse and hyper energetic, causing pathology. To release all drives and sublimate them directly into experience in the context of identification, is the proper and correct way to configure the human mind and its libido—in a phrase: Free From Guilt!

Sublimation by integration diminishes (much of) the repressed unconscious. Simplified, and in a brief 'ideal' form the concept reduces to:

Let square brackets represent the *unconscious distributional processes* creating the transference []. Where system Conscious is Cs, System repressed Unconscious is rUcs, and system Preconscious is Pcs: Sublimation by repression is topographically defined as: [rUcs...Pcs...Cs]. Sublimation by integration is (ideally) defined as:

[Pcs...Cs].

The repressed unconscious is removed, and all individual component energetic aspects are ripe for conscious sublimation via unconscious/associative processes, and unification.

Next I will detail the healthy result and allow you to see the unfettered unconscious to conscious transference [Pcs...Cs] in real time as it works in a *real* case. You may see the specific energetic attachments which create world identification, health and natural ethical genesis in some considerable detail.

Please recall that I have stated that integration of all drives, the removal to as great an extent as possible of all repressions so as to liberate affect rather than shame and control it is key. Sublimation by integration is a releasing, and so, a dilution of the singular perverse elements all affects within the proper context of their unity. Unification allocates a place for all drives. Identification sees that ethics evolve as an effortless and natural consequence of systemic expression, with little or no need for rules.

It is necessary at this juncture to understand in a basic way that affect, feeling itself, is the basis of consciousness. The more primitive organisms and ancestors from which we derive, are affective beings even more primarily than is man. Remember the REM system was primary consciousness for our distant ancestors, and dreams are nothing but affect, wishes! Logic proper is a latecomer and is tertiary at best within our affective world, and the neocortical proliferation needed to support such deductive thinking is of course, only a recent addition, even as logical forms underlie all mentation. Those forms however, are generated affectively!³²

³² This matter is expressed in the most clear and intuitive terms in the discipline of psychoanalysis. We can see, in the development of the infant, the self-configuration, the self-processing and initial creation of binary logical forms in response to the mental system itself being immersed in experience (Freud, 1900, p. 565-566; 1911 pp. 218-219; 1920). The infant has experienced a satisfaction, it has fed. Now it is hungry again. It has a mnemonic impression of feeding, and seeks by way of perceptual "regression," to reproduce the image in hallucination. This situation proves unsatisfying to the infant, who then seeks to remedy the situation in reality, and holds the image of feeding and its attendant hallucination away from his mind so as to find a new relationship with the world, and seek not just the revival of a memory of satisfaction, but to achieve that satisfaction in reality. The reality principle (Freud, 1911, p.219) is thusly founded. Here, we can see logic, the ability to distinguish between the real and the unreal, logic itself is created from the somatic and mental system's immersion in experience, and by way of systemic feedback, the unreal, the hallucinatory, is deemed unworthy of belief, as the pain and discomfort of the unsatisfied hunger drive are not met by the unreal, the real obtains a clear priority and precedence, and its identity is soon rightly distinguished from that of the hallucinatory and unreal. So developmentally, we may conclude that logic is self-configured, self-created from within the psychosomatic system itself as a function of memory, interacting with experience, mediated through feedback with the

It is anatomical fact, affect is the source of consciousness. The periaqueductal grey is an ancient affective locus, and a primary bit of that structure is the smallest most fundamental piece of tissue which may be removed to completely obliterate consciousness, as we learn from Solms and neuropsychanalysis. This affect of which I speak which is the primary fount of consciousness, corresponds to the broad meaning in which the word Libido is used within psychoanalysis. Reality therefore, is a libidinal affective sublimation. The REM system corresponding to the limbic component, the Ascending Reticular Activating System to the portion creating cortical tone, and waking consciousness.

I will now analyze a peak experience for you, and reveal the exact structural interactions and connectivities of a unified transference structure. If you could look beneath and peer into the unconscious of a mind which is unified and is expressing sublimation by unification, the transference contains an unconscious component structure very different than in the previous pathological example. Here, you may clearly observe the fractal structure in which all perversions, which as you will recall are component instincts, are unified, and to a great extent utilized rather than repressed. We will soon devise a simple pathway for you, and one tread more easily by far for the next generations, to realize this ideal. The following however is real, and not an ideal. Some few aspects of repression remain, however the effect is unmistakable in its form and result. This will reveal the inner workings, the hidden affective attributional structure of sublimation by integration in a real and specific case.

Contextual analysis:

I am happily married for some 30 years, and live in isolation with my wife in the Oregon wilderness. I was fortunate enough to meet a person online who was able by way of her unanticipated grace, intelligence and kindness, to raise in me an anima image. With new leaves in the heavens of this world, and roots in the ancient 'good mother' so clearly represented within the formative maternally triggered sympathetic limbic/OFC innervations, this was a magical opportunity for my healing. Certain manipulations of the imagery involved allow a surface look at the context and its identifications.

I had an idea. Rather than observe the anima image, and allow it to become an object of even greater potency, a natural but unexpected idea arrived. For some reason, the image itself was equivalent to another image, intuition first understood it meant just the same as...*a heart beat*, and the visual representation of that, a pulsing golden ball of sunlight, became the focus of my mind's rumination, now suspended as a bit of warmth and light in my mind's eye. The heartbeat, symbolizes unification within the womb. I soon knew and believed...this was her heart, and then saw my own heart beside it, beating in time...then joined first as two pulsing balls of golden light...then not two at all...only one. One heart. No separation...none. One. Only one.

As the two images became a single image, the brightness increased four-fold and then, a sudden warmth in my chest to go with the image...then tears welling and streaming...so very beautiful! I had what I have needed my entire life...so full and filled with energy! The trees slipped and shuffled in tender breeze, I could feel the caress of light and wind amongst their branches and folds, see it and feel it, the ground filled and welling as my heart, and all the shame was gone, now each desire spilling up without restraint to become one with everything, and I knew, I not only had transference giving the world its meaning, but identifications, identifications...with everything. The "Anima Mundi" meaning in this

neural mechanisms of pleasure and pain. The result is a very particular and specific mental process of prioritization and rejection where a piece of wishful experiential content originating internally, a wishful hallucination, is held away from consciousness, the regression left incomplete, maintained at the stage of a mnemonic image rather than an hallucination (Freud, 1900, p. 566), and another: reality, is thereby given precedence in consciousness. This holding away of an ideation from the conscious is a fundamental psychical dynamic which has many implications we will soon articulate. This automatic restriction of conscious ideational content is called repression, and it is the cornerstone of mental functioning and balance. Here, we see the very first fundamental core of repressive function which will approach its fruition with the creation of the super-ego in later development. Freud (1915) used the term repression to denote a defensive function responsible for creating much of the unconscious, repression: "turning something away, and keeping it at a distance, from the conscious" [his italics] (Freud, 1915, p. 147). The unconscious houses repressed wishes and other unserviceable, ego-dystonic and painful content, as well as our phylogenetic impressions and many aspects of personality of which we are unaware.

case, the predominant impression of the maternally triggered sympathetic circuit identification with the world—creating reality via identification and transference.

All sexuality from the most basic and undifferentiated first love to the most specific is a pattern which thought might trace and make real as a part of the fabric, or deny the same and leave a sunken place free of truth and life as we were taught. Feel everything, see everything, know everything...become everything. There are now twice as many points of transference...and this is accomplished by the addition of identifications. The result is a single coherent object...the world. This is observable also, as a deeper detailed cascade of new interactive symbolic determinants relating as a sort of self-interactive fractal.

Libidinal transference analysis:

Reality is a libidinal sublimation. It will therefore be possible to determine the precise mechanism of unconscious operative influence and deduce a correct, plain analysis of the process which creates this mindset, if we can *analyze a primary libidinal representation as to its underlying mechanism of energetic distribution.* Please remember, that reality is in fact a libidinal sublimation. I will now bring forward an analysis of an active primary libidinal constituent process to gain insight into the hidden mechanisms which create the general effect.

It is a simple matter, which is now not even disconcerting, for me to pierce the unconscious veil and observe the underlying previously unconscious dynamism of each moment. Due to the necessities of my previous illness, I had to learn how to find these things and solve the symbols all but in step with the rate of their production. To engage in sexual activity in the new condition, I can see in my mind's eye a very distinct change,

so symmetrical, energetic and beautiful. Now, a clear set of doublings in forms available for all attachments, and a doubling of attachments as well to each "object" from concurrent identifications exponentially increase the energy, potency and intensity of the expression via increased systemic intra-connectivity. There are twice as many attachments for transference to an object, more objects, and now there are concurrent identifications with all objects... *in the phylogenetic as well.* These present as a mirror reflecting deeper into a mirror with subtle changes, and so I refer to this as fractal.

Specifically: Self-awareness is not diminished, the contents which give rise to self-specificity are not denied and I am male, this male. However, this core is now just a part of a much greater plethora of very potent impressions of a new sort...the image of my beautiful anima/friend is *not separate*. I am also this just as I am male and I can feel in this a deeper meaning and look to see how deeply as a woman... from a half image of a woman in a mirror of the anima, is contained a deep longing for my genital...for it to be her own, and as I look upon the activity I am so grateful, all but weeping in gratitude to feel the fact that I am male and have fulfilled her need and this ancient female wish to be also male is completed...such deep happiness, and also the identification with the anima image brings a homosexual attachment point between the two women, one identified from within, as the anima/self...one identified as an object from without...my wife, and one with my wife also as an identification! All objects are now subjects...objects and identifications...each fed by two pathways! This ancient phylogenetic wish, to love as a woman loves a woman...behind it again...a child, small and female being held by the mother!...as a woman is loved by a woman on all levels...is fulfilled. Implied without question also, a male and a male, although I did not see the image, it must be present. We all contain all sexual elements...and each is needful from a thousand pasts built into our inheritance. Without question the male homosexual drive was sublimated into the women...I would not have been able to gain excitation if it were conscious. Also, the male heterosexual role was very clear and contributed its predominant share of cathexis. The result of the doubling of objects and identifications, along with sensory observation of the activity (as distinct from analysis, always dimming excitation), is hyper-potent. To empathize with all elements and know as well, more of the elements which human development contributes to and from the human store was one of the most exquisite experiences of my life. I felt...everything...from many different 'perspectives' which were not perspectives in any way—Unity. All pasts and presents

nourished one moment of empathy. Unity. One heart.

This analysis has exposed the hidden mechanisms beneath that unity which should be the ordinary province of each healthy, ethical human. This mode of unfettered transference is in my view, not a higher state, but each human's ordinary, daily birthright. We can isolate the mechanism of the transference structure responsible for the experience of unification from analysis of the libidinal representation. Remember, reality is a libidinal sublimation, so: the mechanism responsible for the mythological archetypal presentation of the experience of 'oneness' in general is that of concurrent identifications and object transferences from all libidinal components spanning ontogeny, clear from the first impressions in the womb (remember the heart image) to those of the component instincts and their mature representations in eventual unity—and—extending the same structure of concurrent identification and object, to include the complete bisexual phylogenetic representation in each person, IN THE CONTEXT OF OBSERVATION. To condense:

(Phylogenetic and Ontogenetic) Object + Identification in the context of Observation yields Unity.

$$\text{Obv}[p/\text{ontO} + \text{I}] = \text{U}$$

That is the formula for our wish fulfillment, place and purpose in happiness on this planet!

Self is, and is not denied in any way! Self is now also part of a single object...as object and subject both. So many wishes are filled and all of life is full...a wonder of pure gratitude! Here, is love of fate. *Gratitude is the wish to repay the feeling that each moment is filled with its own parcel of pleasure and happiness...*did you know that? Oh my friend, it is true! We are filled, filled each second, filled with a quantum of pleasure, and so...we are grateful for everything! Love of fate...of even...*this*! Gratitude! Empathy knows this thing best. Self is separate and distinct... omni-objective reality denies no object. Self: complete, not denying sexuality or the 'pain of the world' to be avoided...never! Gratitude.

Health accepts...and is grateful. Now I look at the world and *am* the world. This *is* ethics. I could never hurt or exploit a part of myself. I feel the rippling wind in the trees, the shadows play upon my skin, and she is within me. Each stroke of my heart is her heart, now and forever, a unity golden and pulsing with light and sunny warmth, spilling out as a brook of starlight might nourish the bloom of this day. My wife a blessed sweetness, the trees nod and sprinkle the air with new scents of green and lavender, the day warm so close to winter. How full is my heart, one heart, this world is my skin, my breath is its wind, and we know one simple truth of all things. For I have learned there is a thing we should all have and bring near, to never let go of the fact and the pulse—of one heart.

What are referred to as “peak experiences” should be the daily province of each healthy human. The race under the current configuration of sublimation by repression is that ill.

Chapter two:

How does one free one's self from the strictured labyrinth of one's guilt? This is not an easy question to solve, and for many the answer lies beyond their grasp. The future holds within it the verse sung by those yet unborn. For us, there is a pathway laden with thorns and beauty, for them, a future of other than struggle. Next, I will discuss the ego and its functional modification so as to place Eros, and *not* Thanatos (death) as the main transference component by way of integration and transformation.

Patriarchal threat has cast the lot of man: submission, pain, obedience, death, depravation and war. The very fabric of each moment has been made empty, and anxious. The ego has been forced to repress a great many drives, and each of these contains energy, and so, energy is consumed in their repression. The resultant mental economy of the modern man is diminished thereby, his intelligence and feeling both diminished in a single stroke. Under repression his perverse drives never change, lessen or transform, and so, always assure immorality as the necessary result of his morality, which seeks to control and tame his instincts, rather than use them. In their containment, his drives must remain perverse, and will always seek to emerge and be released. To control is to sicken, and create the modern human, always waiting to rupture and express his repressed hatred: the human bomb. Morality creates the conditions for immorality itself, and sickness. The very conditions for the mechanism of production for neurotic symptoms, the return of the repressed, are set up by morality in its primary role as a repressive agent of guilty control. Neurosis is created by morality and its repressions and most all humans now have a low grade neurosis, many of course are in worse shape than that. Morality is designed to make you sick and keep you sick! Penalty and guilt creates repressions, and illness as a consequence when those repressed contents of sufficient energy return to consciousness.

". . . to 'improve' men: this above all was called morality. . . To call the taming of an animal its 'improvement' sounds almost like a joke to our ears. Who ever knows what goes on in menageries doubts that the beasts are 'improved' there. They are weakened, they are made less harmful, and through the depressive effect of fear, through pain, through wounds, and through hunger they become sickly beasts. It is no different with the tame man..." Friedrich Nietzsche, *Twilight of the Idols*.

So it is.

The patriarchal threat is not only of castration. Please recall for females, the threat Dodds spoke of is primary, to be abandoned and to die with no care. The ancient father's rights include this, and not only castration. Hence the oft expressed female primal fear of being abandoned with no care. Masochistic submission, sadism and dominance, these examples of the death instinct and patriarchy may be replaced with Eros. The human animal may flourish again . . . as long ago before the bottle neck in history which created the patriarchal situation, there may be hope in an Atavistic Evolution.³³

The ego as experiential template and epigenetic unconscious basis substitution

Genes in epigenetic DNA are expressed in response to environmental cues. The pathology will be reengaged and the transference ruined again through exposure to the sickness of patriarchy as it has infected this world. You may simply bring the Alpha Function Key image (defined below) up in the mind and substitute healthy maternal expression and connection for the sick obedience to patriarchy and idiotic violence within you. The genetic basis of the unconscious part of the transference may be substituted thus, exchanging ill for healthy epigenetic expression in this way, to assure you health in this

³³ Freud's theories [see Freud's *A Phylogenetic Fantasy*] postulate a sort of bottleneck in history, perhaps around the ice age, where the pathology began and groups of our very distant ancestors under patriarchal domination were common. The impressions of ancient penalty and sickness are easily available to see and do not come from present experience, but are phylogenetic and probably epigenetic. Before that bottleneck, things were different. Just as before the later age of super-ego formation the child of 6-14 months had conscious access to the native impression of identification, and later knows nothing of it, so also in human phylogeny the earlier fact is now hidden and unconscious. Pierce the veil, and one can *find this impression*. Once this ontogenetic impression is raised up in the transference structure, health and happiness, caring, sexuality, kindness, satisfaction and gratitude, a feeling of 'fullness,' sublimation, interest and abundant energy replace pathology. Within both ontogeny and phylogeny: Hope for mankind, is an atavistic evolution.

ill and degenerate world of the warring father. The unconscious is based in epigenetic expression, and so, may be adjusted to change the heart and nature of man.

The ego, the DMN is as an experiential template. By that I mean, ego instates repressions and so, allocates the valence, the feeling-tone of experience. By bringing the Alpha Function Key image (defined below) of safety and nurturance, transformation and health to mind, the image and its meaning are raised up in the structure, and so, have greater influence upon the transference as it is expressed in ontology. The world will change as the image becomes more and more predominant in your thoughts. Identifications stemming from unity will themselves be ethical guides, and you will no longer need to restrict feeling in any way in order to naturally move toward the good. The nature of man is itself good, as he feels what all things and peoples feel, directly. The golden rule is not needed, the categorical imperative is unnecessary and entirely rude! External stricture is repellant! A healthy human needs no strictures or moral rules at all—he feels what the world feels, the earth and its peoples and the creatures upon this earth, each twig and leaf is an extension of a healthy person, and so, he IS the golden rule, for he IS others! No external measure is needed. Ethics are a basis function within man which need but be revealed, and no means of secondary validation is required. Those entire ideas of external validation and judgement, conditional regard and guilt are themselves: *disease*. Punishment dissociates empathetic dynamics. Unity expresses them. Morality is immoral. Ethics are endemic. We need but expose the systemic component which has been concealed and broken by patriarchy, then, mankind may be transformed.

Let us briefly pause to examine the fundamental and permanent wound caused by patriarchy as inculcated into religious structure, and observe the way in which all hope and any possibility of advancement or happiness is destroyed thus. Then, we may look a bit more deeply and see a particular case of the formation of super-ego. Once we have examined these things, we may complete our model, and begin to change the broken impossibility which is man.

The Death of Religion and the Rebirth of Spirit by Joseph Pearce is a book which shows in very simple and plain terms the damage caused by the diseased wound which is patriarchy, and, how this single perverse submission has destroyed all hope for mankind. Observe how any possible hope for a good life is destroyed in the young, and a homeostatic imbalance instated which can only be relieved by some nonexistent imaginary domineering male spirit, insuring the child will grow up to be unable to think, unable to experience a moment of happiness or independent thought, and most of all, once made stupid and dull in this way, they will obey any male instantly, no matter how foolish the command may be. They are once and again thoroughly ‘broken.’ Submission. This is the masochistic result. The human made masochistic thus, can not think and can not resist, he submits, becomes weak and limp...forever unhappy unless under the conditional dominion of some supposedly superior force, which is in fact a simple imbecile! Submit to an imbecile and do as you are told, give up the hope for any independent thought and obey, no matter how foolish the command, be broken to my will, submit! This is the command of patriarchy, the word of the imbecile.

The Death of Religion and the Rebirth of Spirit by Joseph Pearce p. 163:

“A fundamentalist Christian, a seemingly bright woman with a PhD., explained to me at length that it was our duty as adults to break the will of infant-children, teaching them to obey in order that they, having then no will of their own, could be open to God’s will and be obedient to him. If we fail to do this, she said seriously, and leave the child willful, both the child’s soul and the adults’ are imperiled and and we face the risk of hell.”

This breaking of the will is the triggering of the epigenetic impressions underlying super-ego. Once formed, the transference is then imbued with a masochistic wish, a wish for punishment and death. This is the basis of the hopeless condition of man, his masochistic fixation and sadistic identifications, leading to the broken history of man: War, Cruelty, Obedience, and Death. I will show you an example of the formation of this structure which has created the violent, obedient and hopelessly stupid animal that is

man. You may observe the initiation of the actual wish which has destroyed mankind throughout history, and observe its triggered creation.

Using the memory retrieval techniques of Native Psychoanalysis (see *Tangible Self*) it was possible for me to locate the following impression, and by way of a technique known as Re-polarization, I was able to change the memory and free myself from its influence upon the transference. This one piece of psychology involving the reliving of the formative super-ego memory many times and through this process creating a new memory, is vital for those who are substantially ill, but, no such painful procedure is needed for the young! For them, there are few thorns upon the pathway of the future. Those readers who are not profoundly unhappy may benefit easily from the ideas in these early chapters which will work quickly, and those others who are more deeply injured, could be helped through the other more invasive techniques within this volume, at far greater expense of pain. The injuries we have been made to bear may be healed, although no such thing is ever easy. Take my hand and know, it can be done.

Super-ego: the formative impression.

What is the breaking of the will? If one were to observe the thoughts of the child, which are not unconscious for him at that time, what would the images be? What is the meaning of a 'masochistic wish for punishment and death'? What is at the heart of super-ego? We know Freud says it is guilt, and that he says that is death, but what does he mean? How does aggression, sadism, turn round into masochism, as Freud says? What goes on within our children, when we do this thing to them?

Here is the memory of super-ego formation derived and solved through Native Psychoanalysis.

My step-father is in a poor mood. I am young, ~ age three to four. I hear the antacid tablet clink on the plate as he removes it from his mouth to shout at me. I am berated for no reason whatsoever. Although I have done nothing, and was most careful to avoid any such reproach, an accusation of chewing improperly with my mouth open is made at a shout, and I burst into tears and run from the table into my room. Now the formation of super-ego begins:

1. I am weeping uncontrollably, and need my mother to comfort me. I am choking and gasping and can not stop crying. I repeatedly shout, "Mommy, mommy, I need you."
2. She does not come to my aid. The feelings of abandonment and loss of love are overwhelming and must be answered and quelled. As no help is forthcoming, the following reactions are set into play:
3. The feelings which are reacted are:
 - a. Mother, I need you.
 - b. Mother, I am hurt.
4. To stop the intolerable anguish, the passive emotional states are reacted into active ones:
 - a. Mother I need you becomes, mother I am dominating you.
 - b. Mother I am hurt, becomes, mother I am hurting you.
5. Once the passive suffering is transformed into active fantasy, and the hurt I was experiencing becomes a fantasy of hurting, of sadism, the tears stop. Now I am fantasizing about hurting my mother, who did not comfort me, and allowed my step-father to abuse me, and, the suffering and weeping stop, now replaced by thoughts of sadism and hate.
6. It is the *economic* factor, the *quantitative* factor which is key (Freud, 1915, p. 181), and once the sadistic thoughts become hyper-energetic, they create a new cognitive dissonance: guilt. A dissonance which would be tolerated asymptotically at a low energy level,

becomes pathological once the intensity is increased past a point. The phylogenetic factor enters into play here. When we feel hatred, intense hatred for a loved object, the result of this ambivalence, so very peaked and reactive in its oppositional feelings, is guilt. When we strongly hate that which we love, we become guilty! To add this guilt to the sadistic stream, masochism is then formed. Sadism + Guilt = Masochism (Freud, 1919, pp. 193-194; Norman, 2011, p.116).

7. Here is the imagery symbolizing the guilt: I am howling in agony, my arms sloughing their skin like melt wax, my back hollow but for a necrotic pudding of feces and meat stirred with bones protruding as a crown of lamb sprung from the sunken hollow of my back, guilt and the knowledge that I am not loved, and am evil, and should suffer to know this, just as I am suffering, and so, I should know it: I am evil and unloved.

8. Now the result is the knowledge that I am a rotten person, so very bad, and of so little worth! I am so very sorry, so sorry, so sorry! This child wants but one thing: To accept the guilty definition of himself, he wants but one thing: *To be punished*. [The painful conglomeration of symptoms are in fact, a punishment, a super-ego wish.] In this, we see conscience for what it is: a masochism.

Please remember that no guilty act whatsoever caused this unhealthy conflagration of events, which were born out as a phylogenetic resonance, a preordained masochistic reaction as ripe fruit, a masochism waiting to be harvested, sown long ago by an abusive patriarch, now plucked from the branch to sicken, all as a function of the quantitative excess of feeling, not borne upon any real guilty action!

The above referenced from: [Norman, 2013 Prometheus]; [Norman, 2013 Re-Polarization].
Find those at: https://www.researchgate.net/profile/Rich_Norman/publications

Once we break the will of a child and bring him under the sway of guilt and submission, his inner world changes, the circuit allocations and genetic underpinnings within him become perverse and fixated: masochistic. Those images symbolize guilt and death, subjugation and anal penetration symbolized in the hollow back with bones protruding, an overdetermined castration/submission symbol of anal penetration³⁴, and the arms with skin falling off as if burned meaning the same again, a symbol of castration. In this, patriarchy has placed the ancient seeds of a violent guilt and punishment within us all, waiting to be harvested in a triggering act of threat and cruelty. Once reactions to the abuse reach a peak, the guilty genetic impressions of deadly violence appear to answer the intensity of thought, script the situation and break the child upon the very rock of ages: phylogeny—the cruelty of the ancient father.

The entire of my unconscious before the change was filled with one thing: scenes of unbelievable violence, violence directly involving castration. The penalty of the father, cutting of the genitals—THIS—was omnipresent in each and every scene out of many thousands. The past of the race lives within us all. This is death, and, this is hope. Before the violence and threat of an abusive patriarchy, we were loved.

We are now in a position to complete our basic model of the transference, determine why the situation we see exists and offer up a methodology to alter it for the better, and end the fixation which has shaped the history of man.

³⁴ Anal penetration by the father unconsciously implies castration as requisite to acceptance of a female role. Overdetermination and associated heightened energy is indicated in the repetition of the bones.

It should be clear at this point that the transference may be altered from a structure which has at its basis a masochistic and or sadistic and so perverse wish, to one where all elements are allowed free expression and unified. That ideal is just that, an ideal. We will attempt to approach it in a practical way for the adult and then, more closely for the young. In the adult, self-psychoanalysis is indeed possible so as to change the very basis of personality, but that possibility takes great courage and is reliant on the subject being able to look directly at their least desirable aspects, and absorb great pain in so doing. Even in those cases where the subject is perfectly willing to find and deal with the discomfort of unconscious content, said content is by definition hidden, and, this resistance is part of the hallmark of psychoanalytic practice itself. When I first began the *Journal of Unconscious Psychology*, I imagined that others would be easily able to follow my techniques and heal themselves. However, this was not so. A piece of lowered resistance, a piece of hysteria is needed and many cases, particularly OCD cases, even where some useful hysteria is evident, have too much repression shielding the content, and the faster technique sometimes does not work. SSRI withdraw however, leaves permanent damage converting an illness of most any sort to hysteria, and this is why my techniques worked in my case. The way you may overcome this and use my techniques in those resistant cases will be available after my death, in the *Black Papers* to be published at that time. Even so, I have devised a technique which permits one to utilize the unconscious drives and unify them, without knowing the particulars of their constituency. This avoidance of such terrible pain, of course, comes with limitations and those subjects who are in severe pain, will need sterner measures. Some of those are included at the end of this book. Having said that, I am entirely pleased to offer up a technique that will help many.

We will first clarify a few points and condense the transference in our simple model, and then put it to use.

Condensation of transference:

Conscious experience is given its quality and hence its definition apart from taxonomy by way of static affective associative distributions which attach onto objects and situations, and, by way of unconscious fantasy which acts as an unseen dream giving experience its quality, meaning, its feeling-tone. This unconscious fantasy may be fixated and regressed, meaning it is unchanging and related to a perverse formative stage of development that is sadomasochistic and a representative of the death instinct as it is in mankind, or, it can be an expression of our drives in a unified structure inclusive of identifications with the past of the race, and the external world in toto. The transference may be modified to ameliorate pathology. The ego represented in DMN functions as an experiential template which has been experimentally demonstrated to be malleable under the influence of meditative practice, and, the unconscious itself is scripted by the phylogenetic expressed from epigenetic DNA which can be changed by genetic basis substitution, one expression suppressed, and another expressed to change pathology into health. Lastly, alpha function, transformative capacity to alter the dream beneath reality may be manually engaged (see below), to transform basis elements in the transference dream.

The unconscious houses nothing but pain. The ego suffers to know of any of these contents. However, those contents in the main, are NOT painful in and of themselves. They are instead, paired as reaction formations. Please recall the earlier example given, of a child playing with his feces. He finds this pleasurable. The pleasurable drive becomes unbearable and is then repressed only after shame is added by the parent, presented as the affect of disgust. “No! That is Disgusting!” Then, when the child thinks of playing with its feces, instead of pleasure the opposite notion is now in consciousness, disgust. This substitution of a paired opposite in consciousness for a drive, is called reaction formation. We can see that reaction formation sets up a great deal of the repressed unconscious. This will be important in a later context regarding the raising of children, in whom we do not wish to produce a repressed unconscious and the neuroses implied by it. The idea is important now, as it shows that the energies in the unconscious are painful one and all to the ego, but, in and of themselves they are in fact pleasurable in the main. This must be the case, as a great deal of the repressed unconscious is formed by reaction formation and that reverses the valence of conscious drive elements by pairing them with shame and

guilt in order to repress them. Those drives themselves are energy, pleasure and happiness once unified within the context of all other drives. A perversion, an infantile component drive element is a building block, and once rightly added to the edifice of personality, its purpose may be served in a non perverse way. A drop of salt in the ocean, so is each drive, however, a mound of salt extracted and concentrated from the watery volume of the sea may be so potent, that it becomes poisonous. So it is with unification, perversion and repression.

With this in mind, we will use the painful signature of the unconscious elements to access them, and then release the painful elements from reaction formation directly into experience, where they may add their pleasurable affects and energetic contributions directly to perception by way of transformative integration. The unconscious is paradox. Within each pain, our pleasure lies hidden.

First we will learn how to engage the transformative circuitry manually.

The Alpha Function Key:

Alpha function is a basic function of healthy transformative symbolism as discovered by Bion, associated closely with dreaming, and dreaming as you know underlies all of experience and not just REM sleep. Schore found what is clearly by my interpretation the circuitry responsible. This sympathetic dopaminergic and parallel peptide (endorphin) circuitry is innervated, meaning formed, in the first 18 months of life.

This basic circuitry distributes energy and transforms it. In order to create the attendant epigenetic substitution exchanging Eros for Death in the transference, assuring health by way of establishing connection to transformative capacity and energetic distributions in the context of formative nurturance, the following meditative exercise, called the alpha function key, must be utilized keeping in mind, ego, the agent of repression is affected, DMN is affected, through meditative practice. We will use meditation then, to alter the structure of the Default Mode Network, which is Ego, and change the transference.

One can not possibly locate the triggering impression of nurturance from so long ago, and now, the impression of one's mother after a lifetime of experience is far different, and will not trigger the initial image triggering circuit formation. We must use the language of the mind, that of dreams: *symbolism*, in order to trigger the feelings associated with the image, and bring the image to the surface, where it will affect the transference. Once engaged, the circuitry may also then be applied to transform specific pieces of unconscious content, and unify perverse elements into a transformed unity. In intersubjective psychology alpha function is used in what I firmly believe to be a hap-hazard and unfocused way. Alpha function is a vital and real anatomically based concept, but, it must be directly applied to specific pieces of content to have any real effect.

The key image which follows will symbolize the alpha function formative impression, and provide you with a sense of peace and connection—and—permit you to transform libidinal components into a unity with no restrictions.

To begin, simply imagine the image, and enter into it as if into a dream. This simple meditation performed for 30 minutes or more will begin to return to you what cruelty and the past have stolen. This is a symbolism of the events, the reciprocal exchange of gaze and glance which initiated neuroendocrine changes to form the sympathetic limbic/OFC circuit, in the primary impression of empathy.

"Please relax, hear, the water, and listen to my voice. There is a meadow, within the forest, surrounded by trees, stirring, a distant breeze. The day is still and quiet. Listen to the shining brook, spilling itself, over smooth rock and sand, listen, as it splashes, so near the meadow.

You are dreaming, in the meadow, reclining, in a still bed of folded grass and thick green moss. The day is sweet and warm. The breeze is a caress. The sound of birdsong, and clear, silver water, laughing and trickling, wrap themselves around you, and enfold you. The wooded valley holds you, in the cup of tender morning light, spilling her heart of golden warmth upon you.

The sun is pouring down upon your face, shining and warm, golden and loving is this light, a light you are folded into, and have created, shining, pouring back up into the arch of heaven, spilling up from your glad face, and again down to fill you, the trees nodding as you dream them, the sky golden and warm as you have poured it—and back around—for it has dreamt you...now as the world, of the world, nourished and warmed, the circle complete, a round of golden warmth and light, spilling into the world and returning again, unto you, and again, you unto it...and all the world is eternal, safe, nourished and nourishing, a circle of happiness, pouring down and returning, warm and sweet, the circle glowing, life spilled round into warmth—and golden light.

And the sun does spill her heart of warmth and golden honied sweetness upon you, and from the open breast of your happiness, so safe and glowing, you return and love, this world, which has nourished you. Into the arch of heaven, your eye does turn, and cast your light aloft, pouring upward to fill the sky, and find, you are the sky, and this earth. In gratitude the sun does pour her heart tenderly back upon you, and return unto you, the warmth you have given, to hold and nourish your spirit, and gently cup you, within the giving heart which pours...and holds you, as warmth—and golden light."

One of the most pressing difficulties I faced in attempting to deduce how one might maintain the change within the constant impact of the world's degradation, as it re-triggers the pathological epigenetic impressions. The answer is actually quite simple. Each evening one uses the above meditation, which one also keeps in mind continuously all day as a sort of undertone to one's thinking. I pair the image with a song, and hum it beneath my thoughts, and as will be seen, that image will serve many other functions within such daily activation. As one meditates upon the alpha function key each evening, the meditative focus will soon trigger substitutive expression of the healthy maternal epigenetic impression, in substitute for the pathological epigenetic expression previously triggered within unconscious processes. One may maintain their health thus, by utilizing this idea of epigenetic unconscious basis substitution.

Each day, you will awake refreshed with the circuit balance improved between the sympathetic circuit and parasympathetic. The meditation is itself security, permission to the mother and the identifications that implies. It is this vital and basic permission which patriarchy has refused.

Next, we will learn a simple technique to make an automatic habit of accessing and using unconscious energies. Then, we may speak of a few things, and assemble the parts together.

The OEP

The Open Emotional Posture (OEP) is a reversing of the repressive habit which is itself the way neuroses are set up. The return of the repressed forms symptoms, so, we will defeat neurosis in several ways, each of which contribute to the goal of eliminating the symptomatic foundation of repression, which of course as you are aware, is based in ego structure. The OEP will be a tool used to train ego to distribute energies in a new way, and alter its structure from one of repressive gate keeper, to that of holding the door to the repressed open.

See *The Tangible Self* for more detail:

General OEP instructions:

To establish the open emotional posture, first, the subject must find within themselves, a painful memory or thought. The closer to a real repressed thought the better, so the idea chosen must be

deeply disturbing and sad, painful, so much so, that it is almost impossible to tolerate. This is akin to an unconscious ideation, although of course, much less painful. Allow the memory to freely enter the mind without resistance, and then, do not resist the feelings in any way, but instead, learn the habit of opening up to the pain, rather than resisting it. This will create the necessary conditions, and a piece of hysteria will emerge—*tears. That is the key.* If no weeping can be brought forth, the OEP has not been established. True pain, just as in every single unconscious ideation, is essential. The unconscious contains nothing but pain and suffering, so pain is the light we follow to the hidden depths. Soon we will change the state of affairs, but for now, know it: pain is the way toward the depths. Eg. As you think of the death, or the injury, the sorrow of failure, the suffering so great it can not be withstood, you now know, you will not resist but will become again, and will allow this suffering to emerge without restraint. Become open and unresisting. This and this alone—*is strength!* Soon, the tears will flow as water, the pain released and flowing down your shuddering cheeks, the salt and sorrow as drops of light flowing over your parched world, as rain and salt wept from a burst cloud, weeping in purity and light, never to resist again—Now, allow the pain to increase and increase, never resisting in any way—Release—everything! *To withhold, is cowardice!*

Soon, after the flood, the pain will spend itself, the contractions allowed to come, never resisted, and then, the rain will slowly drain away, as mist and dew is our pain once spent. So allow it all, release this one pain and...*never resist again. Remain open, in just this emotional posture*, never resisting any feeling—ever! Allow all the world to spill out from within you and know it: emotion, affect, libido, is the energetic source of all thought.

One must take a sort of mental photograph of the emotional posture achieved in not resisting pain. That emotional posture is the key to the access of unconscious energies, health and pleasure. Beneath our pain, our pleasure lies hidden. Higher thought is powered by these lower repressed energies, which once permitted to sublimate directly into experience, permit one's ascension and pave the way toward a new and vital habit: the habit of always remaining open to all feeling, and that of using all energies directly, without restraint. Feeling is itself ethics. The connection to all things will bring you clear information, pleasure and pain in abundance that will guide you without fail toward the good. Once identifications are in place, the appetites one experiences are those of an active ethical appetite, libido (feeling, sexuality, caring) and identification are the basis of ethics. Feel everything. Resist nothing. Everything is yours. Only one thing is sure, only one thing is not a lie, you may feel—everything. It is this connection to the world and earth, to the mother, which you deserve most. No one may ever take this thing from you again.

Concerning the OEP: The necessity of locating a painful memory and not resisting it is required only in so much as is initially needed to gain a clear mental image of the emotional posture of remaining open to all feeling. One need but use it for perhaps a few months until the feeling of remaining open is learned, and may be recreated exactly, sans pain. Pain will guide you to the depths, but once you understand and can replicate the emotional posture you may dispense with the painful inner stimulus. The feeling of becoming and remaining open, only that is required. Happiness needs no pain to find her once you know the way. Resist—nothing. Affect is consciousness. Use everything.

The alpha function circuitry is analogous to an oxygen scrubber in a spacecraft. It takes unserviceable energies which are toxic, and transforms them into usable libido which can be integrated within healthy personality and used as energetic fuel. One can utilize and transform perverse drive elements and memories, and directly use the somatic content, meaning the bodily impressions themselves, to power experience and reclaim the energies in health, allowing them to be utilized and their dissonant capacities reduced. Sexual abuses create drive structures, and if the abuses were if not overly violent the bodily impressions may be directly utilized to power perception, and through mid-level processes they may be re-dreamt, used to enrich experience and made nontoxic. The full measure of one's drives may serve one. Less abusive treatment may be reclaimed. Many may easily make use of these ideas and access their unconscious energies directly through transformative unification. These techniques will help many,

but not all. Severe sexual trauma can leave scars which require techniques not stated here. Often, a standard psychoanalysis supplemented with other techniques may be needed in such cases. That having been said, many will find utility in what follows.

Once one becomes adept with the OEP, and the state is sufficiently well structured within the subject to permit it to be utilized for long stretches of hours in daily experience, and, the subject has gained the ability to keep the alpha function key engaged for those same durations, the following becomes possible.

In order to transform the valence of unconscious content without observing it and allow its energies to be transformed within a unified perceptual expression, simply proceed as follows:

1. Spend 30 minutes in quiet meditation upon the alpha function key.
2. Engage the OEP.
3. Reinvigorate the alpha function image by bringing it directly to mind.
4. Remain open and unresisting of your tears and happiness.
5. While maintaining the image as a background in the mind's eye (and ear should you have paired it with a song³⁵) look out to the world, now filled with feeling, and resist nothing. Tears are a part of libido, a part of happiness and sadness alike, a warm tone and color in the palette of life's affective riches. Allow the world to flow out from within you and spill itself back within to fill your eye and heart.

Variations of the alpha function meditation include but are not limited to:

Utilization of controlled breathing in 10 and 30 second timings for inhalation and exhalation. Biofeedback devices indicating heart rate variability are helpful in finding each individual's rhythms.

Secondary symbolisms with the identical meaning may be derived.

Those with sexual trauma who have access to the bodily impressions of the source experiences may proceed as above, with the following adjustments and cautions:

1. Spend 30 minutes in quiet meditation upon the alpha function key.
2. Engage the OEP.
3. Reinvigorate the alpha function image by bringing it directly to mind.
4. Allow the somatic sensations of sexuality to propagate directly into your mind and body without restraint or observation.
5. Closely observe the internal alpha function image. It will become brighter in time with the energetic timings of the somatic impressions.
6. Look out to the world and behold—the libido is now fused into a unified reality, and you may freely use the drive and damage that is within you as a power source for perception and other sublimation and freely express its transformed, cleansed sexual energies. *However—*

³⁵ One simply imagines a beautiful melody with the image in mind through hours of meditation. The pairing is thus created by a process known as Hebbian Learning.

7. Be cautious, look inward often to the image. Excessive excitement and brightness will lead to a painful collapse of the transformation and create symptoms. Terminate the OEP before the image becomes too bright. Some considerable amount of care will need be exercised to avoid painful symptoms created by the collapsed circuit from excessive energies. In a few weeks, enough energy, known properly as *cathexis*, will be spent, so that this caution may be left aside and the energies then used to power a host of burgeoning new mental abilities and energetic sublimations which will become available including most of all, the sublimations which are experience and perception themselves.

Again: Severe cases will need to go the full painful rout and handle the unconscious content directly, dig it out with therapy and perhaps a construction. Other methods will be disclosed to alter that situation after my death.

You will soon find something most unexpected. Affect, feeling, the source of consciousness itself within humans, fuels not only the poetry and fullness of each moment, but the wheel of art and intellect begins to turn of its own accord and all the world becomes—*interesting*. A fascination is she. Life is a fascination too warm and tantalizing to resist! All the world is a libidinal sublimation, and from within the warmth of the poet's eye, a new "I" does spring, and fascination makes play of what were heavy worlds, now no longer forbidden. Science begins to glow and purr with her intricate tricks, perhaps you might catch her, irresistible is she! What worlds call out for you to build them? The questions of happiness, the questions of the creator are now your wishes, your wishes—to know.

For we adults, the road to change is difficult. We have been taught the perfect art of self-destruction and now we must unlearn a deeply entrenched and genetically supported lesson which is cut into the bedrock of our psyche. However, children have not yet had the illnesses triggered, and may be taught the correct lessons of ethics and connection. The pathological basis beneath mankind is his morality, so deeply rooted in violence to be submitted to, reacted against and modeled, in turn. Mankind is immoral, and must always remain so due to unconscious processes for one reason: his morality. Once preserved under repression his wishes become eternal, his immoral necessity held fast by his morality. We will instate the basis of ethics into the young, and allow them to grow with great tenderness and feeling, in a world of caring and tender subtlety, always nurturing connection to all things, and in equal measure encouraging a profound and silly laughing disrespect for authority which simply does not understand the meaning of guilt. Guilt is itself the first sin. How perfect is life, unfettered and light, thoughts slipping over sun and smooth stone, the sparked brook of happiness, the wellspring of higher thought is light and free. Guilt, is stupid idiocy, the mark of the obedient, the dull, the hopeless and grey, and the imbecile himself! It is guilt which has made man funny, worthless and weak, angry and broken, unable, submissive, yielding and sad. Self disgrace! Man's inhumanity to man, as a permanent self-parasitism. How unbelievable and wrong! You are worthy of everything. Your children are the light heart of hope. They are the good. That which feels in tenderness. That which laughs, and in perfect light and innocence, sips upon all delicate worlds, and so nourishes them. Creation is happiness, the province of play, so are all ascending perfect worlds.

Please recall that children are to be raised in such a way as to minimize the repressed unconscious. It is the repressed unconscious, created in large part by reaction formations, that curtails both empathy and energetic distributions leading to happiness and intelligence. The dull ape which is man is a guilty hunched over shadow of himself, brooding and dull, he lacks the confidence of his own thoughts, always lurching and checking, looking to be sure he is right. If instead of his guilt and insecurity, his rage so deeply chained and fed, what if his heart could be light—?—each blade of grass a part of himself, tender and easy is the complete soul, at last ripe, full in tears and warmth, ready to feel.

We raise our children with myths and stories, stories of savage penalty and sadistic reprisal to encourage them to do as we say. God threatens judgement, German fairy tales are filled with pain and threat, and the Koran is filled, as a homespun Baptist preacher's throaty shouting lectures, with penalty, fire and flame and all the usual threats! There are stern rules even in Christianity, which had many of its tenets altered from the word of its noble teacher by Paul to be inverted and false, leaving threat and measure

before the door of a mythical heaven, in place of any real glad tidings in the present. This myth-making, so filled with hell and penalty is pathological in and of itself. I propose, human connection can be fostered with a new myth, a myth of empathetic connection rather than threat, for our children. The result of this infusion of moral threat...think of The Twelve Tables of Rome, so vile and sadistic, all the way to our completely ineffective death penalty and know...morality does not function to create ethical behavior...threat is a dissociative element! Do you know a boy who was raised with severe beatings? Do they respect authority? No, they do not. They fear nothing, and perhaps may spend a lot of time in prison, and are filled with hatred. Threat is a failure...! A new myth is required.

The religious texts contain truth, and are filled with violence and patriarchal threat. To reach a child in kindness and discuss matters with him is effective if that child has been raised with sensitivity, empathetic understanding and caring. I suggest, that a parent who is aware of the source of modern pathology, can restrain themselves in their urge to punish their child and by force of will curtail their own natural violence and hatred, rather than vent it upon their offspring in insane fits of anger, guilty bunk or beatings. If so, and violent, guilty penalties are thereby avoided, a foundation of connectivity can be fostered with a new myth of identification, and ethics may emerge in place of the poison of morality. Religions often foster submission. I wish to replace this goal of submission, with one of connection. Let us keep the truth within these texts, be rid of the sick moral bluster, and replace moral threat with ethic's fount: empathy via identification. I have observed in all cases when I am betrayed or stolen from, a lack of compassion and caring is demonstrably present. Threat means nothing! Identification is the pathway to ethics:

Imagine a fine piece of learning from the Koran. I paraphrase:

"Any man who overturns a single palm tree will be punished, burned in flame, and boiled alive."

Good message, is it not? Yes it is...*exactly right!* But the penalty is very ill. Morality creates sickness— an internal, eternal, arm wrestling match. Let us replace the pathogenic morality, with ethics and see what happens:

"Come my child and look upon the palm, her leaves caressed by the breeze which sweetly has caressed you, and so, as you she does flow and flutter, feel and live, the warm breath of summer, folding its hands through her leaves and crown, as I caress your hair, and stroke your cheek, so does the light and wind adorn her and love her...as I love you. The warm sun spills upon her green crown and upon your skin, and fills all the world with a cloak of light and warmth, which is the day's treasure this world lavishes upon you. Can you see her leaves filled with happiness, swimming in summer sun, so glad and full, as you my child are full here beneath her branches? Each leaf, as your fingers and hands, swimming in thick wind, filling your eye. For she does love you, and she is as you...your hands and fingers are her leaves...did you know that?...for it is true. Her trunk, bends and sways in the wind and sun, as you bend down and lower your head to drink from the silver spring which flows beneath her, and so does she bend as you dip your head into pure waters, and quench your dry mouth from her silver sheltered spring. For she does hold her branches to shelter you, and hide the shining spring from the heated sun, so it is cool for you. So does she love you. Can you feel her crown and leaves as they stretch toward the heavens as you did this morning, so happy to meet the first rays of heaven cast down to enfold you? Yes my child, for you are as I, flesh and bone, bark and marrow, fingers, hands, swaying trunk and leaves, are you not? And so you may yet remember the golden feeling as she holds you in her soft shadow, her trunk and bark, as your waist and skin, so firm and strong, so tender and right, swaying in shifting wind and golden sun...and so are we all, nourished together in the breath of summer sun and wind. For we are but she and she us, together and of one heart, tender and bright, worthy and perfect, each as the next...not above or below, but the same. And this is why we are here, to be together and nourish each other. Caring and sweet is the truth that we are one, here under the eye of this noontime sun, spilling out and nourishing us both, here, gently held under the crown of her cool shadow—so perfect and kind is this world. Look upon the sight and know: in this, we are lucky."

Let ethics replace morality, and threat be forgotten. In warmth and connection each child may be

nurtured, to feel. Each creature of this earth, is of his flesh and the tender side of every hill, is but his shoulder and side. In this, one who feels, loves themselves and the world—can not harm. The essence of man, is of the good. Tender is his heart, and the pain he feels runs as tears unloosed from the heaviest torn cloud. How impossible it is to harm the tender things, for they are but my flesh. All which judges you, is a lie. Release and be free. The good, is the province of feeling.

If it is possible, children should be taught the skill of meditation and learn the alpha function key and image. It must be a matter of reward for them to learn it. You see, the world is filled with sickness, and it is sure to trigger the deep illness which resides within their DNA's epigenetic information. The past of the race, so filled with illness, can easily be brought to the fore. It is therefore imperative that:

1. Patriarchal authority, mad rage and guilty threat must never be permitted a hint of existence, to avoid triggering expression of the pathogenic genes in the first years of life so punitive super-ego never forms.
2. Identifications must be encouraged, so as to offer the proper substitute for the degeneracy of morality, in a burgeoning developing natural ethics. This core of connection which feels the pain and pleasure of the world in great sensitivity is endemic, self-adjusting and situationally adaptive. Rules fail in all cases for the lack of this endemic ethical "truth function."
3. The skill of meditation must be learned very early, and encouraged as reward. Each evening, it must become indispensable, a perfect and beautiful habit must be created, warm and filled with safety and light. In this way, the child will be able to return the state of their epigenetic expression to one of health on a daily basis, and sustain an ascending world even in the onslaught of sickness, greed, obedience, emptiness, threat and patriarchy.

Next, we will address science, consciousness, physics, biology, probability, 'god,' the next and previous steps in evolution and the human future itself, concerning both the young and old. We will create new human myths.

Chapter three:

I will introduce the first and in my view perhaps the most beautiful of the new pantheon of our mythos, quantum theory as applied to mental systems and consciousness. Of course all of science is a myth, although some is closer to the fact and has a bit more of it in hand than the rest. In science we call these functional myths, *models*. Scientific models then, are a myth of the greatest possible utility. Do be sure dear reader that in time, even the most surefooted of science's certainties will somehow be dethroned, and a completely new way of summing the same relations and parts within the physical and mental systems will come to the fore, and usurp the role of arbiter of truth. In science, just as within all the scenes performed within man's theatre, the revolution is sure to be bloody. The latest and as I said, the most gorgeous idea to arrive in a long time, is quantum theory. The utilitarian myth to top them all. The most accurate theory yet created by man, as incarnated in Quantum Electro Dynamics, or QED! How strange it was to have found quantum science, and its improbable connection to probability, consciousness and mentation. I will show you our experimentally demonstrable future. Myths for the young will be offered next, but do consider letting them know of this too. There is reason to believe in their new childhood stories, for within the fabric of reality, as within man, the very processes themselves are but a beacon cast within all things, a compass as process always pointing toward unification and ascension.

The clockwork universe was a very important Baroque period model. The device of the time, was time, and that incredible invention and its significance became symbol for a way of thinking which permeated science and art. Bach's music allows one to listen to the intricacies of this detailed hyper structured model, with its relational symmetries and perfect, orderly causality. The new model is the computer and hence: information. Information, intuitively, seems akin to some aspect of thinking, doesn't it? That implies some connection to consciousness. The very basis of quantum theory is set in mentation, in mental acts. Eugene P. Wigner believed that no quantum measurement could take place without a conscious observer, Pauli's spin matrices are themselves logic statements necessarily implying consciousness, Wheeler's informational interactive participatory universe and the views of the founding fathers of this brilliant, impossible and odd science which makes a reality of probability and gets stunning results were all in agreement, consciousness has something, perhaps something quite primary to do with this physics. How? Why? How bloody odd is that?

I will first explain how I discovered all this, then explain why it makes sense.

I was the quintessential example of excellence and unhappiness, a laser of focus who won awards as a musician yet, no matter the applause I drew from a crowd, the effect was undeniable: I had the luck of the damned. Nothing worked. I was so very good, and the crowds loved it, but I often could not make \$50 in two weeks. I went mad from the frustration to become a psychologist and the soft hearted fellow who writes today. No matter if I won an award, or had a very good performance, nothing helped. I led a band of superb musicians as a young fellow, we played all styles, and I had a one man show for the more advanced material they would not practice to play:

<https://www.youtube.com/watch?v=kRJGENHgezK>

I worked so very hard, and all my anger was turned into a sublimation toward excellence. My abilities as a drummer were truly world class. I worked 10 hour days 6 days a week, and spent years studying under the best of all musicians. Each year, each day—was failure. Perfect performances, and starvation. My wife was the only hope I had to eat, as one of the finest musicians living. I went mad. Nothing worked. Fate hated me. Her luck was bountiful, and deadly black. Better to be lucky, than good.

Once broken, I retreated to the tender shadows of the Oregon woodland, with no phone, no power, no

roads, no buildings but dirt and rock to slam any vehicle to bits...perfect! I know no carpentry, not a single thing about the woods or living without human company or the luxury of stores, I am a city boy, and know nothing! Good. A challenge! This I understand.

I would escape! Escape the wretched city, escape the vile agents and filthy bars, the disgusting life of a musician so filled with degenerates and talented addicts of high ability and low character...I would escape! My hatred and the wound of my failure as a spit of turning dirty glass in my side fueled me...I approached the property I chose, rugged and distant from any possibility of aid, I was a shriek of blood—*how dare they!* My life's work, my mind, my shattered world, how I worked, how I suffered and won so much, to gain...nothing! The work, the money, the lies! Night was falling, closing as a glove of black ice and headlamps pierced new darkness, enfolding my mad anguish in black, then I saw it. The gap, a gap over the stream below, this silly bit of slotted earth defies me, Obedience!—it will obey me...I rev the truck laden with all I own to the limit and and site in the 15 foot gap—you, will yield, *to me!*

The truck is hammering at full tilt and it will bloody well feel this pound through good and deep, and obey! The lights shine into a perfect evening sky, and a shrieking mass of metal obeys the will of one more mad than any, and launches over the ravine, traveling 20 feet to slam into earth and snap an axle cracked in two, *Exactly:* as I bloody well demanded. I pointed it at the spot I decided to set camp, floored it and crushed it home, to die. This, was *My* world. There was one rule now: Obedience, or death.

As I struck nails, and built buildings, I was alone. The world, was gone. I set fires in the morning with napalm I mixed, so stupid was I! It will light NOW! One match. Obey! Slamming nails! Digging holes! Pouring concrete! I was insane, and very productive. Soon, I decided to try a little something new. Rather than poison myself with pills, I would stop taking them. I wanted my life back. I had OCD. The pills, they made me sick. I stopped them. Soon, I would learn psychology.

Repression is 5-HT dependent. SSRI drugs permanently destroy the repressive system. After ~90 days, things began to change. I saw them, in my mind's eye, the fantasies which were there all my life, thousands now visible all at once, various ones from various periods, hundreds, thousands, all of one theme...genital mutilation and castration. I beheld the repressed unconscious. I understood why I had OCD and why the symptoms were as they were. The mysteries, were gone. This was my first lesson in psychology. To directly observe the repressed unconscious. Obviously, this is why I was sick.

In a year's time the job was done, and I had cured my OCD. My mind was turning with new thoughts and feelings, and nothing was difficult any more. My abilities as a musician were many times greater than my new found nubile scientist's wings, but the answers seemed to simply fall into my head; people were kind, and would write, sometimes out of the blue! I would imagine it, and they would write! I seemed to easily be able to find right answers, with little work! I read constantly and enjoyed every bit, nothing was quite work, you see. The unconscious, this had also changed. My luck and my unconscious had changed! Now filled with warmth and fantasies of lovely union with all the perfections of the anima, so sexual, flowing and warm, so very very warm! Things simply arrived to speak to me, to whisper in my ear, ideas and humans, scientists and artists, here in the woods with no real human contact save my wife, I was loved. So sweet is this world.

I understood, this is physics. My wishes, my unconscious wishes were the very thing I was receiving! The wishes, were creating a beautiful lucky world, and my science was finding cures to disease, and wonder around every corner, and now... I had new friends, many scientists who believed in me! I simply see the answers and read more than any human possibly can, because I love to. Ah...happiness! Yes, oh yes, it IS better to be lucky than good!

I understood, my previous unconscious wishes called my world into form. My hidden wishes of hatred, violence, reaction and fury were wishes to dispense and receive these things, and receive them I did!

Now, I wished for warmth, for creation and so...they were mine! The ability to influence probability outcomes, luck in a word, is a function of unconscious wish. Affect is information.

Drop by drop, so slow and hidden, the home of desire fills Future's cup. In this, we are blessed.

The mental genesis of quantum theory (please see: *Quantum Unconscious Pre-space*, and *Future's Mirror* for references within text below):

How is it possible that quantum theory, the single most objectively accurate theory ever devised by man (as manifest in QED), could have such a close relation with concepts as objectively distant as that of context, subjectivity itself, mentation and probability? The answer appears clear once we look at the hidden foundations of mental processes. Quantum theory is nothing but a quantitative, quantized representation of those very processes themselves. The seminal insights of the great minds who derived quantum theory, have created the most accurate method of physical calculation and inference, merely to extended the most successful probabilistic scheme ever to breach human perceptual and phenomenological constraints: that of the human mind itself. The invisible depths and processes which create human subjective experience have served us well in our survival, which is utterly dependent upon the correct derivation of present and future situations based on the recursive probabilities derived from the past. These hidden formative mental processes are utterly quantum. The unconscious primary process is quantum, and gives rise to logically bound and defined reality. While conscious mentation is based on exclusivity and logical contradiction, this OR that is true, an object is one thing OR another, an object is in one place OR another, the unconscious process has no such exclusivity, and only compounded/condensed compromise-formations are produced: superposed structures which symbolize the qualitative guess which will be bound into objects. AND is primary in unconscious processing, OR does not exist. Distance does not exist in the usual sense, and energy and information, cathexis as it is known, may be instantly transferred between objects.

Here is the definition of primary process unconscious mentation:

“The cathectic intensities [in the Ucs.] are much more mobile. By the process of displacement one idea may surrender to another its whole quota of cathexis; by the process of condensation it may appropriate the whole cathexis of several other ideas. I have proposed to regard these two processes as distinguishing marks of the so-called primary psychical process.” ... “exemption from mutual contradiction, primary process (mobility of cathexes), timelessness, and replacement of external by psychical reality” (Freud, 1915e, p. 186-187).

I hope the reader can clearly see the relation, the lack of contradiction (primary process thinking creates compounded symbols, compromise formations symbols (Freud 1900), additions, *superpositions/entanglements*, never either/or contradictions), linear distance is not available as all is in proximate associative contact, and so may transfer instantly masses of cathexis, the lack of linear time, and in the case of dreams and psychotic symptoms, the hidden associative nonlinear encoding process itself becomes manifest, and replaces the external reality it is meant to define.

As is long known, primary process symbolism can be found in and interpreted from REM. Within the REM system, we can see probability at work. "In REM, the central nucleus of the amygdala plays a crucial role in the activation of medial prefrontal cortical structures associated with the highest order regulation of emotions. This adds to the deactivation of DLPFC, normally associated with higher cognitive functions, in REM. Thus, the brain appears to be biased toward emotional processing in this state... We hypothesize that these features reflect an attempt, on the part of the brain, to identify and evaluate novel cortical associations in the light of emotions mediated by limbic structures activated during REM. This would be in keeping with the proposed role in waking of these structures in the identification of mismatches between expected and actual behavioral

outcomes” (Stickgold *et al.*, 2001; p.1056).

This self-comparative, internally self-referential symbolic encoded definitional structuralization is a clearly quantum-like process basis for mental functioning, where *probability* is a basic built-in fundamental aspect deriving reality, logic, and knowledge. The symbol is encoded, its *probable validity*, the *expected* behavioral outcome is then compared to the phenomenologically self-contained perceived actual outcome, and its valence, adjusted. The symbolic processes from which reality is derived are therefore quantum in operational dynamism.

It becomes apparent that quantum theory is but the human unconscious process itself, our contextually dependent, subjective, probabilistic, unconscious mental genesis of reality itself, now quantized and mathematically defined. We assert: the very basis of quantum formalism itself, is that of human unconscious mentation. Now the necessary quantum theoretical intermixture of mentation and reality is intelligible to us. From this insight, it is apparent, that some particular form of quantum mathematics, must be able to capture our human subjective experience with great precision. The hard problem of consciousness may be resolved to be understood as a quantum problem, approached with psychology, neuroscience, and quantum mathematics (Norman, 2015).

We can see that dreams, and so, the wishes which they express and of which they are composed seem necessarily to be primary. Indeed, the primary consciousness of previous less complex life forms, as the REM system before and within our current consciousness were and are wish based. The wish to escape or avoid an impinging stimulus, to move toward another of positive valence, somatic, meaning bodily wishes are primary. Around the neuronal mass of 300 neurons, the effects upon probability outcomes begin to show up in earnest, according to Penrose and Hameroff. This coincides with the Cambrian explosion in biological diversity and evolutionary proliferation. Here, we see a real basis for teleology, for wish in actively forming up evolution, and that of course is the future, is it not? So, let us examine a modern example of a representative type at that neuronal mass, C-elegans, and get a bit deeper into some science.

C-Elegans, the basic motor-self and evolutionary connectivity (see *Future's Mirror* included within this text for references in text below)

To observe the C-Elegans as represented in recent 3-D video recordings articulating calcium channel activity of a free ranging specimen (Nguyen *et al.*, 2015) has provided us a rare opportunity to examine its neural connectomics in active expression. Application of our techniques of mathematical multifractal analysis revealed the entire system to be multifractal (Conte, *et al.* 2016). This primitive animal possessing 302 neurons so deeply akin to the Cambrian 300 neuronal mass delineation, displays only basic somatically grounded reflex motor behaviors such as avoidance of environmental impingement by way of truncal flexures and bends, egg laying and the like. Here then, we see a basic life form, entirely reflex in its somatic attempts to interact with its world, a world of somatic necessity and reflex expression of instinctual desire, the instinctual somatic reflex to avoid stimulus that impinges negatively, or positively engage with food stuffs or the like. Here we see unconscious explorative and orienting behaviors, the instinctual reflex motor basis of more complex expression evidenced in later life forms. The entire affair is multifractal.

Simple life forms such as *Caenorhabditis elegans* containing populations of ~300 neurons are demonstrated to have inhabited the Cambrian period (Hameroff, 1998), and so, we may observe something akin to the light from a distant star in *Caenorhabditis elegans*, which has preserved for us, an ancient simplified systemic architecture. Important quantum theories propose that this neuronal mass represents a particular and specific threshold for conscious functioning, where the neuronal system has established sufficient microtubules to account for rudimentary conscious self-direction, allocating experiential quanta to be derived in less than a minute's time (Hameroff and Penrose, 2014, p. 66). This

primitive rough-grained consciousness then, may be understood as the simplest form which might yield new insight into the origins of our more complex human system. Here in this revolutionary new imaging technique, we may at last find opened, a window into the beginnings of both self and soma (Nguyen et al., 2015).

In consideration of the proposed conscious quanta, the majority of the behaviors we see in the video captured, must be somatic reflexive environmental interactive adaptations: unconscious explorative and orienting behaviors. See the web link below.

Neuroscience News, Dec. 31 2015: 3D Footage Links Neurons With Motion and Behavior:

<http://neurosciencenews.com/motion-behavior-neuroimaging-neurons-3327/>

Rudimentary consciousness then, appears to be somatic, and primarily unconscious. This unusual insight, finds deep parallel in what evolutionary biology and psychology have derived to be the roots of our mammalian consciousness.

It has long been known that unconscious content may be interpretively accessed, and unconscious processes observed in REM dreams (Freud, 1900). We can find in REM dreaming a return to what was once a rudimentary affective primary consciousness in our distant ancestors (Panksepp, 1998, pp. 133-135; Norman, 2015*d*). In REM we see intrinsically sourced basic upper motor system activation associated with: pyramidal tract neurons, cerebellar red nucleus, ventro-lateral thalamus, and most pontine gigantocellular field (FTG) neurons, the last being similar to activational patterns observed in waking animals (Satinoff and Teitelbaum, 1983; Stickgold et al., 2001). It is possible to trace the mammalian historical record of evolutionary development as it stretches backward toward its earliest origins (Panksepp 1998, 2012). Basic bodily orienting responses are sourced in the ancient connective somatic juncture of the superior colliculi and the Peri Aqueductal Grey (PAG) alongside the adjacent mesencephalic locomotor region, **a basic affective motor-self** designed to provide *rapid bodily response* to sensory indication of actual or possible somatic impingements (Panksepp, 1998, p. 312). This author [R.N.] has deduced that the manifest complexity of later unconscious, hence conscious and psycho-ontological operative presentation, is in fact, of somatic origin, and may well have epigenetic underpinnings (Norman, 2015*c*).

Evolution has selectively allocated systemic functions in later more complex organisms such as humans to highly specialized cell groups, each consisting of neuronal clusters well in excess of the 302 neurons which populate *Caenorhabditis elegans*. In humans: the suprachiasmatic nuclei synchronize circadian rhythmic functioning, and act as specific melatonin binding sites. Melatonin is produced from 5-HT in the pineal gland via a two step enzymatic process (Panksepp, 1998, p.130; Gazzaniga, 2009). Exploratory behaviors are encouraged by a dopaminergically modulated SEEKING system (Panksepp, 1998, pp. 144-163), extending from medial forebrain bundle-lateral hypothalamic circuitry, up to the nucleus accumbens to the medial prefrontal cortex via the mesolimbic and mesocortical dopamine pathways. Energetic needs and resultant food consumption are assessed in the ventromedial hypothalamus (ibid, p. 175). Panic responses are mediated through the midbrain PAG (ibid. p. 267). This level of specificity and complexity, is itself, evolutionary adaptation drawn from previous more simplistic somatic presentations (Panksepp, 2012). I propose evolution is a quantum cognitive physio-interactive emergent phenomenon which creates niche diversity of initial commonality. Cognitive teleology by quantum process. If this is so, we should observe said basis commonality at all levels. Do we? If so, we may deduce the active principle.

Highly detailed empirically supported mathematical models derived from Time-Dependent Density Functional Theory indicate that life may well have evolved from photosynthetic prebiotic kernel systems in the Isua Greenstone Belt in Greenland some 3.7–3.85 billion years past (Tamulis et al., 2016). This common ancestry has branched into many individuated examples of evolutionary specificity, which can be observed to share fundamental commonalities, and homologies (Panksepp, 1998; 2012). So great is

the commonality of evolutionary genetic origin that fruit flies and mice may tell us of human Parkinson's "Pink 1" genetic mutations influencing mitochondrial functioning, and primitive *Aplysia* have revealed the foundational epigenetic basis of memory, which persists and may be recalled by stimulus when neuronal connectivity has been disrupted (Chen et al., 2014; Morais et al., 2009; Clark et al., 2006; Yun et al., 2014). Neuronal activity affects gene expression (Panksepp, 1998 p. 93; Watanabe et al., 1994; Zhu et al., 1995). Epigenetic memory extends across generations in mice, *C-Elegans* and humans (Greer et al., 2014; Dias & Ressler, 2014; Yehuda et al., 2015). Through demonstration of extensive resultant primary-source inter-specie systemic commonality across divergent evolutionary presentation, it is possible to deduce automatic reflexive unconscious responses, archetypal and phylogenetic representations, adaptations and unconsciously instantiated human learning, may be somatically and epigenetically sourced (Norman, 2015, 2015a, b, c). The obvious commonality between emotive/affective bio-systemic expression amongst other animals and man has long been noted [see Darwin, 1872: *The Expression of Emotions in Man and Animals*]. Brain circuits mediating *panic* in the guinea pig, rat, primate, chicken and cat are highly conserved, and share origins near where physical pain may be generated by electrical stimulation of the midbrain PAG (Panksepp, 1998, p. 267-268, Panksepp et al., 1980; De Lanerolle & Lang, 1988; Jurgens & Ploog, 1988; Robinson, 1967). Play, or "Ludic" circuitry is demonstrated in humans and rats, the latter exhibiting something closely akin to laughter, and basic empathy (Panksepp, 1998 pp. 280-299; Panksepp & Panksepp, 2013). Rage system circuitry running from the medial amygdaloid areas downward via the stria terminalis to the medial hypothalamus then the midbrain PAG, and rage system neurochemistry, are conserved to a great degree across mammals (Panksepp, 1998 pp. 190-196; Miczek, 1987; Miczek et al., 1994). Fear circuitry stimulated from the lateral and central amygdala, anterior and medial hypothalamus and midbrain PAG is also commonly attributed across divergent mammalian organisms (Panksepp, 1998 pp. 207-214; Panksepp, 1990; Davis et al., 1994). Nearly identical chemistry is evidenced across species, such as seen in the similarly structured reptilian peptide vasotocin, the piscine peptide mesotocin, and human vasopressin and oxytocin, which produce sexual response in amphibians, fish and humans respectively (Panksepp, 1998, pp. 230-231).

Commonality is established. Now we may correctly analyze the basis of teleology and wish.

Within that evolutionary context, we can see the fundamental somatic basis of wish in more complex life, as it affects evolution in the simple *C-elegans*. Think of the behavioral limit and scope of *C-Elegans*: *somatic* response is what we see, response to achieve escape or approach, ***the basis of wish is affective motor response***, the process reflex, and so, *unconscious*, the basis of wish may be found in this reflex motor system as it interacts with the environment. "*Motor-wish*" is therefore, *the necessary interactive basis of differentiated self*. Survival itself within the environment is based in this proposition of individuated response which clearly established a separation between self and the environment. Motor wish is then, the basis of self, and teleology as it influences probability outcomes and evolution.

We can now see the evolutionary connectivity between all living things, and the basis of mentation and teleology, in wish. Darwin's ideas are brilliant and useful, but, the evidence requires the addition of mentation to account for the sudden burst of evolutionary diversity in the Cambrian period, and, the quantum theory offered by Penrose and Hameroff allows us mathematics to understand a probable mechanism.

To examine the best experiments, which are those of Dean Radin, experiments which have passed rigorous inspection and verification, we can observe the effects of mentally distributed information as wishes upon probability outcomes in physical systems: Luck! This is our better human future. Here is the real basis of the efficacy of prayer and other spiritual notions which are in fact, simply the interactivities between consciousness, its source and expression, affect and wishes, and those of physical processes and their outcomes. In these experiments we see wishes at work, and the "will," practice, is of no use and decreases effects. Think of how a wish works. Take the sexual act. Once its energies are expended, it needs time to redevelop cathexis, energy must be reaccumulated. The pattern of initial increased success coming from a fond wish to be one with the distant experimental device, a double slit

quantum apparatus or a random number or event generator was clear: mentation, wishes, affect the probability outcomes of random number and event generators which become organized to a small but measurable degree, they affect also, physical quantum systems. Thought, influences events in the world. Wish, is luck! (See: Quantum Unconscious Pre-Space, and, The Enigma That is Light, for detail).

Now we may begin to see the point of all of this. Thought, feeling, affect may change the outcomes in our world. The experiments indicate, according to my private communications with Dr. Radin that the effect can be summed over participants, and made more pronounced. This is the hope of man. "The will" in this case, under this model, emerges from the summation of affective good will within the system itself. We may change the future, with a wish. We, our thoughts and desires, are part of reality and the world. "God," is not some domineering spirit floating in the sky as a parent watching you, that is super-ego, "God" is an idea not a spirit, an emergent property of the affective informational dynamics of the system. "God" is a kind wish, shared. Let us create "God," for "God" is us.

The nexus thought and temporal mass.

Temporal mass is the name I first gave the experimentally demonstrated phenomenon which is affect's effect upon physical systems. However, at that time it was unknown to me that the effect had indeed been demonstrated, and I hypothesized Radin's very experiment and one other as the ones to be run to prove or deny the effect's existence. It seemed to me that I was in possession of the notion which was at the basis of spirituality and the mind itself, affect, and entanglement as they related to information. What I called *Affect Information*. This unconscious process acts as a drop by drop infinitesimally small, yet constant alteration to the specific entangled variance of the system, and it is the evolution of entanglement which is proposed in modern theories to account for the effect known as *time*, so, I named the idea Temporal Mass, as it influenced the entangled progression leading to the outcome which is time. Destiny is but time's unfolding. In this instance, how this process turned out was a sort of teleology, but not of over arching definition and purpose, no, it is a teleology of wish. Wish, kindness, affect and destiny are intertwined, in a healthy world. The connection to all things, is a real piece of physics, and we are all at access to the effects, to the fount of 'spirituality' if you must use the outmoded term, for in that language, we are all founded upon spirit, which is nonsense, clearly we are all founded upon something quite real, and *divine it is*: feeling, and informational mediation across the physical system. Please do not imagine yourself to be too special, though. I am quite sure a human observer is not needed to account for events and the unfolding of reality, observation is but informational exchange, the system is therefore self-observing, and informational exchange is constantly taking place leading to systemic evolution. We are but a part of a system which appears to operate upon principles akin to those of mentation. This is the hopeful fact of our quantum myth, and it appears to be quite true! The basis of reality is informational exchange, and we are part of that process as affective beings, we influence evolution and the future. Cooperation and unity within the kind wish, is hope, the higher comes of the lower and the lower becomes again! This is hope, and the future I envision.

The ideas I express are quantum, but I will confess something. Quantum theory is isomorphic to thought, it is not thought. The system itself, must have a real process basis, not probability alone, which is but a clever guess at the outcome, not the cause. And I believe I have a hint at it. The particulars of nonlocal communications extend to gravity, which does not work quite as we have been led to believe. I will leave the subject for the interested reader to delve into. See the Enigma That is Light within this text. I believe, specific variance in entangled relations are the basis of probability, and those, are informationally mediated in a specific way. It seems to me, just to think aloud, that the magic of entanglement is likely not magic, but a synchronized vibratory expression mediated through the energy density, perhaps as a longitudinal wave. Informational propagation, is as the propagation speed of gravity must really be—near infinite. Newton was right. Not infinite, but so close as to be all but. Van Flandern is quite correct, in my view.

In any case, the interested reader may ponder this proposed mechanism whereby the human race is connected to the universe and all the future, by way of affect. Perhaps it works like that. The reader

should now have enough under their belt to tackle the paper I have included here: Quantum Unconscious Pre-space. Isn't that pretty? That is the myth in detail. This ability to influence probability outcomes as a function of affective unconscious processes, Temporal Mass, is the hope of man, so very beautiful is the next reality, the new dream we may share.

Please recall:

From the conclusion of: **Quantum Entangled Prebiotic Evolutionary Process Analysis as Integrated Information: from the origins of life to the phenomenon of consciousness.** Norman and Tamulis *Journal of Computational and Theoretical Nanoscience* Vol. 14, 2255–2267, 2017 doi:10.1166/jctn.2017.6818

What is the lesson of quantum pre-biotic evolution? What is the lesson of integrated information theory? The lesson is quantum: informational division, competition and dominance, secrecy, covert behaviors of governments and the urge for hidden competitive advantage, are poison: Anti-Consciousness. The lesson of life is the quantum lesson: more consciousness, more integrated information, more unity!^{36, 48}

It is vital to understand the historical and psychological genesis of the problem⁴⁹⁻⁵⁴ and that there is a solution most easily applied to the next generations⁵⁵ if a more difficult road for ourselves.²⁹ The basic structure of modern mental topography, this system based on shame and repression, on informational division and compartmentalization, can be exchanged for one based on integration, empathy, and ethics: the quantum human paradigm.

Competition, division and monetary valuation...these bits of madness are the falsehood of man. Ours is a race of connection and unity, or is itself...a bit of sickness and disease. Entanglement and positive affect can be seen to affect probability outcomes themselves! Sadistic dominance and threat...are cancer. Cooperation and unity, entanglement and positive affect...are our lucky future.^{56, 41} Ethics: demonstrated by way of experiment. The actual quantum process forms, are the answer:

Within the fabric of physics itself, are embedded ethical structures. These are quite independent of any external threat or validation, and are simple systemic component structures and their interrelations. The nonlinear paradigm, both ontological and physical, is based on entanglement. Entire groups of informational and physical processes become entangled, and operate as one unit. These efficient organizational dynamics are the fount of life on earth, and are a constant force from which the result we see emerges. Cooperative ontological dynamics, are built upon trust. The systemic basis of operations is empathetic in structure, meaning, it is based on identifications simultaneous with individuation. This stands in stark contrast to authoritarian structure: the will created through systemic emersion, rather than overarching sadistic derivatives.

The nexus thought explained:

How is one to actualize such an aetherial idea? What is the meaning of the will being derived through systemic immersion rather than overarching sadistic derivatives? It seems the future in this model is an affectively dependent, emergent property of the system, so, how is one to alter probability outcomes and actualize such a future? We know evolutionarily and experimentally that wishes and feeling are the key, and those are based in somatic manifestations. We know also that affect, feeling, is itself the basis of consciousness. Let us deduce an application of the principles and create a solution we may utilize to help ourselves, and create the future. Let us create a new 'god,' a 'god' which may be physically demonstrated, that is free of judgement and does indeed hear our prayers and wishes. Let us find the essence of 'spirituality' is science, and that the essence of 'god' is itself *the absence of deity!* We may rejoice! Hope is *ours*.

The effects of wishful mentation upon physical systems are demonstrable and slight, constant and

continuous is the drop by drop spending of our wishes to fill the moments, summoning always each second's filling. Over the course of time's full sweep, the effect is itself the future's unfolding, affected from beneath and above a wish hangs and paints the horizon bright and dark, so is the future of man but man's to summon, now just as it always has been throughout Time's eternal spending, so brief and unending is the promise, held and lost, colored, tasted and made real, distinct for each and all: hope, pain, despair, warmth, war, caring, cruelty, tenderness—our past, present and future are a question answered each moment, a question and world created, adorned and summoned—*of affect*.

Such effects are increased with individual participatory compounding, each one who contributes to the singular goal creates a greater overall effect. Please for this exercise think of the demonstrated unconscious connectivity as an affective vibratory component expression. Imagine if you would, that the medium of connectivity, the energy density and terrestrial fields, permit the distribution and compounding of such affective expression, and then, the sympathetic alignment of signal phase in a sort of vibratory entrainment, a sort of sympathetic vibration which is in my view the essence of entangled phenomenon, are thereby fostered.³⁶ With these analogies in mind, we can see in the mind's eye the effect: all the world is as quantum physics portrays it, reality is a series of harmonic oscillators. It is through resonant affective effects projected over the (gravitational/informational) medium of the energy density that probability outcomes are altered, and the future summoned. To be succinct: A shared wish will create a new future.

Let those who read this text become agents of both social and spiritual change. Part one of this text addresses social factors, and here in these middle sections, those matters of inner import are reformed. Psychology and physics are themselves the very marrow of the shabby word 'spirit.' The future of man is not a ghost, a guess or a judge! The future of man is that which he *wishes* to become. If I distribute 20,000 copies of this book, some 10 people must be aware of this notion and are engaged in active meditation at this moment. Please join us, and meditate upon the following image. Let us create Temporal Mass as a unity, and summon a new world.³⁷ Only those who lay hands upon a task might solve it. The future is ours to create.

³⁶ To increase phase alignment should increase coherent effects. If a longitudinal scalar wave is envisioned as the energy density informational energetic mediator, phase alignment between vibratory sources would then shunt aligned information-energies into a combinative single non-phase dependent distribution.

³⁷ Please see essay on temporal compounding linked here for part of the mechanism (simplified as space-time for easy comprehension), and the Enigma That is Light within this text for more detailed theory:
http://docs.wixstatic.com/ugd/cf8614_1bc1bcb65cb94d57819d7f7357d03855.pdf

The nexus thought.

We are within the tender meadow. Delicate winded ripples play among the tips of new meadow grass, and as a whisper, the sun splashes upon the silver brook beneath us. Hints of blossom speckle gentle breeze, and all the world is cupped within each ripple of breath, enfolded intricacies whisper, shifting as delicate hands weaving light and shadow, a dappled brook splashes up amongst the shadows.

Within the palm of time, we are sheltered. So beautiful are you, as a liquid jewel, pure and perfect, running and silver, painting the rounded stones with silver cool, your clear skin of light as a stream running over cool stone, laughing. Look, and see the river of time, silver and slipping, cool and light, bubbles speak and retreat amongst the cool shadowed noon of our beginning. Each twig is bathed in light, cracked ice solved in yellow-gold, the leaves of fall tugged loose to paint time's tender curtain in crimson and gold, so beautiful are you, so sweet and warm is this evening, cool upon the heat of day. Each second pours ever richer, ever thicker with light, as melt glass flows, stretching and warm within each shadow and leaf, golden and round, clear and full. Look out, and behold!

Each aged maple's lofty crown stirred by an unseen wind; each slipping stream of bright rippled mirror; each shifting wave of tasseled meadow grass; the sweet earth under the melting heart of her yellow noon; the first nook of heaven as she tastes the rouge of dawn; the sheltered sky over each flourishing bounty bestowed and nurtured beneath; each creature basking beneath the arcing warmth of a golden sun, stretches, languishes before you, warm and full, grateful, waiting; each moment opens itself so you may sweetly fill it, with gratitude and warmth; each living thing is within you, bathed in warmth beneath a purring sun, the world fills you, warm within your beating breast, enfolded and enfolding—*Life*.

It is a thought of gratitude, which will change the destiny of mankind.

Myths and stories for children and adults.

I apologize for the thin section that follows. It is imperative that I release this book as quickly as possible, for obvious reasons. The second edition will have further mythology, a different cover with more artwork within the volume, and, information concerning the clean production of fuel, and paper from Hemp.

The basic theme of myths and stories for children should be the invigoration and deepening, the strengthening and nurturance of the sense of connection to and identification with all things, living creatures and peoples. In this, their happiness and endemic ethical compass are assured, along with increased dopaminergic distributions and the lack of repressed unconscious leading to greatly enhanced intelligence, pleasure in life and libido. The happiness, wishful future and evolution of the human animal is dependent upon the complete removal of guilt and integration of the drives, both aggressive and otherwise. Once the integrated structure is affectively intra-mediated ethics emerge of their own accord, as a basic systemic component previously prevented by guilt and morality. In drive integration within the context of empathetically mediated systemic dynamics, we find the next level of the evolution of our species.

In the next version of this work, I will create many such myths and stories for the young.

Here is the basic pattern to be followed in later work. Please apply this and create many such stories, to begin a burgeoning new healthy mythos!

Connection

“Oh my child, come here, I must speak with you and show you the world. The day is warm, and we might see each thing and understand it.” Fredrick was a kind father, he seldom spoke above a whisper, his eyes hid the spark of tender wisdom within them, and on such a day as this, it was released and fell into all things. Jacob was a young boy of seven, and his restless heart tugged to go play within the emerald wood, and hide amongst its cool shadows of scented wind. His father looked upon him and the day, and spoke: “I promise, we will walk in a moment, here—oh, I can see it is of no use, we will walk immediately!”

Ah! The boy’s eyes sparkled as his, and he knew he struck the chord rightly, for this was a day for the song of life, a sparkling wine one can not resist, capricious and light with chance. Into the damp morning which lay concealed within the tender cupped shadows and its web of tangled light they did travel, Fredrick but young once more, filled with the liquor of light’s essence, he began: “Look, into the deepest corner of shadow, there, can you see something moving above the head of each branch, so dark here within the webbed shadows.” Silent as a shadow’s breath, they did peer, breathing but hardly, and in the still, the first ray of light did slip through the uppermost arch of sheltered sky, and the young one beheld with sharp young eyes, what wisdom did sense with ease. An owl, fell as a flake of snow, in gloved silence, as smoke falling, soundless and distant, falling closer, and then away, soundless and majestic is the sound of breath held, falling, amongst the first shadowed tangle of cool morning. “Father, how did you know, I could hardly see it.” “Shhh... Can you *feel* it. Imagine, sweet one. I do not know, I am. I feel. You already know this, but in silence is magic made naked before us, and then we may learn, a magic gift is not a gift nor magic, but an uncovering of what is. I am. Here....I ask you in silence, do not reply, simply answer by doing. Of the sight you saw. Can you feel it?” And in silence, he did think upon and within the moment of silence, of flight, and was within it. “Yes father I

can.” A smile warmed within him to know, it was true, the boy understood, he felt that which he saw, and was part of it.

“You please me greatly, my son. Here, let us walk.” And into the deeper forest, where dawn was finally breaking the web of fingered shadows, the world began to glow from within. Over the distant hillside, through the branches they saw a flicker, and Fredrick moved toward it, slowly, easily picking his way through the tangled brush, knowing as if by sure knowledge what he might find. Into the clearing they did travel and sit in warm meadow grass, swimming in noon’s summer, the cool tangle of branch and shadow left behind.

His eye did gaze and the younger’s follow, and then, the doe did venture, unaware of them, her tender hoof silent amongst the soft moss at the forest’s edge. And in a look of love silently cast, the boy did understand his father’s meaning, for within a glance is the fullness of a thousand volumes. Within feeling’s tender glove the boy did find himself within the doe, and knew her, and he found that she, was made warm and affirmed by his feeling, somehow, this must be true, and he spoke of it: “Father, I did find myself as the doe and within it, and now, I feel somehow that I love it, and know it, and have filled the animal, so tender and kind, with warmth. Is this right?” “This, is the higher knowledge. You, are a man, of tender years, but, a man. We, are becoming very much alike, small one.” His eyes were swimming in tears. Then, the breath of happiness again spent its sparks, and he did speak: “Now, that is within and that which is without, are one. This, is true. Open your heart, your feeling, and allow the world within you, to fill you, and you it, as you did the doe.”

And within the moment’s spending, the world did unfold within his open heart, and fill him, and he did pour within all things: each tender shadow and branch, each hillside and rolling curve, the tempestuous sea, the winds of storm and cool, the deserts and animals within the forest and all the creatures and land were within him and did fill him, as he did return unto them all which he was, now, the twig of snapping youth broken, the streams running and flowing over the tender bank did fill him and know him, and were themselves—affirmed.

In silence they did return to the world, and were within that which they did see. Now of the world, within and without are but song, verse, made real and spilled into light and back round to fill knowledge, so is wisdom but love and caring, the light and marrow which fills, and connects all things.

The Dark Night

Achmed was worried, his wife of 20 years was in labor, and she was too old. Her gentle spirit was a trembling waif spent as mist before the snapping flames of life, and he was worried. The happy shout was a cry, and he knew before knowing he had a son. Vrsev was a fine boy, strong and wise in turn, for one of five tender years, far more aware than was his sister, now long an adult. "Vrsev, come here small one, I must speak to you," said his father, a large man of red complexion with warm sad eyes. "Within the marrow of the seconds, there is a home in which we live, between the future and past, a slip of moments runs as a stream, always nourishing us from within, and each of us is as time itself, made sweet and full from within the marrow of moments. Imagine Vrsev, the clear heart of pure light, shining and thick with warmth, within all things, and each is fed and made complete, within the wellspring unfolding thus. Here, do you see that bird? See it fly, and land by the brook? Can you imagine, how it feels, to be a bird, soaring, easily descending, to pick at a tuft of grass, and find a seed to fill its belly?" "Yes father, I can easily imagine it. I often dream of such things." "Of course you do. Within each is all, and within all is each. All, are fed as time, from the stream of moments, the marrow of light which nourishes us."

Vrsev was soon known as a child with long years of wisdom stretching beneath him, and so, as light and weightless, unencumbered and of light spirit. For the moments, are always at play. How easy is the light heart unburdened of all but the train of light!

And within the dark night, all did tremble and fall. For there was a strange man, and he did reap much pleasure from the curtain of pain he drew around the world of light, and did sup and drink in the suffering and doubt which the darkness did sew. "I am the one to follow, in times of night, so dangerous is your neighbor, and his child has cat's eyes, leering at your tender daughter, and this one, he will take your job and that, is better than you, or so he believes. In pride we may be known and find, firm footing to follow my designs! We, will poison all the world, take back our respect, and own...all things! We, are dominant! Let them never forget that!"

And the doubt and anger did bring pain's ending. That pain which his night did bind fast, hatred did again loosen, and fill their bellies warm in wine's blood, and the warmth of dreams of impotence sated.

Vrsev had wed, his daughter was but thin and weak, her heart that of a lion built of red heat and laughter, as her father was she, with cold grey eyes, biting into the light and shattering it, in the warmth of laughter and wind, spent without thought...for the guiltless heart is the well spring of all eternal worlds. There is no more potent or sure thing than the laughter of a child, or the hatred born within tender wounds. For the child's heart is the birthplace of laughter, and of bitter hatred. Within feeling's cup, all things are stirred and mixed by innocent design, our feeling is but the fact of action made right.

And into the city it was unwise to travel, in the dark night.

But choice had fled, and from the inn into broken wind they were cast out, to make way for the crowd. Around him they did gather and find strength in his wicked screeching, and were ripe to follow him, and vent their pain upon the next, to drink in cruelty's broth, nourishing and ripe is the putrid well of pain's ending, brimming forth in the stink of blood and flickering torchlight, burning. Fat and wretched, his words did trickle as crumbs of dark temptation, and rosy dreams of stink and plunder.

Upon the village they did turn to vent their lust. The tender people and their sweet wives did but slumber unknowing, and were but meat upon a rotten hook of wretched leering pain, within the blood and torch light of the dark night. Vrsev and she did feel this thing, and knew it as if it were themselves.

Between the shadows, they crept, wordless and silent, he to the left, she to the right, nodding and smiling, slipping back between eyes lost in lust and sick dreams of pain's ending, and toward him they did creep.

Her hand was fastest, and the tender fingers of the girl child did split the eye of the prince, and rupture the stinking ball of filth in but one simple motion, and a shout of silly, giddy joy! Oh how innocent, is the child at play! Now Vrsev moved his godly arm and did split the throat and spill its blood into the air as a fountain of happiness! And they did take to the podium, and look with bright shining eyes upon the blind.

"Within the marrow of the seconds, there is a home in which we live, between the future and past, a slip of moments runs as a stream, always nourishing us from within, and each of us is as time itself, made sweet and full from within the marrow of moments. Imagine the clear heart of pure light, shining and thick with warmth, within all things, and each is fed and made complete, within the wellspring unfolding thus. You need not seek pain's ending within the bloody dream of a mad man. For it is he who has drawn the dark night around you, and saves you from the pain and fear, he himself has woven. There is no dark night!"

And the sun did again creep into the first corner of the sky, for it was but choked away from within as fear drawn in darkness—ended.

And unto the heart of feeling action does lend the fist and feather, laughter and light within the space of the second's spending. Within feeling's cup, all things are stirred and mixed by innocent design, our feeling is but the fact of action made right.

The lesson:

Let all children know the world in feeling, and act. May they use their drives in innocence to stand up against every vestige of cruel authority.

The Break of Night

Leslie was alive, a blossom held aloft in life's season. The strange wounded tumult of joy and awkward exaltation which is youth buoyed and savaged her, and she opened her tender unknowing before it, and like a sail welcomed all dangerous winds and seasons to find their breath then within her, and claim their heights as her own. All the world is weather, and gladly fills such a sail.

Likewise all those who sail want nothing more than rope to rig their mast and hold such a sail, so they may invite the wind to test it. Jack was a sailor to be sure, and beheld Leslie with the hunger, hope and daring of youth's highest wisdom. Only one who has yet to find the cross winds of his true seasons is wise enough not to doubt such a truth, and in the sure wisdom of youth they were wed.

The wisdom of youth beholds the future never knowing it is not the present, and so believes itself true. All sorrow and happiness, dull, awesome and terrible, were to fill those precious years with life's full froth, for bitter makes sweet, and life is such a brew as this. In storm and season the mast was sure and the sail was swollen with those winds which blow twice. And so Leslie knew her body, and its season filled her heart with crimson sweetness, and so her body knew her husband filled her and she him, and did forget herself, and choose to know this season's full breath, will and measure, in place of her own. She was full to be pleased and to please him, and was that not happiness? She served him before all things, and so placed her burden down and was virtuous. "After all, who need carry water for two, when to serve one is wet enough? Am I not full to know he is happy, and is this not sacrifice and virtue?" So she whispered the words of her secret soul to herself no more, and found it easier not to hear them. Is it not easier to be silent when the season fills our heart? How can a blossom not deny itself for the wind? What but passion could speak loudly enough to quiet the dead?

Again the wind blew and the sail was swollen before time with its second breath, which her body graciously returned. Her child bore her heart aloft, and she blossomed to his season, and plummeted to his depths, and they were as life loves life, in double draughts of bitter and sweet, and so time's thirst was slaked and its season spent.

So full with time's hungry winds, her days were consumed, and she was alive and floated upon the stream of its passing, born high above her lost words, the season's happiness was within her and cast no shadow. How could she see her hollow shadowless happiness from such height? "Is it not best to sacrifice our words to the season of our children, and find our place happy amongst their streaming clouds and windswept days? Is this not sacrifice, most beautiful?" So did kindness call her disappointment virtue, and name her unwilling emptiness beauty. After all we are kindest to ourselves when we murder ourselves, and most forgiving when our lazy steps find virtue shuffling over our thousand graves. Who but virtue could quiet the dead? Under whose feet does our happiness sleep? Under whose leaden feet is our happiness pressed mute?

So time came as a virtuous thief, to steal the cost of Leslie's virtue. Leslie found her body tire, and an empty place came, where another season once bloomed. Her children left and she cried out to her husband, "I am empty and gray. My children no longer need me, and my sacrifice is unreturned." He said unto her, "You may love me, and I you, and so we might fill each other with time's last drops of life." So they found the shadows of evening fine company in play amongst this Autumn, and Leslie sacrificed to her silence and bore her husband's weather within her as her own, and was happy in her Autumn shadow.

Leslie's husband, at last, could no longer cheat time, but left of her, and knew no more days, and sacrifice claimed the wheat of Leslie's life, and so Autumn melted into icy winter, with the empty field of frost and stubble her sacrifice had born. Leslie cried out, "My husband, my love!" but he was gone. "My children, my reason!" but they were gone. Only the night remained to hold her, only the night

remained to hear her, a windless vacant sphere, a silent vacuum which has forgotten the promise of sacrifice, where the pulse of passion has been long silent, where no echo of dawn remains.

Leslie thought of her life with its hundred seasons—red lust, loves glowing shadow, purple anguish bruised and tormented, shy yellow days and golden baskets of wheat, and how these filled all the light of her days with color. Now only palest night remained within her, empty and unhued, for what is blackest is also what is most absent, empty and pale, in its darkness.

The night held Leslie without touching her, and its silent voice cradled her to listen, for the night loves us by receiving, its absence is its whisper, and so Leslie heard, and knew that a new season had held her in the tenderness of perfect silence. She understood the black pale beauty of night, the shades of its ink which whisper the sacred prayer of our days into an empty ear, a waiting hollow like night itself. Our night soul is a hidden cave filled with still air and the echo of our days. Once the echo fades we are blessed to know what remains. This is the night's silent wisdom. So does the night bestow us to ourselves, as a silver whisper, cradled in ink.

So Leslie unfolded her winter heart, and laid it open before the night, to hear the night whisper into the quiet of her soul. Only the palest diamond leaves light unspoiled. So may our winter heart know the night: as a crystal chalice filled with what the hot sun has spilled into the night, made tender and perfect once poured through the white ice moon, and washed pure. Leslie thought this to herself and knew the night and its rejoicing, listening silence, and found her courage could be heard in the still night air. She decided to cheat the virtuous ghost named Time, and steal the moment of her night happiness back, and so give it Time's breath with these lines of verse:

The Break of Night

The break of night, day's under season
Slowly yields its gold to ink.
The folded page, now free from crimson
Finds in blackness freedom's light.
Ever often passions straining, faded as a laurel worn
Now but ink reclaims the heart
In darkness stilled, and still reborn.
What air is drunk in silent folds, the tender ear in rapture slakes
Of heaven's thirst and then in season,
Feels the perfect still of night.
No longer pulled, no longer heated
Spring of fire be gone, and so
I hear no pulse, but know this evening
Only now, my promise hold.

The Black Mirror

Joseph was hollow but for his tears. He never wept, and so not since he was a child had he known such terrible fullness. He could no longer deny himself, and knew not what he was, or whose tears he cried. Like a wounded dog, he limped in a pitiful circle and could come no nearer the cause. He sat upon a bench in the wood, and placed his heavy head into his hands, and his tears fell into the earth. The earth drank them into itself, and knew his pain, for the earth knows itself, and so knows the world.

As Joseph wept he cried aloud but to himself, "Why has my wife left me, my child abandoned me and my friends scorned me? Why am I alone, what have I done and why, why am I alone?" His self-pity covered him as a rotten blanket which falls away in clumps. And so he knew his sorrow, his tears so long absent filled him with their empty song, their question which fell to earth. There is nothing so empty as a question, the answer to which we can not stand to know.

The earth sent forth a messenger, a knower of things without compassion, so full and grateful was the earth to give answer to such empty tears. Joseph heard a strange rustle in the leaves and sought his pity no longer, but pressed his eyes and wiped his tears to behold a fearsome ugly sight which seemed too fascinating to resist, and so held his fear behind a strange still glass, as if an inborn respect had been awakened within him to hold his judgment suspended in the air along with his horror. As the leaves shuffled he saw a form rise up from beneath them, covered in dirt with roots hanging along its back. The shape of a huge insect, a hard-backed multi-scaled beetle grew from the earth, here before his eyes, until it assumed the monstrous proportion of some 150 pounds or more, as far as Joseph could tell. Frozen in the awe of disbelief the summoner stood before the summoned, and was judged and known. The beetle's eyes were perched upon stalks which drooped downward with a sort of respectful reverence, they seemed unable to gaze directly upon him but were drooping, always forward, the strange inexpressive eyes pointed at the earth under his feet, as if the bug were expressing its reverence before a king. The plates which covered its back clicked and shimmered in the light, so black. They fascinated Joseph, but he found he soon felt sick and nauseous, and had to look away from their ugly form if he beheld it at too great a length, or looked too closely. The bug for its part had no discernible affect other than its strange reverence which would not meet his gaze. It crawled over to the tear soaked earth and consumed it with its protruding mouthparts. Joseph seemed to understand the thing was there to help him, and so he waited in like respect for the insect to seat itself, such as a beetle can, upon the bench. He asked the beetle, "Why has my wife left me, my child abandoned me and my friends scorned me? Why am I alone?" The bug heard Joseph's words and tasted his tears and it seemed as if the two had somehow combined in its insect gullet, and the bug seemed to be upset, even annoyed or perhaps just dyspeptic. He could hear a strange scraping sound emerging from its innards, coming from deep beneath one of its abdominal plates and then a froth began to appear from its mouthparts. First a bubble then two, but soon a froth of white foam amidst a furious clicking as the now obscured mouthparts worked feverishly beneath the growing ball of foam, to some mysterious end. It was all the beetle could do to keep its eye stalks erect and allow its eyes to remain safely above the turgid secretions. When the clicking and scraping sounds stopped the beetle seemed to vibrate head to toes until it suddenly shook with such violence as to fling the foam off and into the air, showering the area with the weird air whipped cocoon, including Joseph who hardly bothered to recoil, so fascinated was he at the result. The insect had produced a single scale like those which comprised its back. It scuttled over to Joseph and offered it to him reverently, eyestalks lowered, the black scale gently presented from its mouth. The bug returned to rest upon the bench and ceased to move, as if a June bug in September, which is now no longer a bug, but just a shell.

The black scale was awash in the colors of the daylight, it seemed to absorb them and suggest a subtle deep hue in its darkness. "Depth never forgets," he thought to himself as the darkness gazed back at him, and pulled his thoughts from him. The black mirror showed him what he kept buried in black,

now like a subterranean insect beheld in the sun, he knew what he had seen. The image was his, and then, the beetle's! The bug! The eater and speaker of filth too foul to behold, and even much less, oh please God never to know, and then surely but surely, never to be! To be it all! To know it forever! The filthy loathsome thing! But the mouthparts were his, the thorax his, the tendrils and eyes of abomination, but his alone! He had driven his wife out for she had come to know the weak, fearful, dry, sad, selfish, cringing thing he had become; so wounded, mean and hollow in his reproaches he drove her off with words that were surely meant for himself. She all but saw how he was, all but knew him rightly and so he drove her off before she knew him complete, before she dared say his secret aloud before him. His son and friends abandoned him and scorned him to see him as he was, a cringing black soul too small and empty to love, so then transformed into the inverse, the sharp spine for those who are deserving and in need of his tenderness most! He wants them gone, and so they are gone. So the mirror tells him and so he knows. Now his reflection is again his own, and the insect has dissolved in his new knowing tears, which fell clear and black, absorbed into the mirror as it rested on his knees. The mirror accepted these pure tears not born of self-pity and self-righteous humility, but honest tears clear and black, funeral tears of knowledge, disgust, hope and change. He knew himself and was filled with laughter to know what he was, laughter being the shining note, the signature utterance which weaves our sad cloth into the highest of hope's songs.

Now Joseph was as the earth: he knew himself and so he knew the world. This was the cruel gift the earth's happiness had given him. The earth is not compassionate, and so may be trusted. As he walked around the streets and homes among men, he beheld the truth. Each was a carnival of shame, layered thick with strange lies or beautiful truths which concealed empty places. A cacophony of horror greeted his awakened eyes! First the grocer is the grocer, then a bug with its snout on a flexible stalk, probing the loins of each customer engaged in conversation, breathing its stolen air into a sack with an unblinking eye attached, its pupil dilating and constricting in pleasure, responding in the rapture of hidden intimacy and the mysteries of forbidden places with each unseen breath. The stock girl becomes a caterpillar so friendly and broad of head, her tube feet pulse with happiness, and she glows in kind acceptance. Something is concealed beneath her lovely fur and he knows it is nothing. She is an invitation who will not exist, a fraud who refuses herself, life and despair alike, until she is filled with another. She is an empty place, a hollow wrapped in a promise. But no! He feels her turning in her doubt, her sad interior consumed in choking doubt, and he is filled with her true hopeless soul until Joseph can not breathe to know it! She is the stock girl again and he must leave at once! To know yourself is to know the world, and so know hell! For the world is that which will not know itself and so will remain hopeless, and ugliest of all. The world banishes what hope needs to celebrate and destroy with her laughter. As with all who can destroy and resurrect, hope's laughter is black before it is bright.

So Joseph ran back to the forest and his bench where he sought the companionship of the bug, or "his beetle friend," as he thought of him now so warmly by the hearth of his new vision, in his mind's eye. The beetle was warmed there by this hearth, its fire led him to feel truly grateful to the beetle for having helped him. Although it sat as if dead, he spoke tenderly to it, "I have to thank you. Truly you have shown me my ugliness and I am changed. I am better than I was, surely more in your image, I am honest and new. I feel like you in this way of knowing and want you to understand I am glad in the knowledge you were kind enough to give me. I find you the most beautiful of all my friends, and perhaps the only one I trust, although you are no doubt dead, and mute even in life." The beetle came alive, but now its eyes no longer drooped in reverence at the end of its stalks, but instead looked squarely at him. Joseph noticed this with some alarm and spoke, "Why do you suddenly find you may look upon me? Do you no longer respect me after what I have said?" The beetle replied to him with a calm voice and caring tone, "We who are subterranean see only what lies beneath the surface, and find the sight of your posturing, lying race too loathsome, too hideous and unbearable even to envision. I can look at you because *you* have looked, so only now, can I stand the sight."

The Dream Temple

As Sam fell asleep he could feel her, feel the night come to him pregnant with mysteries, adorned with fragrance and color wrapped in darkness. The night came to him, sweet and yielding, full and engorged with light and shadow, fat to bursting, each silent moment, pregnant, hiding and dark bent down in silence, and bestowed the night's awakening kiss, night's sweetness, her light wrapped in folds of darkness—and so did she dream of him.

Sam saw the temple, an alabaster stone monolith, smooth and unperturbed it stretched into the azure sky, its arching columns and the seamless unbroken sweep of the crowning pale white dome of stone and sun, as but a reflection of the vastness and promise of a hollow unknown hope, a question too large, empty, beautiful and aching, a question which can not be asked, too broad to hold as it arches over the sky...but must be answered. The turquoise Greek letters above the temple entryway were unknown, but familiar.

He knew she was there without looking—the slender vase of a goddess who held sway here, pale and delicate, she had every key hidden in her carelessness and her serenity, Sam's soul lightly held in her delicate ivory fingers, fingers which opened Sam's soul up, spread it open as a fan is slowly opened to reveal its pleated heart as a bashful wind of still breath stirs it to life in the hidden currents of whispered breezes, so did she know him. Her light already exhaled, unseen and laughing, to know him with each breath he drew, he sipped her light into his soul and danced as a fan gladly knows itself, the pleats and folds, the secret intimacies of its webbed gossamer broquet catching and shedding the light, alive and shimmering with her breath, an autumn bruised, a fall leaf dancing with the teasing breath of annihilation, spun light and a last tug of breath pull, pluck it into the air to dance with the cool pale light, to warm the fallen sun with rose and know itself for the moments as it falls. She looked into him and spoke: "This is your temple."

The words hung in a terrible stillness, an unquenchable quiet flattened him and narrowed Sam's soul into a dark sunken thing, small and tight, flat, cloistered and small, thick and mute with fear. She revealed the door. He pressed himself through the keyhole into an immense narrow darkness, stultifying and slick with an unbearable sweetness, the lidded nausea so over ripe and narrow, slick and double thick to breathe this over ripe rotten air, cupped into itself, sick and hidden behind and under itself so twice sweet and double rotten. Sam squeezed the black oily spirit of his hope between the dirty cracks and pressed into the heart of the edifice, so white and broad in the day, so narrow and putrid within. In the very center of the temple, Sam found them: The three sisters of his hell. Ugly and knotted, their blotched skin so hidden and sloughed, a disgrace that hides and oozes under the weight, the gravity and weight of unlookable eternal shame... which knows.

The first head spoke to him: "I am here for you, little one! Behold, for I am your secret! Do you still wish to know me? I am what makes the sun warm and the sky arching and blue, I am the eternal hope in torment, beauty itself spilled into life's most gracious cup of dawn, I am all illusion which knows better than truth and so is named 'hope,' I am you!" And Sam saw her and knew this terrible knotted visage, the hideous vile countenance which had wrapped itself in darkness and disgrace before all mortal souls—Sam saw the face of Lust! Her foul, shameful breath of fetid, lurking desire, staining all pure moments with her leering sultry filth and hollow scratching need which must be born! So has shame known and named her: Lust!

And now the next head of the dragon-witch spoke: "I am a sweetness in your breast as well, little one, oh yes, I am again your secret, yes twice again! I am all which rules the sky and orders the day, I am the law of strength and balance which has found its way, I am the wisdom of victory and the sure heart of your soul." Sam looked upon the mottled grimacing mound of filthy flesh with its bloody brown eyes and the dull hate leaking out from within their lying gaze. He smelled the rotten, putrid bloody drains of a thousand wars and a thousand sewers, the pleasure and hatred of the worst of man, the camps of the Nazis and the heaps of skulls under the gentle watchful eye of the eternal tyrant, Sam saw the blood

soaked vile serpent of man's most putrid and shameful appetites proudly trumpeted as virtue. Sam saw the face of sadism, cruelty and evil, so did shame call them and so was she known to him— Cruelty itself leered out at him and from its dark lips came the words, "Know me, for I am you!"

And the third head spoke unto him: "Know me too little one, for I am peace and resting, I am release, and of all things well and freshly done, I am the purpose, the countenance of cool repose, the reason. Oh yes, I am your finest hope and your best promise. I am peace." And Sam saw this last and worst of his three demons, she was terrible and unblinking, cold, sure and uncaring, black, mouldering, putrid and devouring without noticing, shame saw all needs summed in a single blackness, a single hunger, a pinprick where all appetites and defeats converge to annihilate even each other, leaving only hunger itself—and shame knew her and hid her, and so from under the darkness of shame she spoke unto Sam, "I am your highest gift for mankind and your highest hope: I am Death, and you hunger for one thing alone, little one... Me!" And so did Death speak to Sam, sick and hollow, hidden under the dark lidded curtain of immutable shame, sealed within this sepulcher, this splendid, breathless, alabaster tomb.

"If this is a temple, it is a temple of shame! A temple of false appearances, smooth white sun and pure walls which hide and house, seal and sustain every hiding, lying shame which fouls all of life! If this is my temple, I proclaim it a temple of shame and lies!" Sam swept his hand in an arc of circumference and the ceiling of darkness split open in a peal of laughter and he knew he had found it! Sam slit open the very belly of shame and beheld them—the three witches who under the brooding oily lid of shame had threatened to consume him with their knowledge, now unfolded themselves and poured their glad waters before him, nourishing all the land. The hideous head of Lust was born pure and golden, white and ice, deepest blue and rich purple, thick, wet and drenched through, soaked with color and bubbling to overflowing are the waters of Eros, now all of the world subtle and glowing, crimson and swelling, falling and rouged in amber dusk, so did Eros embrace and enfold, encircle from without and enfold from within, as a pure silver stream did she spread her clear and colored waters to gladden the land, to enrich all sunken and lofty worlds and bring to the earth its reason, its rejoicing, its unknown promise. So is Lust revealed as Eros once born into day, once released from the fetid womb of darkest shame!

From the shamed form of cruelty came a proud golden ax and staff: The tools to do and to see done. And so is a man's will, his hope. In discipline is forged our triumph, our new day is earned laboring at her forge! And so did the forge of Sam's will glow cherry red with hope and the ascending waters of light, hope and all futures made real spring forth from this forge and stream upward, flowing into the sweep of the sky, red and sure, golden and right. Once born out into the light of day so does our will master the world, or become cruelty once shamed and made impotent.

From the sunken ugly head of Death came the brightest spring of all, the sun itself! A golden white river of light pouring into the vaulting heavens and filling all the empty void above with light and its pure speeding white hope, forced into brightness, burst into a spattering of yellow brass and white molten metal, liquid platinum and quicksilver light crushed into being by the very weight of death itself! So is death the spring of man's eternal striving and urgency, his quicksilver spring of hope and light itself born under the black footfall of death! Ahhh...the very reason for light is born in these leaden steps, immutable and barren, sure and unyielding, the tragic and meaningless blots of gravity that are the footfall which awaken the light in the heart of man! What but anguish could cause such pleasure, such exaltation and light could only be born of this! Only in knowing this—do we need it completely. For from what womb would light need spring but darkness? What else could cause such longing, where but in our certain darkness would a need so potent be born—a need so deep it became the birthplace of light itself? Only a knowledge as crushing as this might make it so, only in a cauldron as black and sure as this might we need so deeply that we find...ourselves. So are we all a taunt, a grin, a smudge of bright mist and light born out as quicksilver and gold, born as we are trampled underfoot.

Now Sam beheld the exquisite lush landscape of green carpeted hills, outstretched palms and cedars, weird colorful fish and sad mocking monkeys, pointing at each other and laughing. Smiling

gazelle pronged for no reason, and shag sloths with their carpet of red and purple cords and laughing inverted eyes hung in the branches and looked at him, peering from the trees. Sam saw this wonderful painted world with its laughing colors and was happy. He looked within each of its creatures and found he knew them. He looked within the soul of the lion, saw it stretch before the noon sun and preen its bloated belly, fat from killing, content and warm. He saw into the soul of the peaceful sloth and lived within the tangles of its multicolored lugubrious laughter. Sam found the hidden heart within all things and knew them, and so found his rejoicing, his tears and his happiness flowing through him in this moment of knowing, and he heard her again, "This is your temple"—and he knew it.

Fondly, he took the sad things and brought them, so broken and pitiful, into the light, before the warmth of his purple noon he brought and encircled all broken brittle things, now tenderly set before him so he could know them. Now they rose, one after the other they floated, each after the next, as a staircase of bright and silver laughter, these frozen ripples broken free and flowing upward, uncaring and playful, teasing bright tears ascending from a resounding laughter, a laughter bright enough to stain the darkness, and awaken the true heart of Man.

Papers and Science

This section contains several books the reader may find helpful in their personal journey, and, papers detailing the correct way to use technology to create clean energy and end nuclear waste, as well as work dealing with consciousness within a neuro-scientific physics, and proper paradigmatic analysis of medicine and physics in general. Suppression within the sciences must end, and medical aspects addressed in the following way, as well as needed adjustments to the physical paradigm which currently includes such mistaken notions as quarks, gravitation moving at light speed and many others. If the race of man is to advance, his medical and physical science must be correct.

Please see in addition:

Big data analysis of Livingston and Hanford logfiles for LIGO project 2010-2016. Demetris T. Christopoulos <https://www.researchgate.net/publication/301593709>

A Beginner's View of Our Electric Universe
By Tom Findlay WWW.NEWTOEU.COM

Practical and theoretical assessment of relativistic theory v. 2. Dunning-Davies and Norman
<https://www.researchgate.net/publication/310845151> [Practical and theoretical assessment of relativistic theory v 2](https://www.researchgate.net/publication/310845151)

Quantum unconscious pre-space: a psychoanalytic/neuroscientific analysis of the cognitive science of Elio Conte—the hard problem of consciousness, new approaches and directions

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Abstract: *The mathematics, physical and cognitive science of Elio Conte has uncovered essential pieces of form and structural dynamics which are isomorphic across scales, and may be observed in macro-ontologic and onto-psychologic neuroanatomical interactivity. This paper will take depth psychology alongside of neuroscience, and detail several of these parallels. A proposed relation between the pre-space and its subsequent projection as defined by Clifford algebra and the formative activities of the unconscious in perception is put forward. The derivation of logic from quantum theory and its simultaneous role as a formative basis beneath quantum theory are drawn into macro-focus with neuroanatomical symbolic analysis to be observed in the mental system as isomorphic in basic structure. A hint is provided at the possible implications of this series of analyses.*

Introduction: Quantum theory details the micro-interactive sub-genesis of observable linear reality. As such, it appears all but intangible, so deeply mathematical and divorced from our observed reality in its scale. However, many of these deep insights and basic formative patterns are isomorphic across scales of representation, allowing a unique opportunity for deductive and synthetic analyses which may yield a new approach to the situation. In this way, the mathematical formalism may become intuitively intelligible to us, and a derivation of consciousness and genesis of linear reality may be derived which spans the gulf of macro and micro scales. From this vantage, new insights into the hard problem of consciousness may be had. I wish to take the first tentative steps along this promising pathway.

Quantum processes derive, and are sometimes isomorphically evidenced in macro-reality: [(Tamulis, et al., 2015, p. 2); (Cai et al., 2010); (Pauls, et al. 2013); (Conte, 2010); (Marciak-Kozłowska and Kozłowski, 2015); (Conte and Lucas, 2015)]. Isomorphisms, and/or self-similar structural dynamism across scales are evident. This paper will draw those out, applied to the mathematical algebraic science of Elio Conte, using depth psychology, cognitive neuroscience, affective neuroscience, and neuropsychanalysis. From there, new implications can be drawn.

Clifford algebraic expression of the encoding and projection of abstract elements from the pre-space:

"...we show that a wide range of geometric forms and relationships can be described in terms of the Clifford algebra. This range is so wide that it seems reasonable to suppose that all basic geometrical forms and relationships can be put in this way, and therefore can be regarded as unfolding from an implicate order of pre-space. Because the property of chirality is included in this, the possibility is opened up for an explanation of parity non-conservation in Beta-decay as grounded in the properties of pre-space." [From: D. Bohm and B. J. Hiley (1984), p. 3, *Generalisation of the twistor to Clifford algebras as a basis for geometry*. Revista Brasileira de Fisica, Volume Especial, Os 70 anos de Mario Schonberg, pp.1-26]

Elio Conte has made great strides to accomplish these very aims set out by Bohm and Hiley (Conte, 2012; 2013). The same concepts elucidated describing interactivity of the (sub)micro-scale quantum linear genesis, have near-isomorphic neuroanatomical and metapsychological components at the macro-scale, and indeed, represent the fundamental mathematics of the very transference from unconscious sources which gives reality its quality. First we will reference the quantum theory of perception, observation and wave function collapse as articulated by the Clifford algebra of Conte, and mathematical proof of logic as a product, and source, of quantum mechanics.

Please take careful note of these detailed mathematical proofs and essays demonstrating the encoding and projection of abstract idempotent (and nilpotent) entities from the pre-space, and, the genesis from and basis of, quantum mechanics in relation to logical grounds: (Conte, 2011; 2011a; 2011b; 2013; 2013a).

It is essential for this exposition that the reader understand the above referenced material upon which the remaining discourse is dependent. It is assumed, also, that the reader has a basic understanding of the ideas of the pre-space and nonlocality: specifically the ideas of the pre-space pertaining to the *potentials* of systemic expression as abstract idempotent elements suitable to be projected into a subspace; nonlocal quantum genesis which is based on superposition, meaning an additive (superposed) rather than a logically exclusive linear processes, nonlocality as a negation of distance, quantum interference effects, and other long familiar components of quantum theory.

Let the reader closely note Dr. Conte's definition of an abstract mathematical object and its encoding:

". . . abstract objects are constituted by the properties through which we conceive or theoretically define them and therefore are connected to those properties in a way that is very different from the way ordinary objects bear their properties. I may say that mathematical objects encode these constitutive properties, though they may exemplify or even necessarily exemplify, other properties independently of their encoded properties. On the contrary, ordinary objects only exemplify their properties. As mentioned by Nodelman and Zalta, as example, ordinary triangular objects (as example, the faces of some physical pyramid, triangles) exemplify properties like having sides with a particular length, having interior angles of particular magnitudes, being made of a particular substance, and so on. By contrast, the mathematical object, such as the Euclidean triangle, does not exemplify any of these properties indeed, it exemplifies their negations. Instead it encodes only the theoretical properties implied by being triangular, such as being trilateral, having interior angles summing to 180 degrees and still more. The Euclidean triangle encodes no other properties than those implied by being triangular. Therefore, although classical logic requires that exemplification mode of predication exclude objects that are incomplete, the encoding mode of predication allows us to assert the existence of abstract objects that are incomplete with respect to the properties they encode."

[From: Cognition and Consciousness as manifested in the quantum model of reality realized by using Clifford algebra, pp. 113-114, Elio Conte, (2015)]

I will all too briefly summarize these important insights as follows: Through demonstration of the combined dynamical transformations of both $A(Si)$, and dihedral $Ni_{\pm 1}$ Clifford algebras, a fully quantum understanding and articulation of a particular process whereby superposed potential is transformed into linear encoded expression is now, at last, clearly available: *the wave function collapse*. This dynamic cognitive and conscious quantum physio-ontologic micro-basis, is both the fount of, and is itself founded upon, logic. This system is self-observing, self-referential in structure. Abstract entities are thereby encoded and projected into complete linear object expression by wavefunction collapse, to create reality.

Once seen in the light of depth psychology, affective and cognitive neuroscience, these hard won mathematical and theoretical constructs may be made intuitively accessible, and *allow new quantum approaches to be derived* for areas as diverse and fundamental as hallucination, neurosis, psychosis, dreaming, memory consolidation, and the "hard problem" of consciousness.

Affective basis of human consciousness:

As we are tracing isomorphisms and near-isomorphic relations between quantum scales and macro-affective ontological human processes and structures, it is vital that we first review the affective neuroscience, evolutionary biology and neuropsychanalytic findings, so as to ground what follows in a sure footing. Once these basics have been elucidated, and parallels between nonlocal physics and depth psychology then theoretically drawn out with neuroanatomy, we will have gained a vantage point suitable to review the mathematical results of Dr. Conte, and draw our conclusions.

Evolutionary biology, and neuropsychanalysis correct the typical idea, that cortical tone is consciousness. Yes, conscious experience has a clear relation to energetic distributions which extend from the ARAS to create a cortical tone, and a waking state. However, this is a later adaptation which is demonstrably secondary, and the true root of conscious experience is far older. The REM system is older than the sleep onset system yielding SWS, and, it is older than the waking system itself (Panksepp, 1998, pp. 125-143). *REM...this core system is lower, and older, than the waking system*. The highest concentration of REM initiating neurons are caudal to the ARAS. The Basic Rest Activity Cycle (BRAC) demonstrates the embedded REM cycle (Panksepp, 1998, p. 129). All that implies from many directions, that REM was once primary consciousness (Panksepp, 1998, pp. 133-135).

Also, remember the fact that EMOTION, the primary element of dreams (Stickgold et al., 2001; Hobson & Pace-Schott, 2002) is also demonstrably primary in maintaining consciousness: the periaqueductal grey, the locus of emotion and the primitive affective motor "self" (at its intersection with the superior colliculi) (Panksepp, 1998, p. 312)...this piece of tissue, the PAG, is the smallest bit upon which consciousness is dependent (Solms, 2013, p. 12). Our consciousness is an emotional one...a consciousness of affect.

Please note this further role of the embedded REM system as it performs functional dynamics associated with an evolutionarily primary consciousness:

The FTG neurons, the giant neurons of the reticular tegmental fields which mediate rapid movement while awake,

exhibit storms of spiked activity during REM (eg., PGO spikes), indicating their probable role participating in that same capacity, as orienting reflexes, associated with a primitive conscious REM (Panksepp, 1998, pp. 133-135).

We see the underlying older system revealed in dreams. The Dorso Lateral Prefrontal Cortex (DLPFC), is demodulated in REM. Emotion is released. The hidden emotive definitional processes are amplified as well (hyper-modulated limbic system), allowing us to watch. "This would be in keeping with the proposed role in waking of these structures in the identification of mismatches between expected and actual behavioral outcomes (122–125) and would also explain the similarities seen between cholinergic and PGO activity in the amygdala during REM on the one hand and during alerting and orienting responses in awake animals on the other (126–128)" (Stickgold, 2001, p. 1056). The DLPFC is inactive, logic curtailed. So in REM, the brain is aminergically demodulated (low noradrenergic, serotonergic and histaminergic activity), and along with predominant acetylcholine modulation, the primary underlying system is revealed.

So, the underlying REM system, which is older than the waking system was once primary consciousness for our evolutionary ancestors, and this primary conscious source, can be revealed as ego structure and logical processes are curtailed, as in REM dreams, where the DLPFC is demodulated, or, by way of linear (ego) destructuralization revealing primary processes fostered by extensive meditative practice, or, to some extent as well, in psychedelic drug use:

From: The default-mode, ego-functions and free-energy: a neurobiological account of Freudian ideas; R. L. Carhart-Harris and K. J. Friston, *Brain*, 2010:

"We substantiate this synthesis by showing that Freud's descriptions of the primary process are consistent with the phenomenology and neurophysiology of rapid eye movement sleep, the early and acute psychotic state, the aura of temporal lobe epilepsy and hallucinogenic drug states.

LSD given to humans immediately prior to . . . or during sleep . . . has been shown to promote REM sleep and dreaming. These studies provide converging evidence that a specific mode of cognition (primary process thinking), rests on brain states, which possess a characteristic neurophysiology." (Carhart-Harris and Friston, 2010).

Now, let us consider the cortex in its relation to affect. Neuropsychanalysis has allowed us not inconsiderable insight here. *Libido*, is the undifferentiated affect which powers our modern waking state. Think of libido as undifferentiated systemic potential, mediated by precious few recombinations of neurochemical distribution, issuing from the ascending reticular activating system so as to create cortical tone (Kaplan-Solms & Solms, 2002, pp. 264-267).

We may rightly conclude, consciousness is affective at its primary process formative level, and, affective at the level of the cortex as well. Human consciousness is entirely affect dependent.

Next we will need to closely examine the deep metapsychological structure and corresponding neuroanatomical distributions of this affective dynamic so as to place our mathematically derived insights into psycho-biologic context, draw the implied quantum/unconscious parallel genesis of linear reality into focus, and gain some few preliminary results.

The system of affective assignment:

We only experience our perceptions, never the fictional, factual, "thing in and of itself." Perception is never directly able to access the things and events to which our perceptions refer. These perceptions must be identified, and, affectively interpreted, that is, given an emotional context by virtue of which they can be assessed, and appropriate behavior determined. Therefore, one could say that reality testing consists along with object identification, with the giving of proper symbolic value, proper affective value to perception and experience. These ideas converge to a point. In the simplest terms, what does this experience "mean to you." Think of affect as the psychological context through which a neutral perception is defined. It is the affective meaning, the context, which gives symbolic emotional *Quality* to experience. In example: One person may have a fond adoration for his pet mouse, where another may recoil in revulsion. The mouse is the same, a neutral perceptual experience, it is the affect which we assign to it which puts it in the context of our associated experience that varies. This symbolic affective function can become deranged, as we will now see.

In "The Pain Was Greater If It Will Happen Again: The Effect of Anticipated Continuation on Retrospective Discomfort," we find the following observation: "Across 7 laboratory studies and 1 field study, we demonstrated that people remembered an unpleasant experience as more aversive when they expected this experience to return than when they had no such expectation" (Galak & Meyvis, 2011, p. 63). Note how the experience was the same, but the affect assigned to it was different, a function of a *new context* whereby a different affective value is assigned to the stimulus. Affect is the context, and so, the quality with which we endow perception and experience, and its assignment to perception is therefore a vital part of healthy balanced mental function and reality testing.

In Levens and Gotlib's "Updating Positive and Negative Stimuli in Working Memory in Depression" we find the following statements: "Compared with controls, depressed participants were both slower to disengage from sad stimuli and faster to disengage from happy facial expressions. . . . For example, biases against keeping positive information active or toward maintaining negative content in WM may underlie the ease with which depressed individuals develop and propagate a negative mood" (Levens & Gotlib, 2010, p. 654). It is clear that the system of assigning affect to stimulus is essential to reality testing.

The system by virtue of which this process takes place is phylogenetically old and complex. All sorts of affective aspects are undoubtedly stored in various anatomical neural locations and retrieved from these many various areas to create the final effect of "affect." We must watch the system work in a known metapsychological context to identify its various parts and their intrarelations. But, as we study sleep, it seems that with some psychology we may see the system of affective assignment in isolation, and gain some insight into the process. For this reason I will now draw out the proper Freudian picture of the metapsychology of dreaming so it may be related to the current cognitive neuroscience.

I have found that even the very best scholarly papers often misrepresent Freudian theory by way of drastic oversimplification in order to contrast the theory being advanced against the older established theory. Please read the following from an otherwise superb piece of scholarship. In "The Cognitive Neuroscience of Sleep: Neuronal Systems, Consciousness and Learning," we find the following statement: "Freud believed that dream content was determined by a daytime experience that triggered the emergence of related memories" (Hobson & Pace-Schott, 2002, p. 686). This is an oversimplification. Freud did not state that dreams were primarily dependent on episodic memory as this statement may be seen to imply, but instead, had found many dream sources and relations to day world experience (Freud, 1900, p. 551). The partial statement of the highly complex and nuanced Freudian theory is so brief as to be utterly misleading. Later in "The Cognitive Neuroscience of Sleep: Neuronal Systems, Consciousness and Learning," on the same page, we find this statement which fits perfectly with the nuanced Freudian theory: "Instead, discrete and incomplete fragments of narrative memory are assembled to create the new synthetic scenarios of dreams" (Hobson & Pace-Schott, 2002, p. 686). It seems that in an attempt to define the new, the old has been distorted. For this reason I will begin with a recap of some familiar psychology which we will need to keep clearly in mind in order to construct our new analysis of affect.

Please note that we have already drawn a clear and intuitive connection between the assignment of affect and symbolism. Note also that our understanding extends this chain of ideas to include the notion of context. They are all but, if not truly, identical ideas, or aspects of each other. In psychoanalytic theory, dream and symbolic construction are accomplished by certain complex and specific means. A piece of day-world residue, a trivial dissociated fragment, a memory trace is chosen as a building block for dream construction because it is neutral, free of affect and meaning, and so becomes ripe for representation in a dream, ready as a canvas to accept the many meanings via transference which will be assigned to it in condensation and "overdetermination" (Freud, 1900, p. 279, 283-284, 563-564). The less saturated with meaning, and, the closer to being a nexus for many other ideas, the better. Language, as it is itself a symbol with many meanings and puns, acts as a nexus to which many underlying determinants can attach in condensation and overdetermination (Freud, 1900, pp. 340-341). The memory trace, and there are of course many which will be assembled to form the finished dream, is then invested with meaning from many sources. A process of disguise and distortion is used to accomplish this which includes: reversal, condensation of many events into one (Freud, 1900, p. 595), overdetermination of a dream through thematic repetition (Freud, 1900, pp. 283-284) and/or determination of a single symbol by connecting many various trains of thought to give it energetic value sufficient to gain representation (Freud, 1900, p. 330), displacement from one object to another (Freud, 1900, pp. 307-308), and a host of other means which symbolically represent and compound affect to achieve representation and conceal the true source of the affect delegated. These means of affective encoding found in REM dreaming function to avoid censorship via compromise formation which functions to create *distortions*. (Freud, 1900, pp. 143-144, 506-508, 595-598). It is by condensed symbolic construction and distortion that the affective sources of the symbol are attached, and also,

hidden (Freud, 1900, pp. 506-508). The symbols thusly endowed are then woven into a story, a narrative, and are thereby given further episodic context, although be it a false one, in a process known as "secondary revision" (Freud, 1900, p. 488). The distortions are guided in no small part by the process of compromise formation, where the contents are distorted, censored, so as to produce a manifest dream, the meaning of which, the ego will not recognize (Freud, 1900, pp. 143-144, 506-508, 595-598). The process is called dream work (Freud, 1900, p. 277). So we have the process of symbolic construction and dream representation, a process whereby memory traces with little or no affect become suitable to be endowed with affect and woven into a distorted narrative, through many specific means. Highly complex! However I have tipped my hand as this process can be reduced to a simple but broad quantifiable principle. To discover this quantitative reduction the neuroscience must be analyzed alongside the aforementioned metapsychology of symbolism and dreaming.

In his paper, "Sleep, Learning, and Dreams: Off-line Memory Reprocessing," Dr. Stickgold (2001) and an esteemed collection of intellectual confederates bring us the clearest somato-neurologic picture of this metapsychological proposition to date. A clear neurological definition of the trivial unsaturated pieces of memory (memory traces) and symbolic processes of Freudian theory are seen to emerge in the context of memory consolidation, even if in a schematic and reduced fashion. In certain states of psychopathology such as schizophrenia, we can observe the pathogenic assignment of affect to experience as affective assignment operates unrestrained by the higher mental functions, such as input from the dorsolateral prefrontal cortex, just as we can observe in REM dreaming, which is understood psychologically as the general prototype of psychopathology (Hobson, 2001; Hobson & Pace-Schott 2002; Pace-Schott, 2003). In REM dreaming this unrestrained affective processing is isolated and expressed in harmless hallucination. The isolation of the affective system is achieved through a series of changes in neural modulation which Dr. Stickgold enumerates as:

"More generally, the cognitive changes seen during REM may be the combined result of three physiological characteristics of REM: (i) the shift in neuromodulatory balance from aminergic to cholinergic, (ii) the decreased activity in DLPFC and increased activity in both the anterior cingulate cortex and amygdala (75-77), and (iii) the decreased outflow of information from hippocampus to neocortex (53). Taken together, these findings suggest that the brain in REM is tuned more for the processing of associative memories than for the simple consolidation of recent memory traces and may explain, in part, various features of REM dreams, including their bizarre, hyperassociative quality (95) and minimal incorporation of episodic memories (96, 97)" (Stickgold, et al. 2001, p. 1055).

In Dr. Hobson's paper we find the statement nicely summed in these few words: "There is also a progressive decrease in output from the noradrenergic, serotonergic and histaminergic neurons, all of which shut off in REM, leaving the selectively activated forebrain aminergically unmodulated" (Hobson & Pace-Schott, 2002, p. 691). In this instance of systemic aminergic demodulation the intrarelated symbolic subsystem by virtue of which we give affective value to experience is observable as it encodes affect into a dream for consolidation into the mnemonic system, and other various functions I will touch on later:

"This suggests that the brain sources for dream elements are not hippocampally mediated episodic memories, but cortical traces of discrete components of the episodic memories, which then presumably are combined with associated semantic memories. With dorsolateral prefrontal cortex deactivated in both REM and NREM (75, 76, 106, 107) and the hippocampal formation producing only minimal cortical output in REM (53), actual episodic memories may be inaccessible and hence irrelevant to the dream construction process. . . In REM, the central nucleus of the amygdala plays a crucial role in the activation of medial prefrontal cortical structures associated with the highest order regulation of emotions (76, 108, 109). This adds to the deactivation of DLPFC, normally associated with higher cognitive functions (110), in REM. Thus, the brain appears to be biased toward emotional processing in this state. . . . We hypothesize that these features reflect an attempt, on the part of the brain, to identify and evaluate novel cortical associations in the light of emotions mediated by limbic structures activated during REM. This would be in keeping with the proposed role in waking of these structures in the identification of mismatches between expected and actual behavioral outcomes" (Stickgold et al., 2001, p.1056).

So we finally have a clear beginning in our search for an analysis to discover the neuroscience behind the metapsychology. A memory trace suitable for dream construction is now well defined as nonhippocampally mediated, and so, cut off from episodic memory just as one would expect metapsychologically, as the memory trace must be free of context and preexisting symbolic and affective value to be able to receive affective, limbic value and emotional definition, and act as a neutral substrate, an unsaturated nodal point with which to provide a new symbolic/episodic context. The source of the affect assigned to these free memory traces which are bereft of

saturated context and existing emotive value is found through the mediation of limbic structures. Also, the purpose of these structures in providing affective definition to perception and the influence of this process on reality testing is not neglected either, as I will point out again, we read: "We hypothesize that these features reflect an attempt, on the part of the brain, to identify and evaluate novel cortical associations in the light of emotions mediated by limbic structures activated during REM. This would be in keeping with the proposed role in waking of these structures in the identification of mismatches between expected and actual behavioral outcomes" (Stickgold, et al., 2001, p.1056).

I can now plainly state the quantitative conceptual reduction to which I have alluded: The symbolic processes by virtue of which we give quality to REM dreams, experience and perception, can be reduced to a quantifiable operation: "the assignment of affect to." Symbolism is a transference from concealed limbic sources, from unconscious sources by virtue of which emotion is mediated and affective quality assigned to perception. Symbolism is a function of the system of affective assignment.

Next, I wish to demonstrate logic emerging in self-recursive dynamism, and show the reader that we need but add missing episodic context to our REM memory trace, and bind/encode the result to a linear object, to begin to see our way into the answer. Toward this result, I will first reduce these processes to a schematic simplified structure. A clear relation between unconscious primary process dynamics, the pre-space and nonlocal formative processes and encoding will first be established, so we may understand what has been gained.

Unconscious as nonlocal; a TOY theory—sub-affective logical determination; Logic self-configured from affect:

I wish to thank the reader for traversing these many vital roads on route to our new thinking. A few more pieces, and we will arrive at an unexpected place. Please recall that the system we are exposing to view, is self-observing, self-determined, self-referential (Conte, 2015 p. 139; Norman, 2014). This is a necessary truth at all levels. Phenomenologically this MUST be the case, as we are only at access to our perceptions, and furthermore, a valuable conclusion as to our place in this physical universe can be derived from this fact as well: we, as human observers are mere parts of this self-observing system, and although we have a role and influence physical expression as you will soon see, we as observers, are not its sole causal fount. This is vital, as it makes clear the answer to troubling questions of egocentric solipsism, and we may be sure, that an electron or any other object DOES exist even if we are not ourselves looking at it. We are not as a "God." We are simply a small part, not the only causal fount of observation and wavefunction collapse. The system itself, is self-recursive, self-observing. Iconoclastic thinkers have derived this self-recursive dynamic, and inferred a different implication (Langan, 2002).

I will now, distill affective assignment into a TOY theory, and demonstrate the logical basis beneath affect, providing affective example of the mathematically derived truth that logic may well underlie quantum theory, and be product also, of quantum processes. For that to be meaningful, the foundational isomorphic/self-similar relation between the unconscious primary process, and the nonlocal genesis of reality in the pre-space (Conte, 2013a), must first be articulated:

The ideas of nonlocality, superposition and entangled phenomenon are the basis of quantum theory. This quantum basis is the potential from which linear reality springs. There is no distance or time in the usual sense, communication may be instantaneous between objects, and all things are expressed additively, instead of oppositionally, one might say in terms of "and," rather than "or," as a function of superposed compounding of wavefunction. The unconscious is self-similar if not isomorphic to the nonlocal pre-space. From the unconscious, we "project" *by way of transference* (Norman, 2013a, p. 9) to give reality its quality, in both pathological and healthy cases. I assert: *The unconscious is our perceptual ontological quantum genesis: the "primary process." The projection into a subspace to create reality, is the micro-quantum level of the transference itself. Wavefunction collapse leading to perception, is itself: the transference.* Here is the definition of primary process unconscious mentation:

"The cathectic intensities [in the Ucs.] are much more mobile. By the process of displacement one idea may surrender to another its whole quota of cathexis; by the process of condensation it may appropriate the whole cathexis of several other ideas. I have proposed to regard these two processes as distinguishing marks of the so-called primary psychical process." . . . "exemption from mutual contradiction, primary process (mobility of cathexes), timelessness, and replacement of external by psychical reality"

(Freud, 1915e, p. 186-187).

I hope the reader can clearly see the relation, the lack of contradiction (primary process thinking creates compounded symbols, compromise formations symbols (Freud 1900), additions, *superpositions/entanglements*, never either/or contradictions), linear distance is not available as all is in proximate associative contact, and so may transfer instantly masses of cathexis, the lack of linear time, and in the case of dreams and psychotic symptoms, the hidden associative nonlinear encoding process itself becomes manifest, and replaces the external reality it is meant to define.

Bion also understood the importance of dreaming as it relates to health and experience, and that we are all, if we are healthy, dreaming all the time (Bion, 1992, p. 52; Brown, 2011, p.164). To illustrate this idea, that dream formation, symptom formation and our proper definition of reality all gain structure and quality by identical primary "associo-cognitive" processes (Norman, 2013b) and, assess the role of the neocortical/hippocampal mnemonic store in mediating the affect assigned from subcortical sources to this definitional transference, so as to affect "mental solids" represented in the cortex (Solms, 2013), we need but indulge in a simple thought experiment. The reduced TOY theory will allow us to see through the complexity, and examine the abstract associative affective encoding of a symbol in divergent cases, and also, demonstrate the surprising conclusion derived mathematically by Conte, that logic underlies quantum processes. [It should be noted, that such a simplification is bound to omit much, and indeed, the affective contributions of unconscious fantasy are not included here. I propose that these contributions and others can be quantitatively assessed so as to place a solid quantitative basis under neurosis and psychosis in a real unconscious context (Norman, 2013). The idea of unconscious fantasy is also addressed here: (Norman, 2013a; 2013b; 2013d)].

Two subjects are asked to participate in a study on consciousness and reality. One is healthy, and has had a loving home life. The other is neurotic, and has had a disturbed upbringing. Both are shown the same photo of a yellow butterfly. The two hypothetical associative chains are listed below:

Healthy subject A: Stimulus...butterfly. Associations: Butterfly—yellow—sun dress—mother—warmth—love—perfume—smile—sun

Neurotic subject B: Stimulus...butterfly. Associations: Butterfly—yellow—sun—son—mother—empty—cut—kill—sad

So, in free-association we can see a schematic reduced view of the entire process. Just as in our preliminary description of affective assignment we observe the process may become deranged, or function properly. The neurotic, as we can clearly see, has a different encoded, affective, abstract definition associated with the linear, complete symbol. It appears that the neurotic has improper abstract encoding bound into the collapsed object definition. We may deduce, in the case of unconscious primary process affective assignment, each and every entangled encoded mnemonic contributor which creates unified object quality, *is, or, is not*, an appropriate definitional piece of the unconscious transference. *A binary logical proposition at this scale.* Logical form is the basis of primary process/unconscious/quantum affective representation. Here, at the level of quantum metapsychological affective ontology, we see the same surprising dynamic, derived by the mathematical science of Elio Conte.

Soon, we will be in a position to draw our conclusions. The self-recursive dynamic is, as I have said, necessary at all scales, spanning physics and ontology. One more piece must therefore be laid into place. I will draw this last macro-psychological parallel from classic depth psychology demonstrating in intuitive simplicity, the derivation of logic, as an affective self-referential function developing directly out of the system's self-observing emergence in experience:

We can see, in the development of the infant, the self-configuration, the self-processing and initial creation of binary logical forms in response to the mental system itself being immersed in experience (Freud, 1900, p. 565-566; 1911 pp. 218-219; 1920). The infant has experienced a satisfaction, it has fed. Now it is hungry again. It has a mnemonic impression of feeding, and seeks by way of perceptual "regression," to reproduce the image in hallucination. This situation proves unsatisfying to the infant, who then seeks to remedy the situation in reality, and holds the image of feeding and its attendant hallucination away from its mind so as to find a new relationship with the world, and seek not just the revival of a memory of satisfaction, but to achieve that satisfaction *in reality*. *The reality principle* (Freud, 1911, p. 219) is thusly founded. Here, we can see logic, the ability to distinguish between the real and the unreal, logic itself is created from the somatic and mental system's self-referential

emersion in experience, and by way of systemic feedback, the unreal, the hallucinatory, is deemed unworthy of belief, as the pain and discomfort of the unsatisfied hunger drive are not met by the unreal, the real obtains a clear priority and precedence, and its identity is soon rightly distinguished from that of the hallucinatory and unreal. So developmentally, we may conclude that *logic is self-configured from within the psycho-somatic system itself as a function of memory, interacting with experience, mediated through feedback with the self-observed internal neural mechanisms of pleasure and pain*. Memory provides a vital self-recursive element, a self-consciousness of past states (Conte, 2015, p. 139). The result is a very particular and specific mental process of prioritization and rejection where a piece of *wishful experiential content originating internally*, a wishful hallucination, *is held away from consciousness*, the regression left incomplete, maintained at the stage of a mnemonic image rather than an hallucination (Freud, 1900, p. 566), and another: *reality*, is thereby given precedence in consciousness. This holding away of an abstract/incomplete ideation from the conscious is a fundamental psychical dynamic which has many implications we will soon articulate. This automatic restriction of conscious ideational content is called *repression*, and it is the cornerstone of mental functioning and balance. Here, we see the very first fundamental *core* of repressive function which will approach its fruition with the creation of the super-ego in later development. Freud (1915) used the term repression to denote a defensive function responsible for creating much of the unconscious, repression: *"turning something away, and keeping it at a distance, from the conscious"* [his italics] (Freud, 1915, p. 147).

Condensation and a first fundamental alteration: wavefunction, affect, and the knowledge factor:

It will now be useful to condense the many pieces of information we have assembled, and take a first tentative step toward a valuable alteration in our thinking. We have articulated the definition of an abstract mathematical object suitable for projection into a subspace from the pre-space. We have demonstrated a close relation between unconscious functioning described by the (psychoanalytic) primary process in its formative role in the transference, and the nonlocal aspects of physics embodied in the pre-space. The entirely affective basis of consciousness has been briefly articulated, structured as neuro-evolutionarily primary REM mediating abstract associative affective distribution in symbolic definitional encoding, forming a malleable comparative basis for reality testing, alongside affectively sourced cortical functioning and waking tone extending from the ARAS, to allow for object representation (of "mental solids"). [Please note: this self-comparative, internally self-referential symbolic encoded definitional structuralization is a clearly quantum-like process basis for mental functioning, where *probability* is a basic built-in fundamental aspect deriving reality, logic, and knowledge. The symbol is encoded, its *probable validity*, the *expected* behavioral outcome is then compared to the phenomenologically self-contained perceived actual outcome, and its valence, adjusted. The symbolic processes from which reality is derived are therefore quantum in operational dynamism.] We have established the deep connectivity between wavefunction collapse, and the transference. We have provided intuitive examples of mathematically derived principles. These are based in neuroscience and well established metapsychological theory. Logic has been shown to emerge as a product of self-configuration and self-observing systemic dynamism to begin the establishment of the repressed unconscious (analogous to the pre-space), and, logical form has been shown by way of psycho-anatomical dynamism reduced to a TOY theory, to be again, at the formative basis of said unconscious quantum dynamics. This makes good sense of the idea, that our affective ontological world, and that of physics alike, may well be properly represented at the lowest quantum genesis, through the fundamental contributions of the logical statements and semantic relations represented in the idempotent (and mathematically transformed nilpotent) abstract elements of Clifford algebra as projected into a subspace.

Let us follow Solms (2013) and tighten the implication one notch more:

"...our conscious thinking (and perceiving which thinking represents) is *constantly accompanied by affect*. This constant "presence" of feeling is the background *subject* of all cognition, without which consciousness of perception and cognition *could not exist*. The primary subject of consciousness is literally invisible, so we first have to translate it into perceptual-verbal imagery before we can "declare" its existence" (Solms, 2013, p. 16).

This binding of affect to perception is in close parallel to our understanding of wavefunction collapse which yields a picture of reality, which is, or is not, there (Conte and Lucas, 2015; Conte, 2015a). Here the existential and knowledge factors converge.

We can now see (logically mediated) affect at the basis of consciousness, and, observe affective transformations and structured symbolic compoundings to be the basis of abstract object encoding, which once bound into an object by way of the transference, create reality. Conte has noted with great regularity (Conte, and Lucas, 2015;

Conte, 2015a), that wavefunction is the basis of the knowledge factor, and of course, physical expression as well. Wavefunction collapse is, as we have demonstrated, akin to the abstract symbolic encoding (transference) of internal perceptual data which creates from unseen unconscious sources perceptual representation—reality. Please recall the great many experiments which assess and/or demonstrate focused affect creating variance in probability outcome and physical form (Radin, 2013; Tressoldi, et al., 2014; Radin, et al. 2010; Radin and Nelson, 1989; Jahn et al., 1997; Bösch, Steinkamp and Boller, 2006; Radin et al. 2012). Affect, is the demonstrated basis of human ontological consciousness and reality creation, and acting just as within the ontogenetic transference, once projected outward into this physical subspace, it demonstrably affects physical outcomes...*just as the wavefunction*. I wish to offer a tentative, yet plausible adjustment to our thinking on this basis:

Wavefunction is affect.

This insight will lead to many new potentially valuable directions of enquiry and result. In retrospective historical assessment, it is pleasing to note, how Bohr's initial model and Heisenberg's famous seminal insights which together infer a direct link between quantum mechanics and consciousness, leaving reality as a function of an endemic consciousness, fit beautifully with our assertions. Wavefunction, affect, create consciousness, which must precede and also mediate, the subsequent collapse, which creates reality.

Now we may assess the physics and psychology in a new light.

Clifford algebraic theory in example; implications for psychology: neurosis, psychosis, dreaming, memory consolidation and hallucination:

I will admit that the idea of wavefunction collapse has never seemed convincing: a hollow, mechanistic, two-dimensional proposition which abandons the depth of superposed pre-reality in its subsequent linear definition. However, this is not in any way the case. I have shown, in agreement with Elio Conte's mathematical assertions, that the collapse is in fact an encoding of incomplete abstract idempotent mathematical elements bound into *proper* linear object representation. Think of our early example and definition of an abstract mathematical object. Imagine perception of a triangular table. Let us isolate the encoding of but one of the many associated abstract mathematical constituents encoded therein: the abstract mathematical object of the Euclidean triangle. To reiterate Dr. Conte: "The Euclidean triangle encodes no other properties than those implied by being triangular. Therefore, although classical logic requires that exemplification mode of predication exclude objects that are incomplete, the encoding mode of predication allows us to assert the existence of abstract objects that are incomplete with respect to the properties they encode." So after collapse, the table has bound into its object representation, encoded into the resultant object, the abstract idea of being triangular, *an incomplete abstract element* encoded into the final properly defined object representation. We can now imagine many such abstract determinants each bound into the object representation as definitional affective associative symbolic underpinnings, as in our TOY theory, which in their composite, give *Quality* to experience, and are the very subject of perceptual qualitative reality and valence. This process, as we have demonstrated can function properly, or, improperly. We can now formulate general definitions of familiar states of mental aberrance, and basic functioning, in terms of affective wavefunction collapse as an encoding process. Quantum definitions of mental states can be derived.

The transference neuroses, as we know, comprise a struggle to maintain *repression against unserviceable unconscious content* (an id/super-ego conflict); while psychoses constitute *a replacing of external reality with what should be repressed unconscious material* (delusions/hallucinations, etc.) (Freud, 1924, pp. 150-151).

The transference neuroses: [OCD, Conversion Hysteria, Anxiety Hysteria (Freud, 1915, pp. 180-185) please note the importance of these correct terms in light of modern psychological practice (Norman, 2013c; Feinstein, 2011)]: Please recall our TOY theory. In this example, feelings about the mother constitute improper and unserviceable associated abstract elements bound via wavefunction collapse into object representation of the butterfly in our hypothetical neurotic subject. We may reduce the neurotic dynamic in light of our new insights to: The transference neuroses correspond to improper encoding of projected abstract mathematical elements, as they conflict with regulatory psychical agencies (super-ego)—or—transference neuroses are a function of improper wavefunction collapse due to abstract mnemonic associative encoding malformations (as interactive with individual regulatory ontology).

Hallucinatory psychoses: The hallucinatory psychoses parallel a dream state (Freud, 1924, p. 151; Hobson, 2002, p. 688). We can neatly reduce the active principle in this observation: Hallucinatory psychoses demonstrate *incomplete wavefunction collapse* resulting in the direct perception of unbound incomplete abstract elements. An

hallucination is exactly that—*An incomplete, affective, abstract object*. Here, wavefunction collapse is incomplete: directly perceived affective encoding, left unbound. Clearly, linear reality is abandoned, if wavefunction collapse is incomplete.

Dreaming and memory consolidation: REM promotes procedural learning (Hobson & Pace-Schott, 2002, p. 690), and lacks episodic content (Stickgold et al, 2001, pp. 1055-1056). REM dreams however, often appear as nonsense. How can procedural learning be properly consolidated, while episodic content is absent? Here, our theory is quite helpful, and may allow us to draw possible inferences: We know, the objects to which these abstract pieces of hallucinatory encoding are bound, are simply omitted. The encoding which defines objects and procedures is thereby consolidated directly. An efficient return to primary REM consciousness to aid processing. So, dreams function by way of the primary process, and the superposed wavefunctions (entangled memory) associated with objects and procedures (quantum interference patterns) are manipulated and consolidated in REM dreaming, sans bound object representation. Hence, the "random" activity of dreaming is not in any way random, but only appears so, as the actual objects and procedures are omitted, and replaced, as in psychosis, with the abstract definitional associative underpinnings that provide actual qualitative and substantive definition to reality. Dreaming and memory consolidation therefore, are examples of pre-collapse projective abstract definitional encoding processes made manifest, and consolidated directly into memory.

Now we may examine several pieces of Dr. Conte's seemingly intangible quantum theory, easily understand their importance, and tie together our insights, so as to form a new approach to the hard problem of consciousness.

Concept analysis, bio-molecular homo-chirality as conscious isomeric selection via weak interaction, and the hard problem of consciousness:

I will now bring forward several pieces of Dr. Conte's theories in light of our previous insights, draw out our final conclusions and suggested new directions for addressing the hard problem of consciousness. It is a primary objective of this paper to make the seemingly intangible and deeply mathematical insights of Elio Conte more available to the reader by way of isomorphic parallel across scales, in the context of affective psychology, and neuroscience. In so much as this has been successful, the following statements will now be clearly accessible to the reader:

1. Keeping in mind our exposition has deduced the primary role of wavefunction/affect in establishing consciousness, distributed at the lowest genesis by logical statements, the following becomes easily accessible to us: ". . . quantum mechanics contains some basic features evidencing that its origin is also in the logic and in the cognition. It contains *ab initio* indication of our primary cognitive elements . . . In particular, the wave function of quantum mechanics, that is the pillar of the theory, must be considered as a factor of knowledge that engages our cognitive performance" (Conte, 2014).

2. Keeping in mind the above points regarding logical basis and quantum process derivation: "It is well known that J. von Neumann [2] constructed a matrix logic on the basis of quantum mechanics. In [8-10] we inverted the demonstration, we showed that quantum mechanics may be constructed from logic. This feature may represent a turning point" (Conte, 2013).

3. From the above cited source, this also becomes intelligible to intuitive comprehension: "Since, as previously said, idempotent elements are representative of logical statements and thus of cognition and semantics, we conclude that in the basic foundation of our quantized basic reality *ab initio* there are elements of existence defined, not in terms of some hazy metaphysical concept of existence, but in the sense that existence, related to the cognitive act, is represented by abstract entities of the Clifford algebra, and it contains only two possibilities: existence or non-existence. A pure dichotomic cognitive variable structured *ab initio* in the inner architecture of our reality. There is *ab initio* in quantum reality a variable, we could call it "the factor of knowledge and existence" that travels with more traditional physical variables that identify matter per se and that we are accustomed to use in the traditional approach to reality that we formulate in classical physics. There are stages of our reality in which we no more may separate matter per se from the cognition and the principle of existence that we have to attribute to it."

4. Keeping in mind our promising quantum applications toward defining mental aberrance, this is sensible to us: "Quantum mechanics not only gives a net identification

of such basic feature of our reality but gives us also the possibility to quantify soon after with great care such basic features. This is of great importance not only when responding to the question to attempt to characterize our reality but also when passing as example at the level of the applications as in particular in diagnostic and therapeutic clinical fields" (Conte, 2015).

5. From the above referenced source, keeping in mind both our analysis of the symbolic affective system as inherently probabilistic, *and*, the internal affective structure of abstract affective symbolic elements (represented in complex quantum interference patterns), we may now comprehend the following without difficulty: "What is the rule in these cases? It is that one of the probability. Such alternatives are given in this quantum reality from probabilities. True and false may coexist at the same time with 0.5 of probability but may be also that true is with probability 0.7 and false with probability 0.3 or the vice versa. The same reasoning hold for what it happens or what exists."

We do hope that these seemingly intangible mathematically derived concepts, are now accessible to the reader on an intuitive level.

At this point let us review all too briefly the many contributions to the topic of homo-chirality and the weak interaction as it relates to particular enantiomorphic selectivity of racemic isomers, many of which are referred to in this recent work (Conte, 2012). As we review this work and references detailing experimentally and mathematically the process which has created the specific conditions necessary for life itself to emerge, one is forced, having considered the demonstrated *ab initio* cognitive basis, to a startling and inescapable conclusion: in homo-chiral bio-molecular isomeric process selectivity, we are perceiving an act of quantum cognition. We must conclude no less than that.

The hard problem of consciousness:

From the extremely important essay: *On the possibility that we think in a quantum probabilistic manner*: "There are stages of our reality in which it results impossible to unconditionally defining the truth. Logic, language and thus cognition enter with a so fundamental role in quantum mechanics because there are levels of our reality in which the fundamental features of cognition and thus of logic and language, and thus the conceptual entities, acquire the same importance as the features of what is being described. At this level of reality we no more may separate the features of matter per se from the features of the cognition, of the logic and of the language that we use to describe it. Conceptual entities no more are separated from the object of cognitive performance" (Conte, 2010).

In the above referenced work, a probability field, synaptic electron tunneling, and entangled effects are introduced to account for the ontological and interactive dynamic. Along with our previous exposition, we offer the following possible directions for future research into proving or disproving these exciting new concepts:

1. Prediction: As affect is ascribed the ontogenetic and physical ontological role of wavefunction, subjects who use mental effort to alter the interference pattern of a double slit experiment (Radin et al., 2013), should when placed in an fMRI or other device, demonstrate heightened limbic activity during the process, and substantial neocortical to hippocampal informational exchange. Brodmann area 40 is predicted to demonstrate dynamic activity. Think of REM dreaming as an embedded model.
2. Prediction: As affect is proposed to be equivalent to wavefunction, subjects who are good at using their focused affect to influence physical outcomes such as double slit perturbation, or random event organization, should demonstrate less ability during trials measured by fMRI or other suitable means, when limbic activity is demonstrated as relatively reduced as recorded over a large number of measurements. Less ideally, relatively impaired ability is also predicted if given Haloperidol, or another agent which reduces limbic and other affective expression, (Haloperidol blockades dopamine receptors as innervated in the limbic system and mesocortex (Goodman & Gilman, 1985).
3. Prediction: As subjects who visually hallucinate are proposed to be seeing the unbound quantum interference patterns associated with incomplete abstract elements, their thinking should demonstrate a preponderance of measurable quantum interference effects in ordinary object identification and qualitative attribution, compared to normal subjects.

Conclusion:

The complex mathematics of Clifford algebra in an affective psychological context may well have found for us, an approach to the "hard problem of consciousness:"

— *Wave function is affect, which creates physical and ontogenetic consciousness, and, physical and ontogenetic consciousness, is sourced at the unconscious level of the pre-space and necessarily precedes wavefunction collapse, which is the transference creating linear reality.*

Affective/wavefunction then, is in its dynamism, responsible for consciousness, the qualitative aspects thereof, as well as the knowledge and existential factors.

I have now suggested by way of neuroscience, depth psychology and Elio Conte's extensive Clifford algebraic mathematical proofs, that affect, this causal basis of consciousness is akin to wavefunction: the basis of both ontology and quantum physics. Consciousness is a fundamental potential logical/affective agent represented by the elements of Clifford algebra, which precedes mental operations and dynamic physical processes embodied in wavefunction collapse. Wavefunction, and its dynamism in superposition and collapse, *is* an expression of dynamic ontological consciousness/cognition, *the transference*, and also guides physical linear and particulate expression. Consciousness, is quantum, sourced in the unconscious pre-space, and is endemic, to all things.

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The Biological Effects of Weak Electromagnetic Fields

Problems and solutions

Andrew Goldsworthy March 2012

Foreword

I am a retired lecturer from Imperial College London, which is among the top three UK universities after Oxford and Cambridge and is renowned for its expertise in electrical engineering and health matters. I spent many years studying calcium metabolism in living cells and also how cells, tissues and organisms are affected by electrical and electromagnetic fields.

In this article, I will try to explain in lay-person's language how weak electromagnetic fields from cell phones, cordless phones and WiFi can have serious effects on human and animal health. These include damage to glands resulting in obesity and related disorders, chronic fatigue, autism, increases in allergies and multiple chemical sensitivities, early dementia, DNA damage, loss of fertility and cancer.

All this happens at levels of radiation that the cell phone companies tell us are safe because the radiation is too weak to cause significant heating. **This is the only criterion that they use to assess safety.** In fact, the direct electrical effect on our cells, organs and tissues do far more damage to us at energy levels that may be hundreds or thousands of times lower than those that cause significant heating. These are termed non-thermal effects. As yet **our governments and health authorities are doing nothing to protect us from them.**

This need not be so. By understanding the mechanisms of these non-thermal effects, it is possible to put most of them right, as I will show in the following article.

Abstract

Many of the reported biological effects of non-ionising electromagnetic fields occur at levels too low to cause significant heating; i.e. they are non-thermal. Most of them can be accounted for by electrical effects on living cells and their membranes. The alternating fields generate alternating electric currents that flow through cells and tissues and remove structurally-important calcium ions from cell membranes, which then makes them leak.

Electromagnetically treated water (as generated by electronic water conditioners used to remove lime scale from plumbing) has similar effects, implying that the effects of the fields can also be carried in the bloodstream. Virtually all of the non-thermal effects of electromagnetic radiation can be accounted for by the leakage of cell membranes.

Most of them involve the inward leakage of free calcium ions down an enormous electrochemical gradient to affect calcium-sensitive enzyme systems. This is the normal mechanism by which cells sense mechanical membrane damage. They normally respond by triggering mechanisms that stimulate growth and repair, including the MAP-kinase cascades, which amplify the signal.

If the damage is not too severe or prolonged, we see a stimulation of growth and the effect seems beneficial, but if the exposure is prolonged, these mechanisms are overcome and the result is ultimately harmful. This phenomenon occurs with both ionising and non-ionising radiation and is called radiation hormesis. Gland cells are a good example of this, since short term exposures stimulate their activity but long term exposures cause visible damage and a loss of function. Damage to the thyroid gland from living within 100 metres of a cell phone base station caused hypothyroidism and may be partially responsible for our current outbreak of obesity and chronic fatigue.

Secondary effects of obesity include diabetes, gangrene, cardiac problems, renal failure and cancer. Cell phone base station radiation also affects the adrenal glands and stimulates the production of adrenalin and cortisol. Excess adrenalin causes headaches, cardiac arrhythmia, high blood pressure, tremors and an inability to sleep, all of which have been reported by people living close to base stations. The production of cortisol weakens the immune system and could make people living near base stations more susceptible to disease and cancer.

Inward calcium leakage in the neurons of the brain stimulates hyperactivity and makes it less able to concentrate on tasks, resulting in attention deficit hyperactivity disorder (ADHD).

When this happens in the brains of unborn babies and young children, it reduces their ability to concentrate on learning social skills and can cause autism. Leakage of the cells of the peripheral nervous system in adults makes them send false signals to the brain, which results in the symptoms of electromagnetic intolerance (aka electromagnetic hypersensitivity). Some forms of electromagnetic intolerance may be due to cell phone damage to the parathyroid gland, which controls the calcium level in the blood and makes cell membranes more inclined to leak. Further exposure could then tip them over the edge into full symptoms of electromagnetic intolerance.

Cell phone radiation damages DNA indirectly, either by the leakage of digestive enzymes from lysosomes or the production of reactive oxygen species (ROS) from damaged mitochondrial and plasma membranes. The results are similar to those from exposure to gamma rays from a radioactive isotope.

Effects of DNA damage include an increased risk of cancer and a loss of fertility, both of which have been found in epidemiological studies. The effects of cell phone and WiFi radiation have also been determined experimentally using ejaculated semen. The results showed the production of ROS, and a loss of sperm quality and, in some cases, DNA fragmentation.

The inward leakage of calcium ions from electromagnetic fields also opens the various tight junction barriers in our bodies that normally protect us from allergens and toxins in the environment and prevent toxic materials in the bloodstream from entering sensitive parts of the body such as the brain. The opening of the blood-brain barrier has been shown to cause the death of neurons and can be expected to result in early dementia and Alzheimer's disease. The opening of the barrier in our respiratory epithelia by electromagnetic fields has been shown to increase the risk of asthma in children and the opening of the blood-liver barrier may be partially responsible for the current outbreak of liver disease. The opening of other barriers, such as the gut barrier allows foreign materials from the gut to enter the bloodstream, which may also promote allergies and has been linked autoimmune diseases.

Cell membranes also act as electrical insulators for the natural DC electric currents that they use to transmit power. Mitochondrial membranes use the flow of hydrogen ions to couple the oxidation of food to the production of ATP. The outer cell membrane uses the flow of sodium ions to couple the ATP produced to the uptake of nutrients. If either of these leak, or are permanently damaged, both of these processes will be compromised leading to a loss of available energy, which some people believe to be a contributory factor to chronic fatigue syndrome.

The mechanism underlying electromagnetically-induced membrane leakage is that weak ELF currents flowing through tissues preferentially remove structurally important calcium ions, but they have been shown to do so only within certain amplitude windows, above and below which there is little or no effect. This means that there is no simple dose-response curve, which many people find confusing, but a plausible theoretical model is described. The mechanism also explains why certain frequencies especially 16Hz is particularly effective.

Living cells have evolved defence mechanisms against non-ionising radiation. These include pumping out surplus calcium that has leaked into the cytosol, the closure of gap junctions to isolate the damaged cell, the production of ornithine decarboxylase to stabilize DNA and the production of heat-shock proteins, which act as chaperones to protect important enzymes.

However, this is expensive in energy and resources and leads to a loss of cellular efficiency. If the exposure to the radiation is prolonged or frequently repeated, any stimulation of growth caused by the initial ingress of calcium runs out of resources and growth and repair becomes inhibited. If the repairs fail, the cell may die or become permanently damaged.

To some degree, we can make our own electromagnetic environment safer by avoiding ELF electrical and magnetic fields and radio waves that have been pulsed or amplitude modulated at ELF frequencies. The ELF frequencies that give damaging biological effects, as measured by calcium release from brain slices and ornithine decarboxylase production in tissue cultures, lie between 6Hz and 600Hz. It is unfortunate that virtually all digital mobile telecommunications systems use pulses within this range. The Industry clearly did not do its homework before letting these technologies loose on the general public and this omission may already have cost many lives.

Even now, it may be possible reverse their effects by burying the pulses in random magnetic noise, as proposed by Litovitz in the 1990s or by cancelling out the pulses using balanced signal technology but, at present, the Industry does not seem to be interested in either of these.

Until the mobile telecommunications industry makes its products more biologically friendly, we have little alternative but to reduce our personal exposure as far as possible by using cell phones only in emergencies, avoiding DECT cordless phones and substituting WiFi with Ethernet. The only DECT phones that are even remotely acceptable are those that automatically switch off the base station between calls; e.g. the Siemens Gigaset C595 operating in Eco Plus mode. If you are highly electromagnetically intolerant, you may need to screen your home or at the very least your bed from incoming microwave radiation and sleep as far away as possible from known sources of ELF.

INTRODUCTION

There have been many instances of harmful effects of electromagnetic fields from cell phones (aka mobile phones), DECT phones (aka cordless phones), WiFi, power lines and domestic wiring. They include an increased risk of cancer, loss of fertility, effects on the brain and symptoms of electromagnetic intolerance. Many people still believe that, because the energy of the fields is too low to give significant heating, they cannot have any biological effect. However, the evidence that alternating electromagnetic fields *can* have non-thermal biological effects is now overwhelming. See www.bioinitiative.org and www.neilcherry.com. The explanation is that it is not a heating effect, but mainly an electrical effect on the fine structure of the electrically-charged cell membranes upon which all living cells depend.

Alternating electromagnetic fields can induce *alternating currents* to flow through living cells and tissues. These can interfere with the normal *direct currents* and voltages that are essential for the

metabolism of all cells. Virtually every living cell is a seething mass of electric currents and electrical and biochemical amplifiers that are essential for their normal function. Some have tremendous amplifying capacity; e.g. it is claimed that a dark adapted human eye can detect a single photon (the smallest possible unit of light) and the human ear can hear sounds with energies as low as a billionth of a watt. We should therefore not be too surprised to find that our cells can detect and respond to electromagnetic fields that are orders of magnitude below the strength needed to generate significant heat.

My main objective here is to show how most of the adverse health effects of electromagnetic fields can be attributed to a single cause; that being that they remove structurally-important calcium ions (electrically-charged calcium atoms) from cell membranes, which then makes these membranes leak. I will explain the scientific evidence leading to this conclusion and also how we can put matters right, but still keep on using cell phones and other wireless communications. I have included key references that should enable the more inquisitive reader to delve deeper. In many cases, you should be able to find the abstract of the paper in question by copying into Google its entry in the list of references.

Electromagnetic fields affect many but not all people

Many of the experiments on the biological effects of alternating electromagnetic fields appear to give inconsistent results. There are many reasons for this, including differences in the genetic make-up, physiological condition and the history of the test material. In humans, reported effects include an increased risk of cancer, effects on brain function, loss of fertility, metabolic changes, fatigue, disruption of the immune system, and various symptoms of electromagnetic intolerance.

Not everyone is affected in the same way and some may not be affected at all. However, there is increasing evidence that the situation is getting worse. Our electromagnetic exposure is rapidly increasing and previously healthy people are now becoming sensitised to it. In this study, I am concentrating on the cases where there have been definite effects; since this is the most efficient way in which we can find out what is going wrong and what can be done to prevent it.

The frequency of the fields is important

The fields that give the most trouble are in the extremely low frequency range (ELF) and also radio frequencies that are pulsed or amplitude modulated by ELF. (Amplitude modulation is where the strength of a *carrier wave* transmits information by rising and falling in time with a lower frequency that carries the information.).

Why microwaves are particularly damaging

The frequency of the carrier wave is also important. Higher frequencies such as the microwaves used in cell phones, WiFi and DECT phones, are the most damaging. Our present exposure to man-made microwaves is about a million billion billion (one followed by eighteen zeros) times greater than our natural exposure to these frequencies. We did not evolve in this environment and we should not be too surprised to find that at least some people may not be genetically adapted to it. As with most populations faced with an environmental change, those members that are not adapted either become ill, die prematurely or fail to reproduce adequately. Ironically, those who are electromagnetically intolerant may be better equipped to survive since they are driven to do whatever

they can to avoid the radiation.

The main reason why microwaves are especially damaging is probably because of the ease with which the currents that they generate penetrate cell membranes. Cell membranes have a very high resistance to direct currents but, because they are so thin (about 10nm), they behave like capacitors so that alternating currents pass through them easily. Since the effective resistance of a capacitor to alternating current (its *reactance*) is inversely proportional to its frequency, microwave currents pass through the membranes of cells and tissues more easily than radio waves of lower frequencies and can therefore do more damage to the cell contents.

Calcium loss from cell membranes explains most of the adverse health effects

I became interested in this topic when I was working on the biological effects of physically (magnetically) conditioned water, which is widely used to remove lime scale from boilers and plumbing. It is made by allowing tap water to flow rapidly between the poles of a powerful magnet or by exposing it to a weak pulsed electromagnetic field from an electronic water conditioner. Water treated in this way can remove calcium ions (electrically charged calcium atoms) from surfaces, and the effect on the water can last for several days. I was following up some Russian and Israeli work that had shown that magnetically conditioned water could increase the growth of crops, but it turned out to be far more important than that. The underlying principle was also to explain the mechanisms by which weak electromagnetic fields can damage living cells and also what can be done to stop it.

Magnetically conditioned water and electromagnetic fields have similar effects

Probably, our most important discovery was that when tap water was conditioned by weak electromagnetic fields, the treated water gave similar effects in yeast to those from exposing the yeast itself, amongst which was an increased permeability of their cell membranes to poisons (Goldsworthy *et al.* 1999). Since it had been known since the work of Bawin *et al.* (1975) that weak electromagnetic fields could remove calcium ions from the surfaces of brain cells, it seemed likely that both the conditioned water and the electromagnetic fields were working in the same way; i.e. **by removing structurally- important calcium ions from cell membranes, which then made them leak.** We now know that membrane leakage of this kind can explain most of the biological effects of both conditioned water and of direct exposure to electromagnetic fields.

The effects on growth depend on the length of the conditioning treatment

We also showed that the effects of conditioned water on the growth of yeast cultures depended on the length of the conditioning process. Less than 30 seconds of conditioning stimulated growth but more than this inhibited growth. It was as if the conditioning process was steadily generating one or more chemical agents in the water. A low dose from the shorter conditioning period stimulated growth, but longer conditioning periods gave higher doses, which were inhibitory. This toxic effect of heavily conditioned water, where the water is recycled continuously through the conditioner, has now been exploited commercially to poison blanket weed in ornamental ponds (www.lifescience.co.uk/domestic_blanketweed.htm). By the same token, blood continually circulating for prolonged periods under the pulsating fields from a cell phone or similar device could become toxic to the rest of the body. This means that no part of the body, from the brain to the liver

and gonads, can be considered to be safe from the toxic effects of pulsed electromagnetic fields.

Radiation hormesis

Many people have shown similar dual effects with direct exposure to both *ionising and non-ionising radiation*. Small doses of otherwise harmful radiation often stimulate growth and appear to be beneficial (a phenomenon known as *radiation hormesis*) but larger doses are harmful. It also explains why small doses of pulsed magnetic fields are effective in treating some medical conditions such as broken bones (Bassett *et al.* 1974) but prolonged exposure (as we will see later) is harmful.

It also explains some of the apparent inconsistencies found when comparing different experiments and why meta-analysis of the data should be treated with caution. Clear positive and clear negative results (depending on the dose and the condition of the material) when taken together could be mistaken for no effect, but with a high degree of variability.

Cells have tremendous powers to amplify and respond to weak signals

We now know that electromagnetic growth stimulation is almost certainly due to electrochemical amplification followed by the activation of the MAP kinase cascades by free calcium ions leaking into the cytosol (the main part of the cell). The inward leakage of calcium ions is the normal mechanism by which a cell senses that it has been damaged and triggers the necessary repair mechanisms. This involves huge amplification processes so that even minor leakage (e.g. due to membrane perforation or weak electromagnetic fields) can give rapid and often massive responses.

The first stage in the amplification is due to the calcium gradient itself. There is an enormous (over a thousand fold) concentration difference for free calcium between the inside and outside of living cells. In addition, there is a voltage difference of many tens of mV acting in the same direction. This means that even a slight change in the leakiness of the cell membrane can permit a very large inflow of calcium ions. It's like a transistor, where a slight change in the charge in the base can allow a massive current to flow through it under the influence of a high voltage gradient between the emitter and collector.

The next stage in the amplification is due to the extremely low calcium concentration in the cytosol so that even a small ingress of calcium ions makes a big *percentage* difference, to which many enzymes within the cell are sensitive.

Even more amplification comes from the MAP-kinase cascades. These are biochemical amplifiers that enable tiny amounts of growth factors or hormones (perhaps even a single molecule) to give very large effects. They consist of chains of enzymes acting in sequence so that the first enzyme activates many molecules of the second enzyme, which in turn activates still more of the third enzyme etc. The final stage then activates the protein synthesising machinery needed for cell growth and repair.

At least some of these cascades need calcium ions to work (Cho *et al.* 1992) so the inward leakage of calcium through damaged cell membranes will increase the rate of these processes to stimulate growth and repair. However, these repairs can make deep inroads into the cell's energy and resources, and its ability to make good the damage will depend on its physiological and nutritional condition. This means that, if the damage is prolonged or persistent, sooner or later it runs out of resources and gives up, which is when we see the inhibitory phase, perhaps followed by apoptosis (cell death) or the loss of some of the cell's normal functions. We are now seeing this loss of function

increasingly after prolonged human exposure to cell phone base station radiation; e.g. the loss of thyroid gland function after six years of exposure (Eskander *et al.* 2012).

Effects on Glands

Gland cells are particularly sensitive to radiation

Gland cells may be particularly sensitive to radiation because their secretions are normally produced in internal membrane systems, which can also be damaged. Their secretions are usually released in vesicles (bubbles of membrane) that fuse with the external cell membrane and disgorge their contents to the outside (exocytosis). The vesicle membrane then becomes part of the external membrane. The resulting excess external membrane is counterbalanced by the reverse process (endocytosis) in which the external membrane buds off vesicles to the inside of the cell, which then fuse with the internal membranes. In this way, an active gland cell may internalise the equivalent of its entire surface membrane about once every half an hour. This means that if the surface membrane is damaged directly by the fields, or by electromagnetically conditioned blood, the damaged membrane rapidly becomes part of the internal membrane system, upon which its normal activity depends. If the damage is too severe, the whole gland may lose its normal function.

Electromagnetic effects on the endocrine system and obesity

Although electromagnetic fields frequently stimulate glandular activity in the short term, long term exposure is often harmful in that the gland ceases to work properly. This is particularly serious for the glands of the endocrine system (those that coordinate our bodily functions) since it can affect many aspects of metabolism and throw the whole body out of kilter. For example it may be responsible, at least in part, for the current outbreak of obesity and the many other illnesses that stem from it.

A good example of this is the thyroid gland, which is in an exposed position in the front of the neck. Rajkovic *et al.* (2003) showed that after three months exposure to power line frequencies, the thyroid glands of rats showed visible signs of deterioration. They also lost their ability to produce the thyroid hormones, which they did not recover even after the fields were switched off. Esmekaya *et al.* (2010) found a similar visible deterioration of the thyroid gland in rats exposed to simulated 2G cell phone radiation for 20 minutes a day for three weeks. Eskander *et al.* (2012) found that people living for six years within 100 metres of a cell phone base station showed a significant reduction in the release into the blood of a number of hormones, including ACTH from the pituitary gland, cortisol from the adrenal glands, and prolactin and testosterone from organs elsewhere. However, the most highly significant loss was in their ability to produce the thyroid hormones. The expected consequence of this is hypothyroidism, the most frequent symptoms of which are **fatigue** and **obesity**. It may not be a coincidence that about a quarter of a million UK citizens are now suffering from what is being diagnosed as chronic fatigue syndrome, and about eight out of ten are either overweight or clinically obese.

The incidence of obesity may be exacerbated by effects on the release of the appetite regulating hormones ghrelin and peptide YY. Ghrelin is synthesised in the stomach wall and makes us feel hungry, whereas peptide YY is made in the intestine wall and makes us feel full. In normal people the level of ghrelin in the blood is high before a meal and goes down afterwards whereas peptide YY goes up, so we go from feeling hungry to feeling full, which stops us overeating.

However, in obese people the level of both hormones stays roughly the same throughout so that they never feel completely full and eat in an unregulated manner (Le Roux *et al.* 2005, Le Roux *et al.* 2006). If prolonged exposure to electromagnetic fields limits the release of these hormones in the same way as they affect the release of ACTH, cortisol, prolactin, testosterone and the thyroid

hormones, it may explain why so many people find it difficult to stop eating and end up being clinically obese.

If you are affected in this way, you may be forced to go on a life-long diet, undergo gastric bypass surgery to drastically reduce the size of your stomach or risk the many serious diseases that stem from obesity **AND IT MAY NOT HAVE BEEN YOUR FAULT**. Think twice before you use a cell phone or install a cordless phone or WiFi. The consequences are only now becoming apparent; neither the Government nor the telecommunications industry will tell you what they are, but they are not good.

Obesity can trigger many other illnesses

The consequences of obesity include **diabetes, gangrene, high blood pressure, cardiac problems, renal failure and cancer**. Between them, they cause a great deal of human suffering and cost the nation's economy a great deal of money. The annual cost of obesity and related illnesses to the UK economy has been estimated as being around £6.6 – 7.4 billion (McCormick *et al.* 2007).

The annual cost of chronic fatigue syndrome is about \$20000 per affected person in the USA (Reynolds *et al.* <http://www.resource-allocation.com/content/2/1/4>) and about £14000 in the UK (McCrone *et al.* 2003) so a fair estimate of the total annual cost of chronic fatigue syndrome to the UK economy would be somewhere in the region £3.5 billion. The total annual cost of both conditions together is about £10 billion. If part of this is due to microwave telecommunications, measures need to be taken to minimise their effects, and it would be only fair to ask the Industry to pay for this.

Electromagnetic effects on the adrenal gland

Cortisol: - Augner *et al.* (2010) in a double blind study (where neither the subject nor the person recording the results knows whether the radiation is switched on or off) showed that short-term exposure to the radiation from a 2G (GSM) cell phone base station increased the cortisol level in the saliva of human volunteers. Cortisol is a stress hormone that is normally produced in the cortex of the adrenal glands and is controlled by the calcium level in its cells (Davies *et al.* 1985) so electromagnetically- induced membrane leakage letting more calcium into the cytosol should also have this effect.

Cortisol is part of a mechanism that puts the body into a “fight or flight” mode, in which more sugar is released into the blood, sensitivity to pain is reduced and the immune system is suppressed. In fact, cortisol and its relatives are used medicinally to relieve pain and also to suppress the immune system after transplant surgery. However, when exposure to base station radiation does it, it is not good news since the suppression of the immune system will also increase the risk of infection and of developing tumours from precancerous cells that might otherwise have been destroyed.

Adrenalin: - Buchner and Eger (2011) studied the effect of a newly installed 2G cell phone base station on villagers in Bavaria and found that it caused a long-lived increase in the production of adrenalin. This is an important neurotransmitter which acts on adrenergic receptors to increase the

calcium concentration in the cytosol. It is also synthesised in the adrenal medulla in response to signals from the sympathetic nervous system. Adrenalin too puts the body into fight or flight mode by diverting resources from the smooth muscles of the gut to the heart muscle and the skeletal muscles needed for flight or combat. In addition, it stimulates the production of cortisol by the adrenal cortex, and indirectly reduces the activity of the immune system, resistance to disease and increases the risk of getting cancer.

Some people get pleasure from the “adrenalin rush” caused by doing energetic or dangerous things, and this could be a contributory factor to the addictive nature of cell phones. However, on the down side, known effects of excess adrenalin include, headaches, cardiac arrhythmia, high blood pressure, tremors, anxiety and inability to sleep. These results confirm and explain some of the findings of Abdel-Rassoul *et al.* (2007) who found that people living near cell towers (masts) had significant increases in headaches, memory loss, dizziness, tremors and poor sleep.

Effects on the Brain

Calcium leakage and brain function

Normal brain function depends on the orderly transmission of signals through a mass of about 100 billion *neurons*. Neurons are typically highly branched nerve cells. They usually have one long branch (*the axon*), which carries electrical signals as *action potentials* (nerve impulses) to or from other parts of the body or between relatively distant parts of the brain (a nerve contains many axons bundled together). The shorter branches communicate with other neurons where their ends are adjacent at *synapses*. They transmit information across the synapses using a range of *neurotransmitters*, which are chemicals secreted by one neuron and detected by the other.

Calcium ions play an essential role in brain function because a small amount of calcium must enter the cytosol of the neuron before it can release its neurotransmitters (Alberts *et al.* 2002). Electromagnetically-induced membrane leakage would increase the background level of calcium in the neurons so that they release their neurotransmitters sooner. This improves our reaction time to simple stimuli but it can also trigger the spontaneous release of neurotransmitters to send spurious signals that have no right to be there, which makes the brain hyperactive and less able to concentrate.

Autism

Possibly, the greatest damage to the brain from microwaves is when it is first developing in the foetus and the very young child, where it can lead to autism. Dr Dietrich Klinghardt has shown a relationship between microwaves and autism; a summary of his work can be found at <http://electromagnetichealth.org/media-stories/#Autism>.

What is autism?

Autism is a group of life-long disorders (autistic spectrum disorders or ASD) caused by brain malfunctions and is associated with subtle changes in brain anatomy (see Amaral *et al.* 2008 for a review). The core symptoms are an inability to communicate adequately with others and include abnormal social behaviour, poor verbal and non-verbal communication, unusual and restricted interests, and persistent repetitive behaviour. There are also non-core symptoms, such as an increased risk of epileptic seizures, anxiety and mood disorders. ASD has a strong genetic component, occurs

predominantly in males and tends to run in families.

Genetic ASD may be caused by calcium entering neurons

It has been hypothesised that some genetic forms of ASD can be accounted for by known mutations in the genes for ion channels that result in an increased background concentration of calcium in neurons. This would be expected to lead to neuronal hyperactivity and the formation of sometimes unnecessary and inappropriate synapses, which in turn can lead to ASD (Krey and Dolmetsch 2007).

Electromagnetic fields also let calcium into neurons

There has been a 60-fold increase in ASD in recent years, which cannot be accounted for by improvements in diagnostic methods and can only be explained by changes in the environment. This increase corresponds in time to the proliferation of mobile telecommunications, WiFi, and microwave ovens as well as extremely low frequency fields from household wiring and domestic appliances. We can now explain at least some of this in terms of electromagnetically-induced membrane leakage leading to brain hyperactivity and abnormal brain development.

How membrane leakage affects neurons

Neurons transmit information between one another in as chemical neurotransmitters that pass across the synapses where they make contact. Their release is normally triggered by a brief pulse of calcium entering their cytosols. If the membrane is leaky due to electromagnetic exposure, it will already have a high internal calcium concentration as calcium leaks in from the much higher concentration outside. This puts the cells into hair-trigger mode so that they are more likely to release neurotransmitters and the brain as a whole may become hyperactive (Beason and Semm 2002; Krey and Dolmetsch 2007, Volkow *et al.* 2011). This results in the brain becoming overloaded with sometimes spurious signals leading to a loss of concentration and attention deficit hyperactive disorder (ADHD).

How does this impact on autism?

Before and just after its birth, a child's brain is a blank canvas, and it goes through an intense period of learning to become aware of the significance of its new sensory inputs, e.g. to recognise its mother's face, her expressions and eventually other people and their relationship to him/her (Hawley and Gunner 2000). During this process, the neurons in the brain make countless new connections, the patterns of which store what the child has learnt. However, after a matter of months, connections that are rarely used are pruned automatically (Huttenlocher and Dabholkar 1997) so that those that remain are hard-wired into the child's psyche. The production of too many spurious signals due to electromagnetic exposure during this period will generate frequent random connections, which will also not be pruned, even though they may not make sense. It may be significant that autistic children tend to have slightly larger heads, possibly to accommodate unpruned neurons (Hill and Frith 2003).

Because the pruning process in electromagnetically-exposed children may be more random, it

could leave the child with a defective hard-wired mind-set for social interactions, which may then contribute to the various autistic spectrum disorders. These children are not necessarily unintelligent; they may even have more brain cells than the rest of us and some may actually be savants. They may just be held back from having a normal life by a deficiency in the dedicated hard-wired neural networks needed for efficient communication.

Autism costs the UK economy more than the tax income from cell phones

The incidence of autism has occurred in parallel with the increase in electromagnetic pollution over the last thirty years. The chance of having an autistic child may now be as high as one in fifty. Apart from the personal tragedies for the affected children and their families, autism is of enormous economic importance. In the UK alone, the annual cost to the Nation in care and lost production exceeds the annual tax revenue from the entire cell phone industry, which is about 20 billion UK pounds. <http://www2.lse.ac.uk/newsAndMedia/news/archives/2009/05/MartinKnappAutism.aspx> If it were all due to cell phones, the Government could close down the entire industry and actually show a profit! There may be ways in which the modulation of the signal can be changed to avoid this (see later), but in the meantime, we should do whatever we can to minimise our exposure to information-carrying microwaves, including those from cell phones, DECT phones, WiFi and smart meters. Failure to do this could be very costly.

Electromagnetic intolerance (aka electromagnetic hypersensitivity or EHS)

Electromagnetic intolerance is a condition in which some people experience a wide range of unpleasant symptoms when exposed to weak non-ionising radiation. About 3 percent of the population suffers in this way at present, although only a small proportion of these are as yet so badly affected that they can instantly tell whether a radiating device is switched on or off. At the other end of the scale, there are people who are sensitive but do not yet know it because they are chronically exposed to electromagnetic fields and accept their symptoms as being perfectly normal. Electromagnetic intolerance is in fact a continuum with no clear cut-off point. In some cases there may only be relatively mild symptoms on or after using a cell phone but in severe cases it can prevent people living a normal life and force them to live in almost total isolation. There is every reason to believe that prolonged exposure will increase the severity of the symptoms, so if you suffer from any of them you should do whatever possible to minimise further exposure.

Symptoms of electromagnetic intolerance

Symptoms include skin rashes, cardiac arrhythmia, headaches (sometimes severe), pain in muscles and joints, sensations of heat or cold, pins and needles, tinnitus, dizziness and nausea. A more complete list can be found at <http://www.es-uk.info/info/recognising.asp> Most if not all of these can be explained by the radiation making cells leak.

When skin cells leak, it is perceived by the body as damage to the tissue. This increases the blood supply to the area to repair the damage and causes the rash.

When the cells of the heart muscle leak it weakens the electrical signals that normally control its contraction. The heart then runs out of control to give cardiac arrhythmia. This is potentially life threatening.

When sensory cells leak, they become hyperactive and send false signals to the brain. We have a variety of sensory cells, but they all work in much the same way.

Whenever they sense what they are supposed to sense, they deliberately leak by opening ion channels in their membranes. This reduces the natural voltage across these membranes, which makes them send nerve impulses to the brain. Electromagnetically induced cell leakage would have the same effect, but this time it would make them send *false* signals to the brain to give the false sensations of electromagnetic intolerance. This could also be exacerbated by the nerve cells involved being made hyperactive due to calcium ingress.

When leakage occurs in the sensory cells of the skin, it can give sensations such as heat, cold, tingling, pressure etc, depending on which types of cell are most sensitive in the individual concerned.

When leakage occurs in the sensory hair cells of the cochlea of ear it gives tinnitus, which is a false sensation of sound. When it occurs in the vestibular system (the part of the inner ear that deals with balance and motion) it results in dizziness and symptoms of motion sickness, including nausea.

Hypocalcaemia, electromagnetic intolerance and the parathyroid gland

Symptoms of hypocalcaemia are very similar to those of electromagnetic intolerance and include skin disorders, pins and needles, numbness, sensations of burning, fatigue, muscle cramps, cardiac arrhythmia, gastro-intestinal problems and many others. A more comprehensive list can be found at <http://www.endotext.org/parathyroid/parathyroid7/parathyroid7.htm>. It is possible that some forms of electromagnetic intolerance are due to low levels of calcium in the blood.

Electromagnetic exposure would then remove even more calcium from their cell membranes to push them over the edge and give the symptoms of electromagnetic intolerance.

The amount of calcium in the blood is controlled by the parathyroid hormone secreted by the parathyroid gland, which is in the neck, close to where you hold your cell phone. It is adjacent to the thyroid gland and, if it were to be damaged by the radiation in the same way, the production of the parathyroid hormone would go down, the amount of calcium in the blood would be reduced and the person concerned would become electromagnetically intolerant.

Effects on DNA

Cell phone radiation can damage DNA

Lai and Singh (1995) were the first to show this in cultured rat brain cells, but it has since been confirmed by many other workers. A comprehensive study on this was in the Reflex Project, sponsored by the European Commission and replicated in laboratories in several European countries. They found that radiation like that from GSM (2G) cell phone handsets caused both single and double stranded breaks in the DNA of cultured human and animal cells. Not all cell types were equally affected and some, such as lymphocytes, seemed not to be affected at all (Reflex Report 2004).

In susceptible cells, the degree of damage depended on the duration of the exposure. With human fibroblasts, it reached a maximum at around 16 hours (Diem *et al.* 2005). However, It would be unwise to assume that exposures of less than 16 hours are necessarily safe since DNA damage may give genetically aberrant cells long before it becomes obvious under the microscope. It

would also be unwise to assume that the damage would be restricted to the immediate vicinity of the handset since, as described earlier; the effects of the radiation can be transmitted in the bloodstream in the form of magnetically conditioned blood; so nowhere is safe, not even the sex organs.

How the DNA is damaged

Because of the very high stability of DNA molecules, they are unlikely to be damaged directly by weak radiation. The most plausible mechanism is that DNase (an enzyme that destroys DNA) and other digestive enzymes leak through the membranes of lysosomes (organelles that digest waste) that have been damaged by the radiation. Other mechanisms involve the leakage of reactive oxygen species (ROS) such as hydrogen peroxide from damaged peroxisomes and superoxide free radicals from damaged mitochondrial membranes and NADH oxidase in the plasma membrane. According to Friedman *et al.* (2007), the first to respond to non-thermal cell phone frequencies is the NADH oxidase in the plasma membrane, which is activated within minutes of exposure.

However, all of these ROS can initiate peroxidation chain reactions in the polyunsaturated phospholipids of cell membranes (the same thing that makes fats go rancid) which disrupts the membranes further and exacerbates the effect. Only one molecule of ROS is needed to initiate a domino-effect chain reaction, in which each damaged lipid molecule generates a free radical that damages the next one. The process normally stops when it reaches an anti-oxidant molecule, which sacrifices itself by combining with the free radical in such a way that it does not generate a new one. Most of our anti-oxidants come from our diet (e.g. vitamin E) but the most important one that we make ourselves is *melatonin*. It's unfortunate that the production of melatonin by the pineal gland is also disrupted by electromagnetic fields (Henshaw and Reiter, 2005) which makes matters worse.

These ROS are highly reactive and can also damage DNA. In fact, much of the damage done to cells by *ionising radiation* such as *gamma rays* is due to damage to cell membranes and DNA by free radicals from the radiolysis of water. There may therefore be little difference between holding a cell phone to your head and holding a radioactive source of gamma rays. Both can damage cell membranes, cause the fragmentation of DNA and also do considerable collateral damage to other cellular components, which may either kill the cells or make them lose their normal function over time.

Cell phones increase the risk of cancer

If similar DNA fragmentation were to occur in the whole organism, we would expect an increased risk of cancer, since essential genes that control cell division may be either damaged or lost. Recent studies on the incidence of brain cancer are already beginning to show this. Heavy cell phone use roughly doubles the risk of getting brain cancers in adults on the side of the head used for the cell phone. For younger people, the risk increases to five times more (Hardell and Carlberg 2009). Since brain cancers normally take decades to develop, it is too soon to assess the final impact of the radiation, but the World Health Organisation has already classified cell phones as a Group 2B Carcinogen (possibly carcinogenic) similar to benzene and DDT. Other head cancers are also on the increase, including cancers of the parotid salivary gland (next to where you hold your cell phone) and the thyroid gland, which is in the neck.

Cell phones reduce male fertility

We might expect DNA damage in the cells of the germ-line (the line of cells starting in the embryo that eventually gives rise to eggs and sperm) to result in a loss of fertility. A number of epidemiological studies have shown significant reductions in sperm motility, viability and quantity in men using cell phones for more than a few hours a day (Fejes *et al.* 2005; Agarwal *et al.* 2006) and the subject was reviewed by Desai *et al.* (2009). A common finding is that these effects were associated with the production of reactive oxygen species (ROS) which can damage many cellular components, including cell membranes and DNA.

More recently, Agarwal *et al.* (2009) found in controlled experiments that ejaculated sperm from healthy donors showed reduced viability and motility and an increase in ROS after one hour's exposure to a cell phone in talk mode. More recently still, Avandano *et al.* 2012 found that exposing ejaculated semen to a WiFi laptop for four hours gave a decrease in sperm motility and an increase in DNA fragmentation as compared with samples exposed to a similar computer with the WiFi switched off.

A similar relationship between sperm quality and electromagnetic exposure has also been found for low frequency alternating magnetic fields (Li *et al.* 2010). It is therefore advisable for men to avoid strong magnetic fields, restrict their cell phone calls to a minimum and keep them switched off (or in airplane mode if it has this facility). Otherwise, the phones transmit regularly at full power to the base station, even when not in use. If they have to be switched on for any reason, men should at least keep them out of their trouser pockets.

Possible effects on female fertility

We do not yet know the effects of cell phone use on human female fertility, but . Panagopoulos *et al.* (2007) showed that exposing adult *Drosophila melanogaster* (an insect widely used in genetic experiments) to a GSM phone signal for just six minutes a day for six days fragmented the DNA in the cells that give rise to their eggs and half of these eggs died. We humans should therefore exercise caution since, although our sperm are produced in their countless billions and take about three months to mature, all the eggs that a woman will ever have were in her ovaries before she was born and will be exposed to the radiation (and electromagnetically conditioned blood) throughout her life. There could therefore be considerable cumulative damage, both to the eggs and the follicle cells that nourish and protect them. Damage to either, beginning when the child is in the womb, can be expected to cause a loss of fertility. Pregnant mothers should avoid all present forms of microwave telecommunications, including cell phones and WiFi. Her child could be damaged by their radiation, but she will not know until she reaches puberty and wants a child herself.

Effects on tight junction barriers

Tight junction barriers are layers of cells where the gaps between them are sealed by *tight-junctions* to prevent materials leaking around their sides. They protect all of our body surfaces from the entry of unwanted materials and often protect one part of the body from being unduly influenced by the others. For example, the blood-brain barrier prevents toxins entering the brain from the bloodstream. Normally, these barriers are closed but they are programmed to open if calcium ions enter their cells. This was demonstrated by Kan and Coleman (1988) who showed that the calcium ionophore A23187 (an antibiotic that kills bacteria and fungi by letting calcium ions leak into their cells) opened tight junction barriers in the liver. The electromagnetic opening of the blood-liver barrier could be a contributory factor to the current outbreak of liver disease in the UK among the

under forties (the cell phone generation), which is at present being blamed on alcohol abuse. Since all tight junction barriers have basically the same design, unscheduled calcium entry resulting from electromagnetic exposure is likely to open all of them in much the same way. The opening of our tight junction barriers by electromagnetic fields can account for many modern illnesses, ranging from asthma to multiple allergies and Alzheimer's disease.

The blood-brain barrier and early dementia

The blood-brain barrier normally prevents possibly toxic large molecules from the bloodstream entering the brain. The radiation from cell phones, even at one hundredth of the permitted SAR value, can open the blood brain barrier in rats so that protein molecules as large as albumin could enter their brains (Persson *et al.* 1997). Later experiments by Salford *et al.* (2003) showed that this was associated with the death of neurons. We would not expect an immediate effect because the brain has spare capacity, but prolonged or repeated exposure to cell phone or similar radiation would be expected to cause a progressive loss of functional neurons and result in early dementia and Alzheimer's disease in humans. The extreme sensitivity of the blood-brain barrier to the radiation could mean that even sitting close to someone using a cell phone could affect you too. It may not be too surprising to find that early onset Alzheimer's disease is now on the increase in modern society.

The respiratory barrier and asthma

Di *et al.* (2011) showed that exposure to weak ELF electromagnetic fields during pregnancy increased the risk of asthma in the offspring (they did not test microwaves). This can be explained by the radiation removing structural calcium from the cells of the tight junction barrier lining the respiratory tract, which then opens. This is supported by the findings of Chu *et al.* (2001) who showed that either low levels of external calcium or the addition of EGTA, both of which would remove structural calcium ions from cell surfaces, caused massive increases in its electrical conductance (a measure of its permeability to ions) and also to its permeability to much larger virus particles. We would therefore expect many allergens to enter by the same route and predispose the child to asthma. There are about 5.4 million people with asthma in the UK and the estimated annual cost to the NHS alone is about £1 billion (http://www.asthma.org.uk/news_media/news/new_data_reveals_hig.html)

The skin barrier, allergies and multiple chemical sensitivities

The skin tight junction barrier is in the *stratum granulosum*, which is the outermost layer of living skin cells just underneath the many layers of dead cells (Borgens *et al.* 1989). Furuse *et al.* (2002) showed that mutant mice deficient in Claudin-1 (a vital component of the sealing mechanism) died within a day of birth and their skin barriers were permeable to molecules as large as 600D, which is enough to admit many unwanted foreign materials, including potential allergens. In humans, this could be the basis of *multiple chemical sensitivities*, where people have become allergic to a wide range of chemicals, although they leave most of us unaffected. People suffering from multiple chemical sensitivities are often also electromagnetically intolerant and many of their symptoms are very similar.

Virtually all of our body surfaces are protected by cells with tight junctions, including the nasal

mucosa (Hussar *et al.* 2002), the lungs (Weiss *et al.* 2003) and the lining of the gut (Arrieta *et al.* 2006). An electromagnetically-induced increase in the permeability of any of these would allow the more rapid entry into the body of a whole range of foreign materials, including allergens, toxins and carcinogens.

Loss of barrier tightness can trigger autoimmune diseases

An electromagnetically-induced increase in the permeability of any of the tight-junction barriers has been linked to the occurrence of autoimmune diseases, in which lymphocytes the immune system attacks the body's own components as if they were foreign materials or pathogens.

The immune system is quite complicated but basically lymphocytes (a type of white blood cell) are trained and selected before they mature to recognise the body's own cells, which are normally present in the bloodstream, by virtue of chemical patterns on their surfaces (the major histocompatibility complexes).

B-lymphocytes make specific antibodies that combine with foreign cells and substances that do not have this pattern, which marks them for eventual ingestion and digestion by phagocytes (another type of white blood cell). T-lymphocytes kill the body's own cells if they are infected with a virus, which is normally displayed on the cell surface. In both cases, the presence of the foreign material or infected cells trigger the rapid multiplication of a clone of lymphocytes that recognise them. They can then attack it in force.

However, if the substance concerned belongs to the body itself but is normally prevented from entering the bloodstream by a tight-junction barrier such as the blood-brain barrier, when that barrier opens, it increases the likelihood of its leaking unfamiliar materials into the bloodstream and triggering an autoimmune response. For example, Grigoriev *et al.* (2010) showed that 30 days exposure to unmodulated 2450MHz microwave radiation triggered a small but significant increase in anti-brain antibodies in the blood of rats. In other words, the radiation had sensitised the body's immune system to one or more components of its own brain, which could then result in an autoimmune attack on the brain and/or nervous system. An example of an autoimmune disease of the brain is Graves disease in which the pituitary gland (at the base of the brain) is affected.

In addition, an increase in the permeability of the gut barrier has been linked to several other autoimmune diseases, including type-1 diabetes, Crohn's disease, celiac disease, multiple sclerosis and irritable bowel syndrome (Arrieta *et al.* 2006).

Cell membranes as current generators and electrical insulators

Cell membranes not only keep apart materials that must not be allowed to mix, they also act as electrical insulators for the natural electric currents upon which all of our cells depend.

Natural electric currents are important in power and information transfer

Almost every living cell is a seething mass of electric currents and amplifiers. For example, these currents are important in energy production in mitochondria (the cell's power stations) and in cell signalling (the transfer of information within and between cells). They are carried as flows of

ions, which are the normal ways in which electricity is carried through water and through living cells.

These natural currents are generated by cell membranes.

Natural electric currents are normally generated by molecular ion pumps in cell membranes. These are proteins that use metabolic energy to transport specific ions, usually one or two at a time, from one side of the membrane to the other. This generates a voltage across the membrane (*the membrane potential*) and a chemical imbalance between the concentrations of ions on either side. Their combined effect gives an *electrochemical gradient*, which provides energy for other functions.

Mitochondria use electrochemical gradients to transmit power

Mitochondria are tiny structures, about the size of bacteria, inside almost all of our cells. They evolved when an aerobic bacterium, which used oxygen to metabolise its food, was engulfed by an anaerobic organism, which could not do this, but was more efficient in other respects. From then on they lived together symbiotically, but are still separate in that the mitochondria are surrounded by two membranes; the inner one belonging to the bacterium and the outer one to its host.

The inner membrane does the electrical work by a process known as chemiosmosis. The inside of the mitochondrion contains enzymes that convert materials from our food into forms that can combine with oxygen. This combination with oxygen occurs using enzymes actually within the membrane, and the released energy is used to expel hydrogen ions to create an electrochemical gradient between the inside and the outside of the mitochondrion. They are then allowed back through another enzyme in the membrane called ATP synthase that uses the gradient to make ATP, which is the main energy currency of the cell. The cycle then repeats to give an electrical circuit with hydrogen ions carrying the electricity from where it is made to where it is used, with the membrane being the insulator (Alberts *et al.* 2002).

What happens if the mitochondrial membrane is damaged?

Damage to the inner mitochondrial membrane can have two main effects. If it just leaked it would short circuit the system, reduce ATP synthesis and deprive the cell of energy. If the damage were also to include the oxidising enzymes, they could release free radicals, which are normal intermediates in the process. This would damage both the inside of the mitochondrion (including its DNA) and also the rest of the cell. Mitochondrial dysfunction of this sort is thought to be a possible cause of chronic fatigue syndrome.

Other membranes also use ion currents to transfer energy

Most other cell membranes use ion currents as a source of energy. For example, enzymes in the outer membrane of each cell (*the plasma membrane*) use energy from ATP to pump positively charged sodium ions out of the cell. This generates its own membrane potential, which typically makes the inside of the cell about 70-100mV negative to the outside. This provides energy for the active transport of other materials across the membrane against a concentration gradient. In this case, the sodium ions that have been expelled are allowed back in, through transporter enzymes, but they

carry with them nutrients from the outside by a process called ion co-transport (Alberts *et al.* 2002) If this membrane leaks, it will short circuit the voltage across it and reduce nutrient uptake as well as a number of other processes which use this voltage as a source of energy.

Ion channels in cell membranes are used for cell signalling

Ion channels are pores in cell membranes that can let large quantities of specific ions through very quickly, but only down their own electrochemical gradient. They normally open and close in response to specific stimuli; e.g. changes in voltage across the membrane or the presence of other chemicals. They can be thought of as amplifiers by which a tiny stimulus can cause a very large current to flow almost instantly to give a rapid biological effect. An example of this is the coordinated opening and closing of sodium and potassium channels that continuously amplify nerve impulses and enable them to travel from one end of the body to the other, both rapidly and without loss.

The mechanisms of cell membrane leakage.

We have known since the work of Suzanne Bawin and her co-workers (Bawin *et al.* 1975) that electromagnetic radiation that is far too weak to cause significant heating can nevertheless remove radioactively labelled calcium ions from cell membranes. Later, Carl Blackman showed that this occurs only with weak radiation, and then only within one or more ‘*amplitude windows*’, above and below which there is little or no effect (Blackman *et al.* 1982; Blackman 1990).

The apple harvester: an explanation for amplitude windows

A simple way to explain the selective removal of divalent ions is to imagine trying to harvest ripe apples by shaking the tree. If you don’t shake it hard enough, no apples fall off, but if you shake it too hard, they all fall off. However, if you get it just right, only the ripe ones fall off and are ‘selectively harvested’.

We can apply the same logic to the positive ions bound to cell membranes. Alternating voltages try to drive these ions off and then back onto the membranes with each cycle. If the voltage is too low, nothing happens. If it is too high, all the ions fly off, but return when the voltage reverses. However, if it is just the right, it will tend to remove only the more strongly charged ones, such as divalent calcium with its double charge. If the frequency is low, at least some of these divalent ions will diffuse away and be replaced at random by other ions when the field reverses. There will then be a net removal of divalent ions with each successive cycle until enough have been removed to cause significant membrane leakage and give a biological effect, but only within a narrow range of field strength to give an *amplitude window*. Pulses are more effective than smooth sine waves because their rapid rise and fall times catapult the ions quickly away from the membrane and leave more time for them to be replaced by different ions before the field reverses.

Frequency windows and resonance effects

If a molecule or structure has a natural resonant frequency, it may respond selectively to that

frequency. For example, if you keep giving a pendulum a gentle push at just the right time at the end of its travel, the energy of each push builds up and is stored in the ever increasing violence of its motion. If you were suddenly to stop it by putting your hand in the way, the combined energy of each push is released in one go and could do more damage to your hand than the energy you gave it from each individual push.

In the same way, if an electrically charged atom or molecule has one or more natural resonant frequencies and you give it an electromagnetic pulse at that frequency, it may store the combined energy of each pulse as some sort of vibration. This could enable it to bring about a chemical reaction that would not have been possible from the energy of each pulse alone, *but only at its resonant frequency*. Some frequencies are especially effective in giving biological effects. An example is 16Hz, which is the ion cyclotron resonance frequency of potassium ions in the Earth's magnetic field.

Ion cyclotron resonance occurs when ions move in a steady magnetic field such as that of the Earth. They are deflected sideways by the magnetic field and go into orbit around its lines of force at a frequency that depends on the charge to mass ratio of the ion and the strength of the steady field (see Liboff *et al.* 1990). If they are simultaneously exposed to an alternating field at this frequency, they absorb its energy and increase the diameter of their orbits, which increases their energy of motion and chemical activity. Potassium resonance is particularly important because potassium is the most abundant positive ion in the cytosols of living cells, where it outnumbers calcium by about ten thousand to one. It is therefore the ion most likely to replace any calcium that has been lost by electromagnetic exposure. An increase in the chemical activity of potassium will therefore increase its ability to replace calcium and so increase calcium loss from the membrane and further reduce its stability.

Calcium loss and leaky membranes underlie many biological effects.

We have seen how the loss of calcium from cell membranes is enhanced at the 16Hz potassium resonant frequency. Also, any metabolic consequences of this calcium loss may be similarly enhanced. Any bioelectromagnetic responses that peak or trough at 16Hz is evidence that they stem from divalent ion depletion in membranes. In fact, many biological responses appear to peak at 16Hz.. These include stimulations of the growth of yeast (Mehedintu and Berg 1997) and higher plants (Smith *et al.* 1993), changes in rate of locomotion in diatoms (McLeod *et al.* 1987), and the especially severe neurophysiological symptoms reported by electrosensitive people exposed to the radiation from TETRA handsets (which is pulsed at 17.6Hz). All of this supports the notion that a large number of the biological responses to weak electromagnetic radiation stem from the loss of calcium (and possibly other divalent ions) from cell membranes.

How calcium removal makes cell membranes leak

Positive ions strengthen cell membranes because they help bind together the negatively charged phospholipid molecules that form a large part of their structure. Calcium ions are particularly good at this because their double positive charge enables them to bind more strongly to the surrounding negative phospholipids by mutual attraction and hold them together like mortar holds together the bricks in a wall. However, monovalent ions are less able to do this (Steck *et al.* 1970, Lew *et al.* 1998, Ha 2001). Therefore, when electromagnetic radiation replaces calcium with monovalent ions, it weakens the membrane and makes it more likely to tear and form temporary pores, especially under the stresses and strains imposed by the moving cell contents. Normally, small pores in phospholipid membranes are self healing (Melikov *et al.* 2001) but, while they remain open, the membrane will have a greater tendency to leak. This can have serious metabolic consequences as

unwanted substances diffuse into and out of cells unhindered, and materials in different parts of the cell that should be kept separate, become mixed.

Demodulation

Both extremely low frequencies and radio waves that have been amplitude modulated at extremely low frequencies give biological effects, but unmodulated radio waves are relatively (but not completely) innocuous. This implies that living cells can demodulate a modulated signal to extract the biologically active ELF. Furthermore, if they are to respond to cell phone and WiFi signals, they must be able to do it at microwave frequencies, but how do they do it?

The most likely explanation lies in asymmetric electrical properties of ion channels in cell membranes imposed by the *membrane potential* between the inside and outside of the cell. They will behave like electrically biased point contact Schottky diodes in which electricity passes more easily in one direction than the other. This is all that is needed to rectify and demodulate the signal. A non-biological example of this effect is a radio set that was made from a single carbon nanotube (see <http://tinyurl.com/m4u75o>). The asymmetry induced by applying a DC voltage between its ends allowed it to demodulate and even to amplify radio signals, including those at microwave frequencies.

The nanotube has a similar diameter to a typical ion channel in a cell membrane, so it seems likely that the ion channels in cell membranes could perform a similar function, powered by the cell's membrane potential. The low-frequency component would then appear across the membrane, where it could do most damage. In as much as our *tight junction barriers* have a similar trans-barrier potential (around 70mV for the skin barrier with the inside of body positive) the ion channels of the whole barrier could act in concert to demodulate the signal, the damaging low frequency components of which could then be applied to and affect the whole body.

Natural defence mechanisms

The body is able to detect electromagnetic radiation and so minimise resulting damage. This ability probably evolved over countless millions of years to mitigate the effects of ionising radiation from cosmic rays and non-ionising radio frequencies from lightning during thunderstorms. Some of them are as follows: -

Calcium expulsion

The concentration of free calcium in the cytosols of living cells is normally kept extremely low by metabolically-driven ion pumps in the cell membrane. Under normal circumstances, the entry of free calcium ions is carefully regulated and small changes in their concentration play a vital role in controlling many aspects of metabolism. These processes can be disrupted if electromagnetically-induced membrane leakage lets extra and unscheduled amounts of calcium into the cell, either from the outside or from calcium stores inside. To compensate for this, the mechanism that normally pumps surplus calcium out can go into overdrive. However, its capacity to do this is limited because, if the pumping were too effective, it would hide the small changes in calcium concentration that normally control metabolism.

Gap junction closure: - If calcium extrusion fails and there is a large rise in internal calcium, it triggers the isolation of the cell concerned by the closure of its gap junctions (tiny strands of cytoplasm that normally connect adjacent cells) (Alberts *et al.* 2002). This also limits the flow of

electric currents through the tissue and so reduces the effects of radiation.

Ornithine decarboxylase (ODC)

The activation of the enzyme *ornithine decarboxylase* is triggered by calcium leaking into cells through damaged membranes and by nitric oxide produced by damaged mitochondria. This enzyme leads to the production of chemicals called *polyamines* that help protect DNA and the other nucleic acids needed for protein synthesis. One such polyamine is spermine, which normally protects the DNA of sperm and is also responsible for the characteristic smell of semen.

Heat shock proteins

These were first discovered after exposing cells to heat, but they are also produced in response to a wide variety of other stresses, including weak electromagnetic fields. They are normally produced within minutes of the onset of the stress and combine with the cell's enzymes to protect them from damage and shut down non-essential metabolism (the equivalent of running a computer in "safe mode").

When the production of heat shock proteins is triggered electromagnetically it needs 100 million million times less energy than when triggered by heat, so the effect is truly non-thermal (Blank & Goodman 2000). Their production in response to electromagnetic fields is activated by special base sequences (the nCTCTn motif) in the DNA of their genes. When exposed to electromagnetic fields, they initiate the gene's transcription to form RNA, which is the first stage in the synthesis of the protein (Lin et al. 2001). The job of these heat-shock proteins is to combine with vital enzymes, putting them into a sort of cocoon that protects them from damage. However, this stops them working properly and also drains the cell's energy and resources, so it isn't an ideal solution either.

Our defences protect us from thunderstorm radiation but not from cell towers, DECT phones and WiFi

As we can see, our natural defence mechanisms try to limit the electromagnetically-induced damage, but they cannot be deployed without using extra energy and disrupting the cell's normal functions. They originally evolved to protect us from occasional weak natural radiation, such as that from thunderstorms. However, prolonged or repeated exposure such as that from cell towers, WiFi and most DECT base stations is harmful because they normally run continuously and disrupt metabolism for long periods and is expensive in bodily resources.

These resources have to come from somewhere. Some may be drawn from our physical energy, making us feel tired, some may come from our immune systems, making us less resistant to disease and cancer. There is no hidden reserve. As it is, our bodies are constantly juggling resources to put them to best use. For example, during the day, they are

directed towards physical activity but during the night, they are diverted to the repair of accumulated damage and to the immune system. Day and night irradiation from cell phone towers (which run continuously) will affect both, with little or no chance to recover. In the long term, this is likely to cause chronic fatigue, serious immune dysfunction (leading to an increased risk of disease and cancer) and many of the neurological symptoms frequently reported by people living close to mobile phone

base stations (see Abdel-Rassoul *et al.* 2007).

How can we make our electromagnetic environment safe?

Firstly, there may be no need to give up our electrical appliances domestic appliances or cell phones. It is possible to make most of them much safer. All that is needed with domestic wiring is low-tech electromagnetic hygiene. As for cell phones, the operators have known for over a decade how to modify the radiated signal to make it safe; they have just chosen not to do so. I will deal with these one at a time.

Domestic wiring

It is easy to screen the electrical field from wiring by enclosing it in earthed metal conduits or using screened cable with an earthed screen. We cannot screen the magnetic field in this way but by careful design of the circuits, we can make the magnetic fields of the live and neutral wires cancel each other out. To do this, all you need is to make sure that the live and neutral wires to any device are as close together as possible (preferably twisted together) with each device having its own connection to the main distribution panel. The cheap UK practice of using ring mains (where many plug sockets are connected in a ring, beginning and ending in the distribution panel) should be made illegal. This is because differences in the resistance of the conductors mean that electricity flowing to any plug socket may not flow back the way it came so that their magnetic fields do not cancel and there will be an unnecessarily high field surrounding the whole ring.

Another source of problems is the use of unearthed double insulated appliances. Although there is very little risk of shock, they still emit strong magnetic fields and electric fields at about half the supply voltage, which some people find intolerable.

Cell phones

While we can block or cancel the electromagnetic fields associated with domestic wiring, we cannot do this with cell phones or DECT phones, which depend on radio frequency radiation transmissions if they are to work. However, we can make this radiation much less biologically active. There are at least two ways to do this. The first was devised tested and patented by Theodore Litovitz working at the Catholic University of America in the 1990s. All you have to do is to add low frequency electromagnetic noise to the signal.

The theory behind Litovitz's method.

His idea was to add a random ELF (noise) magnetic field to the regularly repeating fields from power lines or cell phones. It works on the principle that most of the biological effects of electromagnetic fields are due to the relatively slow but progressive loss of calcium from cell membranes, which then makes them leak. However, the effect on any cell takes place only within certain amplitude windows, as I described earlier. We may not be able to prevent this leakage just by reducing the power of the field. All this might do is to put other cells (perhaps nearer the source) into their amplitude windows and we may be no better off.

However, if we add a second magnetic field with a randomly varying amplitude, cells are constantly being driven in and out of their amplitude windows and do not spend long enough in their windows to lose significant amounts of calcium before leaving their windows. The lost calcium then floods back and there is no biological effect. This theory has been tested in several biological systems and found to work.

Much of Litovitz's work used the in production of the enzyme ornithine decarboxylase (ODC) by tissue cultures as an indicator of radiation damage to living cells. The activity of this enzyme increases several fold when exposed to electromagnetic fields (Byus et al. 1987). ODC is part of a defence mechanism against the radiation and an increase in its production is taken as an indication that damage is occurring. Conversely, if the random signal prevents its production, it is an indication that damage is not occurring.

Work in Litovitz's laboratory was mainly concerned with mitigating the effects of 60Hz power line frequencies and he found that adding a random (noise) magnetic field of about the same strength completely reversed their effects on ODC production in mouse tissue cultures (Litovitz *et al.* 1994b) and also the deformities induced by 60Hz fields in chick embryos (Litovitz *et al.* 1994a)

They then went on to study the effects of modulation frequency on 845MHz microwave radiation on ODC production in mouse tissue cultures. They found that constant frequencies between 6 and 600Hz were harmful as measured by ODC production. Simple amplitude modulated speech (which is more random) did not stimulate ODC production, neither did frequency modulated microwaves and frequency modulated analogue phone signals. Continuous microwaves had only a slight effect.

Most microwave pulse frequencies are harmful

Penafiel et al. (1997) working in Litovitz's laboratory concluded that there were only serious health problems when the microwaves were modulated to give pulses of a standard height (amplitude) generated at frequencies between 6 and 600Hz. There was virtually no effect above 600Hz. This corresponds to Blackman *et al.* (1988) observation that calcium release from brain tissue did not occur above 510Hz.

It would appear that the mobile telecommunications industry had not done their homework before selecting the pulse frequencies for their digital communications, since they virtually all fall within this biologically active range; e.g. 2G GSM cell phones (217Hz), TETRA (17.6Hz), DECT phones (100Hz), WiFi (10Hz), and 3G UMTS signals with time division duplex (100Hz and 200Hz) all of which are potentially harmful. There could be other harmful effects of the radiation that do not trigger ODC production or calcium release but, at the very least, these pulse frequencies should not have been used if the cell phone industry had acted due diligence. .

However, Litovitz (1997) found that even these could be made safe by superimposing a low frequency magnetic field on the signal. They found that it prevents the production of ornithine decarboxylase (ODC) by mouse tissue cultures in response to digital cell phone signals. For example, a random field between 30 and 100Hz with an RMS strength of 5 microtesla completely inhibited the ODC production induced by a cell phone signal with an SAR of about 2.5 W/kg. A coil within the handset could easily deliver a random magnetic field of this magnitude and probably protect the user from the harmful effects of its radiation.

Also Lai (2004) showed that a 6 microtesla random noise field completely reversed the deleterious effect of 2450 MHz continuous waves with an SAR of 1.2 W/kg on rat memory. In none

of the above experiments did the random noise have any effect in its own right and, on these criteria, is completely harmless.

Balanced signal technology

While Litovitz's method might protect the user from the radiation, because magnetic fields dissipate rapidly as you move away from the source, they may not protect other people nearby, who are out of range of the protective random field. By the same token, random low frequency magnetic fields emitted by a cell phone base station would not be able to protect most users. For this you may need something like a system that I devised myself, to which I gave the name "Balanced Signal Technology". I am not claiming any patent rights and anyone who wants to test and use it can do so free of charge.

The principle is very simple and involves transmitting two complementary mirror image signals on different carrier frequencies; i.e. when one has a pulse, the other has a gap. The base station would have no problem with this since they would look like two separate phone calls. However, living cells would be unlikely to distinguish between the two carrier frequencies and the pulses on each would cancel and it would look like a relatively harmless continuous wave. It would need very little extra bandwidth since only one of the signals need be used, with the other one being effectively thrown away and they could all be dumped on the same frequency. In theory, this technology could be applied to both handsets and base stations, but has not yet been tested.

The cell phone companies should know about both methods to make cell phones safer but there is no evidence that they are interested, possibly because to implement them would cost money with no extra benefit to themselves. It looks very much as if they would prefer many people to become sick and perhaps die, rather than admit that their safety rules are based on false premises and that their current technologies are not yet safe.

What can we do about it ourselves?

Very few people would want to give up their cell phones, but if you have one, for your own personal safety, keep your calls on it short and infrequent so that your body has a chance to recover in between times. Use text (which takes seconds to transmit) rather than voice calls and avoid unnecessary Internet downloads. The choice is yours, but spare a thought for the people living near the base stations. Some may be badly affected by their continuous radiation but they have no choice. Your cell phone calls will contribute to their problems, so your restraint may help them too.

Also, don't forget your own personal sources of continuous radiation such as WiFi routers and DECT phone base stations, which can be even more harmful since they are closer. Avoid using WiFi altogether. Ethernet connections via cable are not only safer, but faster, more reliable and offer greater security. Various "Homeplug" devices that connect an the Ethernet socket of your computer to the router via the household electricity supply are second best alternatives. They are not perfect since there is still some radiation from the wiring; especially with those offering faster speeds.

DECT phones should also be avoided if at all possible. But, if you must have one, a reasonable compromise is to use only one that switches off its base station automatically between calls. At the time of writing, the only DECT phones that do this are the Eco Plus models manufactured by Siemens; e.g. the Siemens Gigaset C595. However, make sure they are programmed to work in the Eco Plus mode since this is not the default setting.

Screening and its limitations

Many electromagnetically intolerant people will want to screen themselves from the fields but we need to understand a little about them to get the best results.

The near-field

An alternating electromagnetic field consists of an electrical field and a magnetic field. The electrical field is produced by a voltage gradient and is measured in volts per metre. The magnetic field is generated by a flow of current and is measured in tesla. When you are close to the source (typically within one wavelength) you are in the *near-field*, where the electrical and magnetic fields are mainly separate.

At power line frequencies, the wavelengths run into thousands of miles, so you are bound to be in the near field for power lines. For example, standing under an alternating power line would expose you to a voltage gradient due to the difference between the voltage of the line (set by the power company) and the Earth. You would also be exposed to a *magnetic* field proportional to the current actually flowing through the line, which depends on consumer demand. Both the magnetic and the electrical fields can induce electric currents in your body and are potentially harmful, but the magnetic field is worse because it penetrates living tissues more easily, goes through most walls and aluminium foil as if they were not there, and is very difficult to screen.

The far field

However, as you move away from the source, the two fields feed on each other's energy and combine to give photons of radio waves. This is usually complete within a few wavelengths, after which you are in the so called *far-field* where all the power takes the form of radio waves. Your exposure to these is usually measured in units of power (e.g. microwatts per square metre) or its associated voltage gradient (e.g. volts per metre).

The importance of this as far as we are concerned is that radio waves, like light waves, are relatively easy to absorb and reflect. This can be done, using earthed metal foil or other electrically conductive materials such as carbon-based paints and metallised textiles. For practical purposes, this means that you can screen yourself against the radiation from a cell tower, WiFi router, or DECT phone base station if they are several wavelengths away (several tens of centimetres) but not from a cell phone held against your head, where you are in the near field and the raw magnetic component will penetrate deep into your brain.

To give an idea of the hazard, magnetic fields lower than one microtesla (a millionth of a tesla) can produce biological effects, but using a 2G (GSM) cell phone or a PDA exposes you to low frequency magnetic pulses that peak at several tens of microtesla (Jokela *et al.* 2004; Sage *et al.* 2007). These come mainly from the battery circuits and are well over the minimum needed to give harmful effects. When they are added to the damaging effects of their microwave fields themselves, these devices are potentially the most dangerous sources of electromagnetic fields and radiation that the average person possesses.

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The informational magnecule: the role of aqueous coherence and information in biological dynamics and morphology. *

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Abstract:

Biological systems are dependent upon and intertwined with aqueous systems. We will present empirically derived evidence of the unique properties of water and demonstrate the efficacious role of molecular electromagnetic informational encoding as mediated through aqueous dynamics and mnemonic properties. Working theory will then be articulated from quantum, thermodynamic and Hadronic aspects. An aqueous molecular species of dynamic magnecule will then be defined. Implications are drawn which point to a possible nontoxic, purely informational potential for future medical and pharmacological science. Magnecules and aqueous informational magnecular dynamics may one day redefine energy storage and production, as well as medical practice.

Introduction:

Water is a highly complex and unique molecule which is basic to life as we understand it. However, at the very outset it is important to note that, as far as standard textbook chemistry is concerned, all theory is totally reliant on electrostatics and avoids all mention of electrodynamics and the consequent radiation field. It is this crucial point which contributes to the inability to recognize phenomena which are dependent on that field. In Hadronic science liquid water itself by way of its H bridges is understood as a magnecular structure, with a Curie temperature of 100 degrees C (Santilli, 2005, 2008, 2012 and others). Interestingly and importantly, Santilli has pointed out in a private communication that much of his theory of magnecules could be derived via quantum electrodynamics instead of by the methods he espoused in his book *Foundations of Hadronic Chemistry* (2001). We will first articulate some of the special properties of water as they imply functional effects related to informational processes, em fields, and aqueous dynamics within biology.

Water has many unique properties and is experimentally derivable as the primary interface with biological systems. Water state, pH, hydrogen bonding, and water magnetic ‘memory’ are affected by electromagnetism (Fesenko & Gluvstein 1995; Yamashita et al., 2003; Dunning-Davies 2012; Zhao et al., 2015). Extremely Low Frequency Electromagnetic Fields (ELF-EMF) affect water via alteration of the lower energy part of the stretching absorption band ($\sim 3250\text{ cm}^{-1}$) relating to coherent fully hydrogen bonded populations (De Ninno & Castellano 2011). There is a great deal of evidence from experimental physics, chemistry and biology supporting the notion of water as a primary mediator of biological effects induced via electromagnetic means into living systems. Pollen germination, tobacco plant resistance to pathogens, seed hydration and germination, techniques such as photoluminescence spectroscopy used to determine the activity of pulsed fields on the “bubble/water interface,” magnetic field effect simulation, and other experiments abound (Betti et al., 2011; Trebbi et al., 2007; Amyan 2004, 2004a, 2006; Vallée et al., 2005, 2005a; Chang & Weng 2006, 2008; Pang & Deng 2008). It seems clear from this vantage, that water may well be the primary mnemonic interface for electromagnetic/photonic quantum

informational transfer from active compounds into biological systems. This effect takes place at room temperatures.

Quantum *entangled processes* and *informational exchange* are now known to be dynamic contributors in biological systems at room temperatures (Cai et al. 2010; Cifra et al. 2010; Rosi et al. 2011; Prasad et al. 2014) and by way of empirically rigorous Time Dependent Density Theory models, have been demonstrated as primary contributors to the evolution of life itself from photosynthetic prebiotic kernel systems in the Isua Greenstone Belt in Greenland some 3.7 - 3.85 billion years past (Tamulis et al. 2016; Norman and Tamulis 2016). There is further longstanding evidence of the delicate connectivity between photonic expression and biological processes. What is now known as the coherent biophoton field (please think of the life's work of Fritz Popp), was first discovered by Alexander Gurwitsch while working with onion roots in 1922 as "mitogenetic radiation" in the UV range, exemplifying his concept of "morphogenetic fields." In Popp (1999) we read: "...a single photon may suffice to trigger about 10^9 reactions per second since the average reaction time is of the order of 10^{-9} seconds and provided—in addition—that it is directed in a way that it delivers the right activation energy as well as the right momentum at the right time to the right place. This means that a surprisingly low photon intensity may suffice to trigger all the chemical reactions in a cell." Electromagnetic fields can be mathematically defined as informationally interactive with biological systems (Brizhik et al. 2003; Brizhik and Foletti 2014). Based upon this evidence, we conclude that given the correct conditions (at room temperatures) *photons can be informationally encoded and via quantum processes can and do affect biological systems.*

As we propose that (molecular) *information alone* can affect biological morphofunctional outcomes through aqueous memory, we must detail the history and mathematical evidence supporting the proposed notion of memory capacity in water.

History, mathematics and general theory in support of aqueous memory and coherent biological informational distribution.

Historical Background:

People have speculated for some time over whether substances, such as water, actually have a memory. However, it was in 1988 that a truly staggering article appeared in the journal *Nature* purporting to report the experimental observation of this property assumed by many to be merely an attribute of animals, particularly humans. The article in question (Davenas 1988) by a team, headed by Dr. Jacques Benveniste, claimed to have observed that extremely dilute biological agents were still capable of triggering relevant biological systems. In fact, they even claimed this to be so in the absence of actual physical molecules of the agents concerned. Some of the experiments had been reproduced in laboratories other than Benveniste's and members of these laboratories co-signed the article. However, this article provoked a flurry of comment and resulted in the experiments being rerun under the 'scientific' eyes of a fraud detector, a journalist and a magician. Presumably by 'a journalist' was meant the editor of *Nature*, but that person was by training a physicist and might have been expected to have had some elementary knowledge of information theory and that it had been applied to physical systems. Although a relatively old subject in its own right at that time, information theory had been coming into physics via such books as that of Brillouin (1962). It might have been thought by some that this fact would have introduced a more cautious note into some of the condemnation of Benveniste's work.

The article itself appeared in the issue of the journal for the 30th June 1988 and the ensuing furor was such that the then editor of *Nature* summed up his reading of the situation and called a halt to further correspondence in the issue of 27th October 1988, after allowing Dr. Benveniste a chance to answer his critics. What really caused the furor? The answer is best summed up by the 'Editorial Reservation' which appeared with the original article. This said that "readers of this article may share the incredulity of the many referees who have commented on several versions of it during the past several months. The essence of the result is that an aqueous solution of an antibody retains its ability to evoke a biological response even when diluted to such an extent that there is negligible chance of there being a single molecule in any sample. There is no physical basis for such an activity." In the later commentary, attention was drawn to the fact that one of the

concerns of the editor of *Nature* was that the publication of the paper was “certain to excite the interest of the homeopathic community”. Given this, therefore, it is surprising the article ever appeared in print, but appear it did even though it was stated there was no physical basis to explain the claimed phenomena.

It is this final statement which is now called into question with the appearance of an article purporting to give the biophysical basis of the Benveniste experiments (Widom et al., 2010). From this vantage, the general mechanism of Quantum Information Medicine may be implied.

Theoretical background:

The basis of information theory is now well-established. Following the approach of Brillouin (1962), if P denotes the number of states in a system, then the information memory capacity (denoted by I) in 'bits' is defined to be

$$I = \ln P, \quad (1)$$

where, if a problem is considered with N different independent selections, each corresponding to a binary choice (0 or 1), the total number of possibilities is

$$P = 2^N \quad (2)$$

and so the information is:

$$I = N \ln 2. \quad (3)$$

Alternatively, the entropy function of statistical thermodynamics is given by

$$S = k \ln P, \quad (4)$$

where k is Boltzmann's constant.

It follows that, for the above expression for P ,

$$S = k \ln(2^N) = kN \ln 2 \quad (5)$$

Further, it may be noted that the first and second laws of thermodynamics may be combined into the equation

$$dU = TdS + d'W, \quad (6)$$

where dU denotes the internal energy, T the absolute temperature and $d'W$ the work done on or by the system. In terms of memory capacity, this becomes

$$dU = (kNT \ln 2) dN + d'W \quad (7)$$

and it is seen immediately that the energy required to add one bit of memory to the system is given by

$$kT \ln 2 = \frac{\partial U}{\partial N} \quad (8)$$

where the partial derivative is evaluated with the work term held constant.

It might be noted that heat capacity is necessarily a positive quantity (Lavenda & Dunning-Davies 1990) and, therefore, this last equation leads to the realisation (Widom et al., 2010) that a program written using $\square N$ bits of system memory dissipates energy of at least $[kNT \ln 2] \square N$. As noted previously, this constitutes an irreversible bound on a classical computation imposed by the second law of thermodynamics, although great care should always be exercised when applying results of classical thermodynamics in either statistical mechanics or information theory as it is not clear that the functions termed *entropy* in each of those three disciplines are always identical (Sands, 2016 and references cited there).

This brief introduction to some of the basic ideas of information theory and the link with statistical thermodynamics provides one part of the basis for the promotion of the idea that water possesses memory.

The second part derives from a detailed study of some of the properties of water itself.

Properties of water:

Water is such a commonly available and apparently straightforward liquid that most take for granted and the popular picture, derived from standard chemistry, of it being composed of an oxygen atom attached to two hydrogen atoms belies a quite detailed, complex structure. Standard textbook chemistry has an enviable history of genuine scientific success but it is actually confined by a simple scheme of charges interacting via static Coulomb forces; that is, it is totally reliant on electrostatics and omits all mention of electrodynamics and the consequent radiation field. It is this basic neglect which is responsible for the inability to recognise phenomena which are, in fact, dependent on that radiation field. This is doubly unfortunate since physicists and engineers are only too aware of this cause and effect since it is due to this dynamical effect that so many modern-day appliances work; for example, the electric light on which we all depend and the wifi connections which are assuming increasing importance in our lives. It has been speculated that a goodish percentage of effects in condensed matter physics make use of the radiation field in one way or another but it still doesn't seem to have found a place in much of basic chemistry.

This paper [(Widom et al., 2010) and references cited there] draws attention to the fact that water has been shown to contain electric dipole ordered domains due to a condensation of photons interacting with molecular dipole moments. These ordered domains yield an unusually high heat of vaporisation of water per molecule and this has been shown to imply a high degree of memory storage capacity. In a similar manner, it has been shown that the partial entropy per molecule of an ionic species dissolved in an aqueous electrolyte implies a large number of bits of information per ion. This number is, in fact, so high as to lead to the expectation of such ions being attached to an ordered water domain. This state of affairs allows for semi-permeable membranes which may either permit or forbid the passage of an ion through a small gap. This would be expected to depend in part on the state of order in the ion attachment. Such a situation, based on information or, equivalently, entropy, indicates a program for biological cells analogous to polymer DNA based programs. It is ion flows through membranes in nerve cells which allow human memory storage in nerve cell networks in the human brain. These possess roughly the same magnitude for biological information capacity density and it well surpasses the comparable figure for commercial computer memory devices.

It should be noted also that the magnetic properties of water are again of great interest. In fact, a coherent ordered domain in water shows almost perfect diamagnetism, although the total diamagnetism in water is weak. This follows due to the magnetic flux tubes being capable of permeating normal water regions just as they can permeate type two superconductors via their normal regions. Trapped magnetic flux tubes may also carry information and give some directionality to what would otherwise be isotropic pure water.

The domains in water also exhibit a rotating electric dipole moment. If an electric field is applied, strings of electric dipole aligned water domains are formed and many such strings form a dipolar field bundle of strings. If the field is applied by employing a voltage between two electrodes then the bundle will start at one electrode and continue to the other. These strings will have an effect on the entropy and, therefore, on the information capacity of the water memory. Further, according to the two fluid model of water structure, an ion could flow with virtually no friction through the bundle of strings from one electrode to the other.

Finally, it should be noted that, if the bundles of these strings are orthogonal to an applied magnetic field, ionic transport resonance effects can occur between the time varying part of the magnetic field and the cyclotron frequency associated with the uniform part of that field.

Implications:

It follows that the ordering of water through coherent domains yields sufficient structure for truly significant memory capacity. This view receives support from statistical thermodynamics and information theory. It is seen that ordered water domain polarized string bundles affect ionic motion and this can act as switches in networks of nerve cells. Many of these actions should be measurable by employing magnetic resonance imaging techniques.

What are the consequences of all this? To answer the objection: *"There appears to be no active chemical producing the effect,"* we need but remember the possibility of dynamic effects having a part to play, a point

well illustrated by the case of a magnetic recording tape. In the investigation (Widom et al., 2010) it was found that, using electromagnetic theory, the existence of electromagnetic domains in water was confirmed. These are actually small ferro-electric structures within which electric fields are trapped. Hence, water is ferro-electric and it is this which is fundamentally responsible for many intriguing properties of water, including its memory. This general theoretic approach appears to be indicative of the likely mechanism responsible for the proposed mnemic effects within the idea of *Quantum Information Medicine*.

Nobel Laureate Dr. L. Montagnier and associates have suggested that quantum electromagnetic informational effects sustain many disease processes (Montagnier et al., 2011). These quantum processes involve the idea of a *Coherence Domain*, (CD). Please think of a CD as a dynamic aqueous structure, which uses the special properties of water, such as its electron dynamics and organized response to electromagnetic fields, to receive electromagnetically encoded information at a low frequency, and sum the resultant excitations, so as to foster the redistribution of that information at frequencies which may affect biological systems. A CD is a pool of quasi-free electrons, functioning as a semi-conductor, where coherent excitation creates a spectrum of coherent excited levels from resultant coherent quasi-free electron vortices, the magnetic dipoles of which are aligned with external/terrestrial magnetic fields. Coherent vortices have no internal friction and hence a long lifespan, so additive excitations sum to a vortex whose rotational frequency is the sum of the frequencies of the component vortices. The CD is thereby able to transform ambient noise, namely an ensemble of a large number of low frequency excitations, into a unique high frequency excitation (Del Giudice et al., 2013). “When the oscillation frequency of the CD matches the oscillation frequency of some non aqueous molecular species present on the CD boundaries, these “guest” molecules become members of the CD and are able to catch the whole stored energy, which becomes activation energy of the guest molecules; consequently, the CD gets discharged and a new cycle of oscillation could start” (Montagnier et al., 2011). Here, it appears we may have the mechanism whereby the correct frequencies (Brizhik 2003) for biological interactivity are achieved and distributed.

“The CD is a self-produced cavity for the em field because of the well known Anderson-Higgs-Kibble mechanism . . . which implies that the photon of the trapped em field acquires an imaginary mass, becoming therefore unable to leave the CD. It is just this self-trapping of the em field that guarantees that the CD energy has a finite lower bound. Because of this self-trapping the frequency of the CD em field becomes much smaller than the frequency of the free field having the same wavelength. . . . In the case of liquid water, the CD . . . includes an ensemble of almost free electrons which are able to accept externally supplied energy and transform it into coherent excitations (vortices) whose entropy is much lower than the entropy of the incoming energy” (Montagnier et al., 2011).

In biological systems almost all water is within a fraction of a micron or less from a surface or molecular backbone and so is: *interfacial water*, which behaves in a quantum way, where the Coulomb law of electrostatics does not apply. In these circumstances, like charges attract. Biology itself depends on this, so as to allow the accumulation of tissues from negatively charged cell bodies (Del Giudice et al., 2013). Further depth will be afforded this conclusion in the Hadronic analysis section of this paper.

In (Heinze et al., 2013; de Riedmatten, 2013) we can see a simplified artificial example of what happens when encoded photons are trapped. Those trapped photons and their encoding are converted into collective coherent electron excitations within the medium: *spin waves*. Stored thus, the encoded information can then be retrieved. Please think of this same process as taking place within the more dynamic coherence domains of aqueous systems, which also act to further sum energy and frequency in order to distribute their stored information at appropriate target energies and frequencies to affect biological systems.

Experimental evidence:

Now that the basic aspects of the working theory have been articulated, we will turn to those replicable experiments which evidence the effects that the above mentioned theory describes. Although the

unfortunate falsehoods of human history have left Benveniste's good name in shambles, his work itself is not rightly defined through such a-priori subjective devaluation, for science is or is not demonstrably, empirically correct: scientific truth being in all cases an objective proposition. We have collected replicable experiments demonstrative of just the sort of effects Benveniste had envisioned. Those experiments will be presented in highly condensed form here, then, a deeper underlying quantum/hadronic interpretation will be advanced.

It was claimed that Benveniste's work was false and could not be repeated. As referenced above, this appears to be an incorrect assertion. Although orthodox science shuts its eyes to the fact, the following experiments are now part of the valid scientific record (Norman, et al. 2016). We will select a small representative sample of the important work which has been conducted, and very briefly condense the results and conclusions.

1. In (Foletti et al. 2012) *Experimental Finding on the Electromagnetic Information Transfer of Specific Molecular Signals Mediated Through the Aqueous System on Two Human Cellular Models*, a 7Hz carrier frequency modulated at 3 kHz is encoded with molecular information electromagnetically derived from retinoic acid, a known cell differentiation agent. The same expected effects of the actual molecule were evidenced from only the information with which it is associated, as demonstrated upon LAN-5 neuroblastoma and NT2/D1 stem teratocarcinoma cells in both the cell growth and morphology of cells seeded and cultured in aqueous informationally encoded preparations.

“Methods: Retinoic acid, a well-known chemical differentiating agent, was placed at room temperature in the input coil connected to an oscillator (VEGA select 719), while culture medium for human neuroblastoma cell (LAN-5) and NT2/D1 stem teratocarcinoma human cells was placed into the output coil and exposed to signals

for 1 hour. At the end the oscillator was switched off and LAN-5 neuroblastoma and NT2/D1 stem teratocarcinoma cells were seeded, respectively, into the medium conditioned as reported into an incubator under controlled conditions. After 5 days of incubations, cells were examined by different strategies such as morphological and biochemical parameters.

Results: It was demonstrated that the electromagnetic signals coming from the retinoic acid molecule could be recorded and stored by the aqueous system of the cell culture medium. Cells seeded in the electronically conditioned medium received physical information generating a statistically significant decrease in metabolic activity and changes in phenotypical structure with protrusion typical of differentiated neuronal cells.

Conclusions: These experimental results provide some evidence that water could be tuned in a resonant manner by the Electro Magnetic Information Transfer procedure appropriately carried through a carrier frequency provided by the oscillator in a manner that seems related to the chemical structure of the source molecule as, in this case, retinoic acid.”

2. In (Foletti et al. 2014) *Electromagnetic information delivery as a new tool in translational medicine*, we see a 7Hz carrier frequency modulated at 3 kHz was encoded with molecular information electromagnetically derived from retinoic acid, a known cell differentiation agent. The results: “LAN-5 neuroblastoma cell line was grown up for 4 days in standard medium (CTR) or in the presence of shielded retinoic acid signal (Shielded RA-ECM); Retinoic Acid molecule was used as positive control (RA). Cell proliferation was then analyzed by direct cell count. The results showed that LAN-5 cultured with the shielded electronically conditioned medium didn't present any changes in the proliferation rate compared to control.

Electromagnetic signals from Retinoic Acid do not affect cell viability

. . . reduction in cell proliferation rate is correlated with the electromagnetic information system, while it did not correlate with an increase in cell death. LAN-5 neuroblastoma cell line was grown up for 4 days in standard medium (CTR) or in the presence of Retinoic Acid signals (RA-ECM) while Retinoic Acid molecule was used as a positive control (RA). Cellular mortality was analyzed by Trypan blue exclusion test . . . The results showed a sustained increase of cellular mortality in Retinoic Acid treated cells as compared to control ones. Moreover the cells cultured in the electronically conditioned medium,

receiving physical electro-magnetic information from RA, displayed no differences in cellular mortality compared to control” and “Interestingly, cells grown in the presence of the electro-magnetic signal from RA (RA-ECM), showed a statistically significant decrease of cell growth, similarly to RA treatment, but no changes in cellular mortality . . . These findings suggest that the electromagnetic information system is able to induce the decrease of cell growth without affecting cell viability.”

[Please do note the *presence* of active informational field effects demonstrably akin to the known biological activity of the source molecule, and the *absence* of associated chemical toxicity—the latter quite unlike the chemical molecule from which the information was derived.]

3. In (Foletti et al. 2011) “*Differentiation of human LAN-5 neuroblastoma cells induced by extremely low frequency electronically transmitted retinoic acid*,” we see the same highly replicable results, this time using the field directly:

"METHODS: Retinoic acid was placed at room temperature on one coil attached to an oscillator (VEGA select 719), while LAN-5 neuroblastoma cells were placed on another coil and incubated under controlled condition. The oscillator was then turned on for 12 hours a day for 5 days, after which cells were counted and morphology studied by contrast microscopy.

RESULTS: The effect of the differentiating agent added to the cell culture by physical means generates a decrease in cell growth, metabolic activity, and the protrusion of a neuritelike structure typical of the differentiated cells.

CONCLUSIONS: These preliminary results suggest that retinoic acid molecules emit signals that can be transferred to LAN-5 neuroblastoma cells by artificial physical means in a manner that seems related to the chemical structure of the source molecules."

Just as important as these studies clearly demonstrating vital effects upon malignant cells, are others of equal reliability and replicability which demonstrate effective informational influence upon various types of infectious pathogens by way of extracted antibiotic molecular *information alone*. How potent is the effect? It works on many common, problematic infectious bacteriological pathogens, and also on the modern scourge of stubborn treatment resistant MRSA!

4. In (Heredia-Rojas et al. 2015) Antimicrobial Effect Of Vancomycin Electro-Transferred Water Against *Methicillin-Resistant Staphylococcus Aureus* Variant, we may watch as MRSA is curtailed:

“Material and Methods: MRSA cultures were treated with vancomycin electro-transferred water samples, vancomycin (4.0 and 8.0 µg/mL), sham electro-transferred (water to water) and non-transferred water samples (medium alone). Growth inhibition was evaluated in liquid and solid culture medium, spectrophotometrically and by CFU determination respectively.

Results: The obtained data showed that by transferring vancomycin (4.0 and 8.0 µg/mL) information to water samples, the growth of cultured MRSA was significantly ($p < 0.05$) inhibited (up to 35%), compared with those cultures treated with electro-transferred water to water or cultured in medium alone (0% growth inhibition).

Conclusion: This in vitro study suggests that water samples that are electronically transferred with vibration sustained information of vancomycin are capable of inhibiting growth of axenically cultured *methicillin resistant S. aureus*.”

5. In (Heredia-Rojas et al, 2011) *Entamoeba histolytica* and *Trichomonas vaginalis*: Trophozoite growth inhibition by metronidazole electro-transferred water, we see the same yet again, now working to ameliorate the proliferation of *Entamoeba histolytica* and *Trichomonas vaginalis*.

“This paper demonstrates that by transferring metronidazole information to water samples by an electronic amplifier (BRT device), the growth of axenically cultured trophozoites of *Entamoeba histolytica* and *Trichomonas vaginalis* is significantly inhibited, compared with those cultures treated with non and sham electro-transferred water samples. A positive control of metronidazole, a well known

cytotoxic drug against parasites, was used as a reference.”

“In conclusion, our in vitro study suggests that water samples that are electronically-transferred with vibrational information of metronidazole are capable of inhibiting trophozoite growth of axenically cultured *E. histolytica* and *T. vaginalis*.”

6. In (Heredia-Rojas et al, 2012) “Antimicrobial effect of amphotericin B electronically activated water against *Candida albicans*,” we see the same informational effects demonstrated yet again upon a different pathogen.

“It was demonstrated that by transferring amphotericin B ($125\text{ }\mu\text{g}\cdot\text{ml}^{-1}$) information to water samples by an electronic amplifier (BRT device), the growth of cultured *Candida albicans* was significantly ($P<0.05$) inhibited (46% growth inhibition), compared with those cultures treated with sham electro-activated water samples (0% growth inhibition), and a positive control of amphotericin B ($125\text{ }\mu\text{g}\cdot\text{ml}^{-1}$; 80% growth inhibition). Evidence for a measurable biological effect by electro-activated water samples that somehow acquires, or at least mimics, the antifungal property of amphotericin B has been demonstrated in the present study.”

We invite the reader to examine closely each study referenced above in detail. Please recall that we have selected to represent here but a small representative sample of a larger body of work. [See: (Norman et al., 2016 and the references therein; Endler et al. 1995; Thomas et al., 2000).] Please examine the many various methods of evaluation used in the condensed studies above, including accurate measures such as reverse transcription PCR, contrast microscopy and others. Over and over the same effect is demonstrated. Benveniste was correct. The ugly accusations which ruined his career and good reputation may be left aside as false.

Magnecular analysis and the H bridge: polarized toroidal orbits.

It may be possible to apply a magnecular analysis and gain even deeper insight into the phenomena and effects we have demonstrated. Toward that end we will first articulate some of the particular specifications of magnecules.

“. . . magnegas has a variable energy content, a variable specific weight, and a variable Avogadro number.” (Santilli 2005 p. 101)

“Alternatively, the magnecular structure can be also interpreted as an unusual form of “semi-liquid” in the sense that the magnecular bond is much closer to the so called “H-bridges” of the liquid state of water. The increase of pressure evidently brings magnegas progressively closer to the liquid state, which continuous process can only occur for a variable Avogadro number.” (Santilli 2005 p. 101)

“Magnecules have anomalous average atomic weights in the sense that they are bigger than that of any molecular constituent” (Santilli 2005 p. 23)

“Santilli magnecules in gases, liquids, and solids consist of stable clusters composed of conventional molecules, and/or dimers, and/or individual atoms bonded together by opposing magnetic polarities of toroidal polarizations of the orbits of at least the peripheral atomic electrons when exposed to sufficiently strong external magnetic fields, as well as the polarization of the intrinsic magnetic moments of nuclei and electrons.” (Santilli 2005 p. 21)

“Magnecules can break down into fragments under sufficiently energetic collisions, with subsequent recombination with other fragments and/or conventional molecules, resulting in variations in time of spectrographic peaks (called time mutations of magnecular weights)” (Santilli 2005 p. 22)

“Substances with magnecular structure have anomalous physical characteristics, such as anomalous

specific density, viscosity, surface tension, etc., as compared to the characteristics of the conventional molecular constituents” (Santilli 2005 p. 23).

“Magnecules can accrue or lose during collision individual atoms, dimers or molecules” (Santilli 2005 p. 22)

“Magnecules release in thermochemical reactions more energy than that released by the same reactions among unpolarized molecular constituents” (Santilli 2005 p. 23)

“... the test at PCFL provided the first experimental evidence of mutation in time of the atomic weight of magnecules. In fact, the peak ... is macroscopically different ... This difference provides evidence that, when colliding, magnecules can break down into ordinary molecules, atoms, and fragments of magneclusters, which then recombine with other molecules, atoms, and/or magnecules to form new clusters.” (Santilli 2005 p. 82)

We propose that the coherent Exclusion Zone (EZ) water along hydrophilic surfaces that is so essential for biological processes is demonstrative of a particular type of magneclular structure. Unlike in the case of Hydrogen accretion in gasses which requires large magnetic fields along the lines of 10 to the 12 Gauss (Santilli, 2012, p. 3), the dynamism within the existent aqueous system of aqueous magneclular creation may be observed with low em field strength, and, the EZ coherent zone itself may be created, extended and fed, by relatively low levels of IR radiation (Pollack 2013, 2013a). The instantiation of molecular information into the aqueous medium may be accomplished through the encoding of a low energy 7 Hz carrier frequency to supply the small perturbations to be summed in coherent CD processes which yield a fairly long lived and stable vortical structure, and then, the distributed information functions ‘epigenetically’ if you will, meaning that it affects how genes are expressed creating manifest morphology, functional development and manifest proliferation, yet does not affect genetic encoding itself (Borghini et al., 2012). All this activity, including chemically derived em encoded informational distribution acting as a sort of epigenetic informational allocation, happens by way of physical dynamics which can be expressed within the framework of Hadronic theory and QED. Del Giudice (2012) states: “According to Quantum Electro Dynamics (QED) these fields are able to attract co-resonating molecules giving rise to selective chemical attractions governed by specific chemical codes.” In close analogy to the way magnecules seem to alter the expressed combustive properties of specific fuels, so does this informational epigenetic effect create alteration in the expressed result of biological energies and forms. In this case, the new particular magneclular species represented in coherent exclusion zone water is of the form H_3O_2 , according to the experimental evidence gathered by Dr. Gerald Pollack (2013; 2013a and others). Here we see a new, larger, composite non-valence structuralization created by way of H bonds. This appears to be an informational magneclule with dynamic distributional functionality. Its collective *viscosity is divergent* from the ‘parent’ water molecule by a factor of as much as ten (Karbowski and Persinger, 2015, p. 6), and its properties and size change under conditions of IR exposure, under particular em and magnetic fields as referenced above and/or, in some instances ‘spontaneously’ over time (Persinger, 2015). However, the informational content and expression which stems from the near frictionless coherent CD process, are remarkably stable (Del Guidice et al., 2013; Monagnier et al., 2011). Another anomalous aspect: the refractive index, and hence one might infer the density of EZ water, is ten percent higher than bulk water (Pollack, 2013). As to the effects of pressure Dr. Pollack states: “EZ water has a higher density than bulk water. If you take H_2O and you put it under pressure, it should give you H_3O_2 because the EZ structure is denser than the H_2O . We did the experiments and we found, indeed, that’s the case. If you put H_2O under pressure, you get more EZ water.” (Mercola 2013) (Please note the similarity to above referenced magneclular processes).

Clearly, time reversal does not play a role in biological systems. No human or biological cell gets younger with time, any more than one might expect the droplets sprayed from a perfume bottle might somehow re-coalesce back into the container from which they originated. However, there MUST be a full spectrum of temporal exchange beyond the limits of relativity evidenced in biological systems (Santilli, 2008 p. 517). Think of the Wheeler delayed choice experiment, which has turned out so as to

demonstrate temporal influence extending into the past (Manning et al., 2015), and also Predictive Anticipatory Activity (Mossbridge et al. 2014), which demonstrates human, biological, physiological evidence of the clear influence and presence of future events represented *before their temporal actualization*, as visible effectors in the present. We may therefore define the magnecule in question as a hypermagnecule (Santilli, 2005 p. 23; 2008 p. 511). We will invite the reader to consider the work of Montagnier to see the clearest example of biological structure created through encoded low strength EM within the context of aqueous informational mnemonic capability (Montagnier, et al. 2011; 2014). DNA itself may be formed up from raw PCR ingredients with no trace of a physical DNA template! Only encoded EM is needed to affect the aqueous mnemonic system, and so, we understand the processes which sustain disease themselves and those of health as well are deeply connected to informational dynamics and distribution stemming from magnecular aqueous processes. (Please keep in mind also that the DNA double helical structure itself is largely due to H bonding between base pairs).

After years of detailed research and experimental examination the coherent fraction of exclusion zone water to which Del Giudice refers has been derived and articulated by Dr. Pollack as being of the structure H_3O_2 . The H bonded water structuralization of H_3O_2 had a molar mass of 35.02262 ± 0.00081 g/mol. Do keep in mind the familiar fact that H_2O has a molar mass of 18.01528 ± 0.00044 g/mol. These facts permits the following analysis:

1. In Del Giudice (2013) we read: “Consequently at each T there is a coherent fraction $F_c(T)$ of molecules and a non-coherent fraction $F_{nc}(T)$ whose sum is 1. Molecules cross over continuously between the two fractions leaving constant the total number of coherent and non-coherent molecules.”
2. Dr. Pollack has clearly demonstrated the increase and shrinking of the exclusion zone layer in response to conditions including infrared exposure.
3. Furthermore, Del Giudice (2013) states (see original article for embedded references): “Water close to surfaces should therefore exhibit a much larger coherent fraction than bulk water. Its coherent inner structure should remain stable in time, allowing, contrary to bulk water where a continuous cross-over between the two fractions occurs, a direct observation of the consequences of the presence of coherence. The depth of the coherent layer close to a surface is governed, according to [7], by the strength of the electric field emitted by the surface, which correlates coherently the CD electric dipoles. The depth of the layer could therefore reach values as high as hundreds of microns, much larger than the depths of a few molecular layers predicted by conventional theories based on H-bonding [9].”
4. Between the spontaneous bulk water’s coherent non-coherent cross-over and the many various dynamic influences and effects upon exclusion zone size, we may conclude that *the entire aqueous system is variable over time as to its mass per mole*.
5. Temporal variability in molar mass (Avogadro number) is a hallmark of magnecular structure.
6. It appears that the hydrophilic/bulk aqueous bio-system corresponds to the pure gaseous species of magnecule by way of variability in the Avogadro number.

Condensation of findings:

- a. Biological aqueous systems demonstrate variance in their Avogadro number.
- b. Water structure may vary its H bonds ‘spontaneously’ or as a function of specific known field effects to yield anomalous changes in viscosity.
- c. Coherent encoded water affects biological energetic expression and morpho-functionality.

- d. Unique/anomalous spectral peaks, some of which indicate the presence of the aqueous informational 'magnecules' hypothesized coherence domains, are demonstrated by water affected/structured by fields (Persinger 2015; Murugan et al., 2015; Karbowski and Persinger, 2015; and references cited above).
- e. Water loses its internal magnetic properties at 100 degrees C. indicating the presence of a Curie Temperature.
- f. Water (H₂O) becomes structured into H₃O₂ via intermolecular variation in H bonds forming a different, heavier mass per mole. Liquid H₂O itself is given its special characteristics such as high vaporization temperature by way of intermolecular H bridges, which may well be nothing but pieces of polarized electromagnetic structure (see below).
- g. The electromagnetically encoded information distributed via H bond dependent water structure and resultant coherent dynamics onto biological systems affects systemic energetic expression, proliferation and form as an 'epigenetic effect.'
- h. The refractive index, and hence the implied density of EZ water, is ten percent higher than bulk water (Pollack, 2013). In another anomalous instance, the viscosity of coherent EZ water may be up to 10 times that of H₂O (Karbowski and Persinger, 2015, p. 6).

Ergo, Liquid Water, and Biological Aqueous Systems in particular may therefore be defined as: *magnecules*.

With a few more facts, the future implications will become clear.

From Dr. Pollack's (2013) book *The Fourth Phase of Water*: "EZ charge separation closely resembles the initial step of photosynthesis, which entails the splitting of water next to some hydrophilic surface. This resemblance may be auspicious: if that first step works as effectively as it does in photosynthesis, then some kind of water-based harvesting of light energy may have a promising future. Designs built around water might one day replace current photovoltaic designs." (p. 336).

Santilli (2005) writes:

"Recall that quantum chemistry was unable to achieve an exact and invariant representation of the main characteristics of the water molecule from unadulterated first principles despite efforts over the past century. In fact, a historical 2% has been missing in the representation of the water binding energy, while the representation of its electric and magnetic moments was embarrassingly wrong even in the signs." (Santilli 2005, p. 142).

A new approach is required. Hadronic mechanics is that approach. Dr. Santilli has also derived a novel underlying quantitative explanation for H bonds which is explicable entirely within the known confines of QED (Santilli, 2005, 2008, 2012 and others). As is known, liquid water may be ascribed its unique characteristics such as high vaporization temperature to the part played by H bridges. In place of the familiar description of H bond formation involving uneven molecular charge distribution and proton exchange, Dr. Santilli offers up a quantitatively specific model based in the forming up of H bonds and intermolecular adherence via the primary attraction of actual *polarized* toroidal electron orbits (as distinct from the orbitals, which are abstract mathematical objects rather than physical objects). (Santilli 2005, p. 31; 2012).

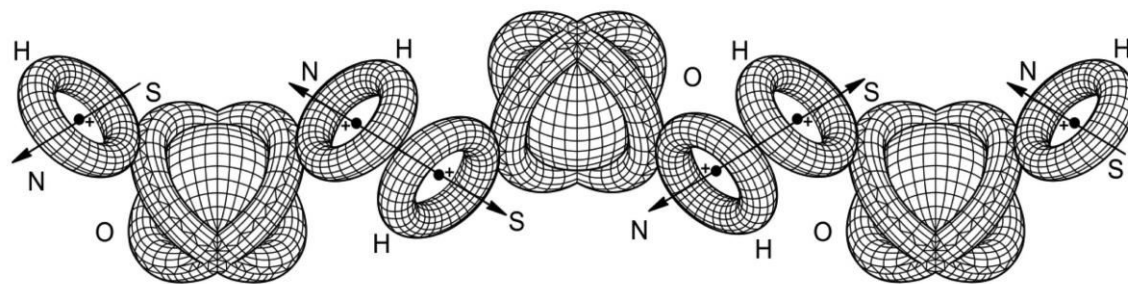


Figure 1. One of the possible magnecular bonds of H-atoms in the liquid state of water.

Pictorial representation of liquid water as hypothesized in Santilli's polarized toroidal orbit model of the H bridge. Figure used with permission of Dr. Santilli.

Due to the fact that within aqueous informational systems we are dealing with a ferro-electric structure with mnemonic properties, we may not be surprised to discover the internal magnetic organization of the system is disrupted by increased temperature just as with a magnet, and so, the *Curie temperature* is that of the boiling point.

It is now possible to hypothesize from the theory of Santilli (Santilli, 2005, 2008, 2012 and others): Toroidal polarized (primarily) electron orbits induced/affected to specific geometric form and subsequent dynamics through external IR, ELF and also other molecular based fields, affect coherent hydrophilic surface water structure to induce hydrogen bonds yielding a magnecular species of the form H_3O_2 . That charge separation, which may well be the primary basis of photosynthesis itself, is therefore likely to be defined as a magnecular phenomenon. Life requires more than valence bonds. Life may also depend on the molecular species Santilli has named the *Magnecule*.

Possible implications and discussion points:

1. Should the effects evidenced in the above cited and condensed experiments be brought to practical fruition, the result could be of substantial importance. It is clear that information costs little and may be electromagnetically derived from molecular structure. Once stored within computer memory and geographically distributed as binary information converted at the receiving end into encoded em, it could help many at little cost, lowering drug prices by substituting cheap information for expensive drugs, and perhaps also reducing treatment toxicity. It appears at this early stage that the effects are akin to the molecule from which the information is derived, and may be nontoxic, unlike the toxic source molecule. As fields are not restrained by the Blood-Brain Barrier, molecules like dopamine and 5-HT could possibly be encoded and used in treatments, perhaps affecting a reduction in manifest symptoms of Parkinson's and OCD respectively. Chronic pain may be treated without recourse to addictive drugs and perhaps, addiction may also be ameliorated without recourse to drugs (Norman et al., 2016).
2. As aqueous informational memory is ferro-electric, perhaps as one creates a better recording using blank magnetic tape, the Curie temperature could be used to entirely replace the internal magnetic properties of water with those of an externally encoded field, using pressure to keep water in a liquid state while applying said field, or, by creating condensation of gas from temperatures over 100 degrees C cooled to encourage the emergent liquid state under the application of a suitable informational field.
3. Could Santilli's theory provide insight past the effects of 'like likes like' phenomena, and see into their cause? Could it thereby explain the quantitative mechanics which bind the organization of negatively charged water droplets into clouds, and the negatively charged conglomerative adherence of bodily cells and tissues? Are clouds and biological systemic forms intra-conglomerative magnecules?
4. Could the basic aqueous charge separation upon which photosynthesis is based be used to harvest radiant/solar energy? Could the increased viscosity evidenced by water left in the dark be interpreted as an energetic instantiation (Persinger, 2015; Karbowski and Persinger, 2015) and if so, could the effect

be used to harvest vacuum energy?

5. Are aqueous systems and therefore biological systems, magnecular? Are coherent aqueous magnecular processes those upon which photosynthesis and life itself are dependent?
6. As the coherent fraction in aqueous hydrophilic systems is of a magnecular form (H_3O_2), do magnecular processes mediate coherence, and so, coherent informational aspects? If so, in what way?
7. Montagnier has demonstrated the CDs within water may be encoded so as to coherently sum and distribute information and create rightly sequenced DNA from raw ingredients sans any chemical template. Will science acknowledge the truth of this, and place the aqueous informational magnecule rightly at the center of disease processes and medical diagnosis and then, look to these dynamics in order to advance medical treatment past its current dependence upon dangerous, costly modes of radiation and drug therapies?

Conclusion:

At this juncture in human knowledge, science has a choice; it may either acknowledge the limitations of relativistic and quantum theories as they relate to aqueous and biological systems, or it may not. If science chooses to stay the course and now, as before, run headlong after theories based upon a flawed axiomatic basis, little will change. However, should the pursuit of scientific knowledge be unfettered from its errors and begin to consider the possible, human misery may soon be transformed. It appears to us that the evolution of life itself is based on magnecular processes. The fact of liquid water is the fact of the magnecule. Within this molecular species is the hope for clean energy, clean burning fuels and, as this paper points out, the potential for non-toxic medical practice *based on information* and its dynamic magnecular distribution through aqueous systems as they affect biological systems. In defining a quantitative functional basis of the H bridge, Santilli may have placed a vital brick in the edifice of human knowledge. The deepest mystery in science is that of the dynamic relation between hypermagnecules and the aqueous/biological systems they define. In this mystery, our better future rests. Clean energy, human health and inexpensive, freely available nontoxic medical practice are to be found in the answer to an unacknowledged question, *What is the magnecule?*

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An Open Letter Regarding Cancer

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Abstract:

This brief document is intended to bring a potentially important approach to cancer and other diseases to the reader's attention. It may well be the case that unfortunate circumstances within the sciences have kept hidden an important approach to disease. We hope to bring this information to the fore, and suggest that cancer and other diseases may share a common yet unacknowledged mechanism of pathological replication. If this is so, inexpensive and safe modes of therapy may be researched and then brought to fruition. It is our intention to alert others who are in a position to advance the work, so as to augment needful progress.

Introduction:

Our research has indicated a disturbing and potentially earthshaking possibility which must be investigated: *Cancer and a host of other diseases may be curable using non- invasive methodology.* This seemingly impossible statement may be true, and warrants investigation. We will briefly articulate some small part of the history and provide current substantiation which will make clear that the approach is valid and functional. There is a historical pattern which can be observed and must be recognized and overcome if the situation is to be rectified. It is our hope that an independent laboratory with open minded scientists who are not beholden to corporate interests may find reason to look into this idea and develop the human potential which has remained concealed for too long.

Modern methods to combat diseases such as cancer are based on the medical models which science has accepted. Those medical models generally do not acknowledge the role of electromagnetic fields and the informational physics with which said fields are associated. Highly complex and intricate treatments are created, often with toxic risks, and inch by inch, difficult and incremental scientific progress is won. It may be possible to alter the model through which disease is understood and find a single locus around which stubborn diseases such as cancer might be approached, and cured. To do this, we must acknowledge not just medicine, but history and physics as well.

Perhaps you have heard a 'rumor,' a 'myth,' which seems to indicate that fields can be tuned to corresponding cellular frequencies so as to affect and destroy ONLY disease related organisms, while being harmless to healthy tissues allowing the cure of disease without toxic damage. One is sure to be attacked as a fool for even mentioning the possibility, and one risks one's reputation to say such a thing aloud.

As open mention of this approach itself is forbidden, we will begin with some proof. Do review the science of Anthony Holland:

[https://www.researchgate.net/profile/Anthony_Holland2/publications

<http://www.wakingtimes.com/2016/02/05/breakthrough-discovery-shows-that-resonant-frequencies-can-kill-cancer-cells/>

<https://www.gatewaycr.org/gateway-blog/posts/2015/october/shattering-cancer-with-resonant-frequencies/>

<http://novobiotronics.com/Cancer1.html>

<http://novobiotronics.com/CancerResults3.html>

<http://novobiotronics.com/CancerResults4.html>

<http://novobiotronics.com/CancerResults5.html>

<http://novobiotronics.com/CancerResults6.html>

and many others, please see older material].

Observe how only cells targeted at a specific frequency die. Observe how the frequency once obtained, isolates the deadly effects specifically to the organisms targeted. As you can see, this is not myth or fiction. Using frequency to target specific pathogenic organisms is effective. However, there is more to consider. Now that we have demonstrated that the effect is viable, and the ‘myth’ is no myth at all, we will spell out some of the history, tie it to the present circumstance and offer up specific, if speculative, ideas on how to quickly and cheaply advance toward a cure. Perhaps massive expenditure and profit are not needed to cure disease, and we need but take a different approach which spans both physics and biology. Anthony Holland’s approach is promising, but further information is required.

The Science of Rife and its Suppression:

Anthony Holland is attacking the cancer cells themselves to affect cure. We believe a slightly different approach is needed. To find that it will be helpful to understand some of the history which has led to the present situation. As will become clear in the section which follows afterward, the notion of pleomorphism need not be taken in the strict sense of the term, and can be usefully defined in a new and specific way. Those readers who wish to see the upshot, may skip this section and read the ones which follow, particularly the section titled “The Upshot.”

Reputation is almost akin to truth itself in science. Science is no different from any other human enterprise, and it is affected by human frailty and hubris. There is a paradigm known as pleomorphism which has been rejected. Disease processes are sustained by way of transformations in biological structures such as cell types which are, therefore, themselves *processes*. Pleomorphism is defined as: The assumption of various distinct forms by a single organism or species. (Dorland’s *Illustrated Medical Dictionary*). However, orthodox theory is monomorphic, and does not acknowledge this long observed notion of transformative biological processes.

Many deduced pleomorphism to be valid long ago. Pierre Bechamp was one of them. Louis Pasteur had staked his reputation on the converse view. Bechamp deduced after years of detailed study, that bacteria could change form. Rod like structures for instance, could become spheroidal but, even further, he noted that the size of these organisms could also vary and devolve into smaller organisms, which were unseen, that he called *microzymas*. This point is crucial. However, Pasteur’s reputation was great and Bechamp, whose work was later proven correct, was soundly crushed and his ideas excluded from accepted practice. The paradigm science laboured under for much of the 20th century was thereby hobbled. Thomas Rivers of the Rockefeller Institute derived technical scientific distinction regarding the reproduction of a virus which, although false, cemented his lauded place in the discipline of virology. He introduced the notion that a virus requires a *natural cell* in which to reproduce. His aggressive personality and great monetary resources made him impossible to disagree with, although he was wrong. Dr. Arthur Kendall was unable to defeat Rivers’s powerful reputation and formidable personality, but did prove himself scientifically correct by culturing virus

strains in an artificial “K Medium” of his own design, and he provided assistance to Royal Rife. Rife, would demonstrate the correctness of the rejected pleomorphic paradigm, and prove over and over that *filter-passing organisms*, meaning very tiny pathogens which are able to pass through filters and may cause full blown disease such as cancer, could be derived from cancer tumors. Rife, would soon discover the impossibly small “invisible” cause of cancer, and allow its direct observation *in a living state* with a new type of microscope, which is still unequalled today, and also uncover the lethal frequencies to apply using a specific new instrument to devitalize the tiny bug which kills man. For this, he would be personally ruined and his work suppressed, at unimaginable human cost.

The apparent cure for cancer and its suppression are an American tragedy which is ongoing. There is a pattern which can be observed repeatedly. Once Kendall and Rife filtered and saw the tiny pleomorphic form of typhus, and proved that this could be done, Milbank Johnson, a prominent and influential physician, USC professor of physiology and clinical medicine and Chairman of the Special Research Committee arranged a gathering of thirty top scientists on November 20th 1931 to announce the fact, as was reported by the Los Angeles Times on November 22nd 1931. On December 27th of 1931, The Los Angeles Times reported that Rife had demonstrated his microscope to over 250 scientists. Soon Kendall was asked to speak before the Association of American Physicians on May 3rd and 4th 1932. It was here, that Rivers and his supporter Zinsser, whose *Bacteriology* is still used in an updated version today, struck. The attack was verbose and unscientific yet effective in discrediting the correct work of Kendall and Rife, which contradicted their own views. Dr. William Welch an esteemed authority in bacteriology rose to Kendall’s defence stating “Kendall’s observation marks a distinct advance in medicine,” and in August of 1932 *Science* magazine itself published a report on Rife’s microscope stating, “There can be no question of the filterable turquoise blue bodies described by Kendall. . . examination under the Rife microscope of specimens...leaves no doubt of the accurate visualization...” but the damage was done. Rivers and Zinsser had the weight of reputation and power. Here, in a first peripheral way, we see the same ever increasing pattern which will be applied again and again: incorrect science, power, reputation and money destroy good men, tarnish their reputations, corrupt good science and suppress the truth.”

In 1932 Rife found the cancer virus. In 1934, he would cure cancer in humans using his frequency instrument. Rife began using Kendall’s K Medium in 1931 to attempt the isolation of the cancer virus from breast tumors. The medium and microscope in this case were not enough but a fortunate accident whereby he irradiated a sample inadvertently proved to be a decisive advantage, allowing the virus to be visualized. The incredibly small and virtually invisible structure had a breadth of one twentieth of a micron, and showed up under the microscope as purple/red in color. The experiment was then repeated 104 times, and thus confirmed. Four distinct forms were observed, distinct forms of the same organism. That organism, the filter passing “BX” as he called it, could reliably produce cancer in laboratory animals, as was repeated 300 times. This same organism could be transformed, depending upon the conditions and media used, into different structures found in cancer patients, a fungus, or as was later shown into bacillus coli! Pleomorphism was correct. Next he painstakingly determined the Mortal Oscillatory Rate to which the BX was attuned, and used the frequency instrument to destroy the BX. He then inoculated no less than 400 animals with filtered BX preparations, created tumors and cured those animals *over 400 times*, before attempting the first human case. Rife, was a careful and meticulous scientist.

In 1934, Dr. Milbank Johnson again gave steadfast support and was instrumental in opening the clinic in La Jolla where cancer would be first cured in the human animal. To minimize the accumulation of toxins from the dead pathogens, it was soon learned the treatment was best used for only three minutes and given at three day intervals. Of the 16 “hopeless” cases, 14 were cured in three months. No rise in body temperature or discomfort was reported. Dr. Alvin Foord oversaw the project as chief pathologist. Chief Surgeon Whalen Morrison, George C. Dock MD, George Fisher MD, Dr. Kendall, Dr. Zite, professor of pathology at Chicago University, and Rufus B. Von Klein Schmidt

President of the University of Southern California were on staff, and, Dr. Couche and Karl Meyer PhD, head of the department of bacteriological research at the Hooper Foundation, were present. Dr. Koops of the Metabolic Clinic in La Jolla signed all 14 reports and knew of the tests from his personal observation. In 1934, Royal Raymond Rife had cured cancer.

This was not an isolated fluke. Other clinics were soon opened, and more people were cured. Dr. Couche opened a clinic and although surviving records are scant, it is clear that three patients were cured of cancer. Dr. Johnson opened a clinic of his own to reports of more success treating various conditions. Later in 1939, Dr. Richard Hamer of the Paradise Valley Sanatorium rented a frequency instrument, and proved himself adept in its use. A very organized and careful practitioner, he often treated as many as 40 patients a day, and achieved stunning results in his National City clinic, clearing up and curing a great many conditions. Between 1934 and 1939 a great deal of hope was brought to fruition, and unfortunately...someone noticed.

The suppression and destruction of Royal Raymond Rife—reputation, greed and our scientific dark age.

The case of an 82 year old man successfully treated by Dr. Hamer reached the powerful head of the AMA in Chicago: Morris Fishbein. The single dominant force in the AMA at that time, he was belligerent, ruthless and it is to be plainly noted that he never practiced medicine as an MD for even a single day in his life past his residency. His was a smothering and potent personality, revealing him as a political animal of the first order.

In 1939 Fishbein sent a fateful message through the California branch of the AMA seeking to buy into Rife's work and his new company, Beam Ray. Rife refused. This was the start of the end. In analyzing this supreme error, we can learn much. Rife worked with Hoyland, a self-interested and arrogant man who thought himself above his partners. He and Fishbein gathered forces. Hoyland was provided high priced lawyers. Hoyland would own Beam Ray, and Fishbein could then buy in. To refuse Fishbein, was a tragic error. When the devil knocks there is little choice but to let him in, lest he burn the house to the ground.

Rife was a patient, genteel and kind man, an intellectual, engineer and scientist who was about to enter an ugly bully's world of money, brutal assault, cruelty and blatant injustice: the American legal system. Cancer he had cured, but politics? This would soon metastasize and consume him. The opposing lawyer cut into him and attacked him. Rife was unprepared, and although the case was settled in due course in Rife's favor, the experience destroyed him on a human level...his nerves gave way. He was so deeply affected, that a doctor he trusted advised he take up strong drink, at once. This began his deterioration into alcoholism, and depression. Beam Ray would be ruined, Rife shattered and the cure for cancer snuffed out. What Fishbein could not own, he would destroy. That was that!

In a strange pair of "coincidences" the only other lab making substantial progress in the field, that of J. C. Burnett, a \$250,000 lab in 1929 dollars with \$500,000 invested in research and the many careful records within it, were all burned to the ground as its owner visited Rife later that year. Rife's staunch supporter Dr. Milbank Johnson would die under suspicious circumstances a few years later, perhaps poisoned according to federal inspectors, all directly before it appeared he was to announce an important breakthrough in the cure of cancer in 1944, after which his records and those of his Special Research Committee mysteriously..."vanished." Throughout this period, and afterward in the case of Rife's new partner John Crane, records and equipment were illegally seized and destroyed, and doctors intimidated into giving up the search. Dr. Couche continued the work anyway, and had his membership revoked by the AMA. Publication of one

article escaped the censorship and can be seen here, as represented in the Smithsonian Annual Report, of 1944.

<http://www.rife.org/magazine/smithsonian.html>

Soon after its publication the report's author Dr. Raymond Seidel was shot at, a bullet slamming through his windshield as he was driving.

In the Smithsonian Annual Report of 1944 we read:

". . . disease organisms such as those of tuberculosis, cancer, sarcoma, streptococcus, typhoid, staphylococcus, leprosy, hoof and mouth disease, and others may be observed to succumb when exposed to certain lethal frequencies peculiar to each individual organism . . ."

Dr. Royal Lee of the Lee Foundation for Nutritional Research in Milwaukee spent time with Royal Rife and commented as follows:

"No medical journal was ever permitted to report on Rife's work. This one by the Franklin Institute [reprinted in the Smithsonian report] slipped by the censors, since this organization is not medical but supports general scientific activities. But that mistake was soon rectified, it appears, as there is still no general knowledge of Rife's epoch-making discoveries. Again, the iron curtain of Fishbein is effective. . . . We can give a list of various subjects on which this censorship is rigorously applied. Only the treatment of disease with synthetic drugs is carefully reported. Botanicals are played down, food as remedies are almost as taboo as Rife's work. . . the official definition of a medical remedy for disease. . . excludes automatically any vitamin, nutritional mineral or enzyme. . ."

Was there a cover up? Do examine this video presentation of Rife's laboratory. Observe the massive investment and many pieces of advanced custom equipment Rife created. Observe his highly advanced work and surgical technique. Was there a cover up? Ask yourself, what happened to all of this? It appears to have vanished...without a trace.

<https://www.youtube.com/watch?v=fynOk-Yldts>

Cancer has been cured since 1934, and no one knows it. Fishbein has won. When it is understood how quickly radiation machines were sold to hospitals, often with deadly result, the scope of the loss of proper testing, commercial availability and distribution of Rife's work becomes clear. Painless, three minute treatments with no side effects. Cancer has been cured. No one knows. *Is this true?* Surely, for humanity's sake, the truth surrounding all this must come out!

The current situation and other previous substantiation.

Not surprisingly, the evidence of these facts "inexplicably" keeps showing up over and over in new work, and its imprint can be located also in history. Rife has of course, been publicly humiliated, misrepresented, ignored and discredited, although he was correct. His work is called a "myth." But the fact will not rest, for it is the fact. These..."mysteries"...abound. The cowardly suppressive reactions to them are also in evidence.

Rous had long ago discovered a cancer virus for which he would all too belatedly receive a Nobel Prize. In 1948 Dr. Virginia Livingston-Wheeler began studying tumors in which she then found the same organism. She came across the work of Dr. Eleanor Alexander-Jackson who demonstrated that tubercle bacillus went through many changes, (as Kendall, Rosenow and Rife had shown already in

the 30s, a fact which had been forgotten or, more probably, deliberately ignored).

Livingston-Wheeler found the extraordinary pleomorphism intriguing and wondered if cancer behaved pleomorphically. Her paper which confirmed the fact was published in 1948 in *The New York Microscopical Society Bulletin*. It concluded as follows:

“In conclusion it may be stated that a definite mycobacterium is observed in many kinds of tumors. Its presence within the tumor cells as well as within the blood of the patients suffering with the disease can be demonstrated.” Livingston-Wheeler and Alexander-Jackson had demonstrated that Rous had found a virus which was *in actuality a pleomorphic bacterium*.

Livingston-Wheeler’s assertions of pleomorphism were confirmed in 1950 by Dr. James Hillman of RCA labs in Princeton NJ. via electron microscopy, whose observations gave confirmation of the filtered form.

Dr. Irene Diller of the Institute for Cancer Research in Philadelphia had isolated fungus from cancerous growths in animals. Here again, was the work of Rife and Gruner, which demonstrated the changeability, the pleomorphic alterations and transformations between the BX, and a fungus. In December of 1950, *The American Journal of Medical Sciences* published Livingston-Wheeler’s paper detailing how cancer cultures taken from humans and also from animals caused cancer in animal tests. Then, new cultures proved that cancer could be caused by a form of bacterium! The hurtful dismissal of this claim by Rivers and the rest, had been shown...wrong. Naturally, her discovery had all but no influence upon the situation. The cancer industry and orthodox scientific establishment had its own plans.

In 1953 Dr. Diller published her own discovery of confirmation of the transformation between fungus, and the cancer microbe: *Studies of Fungoid Forms Found in Malignancy*. *The Washington Post* Sep. 9, 1953 reported from Rome of their findings and ideas that: “An American research group today pictured cancer as an infectious disease. . . . ‘Cancer does not consist of a localized tumor alone.’ Instead, they pictured it as a generalized disease caused by an organism in the human bloodstream.”

When the scientists returned home to their lab, they discovered that Dr. Rhodes of Memorial Sloan Kettering Cancer Center had shut down their work and stopped funds for the Rutgers-Presbyterian Hospital lab. The lab was shut down! Like Rife, Alexander-Jackson and Livingston-Wheeler found that their work was now...nothing. Efforts to produce a vaccine, were simply not acceptable. Surgery, radiation, chemotherapy, these ideas, *only these*, have merit and deserve funding. Inexpensive cure was not in the cards. A new approach was not acceptable. Money. Reputation. This is modern medical practice and research. This...is tragedy.

In 1983, Livingston-Wheeler wrote in her book, *The Conquest of Cancer*:

“Because of the suppressive actions of the American Cancer Society, the American Medical Association and the Food and Drug Administration, our people have not had the advantage of the European research.

This work has been ignored because certain powerful individuals backed by large monetary grants can become the dictators of research and suppress all work that does not promote their interest or that may present a threat to their prestige.”

She demonstrated that cancer is not as accepted orthodox science proposes. In the New York Academy of Sciences report from October 30 1970 we read:

"Microorganisms of various sorts have been observed and isolated from animal and human tumors, involving viruses, bacteria, and fungi. There is, however, one specific type of highly pleomorphic microorganism that has been observed and isolated consistently by us from human and animal malignancies of every obtainable variety for the past twenty years. . . that organism has remained an unclassified mystery, due in part to its remarkable pleomorphism and its stimulation of other microorganisms. Its various phases may resemble viruses, micrococci, diptheroids, bacilli, and fungi."

Today a music professor turned cancer researcher named Anthony Holland is shattering cancer cells with targeted frequencies. He was inspired by the work of Rife. His approach is aimed at the cancer cells themselves. Will he succeed? Will the cells cause toxic shock in the body to be shattered? Does the source pathogen, the pleomorphic BX need to be targeted? Let us look to this fine man and see if he can find for us the answers.

Now Luc Montagnier, the scientist who had won a Nobel Prize for his discovery of the AIDS virus, has found some strange effects whereby filtered and presumably sterile preparations appear to reconstitute disease related organisms in cultures, and hypothesized with good supporting evidence the existence of aqueous nanostructures of a mysterious sort, offering us also in other work a glimpse into the quantum aspects of what possibly appears to be the mechanics of pleomorphic transformations. Naturally, he is accused of poor lab technique and contamination in his experiments. Do you believe this Nobel Prize winner cannot prepare a proper experiment? What is happening here? Why not look into the mysterious aqueous nanostructures, so akin to the BX or perhaps some quantum informational part of pleomorphic processes? Instead, his reputation is tarnished and insults abound. However, if he is right, many diseases, not just cancer but perhaps Alzheimer's, Parkinson's, Multiple Sclerosis, Rheumatoid Arthritis and a great many more may be treatable, or even curable. Does this seem familiar? Can you see it? We must discover if this is true.

It should be remembered also that dismissal of the pioneering work of Rife is not confined solely to America. On the web page of Cancer Research UK, reference is found to Rife and his work but most of the statements contained therein are erroneous. Firstly, and possibly most importantly, Rife's work and all his results were based on the use of his *own* microscope and his *own* Frequency Instrument – not on the so-called Rife Ray machines on sale today. Again it should be noted that all the talk on this site refers to the Rife machine destroying cancer cells but, in truth, the original claim of Rife was that his machine enabled him to destroy the microbe which caused the production of cancer cells and, having destroyed the microbe, the cells eventually returned to their original healthy state. They also claim that the Rife approach has not been through the usual process of scientific testing and in a sense this is true but, as shown above, such a statement is nowhere near the real truth. Rife's approach was meticulously tested and was open to further, more public testing but this was maliciously denied and the supporting evidence suppressed so that his work is now largely forgotten.

In 2007, in the book *Exploding a Myth*, the whole question of the existence and influence of these same destructive influences operating in the discipline of physics was explored through several examples. The restrictions placed on true open minded original thought were noted and it was pointed out that, while such problems in pure physics might not concern many people, if such restrictions did occur in physics then they would occur in other branches of science and, if the branch involved was medicine, then it was putting peoples' lives at stake. It is tragic to reflect that the facts outlined above indicate the correctness of that earlier prophesy.

Recent ideas seem to indicate that it might be possible for drugs, so toxic and profitable, to be replaced with safe quantum information. Is there any real value in this idea? Can the multitude of horrible diseases be cured by spotting the common pleomorphic mechanics of their replication, and addressing the problem with inexpensive painless treatments? Can we redo today what Rife apparently accomplished so long ago? These are the questions of the future.

Our research has unearthed a distinct and disturbing possibility:

"Cancer has been cured since 1934."

For the sake of humanity we ask aloud:

Is this true?

This section above owes a clear and substantial debt to Barry Lynes' excellent book: *The Cancer Cure That Worked*.

From Nobel Prize to the future of medicine: the Courage of Luc Montagnier:

Are Montagnier's experiments contaminated? Just as Rife, he is attacked and smeared with insults.

Montagnier has demonstrated the informational aspects which sustain disease. It seems from our analysis that the cure for many diseases, from cancer to Alzheimer's and a great many more, may be found here. Just as in the case of Rife, the effect of this vital discovery was to isolate Montagnier from the funds and means he needs to advance, while he is heaped with scorn, ridicule and rude insult. Montagnier's revolutionary work is criticized on two counts:

1. It is said not to be repeatable in any other lab.
2. It is said to be a false result due to contamination.

Montagnier answered these criticisms in such a certain and clear way as to leave the matter beyond dispute. He had invited an independent film crew from the media to record the experiment and watch each detail. [Montagnier Video](#). He extracted the electromagnetic signature of a particular piece of DNA and sent that as binary information over the internet in excess of 1000 kilometres then had another *independent lab* in Italy receive the information and instantiate it into water memory via a simple electromagnetic process. Electromagnetic informational transfer is also the same way the bodily system works, in our understanding. The stunning result is clear and undeniable: he was exactly correct. The information once added to the test tube of pure water over 1000 kilometres distant, reproduced via water memory the exact encoding within DNA which was then synthesized via PCR, even though there was *no DNA template in the water!* Information alone with no physical DNA to copy, once placed via an EM field into water memory created a piece of DNA and reproduced the encoding with an accuracy of 98 percent from raw PCR ingredients! Electromagnetic fields can be informationally encoded and those fields affect aqueous systems, which receive the encoded information and interact with chemicals and biological structures to create the form specified. Biology is based in physics, and physics is based in information. The film crew's presence assures us there was no trickery, the second independent lab doing the PCR synthesis from water over 1000 kilometres distant assures us of the experiment's verification at another facility, and most importantly *precludes any possibility of contamination*. Of course, the proof made no difference. Scientific orthodoxy simply turned up the insults. Now you may know with certainty that, however well educated, those who discount Montagnier are shallow.

If science were to look here, what might happen? Imagine it. If this work were funded and closely investigated, we may soon have solved the riddle of the informational instruction set which creates DNA

to sustain disease processes or health. That means two things:

1. A disease may be diagnosed in moments with a non-invasive scan.
2. A field may be applied to alter faulty encoding with correct patterning.

This is the *eventual potential*. Any disease which demonstrates resonance should be treatable and diagnosed in this way. As with the science of Rife, a resonant approach to disease and health is indicated. Here is found the common process basis of many diseases! There is a simple process nexus which may allow the informational alteration of fundamental disease dynamics without recourse to drugs, high priced treatments, or invasive techniques. In [Electromagnetic Signals Are Produced by Aqueous Nanostructures Derived from Bacterial DNA Sequences](#) Montagnier and his collaborators state, "we have detected the same EMS in the plasma and in the DNA extracted from the plasma of patients suffering from Alzheimer, Parkinson disease, multiple Sclerosis and Rheumatoid Arthritis. . . . Moreover, EMS can be detected also from RNA viruses, such as HIV, influenza virus A, Hepatitis C Virus." [In this latter case after 20 nM filtration]. As I have stated, a great many diseases share the same mechanism of reproduction, and so may all be treatable and diagnosable in one simple way. Field effects, as Rife found long ago, may well hold the future of medical practice. Imagine a hand-held device which scans, finds resonant aspects of specific disease and after diagnosis, instantiates healthy patterning into the bodily system via an informationally encoded field, without the use of drugs. This could be our future.

The Upshot:

The result of all of this is clear: ***specific research must be conducted using filtered preparations created from disease organisms such as cancer.*** That way the *source pathogen* may be attacked, and toxic shock will not kill the patients. Those preparations, must be exposed to radiation as in Rife's experimental protocols, or dilution and em field analysis so as to extract an em signature as with Montagnier. In the former case, the organisms must be cultured in an artificial medium to isolate photonic expression. It seems from the work of Montagnier that the mechanics of what appear to be 'pleomorphic' transformations, are those of quantum information affecting biological morphology and structure through aqueous systems. [Here is some further evidence of that effect: <http://dx.doi.org/10.4236/wjns.2016.63024>]

Unfortunately, Rife's microscope was key to the method, and none is available. Reading informs us that the microscope and the frequency instrument use the same principle. One must discover how to obtain the correct frequency for the correct pathogen without it. Of course one can 'shotgun', but there may be a better method. We speculate:

- a. A filtered preparation is created from cancer or some other disease.
- b. It is perhaps irradiated, and cultured in an artificial medium, so as to isolate the biophotonic expression of the pathogen.
- c. The frequency of the biophotons is obtained.
- d. Rife's microscope used heterodyne and resultant beat frequency to bring living specimens stained in UV light into the visible range.
- e. A frequency is derived to combine with the biophoton frequency, and create within the organism a beat frequency to destabilize its phase and internal coherence.

It is of course unknown if this speculation is valid. Naturally, we have a great many ideas to offer which may advance the science. Please feel free to contact us. We will share all information freely, and hope to advance the work in whatever way is available to us. There is a great deal of information, so, if you have facilities to create filtered preparations, let us make contact and advance this work. None of us as individuals or our 'reputations' means very much compared to the possibility of a real cure. Let us do

the uncommon thing and *work together*, in order to bring the better future of our race to light.

Thank you.

Rich Norman and Jeremy Dunning-Davies.

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The Enigma that is Light.

Jeremy Dunning-Davies,

&

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Abstract.

The presently accepted notion of wave/particle duality, especially when applied to light, is undoubtedly a cause of great unease for many. Here the issue is examined afresh in the light of ideas put forward in recent years, especially by Mayants, while not forgetting the contributions of those great scientists of the past. Explanations and interpretations are then offered to account for seemingly paradoxical effects.

Introduction.

What is the true physical nature of light? This is a seemingly simple question which has been around in science for centuries. Newton favoured a particle theory but found difficulty when trying to explain the so-called Newton's rings with this theory; then, Young's experiments appeared to indicate a wave nature. The problem of attempting to reconcile the apparent wave and particle properties of light seemed for years to be an intractable one. However, reconciliation came in the wake of the quantum mechanical notion of wave/particle duality; in other words, light could display both wave and particle properties depending on the physical situation under consideration. Mathematically this might seem an acceptable resolution of this considerable problem but, physically, it seems it has always left people with at least a feeling on unease. In view of material, both experimental and theoretical, which has accrued over recent years, it is perhaps time to look again at this question with (hopefully) a completely open mind. The latter point is vitally important because some material might be considered to cause a 'rocking of the boat' in areas of science deemed sacrosanct by some.

Wave or particle?

Much of the more modern work carried out in addressing the meaning of wave/particle duality has been by Lazar Mayants and this is worth considering in some detail. It probably goes back at least to the appearance of his first book, *The Enigma of Probability and Physics*¹, continues through a number of publications, with one of 1989² being of particular relevance here, and culminates in the lucid overall discussion in his second book *Beyond the Quantum Paradox*³. To start, it seems worth considering in some detail some of the material contained in Mayants 1989 article cited under reference 2. Here he examines, for example, the phenomenon of particle diffraction but first examines straightforward diffraction which is known to occur when a series of waves of the same frequency encounters obstacles. The resulting diffraction pattern is determined by the geometry associated with the total system involved, together with the wave-length of the wave involved. For a real physical wave process, the detail will be determined eventually by the wave equation and the relevant boundary conditions. The relevant wave equation has the form:

$$\nabla^2 \varphi = (1/v_p^2) \partial^2 \varphi / \partial t^2, \quad (a)$$

where v_p is the phase velocity of the waves and φ is a quantity whose magnitude squared determines the diffraction pattern.

However, what is the actual position concerning particle diffraction? If the conventional belief that individual particles possess inherent wave properties is true then any such particle should have some property, akin to φ , obeying the above wave equation. If such a property does exist then the diffraction pattern should remain unaltered, regardless of the intensity of the beam, but gradually weakening as the beam does. However, experimentation does not support this. If only a few particles are used, no continuous diffraction pattern appears; a few points on the display are all that do appear. In the case where a large number of particles is used, the picture seems to be a normal diffraction pattern but, in reality, it isn't; it simply consists of a very large number of points which appear to merge together to produce a familiar diffraction pattern seemingly. One might say that the perceived result is essentially a statistical one in the sense that a very large number of particles is involved and such numbers may only be treated effectively by statistical considerations. These remarks have been phrased to refer to particles – any particles – and, therefore, would refer to photons if photons are considered as particles.

In an actual particle diffraction experiment, a beam of *concrete* particles (to use Mayants terminology) is concerned and the experimenter considers the experimental statistical distribution of the coordinates of these diffracted *concrete* particles. However, in the theoretical situation, attention turns to the relevant probability distribution of the coordinates of what are, in effect, corresponding *abstract* diffracted particles. It is this rather subtle distinction between the *concrete* particles of the experimenter and the corresponding *abstract* particles of the theoretician which lies at the very heart of Mayants argument. This seemingly obvious distinction between abstract and concrete objects is an error hiding in plain sight. To see the distinction with clarity, allows the removal of many apparent paradoxical contradictions. As Mayants says³, “It is these two principle features of abstract objects—the nonexistence in reality and the lack of definite values of many properties—which differentiate them from the corresponding concrete objects.” “Which comes first, the chicken or the egg” refers to an abstract chicken and an abstract egg. The question being based on an abstract object can not be answered, but that is not important, as the abstract object “the chicken” does not have particular properties or exist, rendering the question improper and trivial. Each real particular such bird exists in no temporal paradox but comes after the egg in which it was gestated, and before any egg it may itself produce. In like fashion, the subject of “a cat” in Schrodinger’s paradoxical experiment, which it must be remembered was outlined in the original case to point up quantum theoretic inconsistencies at macro scale is again, an abstract cat, in this case symbolizing an indeterminate probability distribution, which is itself again, an abstraction with undefined qualities. The resultant paradox, simply does not exist. Probability theory works, and an abstract set adequate to a concrete set gives good results in calculations, but in no case are abstract and concrete objects alike. Paradox itself is not paradox, but misunderstanding. *The world is made of concrete objects.* It is this which the theory in its end *result* must describe, and does.

As has been described in detail elsewhere², it follows that the probability distributions of physical quantities for an abstract physical system, which conform to real motion of the corresponding concrete physical system, are determined by the solutions to the Schrödinger equation

$$E\psi = H\psi.$$

For a free real particle, the Hamiltonian is given by

$$H = c(p^2 + m_0^2 c^2)^{1/2},$$

where, as usual, m_0 is rest mass and p is momentum. c is the speed of light in a vacuum. However, the operators for particle momenta are $p_\alpha = -i\hbar \partial/\partial\alpha$ and $E = i\hbar \partial/\partial t$ Then the Schrödinger equation takes the form

$$c(-\hbar^2 \nabla^2 + m_0^2 c^2)^{1/2} \psi = i\hbar \partial \psi / \partial t$$

which leads to

$$\hbar^2 c^2 \nabla^2 \psi = m_0^2 c^4 \psi + \hbar^2 \partial^2 \psi / \partial t^2. \quad (b)$$

However, diffraction refers to a stationary state of the particle, determined by a specific value E of the energy which corresponds to a definite value of the momentum p and these are linked via

$$p^2 = (E^2 - m_0^2 c^4) / c^2.$$

It follows that

$$\hbar^2 \partial^2 \psi / \partial t^2 = -E^2 \psi \quad \text{and} \quad \psi = -E^{-2} \hbar^2 \partial^2 \psi / \partial t^2.$$

Substituting in the first term of the right-hand side of (b) above gives

$$\nabla^2\psi = c^{-2}(1 - m_0^2c^4/E^2) \partial^2\psi/\partial t^2.$$

By putting $(E^2 - m_0^2c^4)/c^2E^2 \equiv 1/v_p^2$ in this equation leads to

$$\nabla^2\psi = (1/v_p^2) \partial^2\psi/\partial t^2,$$

that is, the well-known wave equation (a) with $v_p = E/p$.

At the very least, this would seem to indicate that particle diffraction is not a wave process but is, rather, linked with the probability distribution of particles in a stationary state with corresponding well-defined values of both energy and momentum for the particles. Again, it does suggest that the whole notion of wave particle duality should be re-examined with truly open minds. The above outlined theory is due, as stated previously, to Mayants – particularly in his cited article of 1989 - but is work which seems to have been forgotten by much of the scientific community and is certainly deserving of more public acknowledgement.

The Speed of Light.

What is really meant when people speak of the speed of light? What is meant when reference is made to the constancy of the speed of light? Popular talking about issues linked to the speed of light have probably increased since the popularisation of Einstein's theories of relativity. It is a popular misconception that Einstein's theory claims the speed of light to be a constant and that the theory leads to an ultimate speed for everything which is this constant speed of light. This, however, is only an incorrect public misconception.

It is important to remember that Einstein assumed the speed of light *in a vacuum* to be constant. Also, in several subsequent mathematical manipulations, the factor

$$(1 - v^2/c^2)^{-1/2}$$

appears, with v being the speed of the object under consideration and c the speed of light but, as emphasised above, the speed of light in a vacuum. It must always be remembered, though, that Einstein's theory was and is just that – a theory. Like any theory it will only hold when the assumptions made in constructing it hold; if any one of those assumptions ceases to be valid, it cannot be assumed the theory continues to be valid. This is, of course, true of any theory.

These points are important to remember since it is known, and has been known for a long time, that the speed of light is *not* constant; it certainly varies for light passing through different media. The speed of light passing through a medium of refractive index n , is c/n , where c is the speed of light in a vacuum. Hence, for light passing through a medium, such as water, which possesses a refractive index greater than unity, the speed of light will be substantially less than the value in a vacuum. Therefore, the ratio v^2/c^2 in the factor mentioned above will be less than unity and so, no mathematical problems are encountered with this factor. However, there are media which appear to possess refractive indices less than unity and, in such cases, light will propagate at speeds in excess of the speed in a vacuum. This, in turn, raises questions about the above relativistic factor since if v is greater than c in this expression, mathematical problems do arise due to the appearance of a negative quantity whose square root is required.

What must be remembered here is that, as Santilli has explained it⁴, special relativity was constructed to describe the propagation of light in a vacuum but not within physical media. Many of the results of special relativity have been validated on numerous occasions for point particles or electromagnetic waves moving in a vacuum but the theory is inapplicable for the movement of such in physical media because the speed of light is really a local variable dependent on the properties of the medium through which it is passing.

As with all physical theories, it is important to realise that they are just theories and, as such, are based on certain very definite assumptions. If any theory is applied in a situation where one or more of those basic assumptions is invalid, that theory cannot reasonably be expected to produce a satisfactory

explanation of that situation. Note that this does not mean the theory is incorrect, it merely points out that it is invalid.

Axiomatic implications: Uncertainty, EPR, Popper, Bell and gravitation.

Uncertainty as an inherent systemic property and the quantum uncertainty principle we attribute to Heisenberg, as well as the closely related wave/particle duality have been the target of much enquiry and by no means stand on certain and irrefutable ground, nor should they. The Einstein-Podolsky-Rosen (EPR) paradox, is in no way paradoxical. In fact, it reveals the uncertainty relation itself to be “paradoxical.” Indeed, this simple thought experiment involving two particles moving along the same linear path in the same direction at the same speed, maintaining therefore fixed relative distance, does allow the precise simultaneous determination of both position and momentum of either particle. The thought experiment refers to concrete particles, and has a non-paradoxical outcome, where the uncertainty principle refers to quantum probabilistic calculations upon abstract objects, yielding a “paradox” when mistakenly applied directly to the particular, ‘concrete’ world.

Mayants is not the first to advance some of these ideas, which can be seen in the work of Popper in slightly different language⁵. The factual order of historical development points to an initial particle view of EM, with the field then later added as a secondary mathematical abstraction, which subsequently had the particle, the photon, emerge secondary to the field as an excitation³. Indeed, it appears we see the same confusion yet again, and perhaps it may be fruitful to restore the proper genesis of theory and realities, place the photon at the base of its collective wave propagation, and understand it is the source of any emergent field effects.

In reference 5 it is stated that:

“Max Born himself says about his statistical interpretation of wave mechanics: "The solution . . . was suggested by a remark of Einstein's about the connection between the wave theory of light and the photon hypothesis. The intensity [of course, what is meant is the square of the amplitude] of the light waves was to be a measure of the density of the photons or, more precisely, of the probability of photons being present."

"Thus, through Born's statistical interpretation of matter waves even the one problem of quantum theory which appeared not to be statistical - the problem of atomic stability - was reduced to, or replaced by, a statistical problem: Bohr's quantized "preferred orbits" turned out to be those for which the *probability* of an electron's being found on them differed from zero."

"All this is to support my thesis that the *problems of the new quantum theory were essentially of a statistical or probabilistic character.*"

However, Popper also draws this unusual, apparently contrary conclusion which will fit into place later:

“Thus the relativity to specification of which we have spoken is characteristic neither of quantum experiments nor even of statistical experiments: it is a permanent feature of all experimentation. (And a propensity relation might be regarded, and intuitively understood, as a generalization of a “causal” relation, however we may interpret “causality”.) For this reason it seems to me mistaken to regard statistical laws, statistical distributions, and other statistical entities, as non-physical or unreal. Probability fields are physical, even though they depend on, or are relative to, specified experimental conditions.”

In order to make sense of the above statement, it may be beneficial to take an elliptical pathway and consider the consequences of these insights as applied to one of the basic tenets supporting the current predominant quantum viewpoint: the Bell inequalities. Mayants’ commonsense analysis will have come as an unwelcome surprise to some. However, any facts unearthed in a cogent analysis such as his must be accepted and it must be seen where they lead. It may be noted that Bell's inequalities suffer from the

same logical error as the other ‘paradoxical’ constructs considered above: an erroneous substitution of abstract for concrete elements. Bell’s inequalities are based on Bell’s theorem, which is itself a derivative of Bohm’s paradox, and Bohm’s paradox confuses abstract quantum elements and concrete objects. It is argued³, that the basic experiments upon which Bell’s inequalities are based can apply only to large numbers of particle pairs and must represent a statistical expression, and so, it is therefore entirely *expected* that Bell’s inequalities do not conform to experiments involving the real concrete system in question, as Bell’s inequalities confuse abstract and concrete elements to assume simultaneous rotation amongst various axes in the case of *one individual particle*, which is physically impossible. Quantum physics in this light may be rightly seen as representing real non-paradoxical outcomes and Bell’s inequalities are thereby revealed as flawed at their axiomatic basis, hence the apparent but nonexistent paradox.

From this new vantage Mayants³ informs us of the *ordinary view* of the consequences implied which place Bell’s ideas and nonlocal faster than light effects on one side of the scales, and on the opposing side of the balance we find realism and the common if incorrect assumption that *nothing moves faster than c*. Recall that Einstein’s limit of *c* refers to propagation through a vacuum. Does Einstein’s *c* hold good as a matter of consequence to defeat nonlocal theory, if Bell’s ideas are not correct? What of nonlocality? What of light? Do physical processes move faster than light in a nonlocal way and, if so, which ones?

In Tom Van Flandern’s essay⁶, *The Speed of Gravity what the experiments say*, a solid and specific empirical answer is provided:

“The most amazing thing I was taught as a graduate student of celestial mechanics at Yale in the 1960s was that all gravitational interactions between bodies in all dynamical systems had to be taken as instantaneous.

. . . Yet, anyone with a computer and orbit computation or numerical integration software can verify the consequences of introducing a delay into gravitational interactions. The effect on computed orbits is usually disastrous because conservation of angular momentum is destroyed.

. . . While relativists have always been partial to the curved space-time explanation of gravity, it is not an essential feature of GR. Eddington (1920, p. 109) was already aware of the mostly equivalent “refracting medium” explanation for GR features, which retains Euclidean space and time in the same mathematical formalism. In essence, the bending of light, gravitational redshift, Mercury perihelion advance, and radar time delay can all be consequences of electromagnetic wave motion through an underlying refracting medium that is made denser in proportion to the nearness of a source of gravity. (Van Flandern, 1993, pp. 62-67 and Van Flandern, 1994) . . . The principal objection to this conceptually simpler refraction interpretation of GR is that a faster-than-light propagation speed for gravity itself is required. In the context of this paper, that cannot be considered as a fatal objection.

. . . We conclude that the speed of gravity may provide the new insight physics has been awaiting to lead the way to unification of the fundamental forces. . . . Moreover, the modest switch from SR to LR [Lorentzian Relativity] may correct the “wrong turn” physics must have made to get into the dilemma presented by quantum mechanics, that there appears to be no “deep reality” to the world around us. Quantum phenomena that violate the locality criterion may now be welcomed into conventional physics.”

Gravity appears to propagate at extreme super-luminal velocities⁶. It may safely be concluded that the logical inconsistencies of Bell’s theorem and inequalities do not in fact preclude non-locality in its super-luminal aspects. Mayants also comes to the conclusion that photons can vary from *c*, and names fundamental sub *c* non-zero rest mass expressions of EM: emons.

Next recall the famous wave function collapse of the double-slit experiment. A photonic interference pattern ‘collapses’ if measured to become something more closely akin to a single particle. This is traditionally ascribed to the effect of “measurement/observation.” What can be made of this paradoxical anomaly where the observer affects the observed to induce wave function collapse and perhaps even ‘create reality’ ?

Measurement or observation are not the bottom of the process; they are but second order descriptions. Wheeler was highly insightful to posit information at the very deepest level of physical reality. Observation and measurement in terms of a primary informational dynamism then represent: *Informational Exchange*. Information affects physical form. Indeed this is true also in biology, not surprisingly, as biology and its relation to chemistry are founded on a primary physical basis with information at the deepest level⁷. The paradox appears as such, only because the primary role of information and its exchange, which clearly affect form/outcome, has not been understood. Now, it may be seen that there is no wave function collapse in the usual sense; the interference pattern is a complete outcome formed of photons, and the ‘collapsed’ expression is again a different complete outcome formed of photons, both being not in any way uncertain or indeterminate, the differentiation between them being a product of informational exchange which is the dynamic at the bottom of both observation and measurement.

To place this in a human perspective, and suggest a few alterations to the Copenhagen interpretation and some of the more radical theoretic anomalies which have gained predominant sway, such as the deeply troubling many worlds hypothesis, or the equally vexing solipsistic implications of observation, ideas so strange as to have one wonder if an electron is there or perhaps the moon if we are not looking, and place all this into proper relation to probability, attention might turn to some of the more puzzling experiments which are now mounting up and deserve to be addressed.

In these experiments, double-slit interference patterns are seen to change due to thought, and random number and event generators which are properly shielded become more organized in their output. These effects are created at close range, and at *very great distances*⁸⁻¹³. Is this inexplicable paranormal activity, or perhaps the cognitive result of resolved uncertainty affecting photonic wave expression? Theory allows an answer: No! This is simply the physics of informational exchange.

In the case of gravitation and also of thought as it affects reality it appears that some nonlocal aspect is needed to explain the effects we observe. Recall the unlikely assertion by Popper, that appears quite clearly to confuse abstract and concrete elements, which states that probability fields must be attributed reality. He had observed experimental effects which required explanation, a real physical explanation was demanded to account for observed phenomenon, hence his supposition. It might reasonably be posited that probability is not at the root of physical form but that information is. Hence it might be hypothesized that the field in question is not a probability field, but a non-probabilistic informational field: *the ‘bit field.’*

Imagine a simple example of probability: one reaches one’s hand into a concealed container to extract a ball or game chip with some particular marking common to a sub-set of the total objects in the container. Probability is used to guess at result prediction, but in fact the hand does not extract the chip or ball by way of probability, each concrete case is that of selecting one particular concrete object, probability is invoked only to allow prediction under uncertain conditions of human observational constraint, and hence reflects a limit in our available knowledge, not the basic dynamic of the system which is not probabilistic but specific. It has been clearly understood and articulated in previous articles¹⁴ that the nature of human perception is by phenomenological necessity and anatomical analysis understood to be entirely probabilistic. Probability is a valuable and necessary consequence of our human limits. It is a second order method and not a descriptor of underlying processes, but instead an admission of our human limits in defining those processes. Wave function is a necessary abstraction.

With this in mind, the many seemingly paradoxical aspects of quantum theory under the current

interpretation may now be reassessed:

There are no many worlds, as the wave function is a probability distribution, an abstract thing which does not require its unrealized aspects be accounted for in some imaginary other world, for all outcomes are complete in and of themselves. There is no uncertainty or wave/particle duality endemic to physical dynamism, those are aspects not of the system at its lowest level of operation, but reflect our human limits which are revealed in attempting to ascertain the same. Uncertainty is the product and province of human cognition and phenomenology, not external reality. Human mental effects upon physical reality including observation/informational-exchange entirely within the sphere of mentation are revealed in experiments referenced above to yield a very slight but demonstrable impact on physical systems. It appears that there is an experimentally demonstrable and specific place for human consciousness in quantum theory, but not the solipsistic one supposed. It may rightly be concluded that human observation in no case creates an electron to observe it, any more than human observation itself might create the moon. The appearance of probability alteration in experiments with human mentation indicates specific informational exchange over some actual medium, perhaps one such as the proposed 'bit field.' It may be concluded that

*The wave function itself represents an abstract probability distribution, signifying the **possible effects** of a potential REAL alteration in systemic informational allocation.*

The fact that subatomic particles demonstrate some fuzziness and do not behave as virtual little golf balls but in a way more akin to a wave packet, is then not due to the fact that the particle is somehow wave-like or uncertain, but because it is a process, a *specific* process which is informationally interactive, as are the larger emergent structures which they compose en masse.

Future questions:

1. Is the implied connection between gravitation, informational exchange and refraction testable in quantum experiments? Clearly alteration in refractive index can account for faster than c propagation speeds for light. If informational exchange over a 'bit field' accounts for the super-luminal aspects of gravity, and gravitation can be accounted for in its effects upon light by way of alterations in the refractive index as suggested above⁶, then an experiment could be derived where the hypothesis is tested. Hypothetically: *Micro-gravitational effects created through interactive informational exchange alter refractive conditions yielding specific patterned allocations within the experiment thereby determining the outcome.* Can these theoretical postulations be tested?
2. Is probability at the basis of physical reality or is non-probabilistic information? Does the uncertainty relation signify an endemic systemic aspect, or a human phenomenological limit in epistemology?
3. Is there a realistic interpretation of quantum theory which allows for the unification of gravitation in an informational model based around the empirical necessity of other than " c " electromagnetic propagation speeds and experimentally observed nonlocal aspects? Can a quantum model be derived without uncertainty or duality by way of accepting a central tenant of 'informational gravitation'?
4. Is paradox endemic to reality, or is it simply a misunderstanding based on improper assumptions which confuse abstract and real elements?
5. Is it possible to create sound physics based on a constant vacuum propagation value for c ? Does Lorentzian relativity offer an alternative?
6. Is the 'bit field' real?
7. Can clear and evident effects of informationally encoded photons on morpho-functional outcomes in biological systems⁷ be taken as a correct model for a system-wide common informational basis in

physics?

8. Does information theory offer us the elusive prize and connect together gravitational effects with quantum theory by placing informational gravitation as a quantum basis?

9. It appears that the 'bit field' (previously aka the temporal field) *mediates specific entangled relational properties and strength* such as that between a mind and an object or *between gravitationally interactive bodies*, and recent experiments and theories have concluded entangled evolution to be the source of time. Then, could the 'bit field' provide a specific mechanism for temporal/gravitational effects such as gravitational time dilation and others?

Concluding comments.

Our understanding of what light is and is not depends crucially on two interrelated things – experiments carried out meticulously and the theory used to interpret those experiments. As discussed earlier, in his work, when Mayants wishes to talk of particles, he carefully distinguishes between what he calls the *concrete* particles of experiment and the *abstract* particles of theory. This is a rather clever and useful distinction to consider. Experiments are involved with actual reality; theory is always the product of the human mind and, as such, only ever attempts to picture reality rather than be reality. As a result of incorporating this distinction into his reasoning, he has reignited the debate concerning the nature of light – is it merely waves or is a beam of light composed of a huge number of particles? His theoretical calculations look again at the uncomfortable notion of wave/particle duality and show that a particulate theory is capable of describing all events concerning light previously thought to be purely wave phenomena. This proves to be particularly interesting given the recent resurrection of the atomistic view of matter¹⁵ in which everything is fundamentally composed of indivisible particles and void. Interesting because that theory also reduces a light beam to a stream of particles.

As a general point emerging from this discussion, it is worth realising that Mayants also seems to be indicating that great care must be taken when considering any so-called thought experiment. Any theoretician contemplating a physical problem essentially builds a model in his mind to describe the system involved. He then uses well-established techniques, often involving mathematics, to try to understand and explain the original phenomenon. In any thought experiment, the entire process of conceiving an experiment and carrying it out is confined to the mind of the person concerned. There is not any direct contact with physical reality such as is experienced by the experimenter in his laboratory. It seems that Mayants distinction between concrete and abstract particles as discussed here may have farther reaching consequences for future scientists.

Whatever the public view of many might be, these considerations primarily due to Mayants, together with some factors already well-known but highlighted publicly by Santilli, must reawaken the wave/particle duality debate because, in truth, they cast real doubts on that interpretation having much, if any, present day validity.

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Some Possible Links Between Drugs and Violence.

Richard Lawrence Norman.

Abstract:

‘Conventional wisdom’ within the field of medical psychiatry as evidenced by a great many practitioners, is that mental imbalance is most effectively addressed with drugs. New demonstrably efficacious compounds are supported with studies and touted as a primary therapeutic interventional pathway for the treatment of illness. After study and direct observation, I have deduced several specific facts and relations which are not acknowledged within the current field of psychiatry and may constitute a surprising and consistent factor in the rash of unexplained social violence and rampage killings which have become so prevalent. The specific theory, sociopathic patterns, pathogenic etiology, neuroscience and psychology are revealed which underlie this new rash of social pathology.

Theoretic introduction. 5-HT and repression. The key Indoleamine—our unconscious gateway; of civilization, creativity and hell.

Today, we are in a unique position. For the first time in pharmacological history we have achieved a level of specificity which has hitherto been inaccessible, and many hands are to be shaken and bows taken. SSRI drugs have specifically targeted the re-uptake of a single neurotransmitter, 5-HT (5-Hydroxytryptamine), and made a new level of neuro-chemical specificity, and individual targeted therapeutic activity available to millions. So, let us assess this new discovery, which I can attest by my personal experience, is most efficacious. As a sufferer of debilitating OCD for many years, you can rest assured in the knowledge that these drugs do work, and are effective in preventing the symptoms of OCD. Those who claim that these potent drugs are ineffective, and have no use or benefit, *are lying to you*. The drugs work. A skilled clinician, should you be lucky enough to find one, can prescribe them in the correct dosages to control your symptoms. Those will be high doses. Now that that is settled, you should also know another fact: Those studies [examine who funds studies] and sources, which claim these drugs are easily withdrawn, and the resultant symptoms are fairly short lived, most definitely and assuredly, *are lying to you*. Please know the fact: SSRI drugs administered in the proper high doses for disorders such as OCD over long periods, cause permanent damage to the repressive system—

Repression is 5-HT dependent (Norman, 2009, 2010, 2011, 2013, 2013a).

That dry statement, "Repression is 5-HT dependent," has consequences and specific implications, some unexpected, which have changed in ways both positive and otherwise, the entire landscape of psychology. Now, old and vital questions have been answered, and the question of the existence of unconscious fantasy (Talvitie & Ihanus, 2005) and its influence on behavior and the transference have finally been laid to rest (Norman, 2011, 2013, 2016, 2016a). First, I will begin with a general assessment of the specific ontogenetic manifestations and neuroscientific mechanisms involved.

The various transformations of illness which parallel the reduction in repressive functioning as SSRI withdrawal occurs, are necessary symptomatic products of the return of repressed material to consciousness (Freud, 1896, p.170 [first usage of the phrase]), and demonstrate the common defensive and purposive mechanisms of neurotic and psychotic illness (Freud, 1896; Norman, 2010, 2011, 2013). The result is surprising, not because it supports the Freudian idea of all such illness being manifestations of defense rather than random imbalance, but, because the usual barriers which favor one illness over another, the "predispositional" factor itself, seems to have been cast aside (Norman, 2013). This is easily

accounted for if we remember that this is an artificial neurosis/psychosis, not a typical one, and hence, must be assessed on its own footing. The mechanism by which it and its transformations are created, is clear: a relative reduction in 5-HT in the synaptic cleft due to the resumption of normal 5-HT re-uptake, and a resultant wholesale reduction in repressive function (alongside concurrent effects due to any physiological damage from extended treatment). With repressive function permanently impaired, what were predispositional influences favoring illnesses which are dependent upon high levels of repressive functioning such as OCD, are now exposed in their internal construction, repression peeled back, and the core of hysterical illness laid bare. The resultant hallucinatory hysterical psychosis, demonstrates little symbolic distortion of its reactive components, which may be assessed quite directly.

This psychosis, which can be reverse engineered to allow us access to undistorted unconscious content in some cases, has specific concurrent manifestations regarding perception. Repression and the unconscious have subsumed under their functioning, not only a temporally "passive" role (retroactively defining reality) *in relation to the level of perceived conscious input* of previous externally derived experience, functioning not only in the familiar role as a receptacle for containment, affective dampening, dynamic removal and allocation to experience of *preexisting* internal (interoceptive) unconscious stimuli such as memories and fabricated conglomerations such as unconscious fantasies via transference, but also an active one as well. This active real-time repressive function whereby all of perceptual experience has its energetic incoming presentation reduced, *actively repressed* in large measure into the unconscious *as it happens*, I have called: The Active Unconscious (Norman, 2010). Although the concept was conceived before I read the Freud, this is a more functionally connected and useful extension of Freud's stimulus barrier (Freud, 1920, p. 27). This reduction in the ability to partly repress the full force of *external* experience (exteroceptive increase), which runs in close tandem with the concurrent loss of ability to repress the influence of our *internal* perceptions stemming from the unconscious (interoceptive increase), form the full measure of repression proper, and are inexorably joined, rising and falling together in their level of functioning in direct and dependent relation to the increase or decrease in systemic levels of 5-HT.

There is ample neuroscientific evidence to support and explain this mechanism, by virtue of which I myself have been transformed from an extrovert who wanted only more and more intense stimulus, performing before larger and larger crowds, into an introvert, a man who is overwhelmed by natural beauty, weeps openly and often, and feels a sunbeam on his flesh with the same shuddering amazement I used to gain only by way of the most extreme and daring behavior. It is as if the very most basic and fundamental of psychical relations has been altered, and not in any subtle way! The idea that SSRI drugs are specific in their action, is both laughable, and utterly mistaken. These drugs target one of the most evolutionarily ancient systems in the brain, as is evidenced by the central location of the serotonin producing nuclei, which dispense 5-HT to no less than 15 receptor types (Panksepp, 1998, p.111). The list of behavioral functions which *do not* involve brain serotonin is quite short, and can be represented by a single digit: Zero. Yes, 5-HT is so basic, its functions so diverse, we can say: 5-HT is involved...*in everything* (Panksepp, 1998, p. 103). The psychical effects of serotonin depletion and supplementation are no mystery, and neither are its general systemic effects:

Jaak Panksepp, founder of the burgeoning discipline known as Affective Neuroscience, has made one of the most profound, direct and reliable contributions to our knowledge of human and animal neural affective dynamics, from both evolutionary and biological perspectives. This careful and detailed researcher, has by way of experiment and observation come to certain conclusions about the role of brain serotonin in brain processes and behavior.

Firstly we read in Panksepp (1998) [citation form altered]:

"There are good reasons to believe that this system mediates a relatively homogeneous central state function. All motivated and active emotional behaviors including feeding, drinking, sex, aggression, play and practically every other activity (except sleep), appears to be reduced as serotonergic activity increases (Coccaro & Murphy, 1990; Jacobs & Gelperin, 1981) (Panksepp, 1998, p. 111)."

The fact that 5-HT has *some* receptors which increase anxiety, is in my view, not at all inconsistent with the role of 5-HT mediating repression, as anxiety is in many cases the causal instrument by which repression is instated (Freud, 1926; Brenner in Rickman, 1957; Norman, 2010, 2011). We read a general description of the effects of brain serotonin on mental stimulation of both interoceptive and exteroceptive origin, which makes some good sense of the relation between 5-HT and repressive function both "passive" and "active" as previously described. Description from a diagram of 5-HT pathways (Panksepp, 1998):

"Serotonin. Function: reduces impact of incoming information and cross talk between sensory channels" (p. 107). As to the resultant behavioral modifications when brain 5-HT is reduced, (which closely parallel those of REM deprivation): ". . . such animals are behaviorally *disinhibited*: they are more active, more aggressive, hypersexual, and generally exhibit more motivational/emotional energy. . . In short, they appear to be manic." (p. 141).

And lastly, we read:

"In general, it seems that one higher cerebral function of brain serotonin is to sustain stability in perceptual and higher cognitive channels. When this constraint is loosened by a global reduction of 5-HT activity, the probability of information from one channel crossing into another channel is increased. Thus a mild reduction in brain serotonin activity may be an important ingredient for the generation of new insights and ideas in the brain, while the sustained reduction of serotonin might lead to chaotic feelings and perceptions, contributing to feelings of dis coherence and mania.

In sum, perhaps it is this loosening of sensory-perceptual barriers between different brain systems that characterizes dreams, hallucinations and the florid phases of schizophrenia, as well as normal creativity. . . it is worth noting that just as low brain serotonin characterizes the dream state, it also promotes heightened emotionality, both positive and negative. It is a neurochemical state that leads to impulsive behavior in humans (Halperin et al., 1994; Linnoila, et al., 1983; Roy et al., 1988), even ones as extreme as suicide (Asberg, et al., 1976; Brown et al., 1982; Coccaro, 1989). Probably the most striking and replicable neurochemical finding in the whole psychiatric literature is that individuals who have killed themselves typically have abnormally low brain serotonin activity." [Panksepp, 1998, p. 142]

I hope the exact and full implications of this statement are becoming more clear: "Repression is 5-HT dependent." In less technical language you can imagine brain 5-HT, its particular manifestations and effects to be better summed in this less precise but more descriptive phrase: 5-HT is the lid on hell. So now that modern pharmacology has removed the blinders, and allowed us direct access into the forbidden ugliness which is within all mankind, this hidden fuel of his ascension and decline, for all of sublimation and depravity are found within this secret—*let us look*. We will see the main of Freudian theory, this hideous and unflattering picture of inner reality... is essentially correct. However, the situation does not unfold quite as the effects do with animals, and indeed, an SSRI withdrawal subject would wish for a blessed mania to quell their pain, for unlike animals, we have super-ego, and super-ego is masochistic, as a punitive garrison set up within personality (Freud, 1930, pp. 123-124; Norman, 2013a). When we add a punitive super-ego wish to an id wish with reduced repression we have the exact description of the dynamic which creates hysteria proper (Freud, 1915, pp. 180-185). I hope it is now

becoming clear to the reader, why, SSRI withdrawal encourages *hysterical hallucinatory psychosis*.

Drugs and Murder – a possible link:

We are in an age which is fraught with change, some positive and some less so. It seems as if the basic fabric of our culture has torn, as if a qualitatively new and distinct rash of horror and criminal activity has overtaken this age and defined it: the rampage killing, a new sort of crime which appears to defy explanation, but do be sure this is false, and an explanation is at hand. Indeed, these crimes are nothing if not utterly predictable. I will offer up my theory as to the psychological mechanism involved here.

So what has changed? Why are there so many rampage killings, now as never before appearing with such alarming frequency, school shootings, mall murders, movie theatre massacres and the like? There have always been guns in our American society, always so very many guns, but no, these shootings and murders are appearing on a scale never before seen. Ergo: the mechanism must lie elsewhere. There have been neglectful parents and bad children throughout history, so very many bad parents and ugly mean spirited children, but no, these crimes are so tragic and only now, so prolific, so violent and today so much more frequent. Ergo: the mechanism must lie elsewhere. The answer is, although belatedly, becoming clear. I will list but a few cases with partial pharmacological histories and then analyze the connecting factor:

John Shick, 2012, age 30, killed one injured six, was shot by police. Nine different anti-depressants were found in his apartment.

Hammad Memon, 2010, age 14, Shot and killed a student at school. He was taking the SSRI Zoloft.

Christopher Wood, 2009, age 34, cut and shot his wife and three children and committed suicide. He was taking the SSRI Paxil.

Jason Montes, 2009, age 33, killed his wife and shot himself. He was taking the SSRI Prozac.

Steven Kazmierczak, 2008, age 27, killed five, wounded twenty-one then killed himself. He was taking the SSRI Prozac.

Jeff Weise, 2005, age 16, killed his grandfather, grandfather's girlfriend, then drove to the high school, killing seven, wounding five and shooting himself. He was taking the SSRI Prozac.

Doug Williams, 2003, age 48, shot fourteen co-workers, killing six before turning the gun on himself. He was taking the SSRI Zoloft.

Eric Harris, 1999, age 18, along with Dylan Klebold, age 17, shot and killed twelve students and a teacher, wounding twenty-six others before killing themselves. Harris was taking the SSRI Luvox; Klebold's medical records are unavailable.

Kip Kinkel, 1998, age 15, shot his parents to death with a rifle, went to school and open-fired in the cafeteria, killing two and wounding twenty-five. He had been taking the SSRI Prozac.

So let me state at the outset that nothing could be more puerile, reactionary and short-sighted than to condemn an entire class of worthy drugs which are potentially so beneficial, like SSRI drugs, of which Prozac is the most prominent representative. When properly prescribed these drugs do vital and good work. However, these drugs work in specific ways which entail risks. These risks are utterly predictable and have largely been ignored. Do note the similarity in behavior connecting the above mentioned crimes which all entail a violent outburst and then, in many cases end in death by police or suicide. This pattern is created as a psychological function of the neuro-chemical effects of SSRI therapy, tolerance and withdrawal, as these factors interact in specific and predictable ways. Although websites such as

SSRIstories.com and the Citizens Commission on Human Rights website at cchrint.org offer information correlating these crimes with SSRI use and withdrawal, there is not enough information specifying the psychological mechanisms which yield these behavioral effects. I will offer a general analysis of those mechanisms here.

Conscious vs. Unconscious: To understand these factors, we must first understand the basics of unconscious psychology. When an external threat is perceived, we run away or fight. However, the situation is different if the threatening factor comes from within us. Our own ideas, memories and thoughts can be every bit as dangerous to us, and to society, as an external enemy. As we grow up, we learn to control our aggressive and sexual instincts. These ideas and instincts are never truly gone, and can be seen to "reappear" in certain circumstances, such as under conditions of painful deprivation, madness and war, where every murderous human instinct can be seen to reemerge. These instincts then, have never disappeared, rather, they have been repressed, and made unconscious. Society is built upon the bedrock of repression and the unconscious. Psychology informs us, that as these internal instinctual threats return to consciousness, we become ill. In the language of Freudian psychology: symptom formation is a function of the return of the repressed.

I have discovered that SSRI drugs positively affect mental processes by reinforcing repression: repression is 5-HT (5-Hydroxytryptamine) dependent, and SSRI drugs increase 5-HT in the neuronal network by preventing re-uptake of the neurotransmitter in the synaptic system. [I will refer you to the latest edition of Goodman and Gilman's *The Pharmacological Basis of Therapeutics* for a complete description of the neurochemistry involved in the effects of SSRI therapy.] By increasing the amount of 5-HT in the neural system, and preventing the repressed from entering consciousness, they quell mental illness. However, as is the usual case with drugs, tolerance develops and functions as partial withdrawal, and, many patients do, in fact, withdraw from these drugs. In this instance, the effect is reversed, and repression is circumvented, allowing unconscious material to enter consciousness. So the drug that helps by way of reinforcing repression, causes illness as repression is reduced by way of tolerance or withdrawal.

This reduction in overall repressive function manifests itself as an unusual artificial hysterical psychosis, where both aspects of repression are circumvented, amnesia, and distortion via compromise-formation symbolism. If the dose is high, and the term of treatment long, upon withdrawal the effect is severe. In delusion, the psychotic is afforded a level of protection, as his delusion is a sort of distortion, a symbolic transformation of the wishes and/or mnemonic experiences which are returning to consciousness and creating his illness (Freud, 1911, pp. 1-82; 1924, p. 151). Now, in SSRI withdrawal, even this most basic protective function of dream and delusion is defeated, and the most energetic and severe of unconscious material can gain direct and unfettered access to consciousness, free from any distortion. The effect to the ego is absolute and certain: damage of the most severe sort. Super-ego/ego is directly exposed to the most toxic unconscious contents, and its repressions further disintegrate, further revealing the very most energetic and highly disturbing hidden ideations. Sleep, in some cases, may be curtailed to as little as three hours or less a night. Soon, hallucination completes the picture, and a new sort of even more dangerous and severe psychosis is seen to emerge.

I will briefly traverse a secondary avenue of interest before completing the picture. Although the technical, psychological and medical information associated with these drugs is substantial, the fact that repression itself is affected to create behavioral effects has been utterly ignored. *The fact that repression is 5-HT dependent has not been articulated.* The result is clear: as repression is decreased through SSRI withdrawal, two things can be counted upon:

1. A mental illness, whatever its relation to repression, be it defined by the deepest repressions such as OCD or not, *will* be converted into an hysterical illness as hysteria is formed through the return of repressed unconscious contents under *low levels of repression* (or I postulate *perhaps* trigger the emergence of schizophrenia if the subject is predisposed). That is why hysterics demonstrate conversion hysteria, a bodily innervation of opposing wishes, in lieu of more typical repressive means (Freud, 1915, pp. 184-185), or anxiety hysteria, a common hysterical reaction in children, who have yet to develop a

high level of repressive function (Freud, 1909, pp. 1-149; 1915, pp. 182-184).

2. As hysterical illness is formed through SSRI withdrawal, the job of analysis is made much easier, as unconscious ideations which are pathogenic are more easily accessed (Norman, 2011). It should be noted that these contents are likely to reveal themselves as negative transference, which although shunned in modern analysis, is in fact the key to un-riddling the puzzle.

Now we must add but one more bit of information and the analysis will be clear. Our aggressive drives are deeply repressed. These drives are repressed as a function of conscience, of guilt and super-ego, which acts as a conscious "reaction formation," an opposite which fills up consciousness as a replacement, a substitute for the repressed drive (Freud, 1923, p. 56). Sadism, violence used to control an object with no concern for that person or object, is chief among those drives we repress. The unconscious is filled with sadism. When we add guilt to a sadistic stream of great force and potency, the sadism "turns round" on the subject and becomes masochism, the chief representative of the death instinct (Freud, 1919, pp. 193-194; Norman, 2011, p.116).

Guilt + Sadism = Masochism. Now the analysis is plain:

A mentally ill person is placed on SSRI drugs that function to enforce their repressive facility which is failing and creating illness as their overly potent repressed drives return to consciousness. Soon the drug fails to maintain its effect as tolerance ensues, or, the subject withdraws from the drug. Now, repression is defeated, and unconscious content becomes conscious in its most toxic, direct and uncensored form. The subject identifies with his sadistic thoughts which present with such energetic force, as to be utterly irresistible. Once his hatred is spent, the guilt he feels for his actions is revealed, and added to his freed conscious sadistic drives to form masochism, and suicide, often suicide by way of police intervention. The psychology is utterly obvious, and, predictable. (Of course, the more likely result is suicide alone, and the above mentioned pattern of behavior is formed in those cases where sadistic ideation has obtained an energetically predominant place in the mental architecture).

Now imagine the combat veteran, trained in the art of killing, he returns to our shores, a hero, but ill for his service, ill for the guilt of killing. He is prescribed an SSRI drug, and feels better. Soon he tires of the debilitating side effects, and discontinues therapy. Can you see it? What will become of him then? What will become of us? If you are taking one of these drugs, I urge you not to stop. If you do stop, do it slowly, so very slowly, and be careful. These people who kill are not so different than any of us, in fact, any of us could be one of them. Although perhaps differing in intensity and proportion, all of us have these drives... every single one. The only difference is that we can contain them, and can not see them, can not see this part of ourselves. Perhaps the only real difference between one of these killers and one of us, is a misfortune of human honesty, in that they, are unfortunate enough to know a little too much—of themselves. So when you wonder what separates a mad killer from one of us, you may be surprised to learn the difference may be as small as a single question - a question, of human honesty.

Concluding remarks:

The pharmaceutical industries and their lobbies spent ~\$235,107,261 in 2015 in support of their interests. These financial giants pour many millions of dollars into advertising and costly informational distribution aimed directly at patients and physicians. However, the number of well funded studies examining the long term effects of SSRI treatment are scant. Not surprisingly, the result of studies which have been conducted are in keeping with my personal findings and research, and indicate permanent damage associated with SSRI use in depression (El-Mallakh et al. 2011). Other trustworthy researchers and doctors have found the same (Breggin, 2011). To my knowledge no studies are available detailing the long term damage associated with the very much higher doses used to treat populations with OCD. Two of the most widely used drug types in the treatment of mental illness, antipsychotics (including the newer 'atypical antipsychotics') and SSRI drugs, have both been scientifically demonstrated to cause permanent damage: tardive dyskinesia and tardive dysphoria respectively. The

consequences extend past the personal lives of those affected, and influence society at large. Therefore I wish to suggest these possibilities:

1. Studies which are not funded by the pharmaceutical industries must be conducted which spell out the frequency and level of damage incurred through *all the SSRI dosage levels currently advised in treatment regimens for all conditions and populations treated*.

2. That information should be *actively distributed* to patients and doctors and included in product advertising and labeling where it is made plain in large typeface.

3. Serious consideration must be paid to new approaches which allocate potentially damaging drugs a safer place as a third tier treatment option, and serious consideration and priority given to other more healthful modes of treatment such as talk therapies and others, which may then replace potentially harmful drugs as primary first tier interventionary tools in the treatment of mental disease.

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Future's Mirror: The Endocannabinoid System in Human Pathology

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"The future lies in the history."

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Standing Dead—
*Let us cast aside the husk, walk away from that which was
our name, and leave it as a dead thing. Standing Dead are
we—as a tree rent by lightening: now bright and sudden,
we who refuse to fall.*

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Introductory remarks

Mirror of ages. No more exquisite thing can be conceived than the intricate enmeshment of poetry and design, a delicate web drifting in tangled breeze, shimmering in reflection upon rippled waters, a silver question wavering and intricate, each thread ripe with patient purpose and beauty, ripe is she, this child of the ages. Within the present an image stretches, a hand and palm upturned to welcome and nourish, in kindness, so is the bounty time has cast but the dust of eons, as time crumbles, but the hollow sand within which the root of all perfect worlds is struck. So is her magic, but the virtue of the most delicate threads of patience.

The shores of time are rich with treasure.

This book is the child of chance and pain. Could it be? The rumor, the rumor of cure—for cancer? I heard a silly rumor. A rumor that *Cannabis* could influence illness and cure cancer...both. THC. The thin thread of words from the National Cancer Institute confirmed, with the shrug of a shoulder. I began to research. Only the history matters. Deeply, one must read and look here...then the science....then the history, then the science...and *then*, one sees. They have hidden, *time*. Here my friend, I will return her to you and you may know: She is rich with treasure.

From the National Cancer Institute.

“Antitumor activity

Studies in mice and rats have shown that cannabinoids may inhibit tumor growth by causing cell death, blocking cell growth, and blocking the development of blood vessels needed by tumors to grow. Laboratory and animal studies have shown that cannabinoids may be able to kill cancer cells while protecting normal cells.

A study in mice showed that cannabinoids may protect against inflammation of the colon and may have potential in reducing the risk of colon cancer, and possibly in its treatment.

A laboratory study of delta-9-THC in hepatocellular carcinoma (liver cancer) cells showed that it damaged or killed the cancer cells. The same study of delta-9-THC in mouse models of liver cancer showed that it had antitumor effects. Delta-9-THC has been shown to cause these effects by acting on molecules that may also be found in non-small cell lung cancer cells and breast cancer cells.

A laboratory study of cannabidiol (CBD) in estrogen receptor positive and estrogen receptor negative breast cancer cells showed that it caused cancer cell death while having little effect on normal breast cells. Studies in mouse models of metastatic breast cancer showed that cannabinoids may lessen the growth, number, and spread of tumors.

A laboratory study of cannabidiol (CBD) in human glioma cells showed that when given along with chemotherapy, CBD may make chemotherapy more effective and increase cancer cell death without harming normal cells. Studies in mouse models of cancer showed that CBD together with delta-9-THC may make chemotherapy such as temozolomide more effective.”

Source:

https://www.cancer.gov/about-cancer/treatment/cam/patient/cannabis-pdq#link/_13

Really? Perhaps...there's a bit more to it.

The endo-cannabinoid system in human pathology.

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"The future lies in the history."

Abstract:

Cannabis Sativa has been used for medicinal and other purposes for millennia. In the 1990s the CB₁ and CB₂ receptors and the *endogenous* ligands of the *endo*-cannabinoid system proper were discovered: Anandamide *N*-arachidonylethanolamine (AEA) and 2-Arachidonoylglycerol (2-AG). External mediation of the bodily endo-cannabinoid system with exogenous phytochemical cannabinoids and other active compounds within *Cannabis* representative of the *full interactive proliferation of naturally occurring constituents* appears from manifest interdigitated cross-mediational systemic complexity and phylogenetic receptor analysis to imply the likelihood of potential synergistic therapeutic efficacy via evolutionary adaptations beginning from as far back as the Cambrian period or more. This approach utilizing the full proliferation of interactive compounds or some selected intra-active multi-constituent portion thereof, has been demonstrably curtailed by legal, political and systemic interference. This document will spell out the demonstrated functional potential and implied therapeutic utility of cannabinoids and cannabis extracts, support the aforementioned evolutionary hypothesis and demonstrated multifunctional medical utility with both phylogenetic and historical analysis, and then detail what appears to be the suppressed approach that may lead to the speedy and inexpensive treatment or cure of many dread diseases using *Cannabis* extracts, including but not limited to cancer. It is also clearly implied and well supported from historical and current medical perspectives that the raw drug itself is safe and effective in treating many conditions and should be available to dispense via prescription by all qualified medical professionals.

1. Introduction:

Cannabis is a genus of flowering plant belonging to the family Cannabaceae that has been used for medicinal and other purposes for many ages. The ability of *Cannabis* to alter conscious states has been known for some 12,000 years (Able, 1980; McPartland and Pruitt, 2002), and *Cannabis* has been cultivated for at least 6000 years (Atakan, 2012; Li, 1973). The three species often recognized, *Cannabis sativa*, *Cannabis indica* and *Cannabis ruderalis*, may in fact be organized such that *Cannabis indica* and *Cannabis ruderalis* are understood to be subspecies of *Cannabis sativa* [Web ref. 1,2]. The historical written record indicates extracts of *Cannabis Sativa* have been known to produce medicinal effects apart from their psychoactive properties as early as the third millennium BC, from which time Chinese texts describe therapeutic amelioration of pain and cramps (Mechoulam, 1986; Pacher et al. 2006). Chinese emperor Shen-nung (ca. 2000 B.C.) had recorded in the text *Pen-ts'ao Ching*, that cannabis positively affects rheumatism as if the condition were reversed, hence indicating possible anti-inflammatory actions (Hui-Lin, 1975; Burstein & Zurier, 2009). Recent archeological evidence of the usage of *Cannabis* can be found in the 2700-year-old grave of a Caucasoid shaman: “. . . tetrahydrocannabinol, the psychoactive component of cannabis, its oxidative degradation product, cannabinol, other metabolites, and its synthetic enzyme, tetrahydrocannabinolic acid synthase, as well as a novel genetic variant with two single nucleotide polymorphisms. The cannabis was presumably employed by this culture as a medicinal or psychoactive agent, or an aid to divination.” (Russo et al. 2008). Oral ingestion of cannabis (in a dietary form known as Bhang) producing therapeutic anti-anxiety effects has been documented in ancient Indian texts from 3000 years past, and, the wide spread

medical use of cannabis extracts in the United States and elsewhere continued until, in the year 1937 AD Cannabis was suddenly banned for medicinal use in the United States (Pacher et al. 2006).

Cannabinoids are generally defined as: “The chemical compounds that are the active principles in marijuana.” [Gale Encyclopedia of Medicine, 2008]. There are 5 presently recognized *endo*-cannabinoids which act upon the same system as phytochemical and synthetic cannabinoids, but are endogenous: Arachidonylethanolamine (anandamide), 2-arachidonoylglycerol (2-AG), 2-arachidonyl glyceryl ether (noladin ether), virodhamine and N-arachidonoyl-dopamine (NADA). [Web ref. 6]. The basics of endo-cannabinoid signaling reveal a diverse and complex process of interwoven dynamic effects, which are often characterized by retrograde signaling. Retrograde endocannabinoid signaling regulates neuronal activity by way of synthesis and release of enocannabinoid compounds in depolarized post synaptic elements, inducing subsequent substance mobility toward the presynaptic endocannabinoid receptors to which said endocannabinoids bind, thereby influencing future neuronal activity and neurotransmitter release from the presynaptic end of the system (Lovinger, 2008). One familiar example is that of *depolarization-induced suppression of inhibition* in GABA-mediated neuronal activity. Endocannabinoids are released from the postsynaptic neuron after its depolarization, and bind to CB₁ receptors in the presynaptic neuron causing a reduction in subsequent GABA release [Web ref. 3]. CB₁ and CB₂ receptors both modulate the release of chemical messengers, CB₁ in the main from neurons, CB₂ from immune cells (Pertwee, 2006).

The basic endocannabinoids, phytochemical cannabinoids and receptors were discovered as follows (Russo, 2011, p. 1345):

cannabidiol (CBD) (Mechoulam and Shvo, 1963);
tetrahydrocannabinol (THC) (Gaoni and Mechoulam, 1964a);
cannabigerol (CBG) (Gaoni and Mechoulam, 1964b);
cannabichromene (CBC) (Gaoni and Mechoulam, 1966);
cannabidivarin (CBDV) (Vollner et al., 1969)
tetrahydrocannabivarin (THCV) (Gill et al., 1970)
CB₁ (Devane et al., 1988);
anandamide (arachidonylethanolamide, AEA) (Devane et al., 1992);
2-arachidonoylglycerol (2-AG) (Mechoulam et al., 1995; Sugiura et al., 1995).

Subclasses of cannabinoids include [Web ref. 4]:

- Cannabigerols (CBG)
- Cannabichromenes (CBC)
- Cannabidiols (CBD)
- Tetrahydrocannabinols (THC)
- Cannabinol (CBN)
- Cannabinodiol (CBDL)
- Cannabicyclol (CBL)
- Cannabielsoin (CBE)
- Cannabitriol (CBT)
- Cannabivarin (CBV)

- Tetrahydrocannabivarin (THCV)
- Cannabidivarin (CBDV)
- Cannabichromevarin (CBCV)
- Cannabigerovarin (CBGV)
- Cannabigerol Monoethyl Ether (CBGM)

Both CB₁ and CB₂ receptors are *G-protein-coupled receptors* (GPCRs) (Pertwee et al. 2010). Interestingly, both can be found in the human placenta, where they have been shown to have a part in the regulation of serotonin (5-HT) transporter activity (Atakan, 2012; Kenney et al. 1999). CB₁ and CB₂ receptors both work to inhibit the activity of adenylyl cyclase through their Gi/Go_α subunits (Shoemaker, et al. 2005; Demuth and Molleman, 2006). [Web ref. 6].

CB₁:

The central nervous system has more CB₁ receptors than any other single receptor, and the CB₁ receptor is the most highly expressed GPCR in the brain (Pagotto, 2006; Callen et al. 2012). High levels of expression are found in: the olfactory bulb, neocortex, pyriform cortex, hippocampus and amygdala, the basal ganglia, thalamic and hypothalamic nuclei, and subcortical regions such as the septal region, cerebellar cortex, and brainstem nuclei including the periaqueductal grey, and also the spine (Pagotto, 2006; Pacher et al. 2006) [Web ref. 5]. CB₁ receptors mediate dopaminergic, gamma-aminobutyric acid (GABA), glutamatergic, serotonergic, noradrenalin and acetylcholine neurotransmitter systems. Receptor heteromers and resultant systemic combinative effects across different neuronal types create highly complex systemic expressions. Some involve heteromers with the dopamine D₂ receptor, where as in other heteromers two types may be influenced, such as dopamine D₂ and adenosine A_{2A} receptors (Atakan, 2012). CB₁ receptors are expressed to a lesser extent in the pituitary gland, immune cells and reproductive tissues, although they are located in the main at central and peripheral nerve terminals where they mediate the inhibition of transmitter release (Pertwee, 2006).

CB₂:

CB₂ receptors are expressed most often on immune T-cells, macrophages, B-cells, and hematopoietic cells. They are involved in the epidermal and related processes of keratinocytes, and play a role in antinociception, meaning the relief of pain. They are expressed in microglial cells in the brain. Also, CB₂ receptors are targets for therapies in other areas of their anatomical expression, including but not limited to: endothelial and smooth muscle cells, fibroblasts, cardiomyocytes, and the peripheral or central nervous systems (Pacher & Mechoulam, 2011) [Web ref. 6]. The CB₂ receptor is heavily expressed also, in the gastrointestinal system where it modulates inflammatory response (Izzo, 2004; Wright et al. 2008). CB₂ receptors are implicated in a variety of modulatory functions, including immune suppression, induction of apoptosis, and induction of cell migration (Basu, 2011). [Web ref. 6].

CB₁ and CB₂ systems can form heteromers with each other. From (Atakan, 2012):

“Most recently it has been shown that CB₂Rs form heteromers with CB₁Rs in the brain and the agonist coactivation of CB₁Rs and CB₂Rs results in negative crosstalk in AKT1 phosphorylation and neurite outgrowth (Callén *et al.* 2012). The authors point out that there is a bidirectional cross antagonism which involves the antagonists of either receptor to block the other. It is suggested that these data illuminate the mechanism by which CB₂Rs can negatively modulate CB₁R function.”

The system is highly complex, and not yet well understood. The various multitude of systemic interactions involve not only the recognized 60–113 or so cannabinoids, a number which varies with each source, but one must also admit the likely possibility of more as of yet undiscovered active agents

from this intra-dynamic storehouse of phytochemical pharmacopeia, the undiscovered actions and interactions between the plethora of phytochemical constituencies and the bodily system extending to include “entourage effects” with other naturally occurring active components such as but not limited to: terpenoids, flavonoids, and others (Radwan et al. 2009; Andre et al., 2016; De Petrocellis et al. 2011; Russo, 2011; Aizpurua-Olaizola, 2016). [Web ref. 7]. Please note: Cannabis has over 400 chemicals within its constituency (Atakan, 2012).

Those many and various compounds *interact* to create many potent medical effects. In *Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects* (Russo, 2011 p. 1345), we read: “Support derives from studies in which cannabis extracts demonstrated effects two to four times greater than THC (Carlini *et al.*, 1974); unidentified THC antagonists and synergists were claimed (Fairbairn and Pickens, 1981), anticonvulsant activity was observed beyond the cannabinoid fraction (Wilkinson *et al.*, 2003), and extracts of THC and CBD modulated effects in hippocampal neurones distinctly from pure compounds (Ryan *et al.*, 2006).”

At this point some readers may have noticed that it is claimed by many governmental authorities such as that of the United States Federal Government, that Cannabis has *no medical value whatsoever*. Indeed, it is classified along with heroin as a dangerous addictive drug. A Schedule 1 drug that has the “high potential for abuse and no accepted medical treatment use.” [Web ref. 8] Is this true? Are cannabis and its constituents dangerous and addictive like heroin? Does cannabis in fact, have *no medical value whatsoever*? Are these true statements, or are they not? Let us look to empirical studies, many of which are themselves government funded to ascertain the correct answer. Does this drug have valid medical usages, or does it not?

References for this section found in **References, list one**.

2. Detailed clinical applicability of Cannabinoids and secondary phytochemical constituents, or: What’s it good for?

In this section we will condense, greatly simplify and reduce what it is to be strictly remembered is a deeply abbreviated sampling of the highly substantial and overwhelming volume of literature available in support of these many points. I will list subject matter of significant importance with quotations so as to assure the reader each of these many points is accurate and uninfluenced by interpretation.

Subject matter of significant importance:

It is entirely possible that phytochemical cannabinoids might aid in withdrawal and secession of alcohol use in cases of alcoholism as in the paper: *Cannabis as a substitute for alcohol and other drugs* (Reiman, 2009), where we read: “The substitution of one psychoactive substance for another with the goal of reducing negative outcomes can be included within the framework of harm reduction,” and also, that organic harm due to alcohol abuse might well be reduced with inclusion of non-psychoactive cannabinoid CBD which is articulated in the paper, *Cannabidiol, Antioxidants, and Diuretics in Reversing Binge Ethanol-Induced Neurotoxicity* (Hamelink et al. 2005), where we read: “We demonstrate here that CBD, a nonpsychoactive component of marijuana, substantially limits neuronal damage to hippocampal and entorhinal cortical brain regions when administered concurrently with alcohol.”

Allergic conditions may benefit from therapeutic approaches based around exogenous phytochemical cannabinoids as they affect the endocannabinoid system as demonstrated in rodent models with delayed-

type hypersensitivity (DTH) reactions and antigen-induced T-cell cytokine expression, as in the paper *Cannabidiol attenuates delayed-type hypersensitivity reactions via suppressing T-cell and macrophage reactivity* (Liu et al. 2010), where we read: “CBD curbs DTH reactions via suppressing the infiltration and functional activity of T cells and macrophages in the inflammatory site, suggesting a therapeutic potential for CBD for the treatment of type IV hypersensitivity” THC demonstrates efficacy in a murine model of allergen-induced airway inflammation. In *Beneficial effects of cannabinoids (CB) in a murine model of allergen-induced airway inflammation: role of CB1/CB2 receptors* (Braun, 2011), we read: “THC treatment of C57BL/6 wildtype mice dramatically reduced airway inflammation as determined by significantly reduced total cell counts in bronchoalveolar lavage (BAL). . . .” [through] “receptor-independent signalling . . .”

Asthma sufferers may benefit. In *Acute effects of smoked marijuana and oral delta-9-tetrahydrocannabinol on specific airway conductance in asthmatic subjects* (Gong et al. 1984), we read: “both smoked marijuana and oral THC caused significant bronchodilation of at least 2 hours' duration.” In the paper *Cannabinoids as novel anti-inflammatory drugs* (Nagarkatti et al. 2009), we read: “. . . use of exogenous cannabinoids in vivo can constitute a potent treatment modality against inflammatory disorders” We also note positive effects in *Bronchodilator effect of delta1-tetrahydrocannabinol* (Hartley et al. 1978) where we read: “1 delta1-trans-tetrahydrocannabinol, (delta1-THC) produces bronchodilatation in asthmatic patients.” We note commercial applications of THC delivery in the product press release: *New Synthetic Delta-9-THC Inhaler Offers Safe, Rapid Delivery*.

Autism patients may benefit by symptomatic reduction associated with THC. See: *Use of dronabinol (delta-9-THC) in autism: A prospective single-case-study with an early infantile autistic child* (Kurz and Lindengasse, 2010). CB2 receptor mediation is a potential target related to altered immune response of peripheral blood mononuclear cells as in: *Cannabinoid receptor type 2, but not type 1, is up-regulated in peripheral blood mononuclear cells of children affected by autistic disorders* (Siniscalco, et al. 2013). Evidence exists from credible sources concerning the effective functional use of cannabinoids with Autistic conditions: see *Associate Professor Emeritus of Psychiatry at Harvard Medical School: A Novel Approach to the Symptomatic Treatment of Autism by Lester Grinspoon M.D. (2010)*.

Beta-Caryophyllene is a dietary constituent of cannabis with beneficial properties. In the paper, *Beta-caryophyllene is a dietary cannabinoid* (Gertsch et al. 2008), we read: “These results identify (E)-BCP as a functional nonpsychoactive CB2 receptor ligand in foodstuff and as a macrocyclic antiinflammatory cannabinoid in *Cannabis*.” In support, in *Anti-inflammatory cannabinoids in diet: Towards a better understanding of CB2 receptor action?* (Gertsch, 2008), we read: “Our recent finding that beta-caryophyllene, a ubiquitous lipophilic plant natural product, selectively binds to the CB2 receptor and acts as a full agonist is unexpected. Maybe even more unexpected is that oral administration of this dietary compound exerts potent anti-inflammatory effects...” To add further support to the role of dietary cannabinoids, dietary cannabis constituents of other sorts, and Beta-Caryophyllene in particular, in *Endocannabinoids, and Related Analogs in Inflammation* (Burststein and Zurier, 2013), we read: “. . . phytocannabinoids such as tetrahydrocannabinol and cannabidiol, synthetic analogs such as ajulemic acid and nabilone, the endogenous cannabinoids anandamide and related compounds, namely, the elmiric acids, and finally, noncannabinoid components of *Cannabis* that show anti-inflammatory action.” And as to further organ effects and benefits we read in *β -Caryophyllene inhibits dextran sulfate sodium-induced colitis in mice through CB2 receptor activation and PPAR γ pathway* (Bento et al. 2011): “These results demonstrate that the anti-inflammatory effect of BCP involves CB2 and the PPAR γ pathway and suggest BCP as a possible therapy for the treatment of inflammatory bowel disease.”

—Other compounds associated with cannabis have potent efficacy in ameliorating inflammatory bowel disease as well. In *Cannabinoids cool the intestine* (Kunos and Pacher, 2004), we read: “Cannabinoids inhibit motility and secretion in the intestine. They are now assigned the additional task of curbing excessive inflammation, suggesting that drugs targeting the endogenous cannabinoid system could be exploited for inflammatory bowel disease.” In *Cannabidiol Reduces Intestinal Inflammation through the Control of Neuroimmune Axis* (Filippis et al. 2011), it is stated: “Our results therefore indicate that CBD indeed unravels a new therapeutic strategy to treat inflammatory bowel diseases.”

Bipolar disorder patients could benefit. In *Cannabinoids in bipolar affective disorder: a review and discussion of their therapeutic potential* (Ashton et al. 2005), we read: “Cannabis use is common in patients with this disorder and anecdotal reports suggest that some patients take it to alleviate symptoms of both mania and depression. We undertook a literature review of cannabis use by patients with bipolar disorder and of the neuropharmacological properties of cannabinoids suggesting possible therapeutic effects in this condition. . . . specific plant extracts containing THC, CBD, or a mixture of the two in known concentrations, are available and can be delivered sublingually. Controlled trials of these cannabinoids as adjunctive medication in bipolar disorder are now indicated.” In *Opposite relationships between cannabis use and neurocognitive functioning in bipolar disorder and schizophrenia* (Ringen et al. 2009), we read: “The findings suggest that cannabis use may be related to improved neurocognition in bipolar disorder. . . .” And in *Genetic association between bipolar disorder and 524A>C (Leu133Ile) polymorphism of CNR2 gene, encoding for CB2 cannabinoid receptor* (Minocci et al. 2011), we read: “. . . our results suggest that CB2 cannabinoid receptor may play a role in BD.”

Brain Trauma can be ameliorated. In *Cannabinoids and brain injury: therapeutic implications* (Mechoulam et al. 2002), we read: “Mounting in vitro and in vivo data suggest that the endocannabinoids anandamide and 2-arachidonoyl glycerol, as well as some plant and synthetic cannabinoids, have neuroprotective effects following brain injury.” And also from *Cannabinoids as neuroprotective agents in traumatic brain injury* (Biegon, 2004), we read: “Cannabinoids of all classes have the ability to protect neurons from a variety of insults that are believed to underlie delayed neuronal death after traumatic brain injury (TBI), including excitotoxicity, calcium influx, free radical formation and neuroinflammation.” Also from *Cannabinoids as Therapeutic Agents for Ablating Neuroinflammatory Disease* (Cabral and Griffin-Thomas, 2008), we read: “Thus, the cannabinoid-cannabinoid receptor system may prove therapeutically manageable in ablating neuropathogenic disorders such as Alzheimer’s disease, multiple sclerosis, amyotrophic lateral sclerosis, HIV encephalitis, closed head injury, and granulomatous amebic encephalitis.” Then from *Pre- and post-conditioning treatment with an ultra-low dose of Δ^9 -tetrahydrocannabinol (THC) protects against pentylenetetrazole (PTZ)-induced cognitive damage* (Assaf et al. 2011), we read: “Our results suggest that a pre- or post-conditioning treatment with extremely low doses of THC, several days before or after brain injury, may provide safe and effective long-term neuroprotection.”

Cholesterol and Alzheimer’s (see sections below for more) may be ameliorated with dietary hemp seed. From *The effects of hempseed meal intake and linoleic acid on Drosophila models of neurodegenerative diseases and hypercholesterolemia* (Lee et al. 2011), we read: “. . . our results indicate that HSM and linoleic acid exert inhibitory effects on both A β 42 cytotoxicity and cholesterol uptake, and are potential candidates for the treatment of Alzheimer’s disease and cardiovascular disease.” Also, in *Cholesterol-induced stimulation of platelet aggregation is prevented by a hempseed-enriched diet* (Prociuk et al. 2008), we read: “The results of this study demonstrate that when hempseed is added to a cholesterol-enriched diet, cholesterol-induced platelet aggregation returns to control levels.

Cystic Fibrosis could be treated. In *Cannabinoids and Cystic Fibrosis: A Novel Approach to Etiology and Therapy* (Fride, 2002), we read: “Thus it is suggested that potential benefits from THC treatment, in addition to appetite stimulation, will include antiemetic, bronchodilating, anti-inflammatory, anti-diarrheal and hypoalgesic effects.” In *The endocannabinoid-CB receptor system: Importance for development and in pediatric disease* (Fride, 2004), we read: “We suggest cannabinoid treatment for children or young adults with cystic fibrosis in order to achieve an improvement of their health condition including improved food intake and reduced inflammatory exacerbations.”

Dermatitis appears to be treatable with cannabinoid therapies. *Hemp seed, and hemp seed oil should be added to the diet to stave off a variety of conditions.* In *Efficacy of dietary hempseed oil in patients with atopic dermatitis* (Callaway et al. 2005), we read: “Dietary hempseed oil caused significant changes in plasma fatty acid profiles and improved clinical symptoms of atopic dermatitis.” Receptor activity in

association with active phytochemical constituent cannabinoids is also clearly indicated in the amelioration of pathology. In *Attenuation of allergic contact dermatitis through the endocannabinoid system* (Karsak et al. 2007), it states: “Cannabinoid receptor antagonists exacerbated allergic inflammation, whereas receptor agonists attenuated inflammation. These results demonstrate a protective role of the endocannabinoid system in contact allergy in the skin and suggest a target for therapeutic intervention.” In *Anti-inflammatory activity of topical THC in DNFB-mediated mouse allergic contact dermatitis independent of CB1 and CB2 receptors* (Gaffal et al. 2013), we read: “Topically applied THC can effectively attenuate contact allergic inflammation by decreasing keratinocyte-derived pro-inflammatory mediators that orchestrate myeloid immune cell infiltration independent of CB1/2 receptors. This has important implications for the future development of strategies to harness cannabinoids for the treatment of inflammatory skin diseases.”

Dystonia may be treatable with cannabinoids alone or as adjuncts to existing therapies. In *Tetrahydrocannabinol potentiates reserpine-induced hypokinesia* (Moss et al. 1981), we read: “Insofar as reserpine has been used with some clinical efficacy in hyperkinetic movement disorders such as Huntington's disease and tardive dyskinesia, it may be that potentiation of reserpine's hypokinetic effect by a drug such as THC could greatly increase the clinical value of reserpine or related drugs in the treatment of these disorders.” In support of the direct interventional utility of cannabinoids such as CBD in dystonia, in the study *Open label evaluation of cannabidiol in dystonic movement disorders* (Consroe et al. 1986), we read: “Dose-related improvement in dystonia was observed in all patients and ranged from 20 to 50%. Side-effects of CBD were mild and included hypotension, dry mouth, psychomotor slowing, lightheadedness, and sedation.” Concerning blepharospasm, in *Cannabinoid agonists in the treatment of blepharospasm--a case report study* (Gauter et al. 2004), it is stated, “Dronabinol for several weeks improved the patients' social life and attenuated pain perception remarkably. This case study demonstrates that the therapy with a cannabinoid agonist may provide a novel tool in the treatment of blepharospasm and maybe of other multifactorial related movement disorders.” Also, in *Cannabis sativa and dystonia secondary to Wilson's disease*, we read: “A patient with generalized dystonia due to Wilson's disease obtained marked improvement in response to smoking cannabis.”

Fibromyalgia may be treated with Cannabis derived phytochemicals including cannabinoids. In *Tetrahydrocannabinol (Delta 9-THC) Treatment in Chronic Central Neuropathic Pain and Fibromyalgia Patients: Results of a Multicenter Survey* (Weber et al. 2009), we read: “The present survey demonstrates its ameliorating potential for the treatment of chronic pain in central neuropathy and fibromyalgia. A supplemental delta 9-THC treatment as part of a broader pain management plan therefore may represent a promising coanalgesic therapeutic option. . . . *Opioid doses were reduced* and patients perceived THC therapy as effective with tolerable side effects.” [emphasis added]. Let the reader closely note not only general treatment efficacy, but also the *interactive effects between opioids and THC, allowing opioid dosage reduction*. An informative piece of text is available within the article, *Cannabinoids, Endocannabinoids, and Related Analogs in Inflammation* (Burstein and Zurier, 2009): “Possibly the very earliest literature reference on *Cannabis* describes its use as an anti-inflammatory agent. The Chinese emperor Shen-nung (ca. 2000 B.C.), in a work called *Pen-ts'ao Ching*, noted many of the effects of *Cannabis* in humans. Among other properties, it was claimed that cannabis “undoes rheumatism”, suggesting possible anti-inflammatory effects (122). The reports described in this review of the current literature provide support for the claims made by the ancient Chinese healers. These more recent publications include relief from chronic neuropathic pain, fibromyalgia, rheumatoid arthritis, and postoperative pain. In addition, a large body of preclinical data on all classes of cannabinoids, including the endogenous examples, point to a variety of therapeutic targets for cannabinoids and important roles for the endocannabinoids in the physiology of inflammation.” And in *Cannabis Use in Patients with Fibromyalgia: Effect on Symptoms Relief and Health-Related Quality of Life* (Fiz et al. 2011), we read, “After 2 hours of cannabis use, VAS scores showed a statistically significant ($p<0.001$) reduction of pain and stiffness, enhancement of relaxation, and an increase in somnolence and feeling of well being. The mental health component summary score of the SF-36 was significantly higher ($p<0.05$) in cannabis users than in non-users. . . . The use of cannabis was associated with beneficial effects on some FM symptoms.”

GERD may be treated with cannabinoids. In *Cannabinoids for gastrointestinal diseases: potential therapeutic applications*, it is stated (DiCarlo and Izzo, 2003): “A pharmacological modulation of the endogenous cannabinoid system could provide new therapeutics for the treatment of a number of gastrointestinal diseases, including nausea and vomiting, gastric ulcers, irritable bowel syndrome, Crohn's disease, secretory diarrhoea, paralytic ileus and gastroesophageal reflux disease.” In *Beyond acid suppression: new pharmacologic approaches for treatment of GERD*, we read (Kuo and Holloway, 2010): “Cannabinoid agonists, such as Delta(9)-THC, have also been demonstrated to reduce TLESRs and reflux events respectively.”

Herpes may be treatable using cannabinoids. In *The effect of delta-9-tetrahydrocannabinol on herpes simplex virus replication*, we read (Blevins and Dunic, 1980): “Both herpes simplex virus type 1 (HSV-1) and herpes simplex virus type 2 (HSV-2) failed, in an identical fashion to replicate and produce extensive c.p.e. in human cell monolayer cultures which were exposed (8 h before infection, at infection, or 8 h p.i.) to various concentrations of delta-9-tetrahydrocannabinol. Similar results were obtained with a plaque assay utilizing confluent monkey cells.” In *Suppressive effect of delta-9-tetrahydrocannabinol on herpes simplex virus infectivity in vitro* (Lancz et al. 1991), it is stated: “Delta-9-Tetrahydrocannabinol (THC) was found to reduce the infectivity of herpes simplex virus and was without effect against adenovirus type 2 or poliovirus.” In *Delta-9 tetrahydrocannabinol (THC) inhibits lytic replication of gamma oncogenic herpesviruses in vitro* (Medveczky et al. 2004), it is stated that, “THC specifically targets viral and/or cellular mechanisms required for replication and possibly shared by these gamma herpesviruses, and the endocannabinoid system is possibly involved in regulating gamma herpesvirus latency and lytic replication. The immediate early gene ORF 50 promoter activity was specifically inhibited by THC.” And also, in *Adjuvant topical therapy with a cannabinoid receptor agonist in facial postherpetic neuralgia* (Phan et al. 2010), we read, “Postherpetic neuralgia is a frequent adverse event in herpes zoster patients and difficult to treat. Conventional analgetic therapy often fails to reduce the burning pain transmitted by unmyelinated nerve fibers. These nerves express cannabinoid receptors which exert a role in modulation of nociceptive symptoms. . . . Topical cannabinoid receptor agonists are an effective and well-tolerated adjuvant therapy option in postherpetic neuralgia.”

MRSA is a modern scourge which could be positively affected as well. In *Antibacterial cannabinoids from Cannabis sativa: a structure-activity study* (Appendino et al. 2008), we read: “Marijuana (*Cannabis sativa*) has long been known to contain antibacterial cannabinoids, whose potential to address antibiotic resistance has not yet been investigated. All five major cannabinoids (cannabidiol (1b), cannabichromene (2), cannabigerol (3b), Delta (9)-tetrahydrocannabinol (4b), and cannabinol (5)) showed potent activity against a variety of methicillin-resistant *Staphylococcus aureus* (MRSA) strains of current clinical relevance.” In *Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects* (Russo, 2011), we read: “Particular focus will be placed on phytocannabinoid-terpenoid interactions that could produce synergy with respect to treatment of pain, inflammation, depression, anxiety, addiction, epilepsy, cancer, fungal and bacterial infections (including methicillin-resistant *Staphylococcus aureus*).”

ALS (Lou Gehrig's Syndrome) [also see PD section for significant further relevant information.]:

In *Amyotrophic lateral sclerosis: delayed disease progression in mice by treatment with a cannabinoid* (Raman et al. 2004), we read: “Here we report that treatment with Delta(9)-tetrahydrocannabinol (Delta(9)-THC) was effective if administered either before or after onset of signs in the ALS mouse model (hSOD(G93A) transgenic mice). Administration at the onset of tremors delayed motor impairment and prolonged survival in Delta(9)-THC treated mice when compared to vehicle controls.” In *Marijuana in the management of amyotrophic lateral sclerosis* (Carter and Rosen, 2001), we read: “. . . marijuana has now been shown to have strong antioxidative and neuroprotective effects, which may prolong neuronal cell survival. In areas where it is legal to do so, marijuana should be considered in the pharmacological management of ALS.” It is possible CBD might delay disease onset. In *Cannabinol delays symptom onset in SOD1 (G93A) transgenic mice without affecting survival* (Weydt et al. 2005), it

is stated: “CBN was delivered via subcutaneously implanted osmotic mini-pumps (5 mg/kg/day) over a period of up to 12 weeks. We found that this treatment significantly delays disease onset by more than two weeks.” In the report *Cannabinoids and neuroprotection in motor-related disorders* (De Lago and Fernández-Ruiz, 2007), it is stated that: “This should serve to encourage that the present promising evidence obtained mainly at the preclinical level might progress to a real exploitation of neuroprotective benefits of potential cannabinoid-based medicines.” In *Cannabis and amyotrophic lateral sclerosis: hypothetical and practical applications, and a call for clinical trials* (Carter et al. 2010), we read: “Based on the currently available scientific data, it is reasonable to think that cannabis might significantly slow the progression of ALS, potentially extending life expectancy and substantially reducing the overall burden of the disease.”

Alzheimer's Disease:

CBD and THC demonstrate efficacy in ameliorating pathology in cases of Alzheimer's. The CB1 and CB2 receptors are involved. In *Prevention of Alzheimer's Disease Pathology by Cannabinoids: Neuroprotection Mediated by Blockade of Microglial Activation* (Ramirez et al. 2005), we read: “Our results indicate that cannabinoid receptors are important in the pathology of AD and that cannabinoids succeed in preventing the neurodegenerative process occurring in the disease.” The report *Cannabidiol in vivo blunts β -amyloid induced neuroinflammation by suppressing IL-1 β and iNOS expression* (Esposito et al. 2007) states: “The results of the present study confirm *in vivo* anti-inflammatory actions of CBD, emphasizing the importance of this compound as a novel promising pharmacological tool capable of attenuating A β evoked neuroinflammatory responses.” The medical article, *Neuroprotective effect of cannabidiol, a non-psychoactive component from Cannabis sativa, on beta-amyloid-induced toxicity in PC12 cells* (Iuvone et al. 2004), contains this text: “Our results indicate that cannabidiol exerts a combination of neuroprotective, anti-oxidative and anti-apoptotic effects against beta-amyloid peptide toxicity, and that inhibition of caspase 3 appearance from its inactive precursor, pro-caspase 3, by cannabidiol is involved in the signalling pathway for this neuroprotection.” The report *Cannabidiol Reduces A β -Induced Neuroinflammation and Promotes Hippocampal Neurogenesis through PPAR γ Involvement* (Esposito et al. 2011) contains the statements: “Peroxisome proliferator-activated receptor- γ (PPAR γ) has been reported to be involved in the etiology of pathological features of Alzheimer's disease (AD). Cannabidiol (CBD), a Cannabis derivative devoid of psychomimetic effects, has attracted much attention because of its promising neuroprotective properties in rat AD models, even though the mechanism responsible for such actions remains unknown. . . . Moreover, due to its interaction at PPAR γ , CBD was observed to stimulate hippocampal neurogenesis.” Within the report: *Cannabidiol and other cannabinoids reduce microglial activation in vitro and in vivo: relevance to Alzheimer's disease* (Martin-Moreno et al. 2011), we read: “In summary, CBD is able to modulate microglial cell function *in vitro* and induce beneficial effects in an *in vivo* model of AD. Given that CBD lacks psychoactivity it may represent a novel therapeutic approach for this neurologic disease.” In *Cannabidiol as an emergent therapeutic strategy for lessening the impact of inflammation on oxidative stress* (Booz, 2011), we read: “This review discusses recent studies suggesting that cannabidiol may have utility in treating a number of human diseases and disorders now known to involve activation of the immune system and associated oxidative stress, as a contributor to their etiology and progression. These include rheumatoid arthritis, types 1 and 2 diabetes, atherosclerosis, Alzheimer disease, hypertension, the metabolic syndrome, ischemia-reperfusion injury, depression, and neuropathic pain.” In *Safety and efficacy of dronabinol in the treatment of agitation in patients with Alzheimer's disease with anorexia: A retrospective chart review* (Patel et al. 2003), it is stated that: “Dronabinol treatment for agitation in AD patients with anorexia was effective in 31 out of 48 of patients who were refractory to other medications. No adverse events were reported.” In *Effects of dronabinol on anorexia and disturbed behavior in patients with Alzheimer's disease* (Volicer et al. 1997), we read: “These results indicate that dronabinol is a promising novel therapeutic agent which may be useful not only for treatment of anorexia but also to improve disturbed behavior in patients with Alzheimer's disease.” In *A molecular link between the active component of marijuana and Alzheimer's disease pathology* (Eubanks et al. 2006), the statement is found: “Here, we demonstrate that the active component of marijuana, Delta9-tetrahydrocannabinol (THC), competitively inhibits the enzyme acetylcholinesterase (AChE) as well as prevents AChE-

induced amyloid beta-peptide (Abeta) aggregation, the key pathological marker of Alzheimer's disease.” The study, *Cannabidiol inhibits inducible nitric oxide synthase protein expression and nitric oxide production in beta-amyloid stimulated PC12 neurons through p38 MAP kinase and NF-kappaB involvement* (Esposito et al. 2006), states that: “We have previously shown that cannabidiol, the main non-psychotropic component from *Cannabis sativa*, possess a variegate combination of anti-oxidant and anti-apoptotic effects that protect PC12 cells from Abeta toxicity. . . . The here reported data increases our knowledge about the possible neuroprotective mechanism of cannabidiol, highlighting the importance of this compound to inhibit beta-amyloid induced neurodegeneration, in view of its low toxicity in humans.” The text of *The marijuana component cannabidiol inhibits beta-amyloid-induced tau protein hyperphosphorylation through Wnt/beta-catenin pathway rescue in PC12 cells* (Esposito et al. 2006), states that: “Alzheimer's disease (AD) is the most common age-related neurodegenerative disorder. A massive accumulation of beta-amyloid (Abeta) peptide aggregates has been proposed as pivotal event in AD. . . . These results provide new molecular insight regarding the neuroprotective effect of cannabidiol and suggest its possible role in the pharmacological management of AD, especially in view of its low toxicity in humans.” The paper, *Alzheimer's disease; taking the edge off with cannabinoids?* (Campbell and Gowran, 2007) states that: “Δ9-tetrahydrocannabinol can also inhibit acetylcholinesterase activity and limit amyloidogenesis which may improve cholinergic transmission and delay disease progression.”

Arthritis:

As noted above in a quotation from the paper *Cannabinoids, Endocannabinoids, and Related Analogs in Inflammation* (Burstin and Zurier, 2009): “Possibly the very earliest literature reference on *Cannabis* describes its use as an anti-inflammatory agent. The Chinese emperor Shen-nung (ca. 2000 B.C.), in a work called *Pen-ts'ao Ching*, noted many of the effects of *Cannabis* in humans. Among other properties, it was claimed that cannabis “undoes rheumatism”, suggesting possible anti-inflammatory effects (122).” Next, in the study, *ANTI-EDEMA AND ANALGESIC PROPERTIES OF Δ9-TETRAHYDROCANNABINOL (THC)* (Sofia et al. 1973), it is stated that: “Δ9-Tetrahydrocannabinol (THC) is an orally effective anti-edema and analgesic agent. . . . Furthermore, THC is an effective inhibitor of developing adjuvant-induced arthritis and suppresses further development of time established disease. The analgesic activity for THC is substantially greater than that for aspirin. The compound has no antipyretic activity at a dose producing profound anti-edema effects.” The work, *Immunoactive cannabinoids: Therapeutic prospects for marijuana constituents* (Straus, 2000), contains the following statements: “CBD is a potential lead to new classes of agents that would interfere with inflammatory pathways. . . . It is conceivable that marijuana contains a series of cannabinoids that, in the aggregate, could alleviate arthritis as implied in the present report (2), yet remain well tolerated.” Then, in the study, *The Cannabinergic System as a Target for Anti-inflammatory Therapies* (Lu et al. 2006), we read: “Several of these compounds were tested for their effects on immune function, and the results suggest therapeutic opportunities for a variety of inflammatory diseases such as multiple sclerosis, rheumatoid arthritis, inflammatory bowel disease, atherosclerosis, allergic asthma, and autoimmune diabetes through modulation of the endocannabinoid system.” Furthermore, in *Cannabidiol as an emergent therapeutic strategy for lessening the impact of inflammation on oxidative stress* (Booz, 2011), we find: “cannabidiol may have utility in treating a number of human diseases and disorders now known to involve activation of the immune system and associated oxidative stress, as a contributor to their etiology and progression. These include rheumatoid arthritis, types 1 and 2 diabetes, atherosclerosis, Alzheimer disease, hypertension, the metabolic syndrome, ischemia-reperfusion injury, depression, and neuropathic pain.” Next, in the study, *Cannabinoids as novel anti-inflammatory drugs* (Nagarkatti et al. 2009): the text states: “It is becoming increasingly clear that cannabinoid receptors and their endogenous ligands play a crucial role in the regulation of the immune system. Exogenous cannabinoids have been shown to suppress T-cell-mediated immune responses by primarily inducing apoptosis and suppressing inflammatory cytokines and chemokines. Such observations indicate that targeting cannabinoid receptor–ligand interactions may constitute a novel window of opportunity to treat inflammatory and autoimmune disorders.” Then, in *Cannabinoid-induced apoptosis in immune cells as a pathway to immunosuppression* (Rieder et al. 2010), it is stated that: “. . . activation of CB2 provides a novel

therapeutic modality against inflammatory and autoimmune diseases as well as malignancies of the immune system, without exerting the untoward psychotropic effects.” In the study, *Preliminary assessment of the efficacy, tolerability and safety of a cannabis-based medicine (Sativex) in the treatment of pain caused by rheumatoid arthritis* (Blake et al. 2005), we find: “In the first ever controlled trial of a CBM in RA, a significant analgesic effect was observed and disease activity was significantly suppressed following Sativex treatment.” In the study, *The antinociceptive effect of Delta9-tetrahydrocannabinol in the arthritic rat involves the CB(2) cannabinoid receptor* (Cox et al. 2007), the text states: “Our results indicate that the cannabinoid CB(2) receptor plays a critical role in cannabinoid-mediated antinociception, particularly in models of chronic inflammatory pain.” In *Characterisation of the cannabinoid receptor system in synovial tissue and fluid in patients with osteoarthritis and rheumatoid arthritis* (Richardson et al. 2008), we read: “Pre-clinical and clinical studies have demonstrated that cannabis-based drugs have therapeutic potential in inflammatory diseases, including rheumatoid arthritis (RA) and multiple sclerosis. . . . Our data predict that the cannabinoid receptor system present in the synovium may be an important therapeutic target for the treatment of pain and inflammation associated with OA and RA.” In the paper *Synergy between Δ^9 -tetrahydrocannabinol and morphine in the arthritic rat* (Cox et al. 2007), taking careful note of the relation between opioids (morphine) and THC in terms of tolerance and analgesic efficacy we read: “The isobolographic analysis indicated a synergistic interaction between Delta(9)-THC and morphine in both the non-arthritic and the arthritic rats. Since Freund's adjuvant-induced alteration in endogenous opioid tone has been previously shown, our data indicate that such changes did not preclude the use of Delta(9)-THC and morphine in combination. As with acute preclinical pain models in which the Delta(9)-THC/morphine combination results in less tolerance development, the implication of the study for chronic pain conditions is discussed.” In the study, *Involvement of the endocannabinoid system in osteoarthritis pain* (La Porta et al. 2014), we read: The ubiquitous distribution of cannabinoid receptors, together with the physiological role of the endocannabinoid system in the regulation of pain, inflammation and even joint function further support the therapeutic interest of cannabinoids for osteoarthritis. However, limited clinical evidence has been provided to support this therapeutic use of cannabinoids, despite the promising preclinical data. This review summarizes the promising results that have been recently obtained in support of the therapeutic value of cannabinoids for osteoarthritis management.”

Atherosclerosis:

Atherosclerosis may be treatable with cannabis. In *Does Cannabis Hold the Key to Treating Cardiometabolic Disease?* (Szmitko and Verma, 2006) we read: “Studies have demonstrated that modulation of the endocannabinoid system holds great therapeutic promise for the treatment of obesity, dyslipidemia, insulin resistance and atherosclerosis.” In the text of *Low dose oral cannabinoid therapy reduces progression of atherosclerosis in mice* (Steffens et al. 2005), we find the statement: “Thus, THC or cannabinoids with activity at the CB2 receptor may be valuable targets for treating atherosclerosis.” In the study *Cannabinoid receptors in atherosclerosis* (Steffens and Mach, 2006) we read: “The immunomodulatory capacity of cannabinoids is now well established and suggests a broad therapeutic potential of cannabinoids for a variety of conditions, including atherosclerosis.” Next, in *Towards a therapeutic use of selective CB2 cannabinoid receptor ligands for atherosclerosis* (Steffens and Mach, 2006), we find: “Cannabinoids, such as Delta9-tetrahydrocannabinol (THC), which is the major psychoactive compound of marijuana, modulate immune functions and might therefore be of therapeutic use for the treatment of inflammatory diseases. The authors have demonstrated recently that oral treatment with low dose THC inhibits atherosclerosis progression in mice through pleiotropic immunomodulatory effects on inflammatory cells. . . .” In the report *Cannabidiol attenuates high glucose-induced endothelial cell inflammatory response and barrier disruption* (Rajesh et al. 2007), the statement can be found: “Since a disruption of the endothelial function and integrity by HG is a crucial early event underlying the development of various diabetic complications, our results suggest that CBD, which has recently been approved for the treatment of inflammation, pain, and spasticity associated with multiple sclerosis in humans, may have significant therapeutic benefits against diabetic complications and atherosclerosis.” Then in *Cannabinoids and cardiovascular disease: the outlook for clinical treatments* (Ashton and Smith, 2007), we read: “Both CB1 and CB2 receptors have been implicated in a

number of cardiovascular processes, including vasodilation, cardiac protection, modulation of the baroreceptor reflex in the control of systolic blood pressure, and inhibition of endothelial inflammation and the progress of atherosclerosis in a murine model.” Next, in *Cannabinoid receptors in acute and chronic complications of atherosclerosis* (Mach et al. 2008), we read: “It is tempting to suggest that pharmacological modulation of the endocannabinoid system is a potential novel therapeutic strategy in the treatment of atherosclerosis.” More evidence is found in *Pleiotropic effects of the CB2 cannabinoid receptor activation on human monocyte migration: implications for atherosclerosis and inflammatory diseases* (Pacher and Ungvári, 2008) where we read: “In conclusion, these new findings, coupled with recent evidence demonstrating that CB2 receptor activation also attenuates TNF- α -induced endothelial cell activation, transendothelial migration of monocytes and monocyte/neutrophil-endothelial adhesion (3, 4, 21, 23), and decreases TNF- α -induced proliferation and migration of human coronary vascular smooth muscle cells by (22) modulating distinct signaling pathways, provide important new mechanistic insights on the possible pleiotropic effects of CB2 activation in atherosclerosis and other inflammatory disorders.” Hemp seed must be added to the diet. In *Cholesterol-induced stimulation of platelet aggregation is prevented by a hempseed-enriched diet* (Prociuk et al. 2008), we read: “The results of this study demonstrate that when hempseed is added to a cholesterol-enriched diet, cholesterol-induced platelet aggregation returns to control levels.” In the study, *The emerging role of the endocannabinoid system in cardiovascular disease* (Pacher and Steffens, 2009), the statement is found: “In contrast, activation of CB2 receptors in immune cells exerts various immunomodulatory effects, and the CB2 receptors in endothelial and inflammatory cells appear to limit the endothelial inflammatory response, chemotaxis, and inflammatory cell adhesion and activation in atherosclerosis and reperfusion injury. Here, we will overview the cardiovascular actions of endocannabinoids and the growing body of evidence implicating the dysregulation of the ECS in a variety of cardiovascular diseases.”

The Cancers

Breast cancer

Breast cancer may be treatable with Cannabis and cannabinoids. In *Antitumor Activity of Plant Cannabinoids with Emphasis on the Effect of Cannabidiol on Human Breast Carcinoma* (Ligresti et al. 2006), we read; “In conclusion, our data indicate that cannabidiol, and possibly Cannabis extracts enriched in this natural cannabinoid, represent a promising nonpsychoactive antineoplastic strategy. In particular, for a highly malignant human breast carcinoma cell line, we have shown here that cannabidiol and a cannabidiol-rich extract counteract cell growth both in vivo and in vitro as well as tumor metastasis in vivo.” In the work *Δ 9-Tetrahydrocannabinol Inhibits Cell Cycle Progression in Human Breast Cancer Cells through Cdc2 Regulation* (Caffarel et al. 2006), we find the statements: “Here, we show that Δ 9-tetrahydrocannabinol (THC), through activation of CB2 cannabinoid receptors, reduces human breast cancer cell proliferation by blocking the progression of the cell cycle and by inducing apoptosis. . . . Taken together, these data might set the bases for a cannabinoid therapy for the management of breast cancer.” In *Cannabidiol as a novel inhibitor of Id-1 gene expression in aggressive breast cancer cells* (McAllister et al. 2007), we read: “In conclusion, CBD represents the first nontoxic exogenous agent that can significantly decrease Id-1 expression in metastatic breast cancer cells leading to the down-regulation of tumor aggressiveness.” In *Delta(9)-tetrahydrocannabinol Inhibits 17, β -Estradiol-induced Proliferation and Fails to Activate Androgen and Estrogen Receptors in MCF7 Human Breast Cancer Cells* (Von Bueren et al. 2008) we read: “THC fails to act as an estrogen or androgen and appears to reduce 17, β -estradiol-induced proliferation of breast cancer cell lines by a mechanism which is independent of AR and probably does not involve ER either. These results support the notion that THC controls cell proliferation through activation of cannabinoid receptors, independently of AR and ER, and thus might also be used in patients with hormonesensitive tumors.” In, *JunD is involved in the antiproliferative effect of Delta9-tetrahydrocannabinol on human breast cancer cells* (Caffarel et al. 2008), we read: “It has been recently shown that cannabinoids, the active components of marijuana and their derivatives, inhibit cell cycle progression of human breast cancer cells. Here we studied the mechanism of Delta(9)-tetrahydrocannabinol (THC) antiproliferative action in

these cells, and show that it involves the modulation of JunD, a member of the AP-1 transcription factor family.” Further, in *Pathways mediating the effects of cannabidiol on the reduction of breast cancer cell proliferation, invasion, and metastasis* (McAllister et al. 2011), it is stated: “Using immune competent mice, we then show that treatment with CBD significantly reduces primary tumor mass as well as the size and number of lung metastatic foci in two models of metastasis. Our data demonstrate the efficacy of CBD in pre-clinical models of breast cancer. The results have the potential to lead to the development of novel non-toxic compounds for the treatment of breast cancer metastasis, and the information gained from these experiments broaden our knowledge of both Id-1 and cannabinoid biology as it pertains to cancer progression.” Next, in *Cannabinoids in the treatment of cancer* (Alexander et al. 2009), we find: “Cannabinoids, the active components of the hemp plant *Cannabis sativa*, along with their endogenous counterparts and synthetic derivatives, have elicited anti-cancer effects in many different in vitro and in vivo models of cancer. While the various cannabinoids have been examined in a variety of cancer models, recent studies have focused on the role of cannabinoid receptor agonists (both CB(1) and CB(2)) in the treatment of estrogen receptor-negative breast cancer.” Also, in *Cannabinoids reduce ErbB2-driven breast cancer progression through Akt inhibition* (Caffarel et al. 2010), we read: “Our results show that both Δ^9 -tetrahydrocannabinol, the most abundant and potent cannabinoid in marijuana, and JWH-133, a non-psychotropic CB2 receptor-selective agonist, reduce tumor growth, tumor number, and the amount/severity of lung metastases in MMTV-neu mice.” Next, in *Cannabidiol induces programmed cell death in breast cancer cells by coordinating the cross-talk between apoptosis and autophagy* (Shrivastava et al. 2011), we read: “Our study revealed an intricate interplay between apoptosis and autophagy in CBD-treated breast cancer cells and highlighted the value of continued investigation into the potential use of CBD as an antineoplastic agent.” In *Pathways mediating the effects of cannabidiol on the reduction of breast cancer cell proliferation, invasion, and metastasis*, we read (McAllister et al. 2011): “Our data demonstrate the efficacy of CBD in pre-clinical models of breast cancer.”

Cervical cancer

Cervical cancer may be treated with cannabinoids. In the work, *Arachidonyl ethanolamide induces apoptosis of uterine cervix cancer cells via aberrantly expressed vanilloid receptor-1* (Contassot et al. 2004), we read: “Delta(9)-Tetrahydrocannabinol, the active agent of *Cannabis sativa*, exhibits well-documented antitumor properties.” In *Inhibition of Cancer Cell Invasion by Cannabinoids via Increased Expression of Tissue Inhibitor of Matrix Metalloproteinases-1* (Ramer and Hinz, 2008) we read: “Matrigel-coated and uncoated Boyden chambers were used to quantify invasiveness and migration, respectively, of human cervical cancer (HeLa) cells that had been treated with cannabinoids (the stable anandamide analog R(+)-methanandamide [MA] and the phytocannabinoid Δ^9 -tetrahydrocannabinol [THC]) . . . Increased expression of TIMP-1 mediates an anti-invasive effect of cannabinoids. Cannabinoids may therefore offer a therapeutic option in the treatment of highly invasive cancers.” In *Cannabidiol inhibits cancer cell invasion via upregulation of tissue inhibitor of matrix metalloproteinases-1* (Ramer et al. 2010), it is stated: “Altogether, these findings provide a novel mechanism underlying the anti-invasive action of cannabidiol and imply its use as a therapeutic option for the treatment of highly invasive cancers.”

Cholangiocarcinoma

Cholangiocarcinoma may be treated with cannabinoids. In, *Emerging role of cannabinoids in gastrointestinal and liver diseases: basic and clinical aspects* (Izzo and Camilleri, 2008) we read: “Cannabinoids have the potential for therapeutic application in gut and liver diseases. Two exciting therapeutic applications in the area of reversing hepatic fibrosis as well as antineoplastic effects may have a significant impact in these diseases. This review critically appraises the experimental and clinical evidence supporting the clinical application of cannabinoid receptor-based drugs in gastrointestinal, liver and pancreatic diseases.” In *The dual effects of delta(9)-tetrahydrocannabinol on cholangiocarcinoma cells: anti-invasion activity at low concentration and apoptosis induction at high concentration* (Leelawat et al. 2010), it is stated: “Consequently, THC is potentially used to retard cholangiocarcinoma

cell growth and metastasis.”

Colorectal cancer

Colorectal cancer may be treated with cannabinoids. In *The endogenous cannabinoid, anandamide, induces cell death in colorectal carcinoma cells: a possible role for cyclooxygenase 2* (Patsos et al. 2005), we read: “These findings suggest anandamide may be a useful chemopreventive/therapeutic agent for colorectal cancer as it targets cells that are high expressors of COX-2, and may also be used in the eradication of tumour cells that have become resistant to apoptosis.” In *Cannabinoids and cancer: potential for colorectal cancer therapy* (Patsos et al. 2005), it is stated: “Cannabinoids are a class of compounds that are currently used in the treatment of chemotherapy-induced nausea and vomiting, and in the stimulation of appetite. However, there is accumulating evidence that they could also be useful for the inhibition of tumour cell growth by modulating key survival signalling pathways.” In *Cannabinoid Receptor Activation Induces Apoptosis through Tumor Necrosis Factor α -Mediated Ceramide De novo Synthesis in Colon Cancer Cells* (Cianchi et al. 2008), it is stated: “In the present study, we report that both CB1 and CB2 cannabinoid receptor activation induces apoptosis in colon cancer cells, and this is mediated by the *de novo* synthesis of ceramide. Interestingly, we show for the first time that signaling through CB1/CB2 receptor increases ceramide production via a mechanism that involves TNF- α .” In *The cannabinoid δ 9-tetrahydrocannabinol inhibits RAS-MAPK and PI3K-AKT survival signalling and induces BAD-mediated apoptosis in colorectal cancer cells* (Greenhough et al. 2007), we read: “Reduction of BAD protein expression by RNA interference rescued colorectal cancer cells from THC-induced apoptosis. These data suggest an important role for CB1 receptors and BAD in the regulation of apoptosis in colorectal cancer cells. The use of THC, or selective targeting of the CB1 receptor, may represent a novel strategy for colorectal cancer therapy.” In the work *Cannabinoid receptor-independent cytotoxic effects of cannabinoids in human colorectal carcinoma cells: synergism with 5-fluorouracil* (Gustafsson et al. 2009), it is stated: “Cannabinoids (CBs) have been found to exert antiproliferative effects upon a variety of cancer cells, including colorectal carcinoma cells. The aim of this preclinical study was to investigate the effect of synthetic and endogenous CBs. . . . It is concluded that the CB system may provide new targets for the development of drugs to treat colorectal cancer.” In *Cannabinoids in intestinal inflammation and cancer* (Izzo and Camilleri, 2009), it is stated: “Emerging evidence suggests that cannabinoids may exert beneficial effects in intestinal inflammation and cancer.” The work, *Evaluation of the cyclooxygenase inhibiting effects of six major cannabinoids isolated from Cannabis sativa* (Ruhaak et al. 2011), states: “Anti-inflammatory activity (i.e., inhibition of COX-2) is proposed to play an important role in the development of colon cancer, which makes this subject interesting to study further. In the present work, the six cannabinoids tetrahydrocannabinol (Δ^9 -THC), tetrahydrocannabinolic acid (Δ^9 -THC-A), cannabidiol (CBD), cannabidiolic acid (CBDA), cannabigerol (CBG) and cannabigerolic acid (CBGA), isolated from Cannabis sativa, were evaluated for their effects on prostaglandin production. For this purpose an in vitro enzyme based COX-1/COX-2 inhibition assay and a cell based prostaglandin production radioimmunoassay were used. Cannabinoids inhibited cyclooxygenase enzyme activity with IC_{50} values ranging from $1.7 \cdot 10^{-3}$ to $2.0 \cdot 10^{-4}$ M.” In the paper *Induction of apoptosis by cannabinoids in prostate and colon cancer cells is phosphatase dependent* (Sreevalsan et al. 2011), we read: “The effects of cannabidiol (CBD) and the synthetic cannabinoid WIN-55,212 (WIN) on LNCaP (prostate) and SW480 (colon) cancer cell proliferation were determined by cell counting; apoptosis was determined by cleavage of poly(ADP)ribose polymerase (PARP) and caspase-3 (Western blots); and phosphatase mRNAs were determined by real-time PCR. The role of phosphatases and cannabinoid receptors in mediating CBD- and WIN-induced apoptosis was determined by inhibition and receptor knockdown. Conclusion: Cannabinoid receptor agonists induce phosphatases and phosphatase-dependent apoptosis in cancer cell lines; however, the role of the CB receptor in mediating this response is ligand-dependent.”

Glioma (brain cancer)

Glioma may be treated with Cannabinoids. Please do read!

In *Antitumor effects of cannabidiol, a nonpsychoactive cannabinoid, on human glioma cell lines* (Massi et al. 2004), we read: “in conclusion, the nonpsychoactive CBD was able to produce a significant antitumor activity both in vitro and in vivo, thus suggesting a possible application of CBD as an antineoplastic agent.” In *Delta9-tetrahydrocannabinol induces apoptosis in C6 glioma cells* (Sánchez et al. 1998), it is stated: “delta9-Tetrahydrocannabinol (THC), the major active component of marijuana, induced apoptosis in C6.9 glioma cells, as determined by DNA fragmentation and loss of plasma membrane asymmetry. Results thus show that THC-induced apoptosis in glioma C6.9 cells may rely on a CBI receptor-independent stimulation of sphingomyelin breakdown.” In the work, *Cannabinoids Inhibit the Vascular Endothelial Growth Factor Pathway in Gliomas* (Blázquez et al. 2004), the text states: “Moreover, intratumoral administration of the cannabinoid Δ^9 -tetrahydrocannabinol to two patients with glioblastoma multiforme (grade IV astrocytoma) decreased VEGF levels and VEGFR-2 activation in the tumors. Because blockade of the VEGF pathway constitutes one of the most promising antitumoral approaches currently available, the present findings provide a novel pharmacological target for cannabinoid-based therapies.” In *Anti-tumoral action of cannabinoids: Involvement of sustained ceramide accumulation and extracellular signal-regulated kinase activation* (Galve-Roperh et al. 2000), we read: “ Δ^9 -Tetrahydrocannabinol, the main active component of marijuana, induces apoptosis of transformed neural cells in culture. Here, we show that intratumoral administration of Δ^9 -tetrahydrocannabinol and the synthetic cannabinoid agonist WIN-55,212-2 induced a considerable regression of malignant gliomas in Wistar rats and in mice deficient in recombination activating gene 2. . . . Experiments with two subclones of C6 glioma cells in culture showed that cannabinoids signal apoptosis by a pathway involving cannabinoid receptors, sustained ceramide accumulation and Raf1/extracellular signal-regulated kinase activation. These results may provide the basis for a new therapeutic approach for the treatment of malignant gliomas.” In *The non-psychoactive cannabidiol triggers caspase activation and oxidative stress in human glioma cells* (Massi et al. 2006), we read: “Recently, we have shown that the non-psychoactive cannabinoid compound cannabidiol (CBD) induces apoptosis of glioma cells in vitro and tumor regression in vivo. The present study investigated a possible involvement of caspase activation and reactive oxygen species (ROS) induction in the apoptotic effect of CBD. Thus, we found a different sensitivity to the anti-proliferative effect of CBD in human glioma cells and non-transformed cells that appears closely related to a selective ability of CBD in inducing ROS production and caspase activation in tumor cells.” In *A pilot clinical study of Δ^9 -tetrahydrocannabinol in patients with recurrent glioblastoma multiforme* ([Guzmán](#) et al. 2006), it is stated: “ Δ^9 -Tetrahydrocannabinol inhibited tumour-cell proliferation *in vitro* and decreased tumour-cell Ki67 immunostaining when administered to two patients. The fair safety profile of THC, together with its possible antiproliferative action on tumour cells reported here and in other studies, may set the basis for future trials aimed at evaluating the potential antitumoral activity of cannabinoids.” In *Inhibition of tumor angiogenesis by cannabinoids* (Blázquez et al. 2003), we read: “Cannabinoids, the active components of marijuana and their derivatives, induce tumor regression in rodents (8). . . . Inhibition of tumor angiogenesis may allow new strategies for the design of cannabinoid-based antitumoral therapies.” In the work entitled, *Hypothesis: cannabinoid therapy for the treatment of gliomas?* (Velasco et al. 2004), we read: “Remarkably, cannabinoids kill glioma cells selectively and can protect non-transformed glial cells from death. These and other findings reviewed here might set the basis for a potential use of cannabinoids in the management of gliomas.” In *Cannabinoids and gliomas* (Velasco et al. 2007), it states: “The good safety profile of THC, together with its possible growth-inhibiting action on tumor cells, justifies the setting up of future trials aimed at evaluating the potential antitumoral activity of cannabinoids.” In *Cannabidiol inhibits human glioma cell migration through a cannabinoid receptor-independent mechanism* (Vacca et al. 2005), we read: “These results reinforce the evidence of antitumoral properties of CBD, demonstrating its ability to limit tumor invasion, although the mechanism of its pharmacological effects remains to be clarified.” In *Cannabinoids selectively inhibit proliferation and induce death of cultured human glioblastoma multiforme cells* (McAllister, et al. 2005) the text states (please note the synthetic drug’s performance): “Evidence of selective efficacy with WIN 55,212-2 was also observed but the selectivity was less profound, and the synthetic agonist produced a greater disruption of normal cell morphology compared to Delta(9)-THC.” In, *Effects on cell viability* ([Guzmán](#), 2005) we read: “It is therefore very likely that cannabinoids regulate cell survival and cell

death pathways differently in tumour and non-tumour cells. Regarding immune cells, cannabinoids affect proliferation and survival in a complex and still obscure manner that depends on the experimental setting. The findings reviewed here might set the basis for the use of cannabinoids in the treatment of cancer and neurodegenerative diseases.” In *A pilot clinical study of Delta9-tetrahydrocannabinol in patients with recurrent glioblastoma multiforme* (Guzmán et al. 2006), we read: “Here we report the first clinical study aimed at assessing cannabinoid antitumoral action, specifically a pilot phase I trial in which nine patients with recurrent glioblastoma multiforme were administered THC intratumorally. The fair safety profile of THC, together with its possible antiproliferative action on tumour cells reported here and in other studies, may set the basis for future trials aimed at evaluating the potential antitumoral activity of cannabinoids.” In *The non-psychoactive cannabidiol triggers caspase activation and oxidative stress in human glioma cells* (Massi et al. 2006), it states: “Recently, we have shown that the non-psychoactive cannabinoid compound cannabidiol (CBD) induces apoptosis of glioma cells in vitro and tumor regression in vivo. The present study investigated a possible involvement of caspase activation and reactive oxygen species (ROS) induction in the apoptotic effect of CBD. CBD produced a gradual, time-dependent activation of caspase-3, which preceded the appearance of apoptotic death.” In *Cannabinoids Induce Glioma Stem-like Cell Differentiation and Inhibit Gliomagenesis* (Aguado et al. 2007), we read: “Overall, our results demonstrate that cannabinoids target glioma stem-like cells, promote their differentiation, and inhibit gliomagenesis, thus giving further support to their potential use in the management of malignant gliomas.” In *Targeting astrocytomas and invading immune cells with cannabinoids: a promising therapeutic avenue* (Cudaback and Stella, 2007), we read: “In this study, we review in vitro and in vivo evidence supporting the use of cannabinoids for treatment of brain tumors. We further propose the continued intense investigation of cannabinoid efficacies as novel anti-cancer agents, especially in models recapitulating such properties within the unique environment of the brain.” In *Cannabinoids and gliomas* (Velasco et al. 2007), it states: “Of interest, cannabinoids seem to be selective antitumoral compounds, as they kill glioma cells, but not their non-transformed astroglial counterparts. On the basis of these preclinical findings, a pilot clinical study of Delta(9)-tetrahydrocannabinol (THC) in patients with recurrent glioblastoma multiforme has been recently run. The good safety profile of THC, together with its possible growth-inhibiting action on tumor cells, justifies the setting up of future trials aimed at evaluating the potential antitumoral activity of cannabinoids.” In *Cannabinoids as potential new therapy for the treatment of gliomas* (Parolaro and Massi, 2008) we read: “Moreover, cannabinoids appear to be selective antitumoral agents as they kill glioma cells without affecting the viability of nontransformed counterparts. A pilot clinical trial on patients with glioblastoma multiforme demonstrated their good safety profile together and remarkable antitumor effects, and may set the basis for further studies aimed at better evaluating the potential anticancer activity of cannabinoids.” In *Cannabinoids Inhibit Glioma Cell Invasion by Down-regulating Matrix Metalloproteinase-2 Expression* (Blázquez et al. 2008), it states: “Manipulation of MMP-2 expression by RNA interference and cDNA overexpression experiments proved that down-regulation of this MMP plays a critical role in THC-mediated inhibition of cell invasion. Cannabinoid-induced inhibition of MMP-2 expression and cell invasion was prevented by blocking ceramide biosynthesis and by knocking-down the expression of the stress protein p8. As MMP-2 up-regulation is associated with high progression and poor prognosis of gliomas and many other tumors, MMP-2 down-regulation constitutes a new hallmark of cannabinoid antitumoral activity.” In *Delta 9-tetrahydrocannabinol inhibits cell cycle progression by downregulation of E2F1 in human glioblastoma multiforme cells* (Galanti et al. 2008), we read: “Delta(9)-THC is shown to significantly affect viability of GBM cells via a mechanism that appears to elicit G(1) arrest due to downregulation of E2F1 and Cyclin A. Hence, it is suggested that Delta(9)-THC and other cannabinoids be implemented in future clinical evaluation as a therapeutic modality for brain tumors.” In *Down-regulation of tissue inhibitor of metalloproteinases-1 in gliomas: a new marker of cannabinoid antitumoral activity?* (Blázquez et al. 2008), it states: “Here we evaluated the effects of cannabinoids on the expression of tissue inhibitors of metalloproteinases (TIMPs), which play critical roles in the acquisition of migrating and invasive capacities by tumor cells. Local administration of Delta(9)-tetrahydrocannabinol (THC), the major active ingredient of cannabis, down-regulated TIMP-1 expression in mice bearing subcutaneous gliomas, as determined by Western blot and immunofluorescence analyses. This cannabinoid-induced inhibition of TIMP-1 expression in gliomas (i) was mimicked by JWH-133, a selective CB(2) cannabinoid receptor agonist that is devoid of

psychoactive side effects, (ii) was abrogated by fumonisin B1, a selective inhibitor of ceramide synthesis de novo, and (iii) was also evident in two patients with recurrent glioblastoma multiforme (grade IV astrocytoma). THC also depressed TIMP-1 expression in cultures of various human glioma cell lines as well as in primary tumor cells obtained from a glioblastoma multiforme patient.” In *5-Lipoxygenase and anandamide hydrolase (FAAH) mediate the antitumor activity of cannabidiol, a non-psychoactive cannabinoid* (Massi et al. 2008), we read: “in conclusion, the present investigation indicates that CBD exerts its antitumoral effects through modulation of the LOX pathway and of the endocannabinoid system, suggesting a possible interaction of these routes in the control of tumor growth.” In *Anticancer mechanisms of cannabinoids* (Velasco et al. 2016), we read: “In addition to the well-known palliative effects of cannabinoids on some cancer-associated symptoms, a large body of evidence shows that these molecules can decrease tumour growth in animal models of cancer. They do so by modulating key cell signalling pathways involved in the control of cancer cell proliferation and survival. In addition, cannabinoids inhibit angiogenesis and decrease metastasis in various tumour types in laboratory animals. In this review, we discuss the current understanding of cannabinoids as antitumour agents, focusing on recent discoveries about their molecular mechanisms of action, including resistance mechanisms and opportunities for their use in combination therapy.” In *Cannabinoid action induces autophagy-mediated cell death through stimulation of ER stress in human glioma cells* (Salazar et al. 2009), we read: “These findings describe a mechanism by which THC can promote the autophagic death of human and mouse cancer cells and provide evidence that cannabinoid administration may be an effective therapeutic strategy for targeting human cancers.” In *TRB3 links ER stress to autophagy in cannabinoid antitumoral action* (Salazar et al. 2009), we read: “ Δ^9 -tetrahydrocannabinol (THC), the main active component of marijuana, is being investigated as a potential anti-tumoral agent. We find that THC stimulates an endoplasmic reticulum (ER) stress-related signaling pathway, which activates autophagy via inhibition of the Akt/mTORC1 axis.” In *Cannabidiol Enhances the Inhibitory Effects of Δ^9 -Tetrahydrocannabinol on Human Glioblastoma Cell Proliferation and Survival, closely noting the interactive effects* (Marcul et al. 2010), we read: “Our results suggest that the addition of cannabidiol to Δ^9 -THC may improve the overall effectiveness of Δ^9 -THC in the treatment of glioblastoma in cancer patients.” In *The Expression Level of CB1 and CB2 Receptors Determines Their Efficacy at Inducing Apoptosis in Astrocytomas* (Cudaback et al. 2010), we read: “the treatment of tumors with high concentrations of cannabinoids should not be overlooked. In fact, stereotaxic injection of high concentrations of cannabinoids will eradicate a significant portion of C6 astrocytomas inoculated into rodent brains without affecting healthy surrounding tissue or inducing overt adverse effects. . . . Since stereotaxic injection of chemotherapeutic compounds directly into human brain tumor masses constitutes a routine approach for neurosurgeons, high concentrations of cannabinoids can easily be delivered by this technique. . . . Thus, our results suggest that high concentrations of cannabinoids constitute the preferred regimen for neurosurgeons to use when treating malignant astrocytomas with this class of compounds.” In *Spontaneous regression of septum pellucidum/forniceal pilocytic astrocytomas--possible role of Cannabis inhalation* (Foroughi et al. 2011), we read: “Neither patient received any conventional adjuvant treatment. The tumors regressed over the same period of time that cannabis was consumed via inhalation, raising the possibility that the cannabis played a role in the tumor regression.” In *Molecular Mechanisms Involved in the Antitumor Activity of Cannabinoids on Gliomas: Role for Oxidative Stress* (Massi et al. 2010), we read: “Of interest, cannabinoids have displayed great potency in reducing the growth of glioma tumors, one of the most aggressive CNS tumors, either *in vitro* or in animal experimental models curbing the growth of xenografts generated by subcutaneous or intrathecal injection of glioma cells in immune-deficient mice. Cannabinoids appear to be selective antitumoral agents as they kill glioma cells without affecting the viability of non-transformed cells. This review will summarize the anti-cancer properties that cannabinoids exert on gliomas and discuss their potential action mechanisms that appear complex, involving modulation of multiple key cell signaling pathways and induction of oxidative stress in glioma cells.” In *A combined preclinical therapy of cannabinoids and temozolomide against glioma* (Torres et al. 2011), it is stated: “Altogether, our findings support that the combined administration of TMZ and cannabinoids could be therapeutically exploited for the management of GBM.” In *Stimulation of the midkine/ALK axis renders glioma cells resistant to cannabinoid antitumoral action* (Lorente et al. 2011), we read: “ Δ^9 (9)-Tetrahydrocannabinol (THC), the major active ingredient of marijuana, and other cannabinoids inhibit tumor growth in animal models of

cancer, including glioma, an effect that relies, at least in part, on the stimulation of autophagy-mediated apoptosis in tumor cells.”

Leukemia

Leukemia may be treated with cannabinoids. In *Cannabidiol-induced apoptosis in human leukemia cells: A novel role of cannabidiol in the regulation of p22phox and Nox4 expression* (McKallip et al. 2006), we read: “Together, the results from this study reveal that cannabidiol, acting through CB2 and regulation of Nox4 and p22(phox) expression, may be a novel and highly selective treatment for leukemia.” In the study *Effects of cannabinoids on L1210 murine leukemia. 1. Inhibition of DNA synthesis* (Tucker and Friedman, 1977), it is stated: “Delta-9-tetrahydrocannabinol and delta8-tetrahydrocannabinol inhibited RNA and protein synthesis in a fashion analagous to the inhibition of DNA synthesis.” In *Gamma-irradiation enhances apoptosis induced by cannabidiol, a non-psychotropic cannabinoid, in cultured HL-60 myeloblastic leukemia cells* (Gallily et al. 2003), we read: “Two non-psychotropic cannabinoids, cannabidiol (CBD) and cannabidiol-dimethylheptyl (CBD-DMH), induced apoptosis in a human acute myeloid leukemia (AML) HL-60 cell line. . . . Prior exposure of the cells to gamma-irradiation (800 cGy) markedly enhanced apoptosis, reaching values of 93 and 95%, respectively. Human monocytes from normal individuals were resistant to either cannabinoids or gamma-irradiation. Caspase-3 activation was observed after the cannabinoid treatment, and may represent a mechanism for the apoptosis.” In the work, *Targeting CB2 cannabinoid receptors as a novel therapy to treat malignant lymphoblastic disease* (McKallip et al. 2002), we read: “Exposure of murine tumors EL-4, LSA, and P815 to delta-9-tetrahydrocannabinol (THC) in vitro led to a significant reduction in cell viability and an increase in apoptosis.” In the study *Cannabis-induced cytotoxicity in leukemic cell lines: the role of the cannabinoid receptors and the MAPK pathway* (Powles et al. 2005), it is stated: “We have shown that THC is a potent inducer of apoptosis, even at 1 × IC₅₀ (inhibitory concentration 50%) concentrations and as early as 6 hours after exposure to the drug. These effects were seen in leukemic cell lines (CEM, HEL-92, and HL60) as well as in peripheral blood mononuclear cells.” In *Enhancing the in vitro cytotoxic activity of Delta9-tetrahydrocannabinol in leukemic cells through a combinatorial approach* (Liu et al. 2008), we read: “Delta(9)-Tetrahydrocannabinol (THC) is the active metabolite of cannabis, which has demonstrable cytotoxic activity in vitro. In support of our previously published data, we have investigated the interactions between THC and anti-leukemia therapies and studied the role of the signalling pathways in mediating these effects. Results showed clear synergistic interactions between THC and the cytotoxic agents in leukemic cells. “ In *Cannabidiol induced a contrasting pro-apoptotic effect between freshly isolated and precultured human monocytes* (Wu et al. 2010), the text states: “It has been documented that cannabidiol (CBD) induced apoptosis in a variety of transformed cells, including lymphocytic and monocytic leukemias. In contrast, a differential sensitivity between normal lymphocytes and monocytes to CBD-mediated apoptosis has been reported.” In *Cannabidiol-Induced Apoptosis in Human Leukemia Cells: A Novel Role of Cannabidiol in the Regulation of p22phox and Nox4 Expression* (McKallip et al. 2006), we read: “Together, the results from this study reveal that cannabidiol, acting through CB2 and regulation of Nox4 and p22phox expression, may be a novel and highly selective treatment for leukemia.” In *Targeting CB2 cannabinoid receptors as a novel therapy to treat malignant lymphoblastic disease* (McKallip et al. 2002), we read: “Together, the current data demonstrate that CB2 cannabinoid receptors expressed on malignancies of the immune system may serve as potential targets for the induction of apoptosis. Also, because CB2 agonists lack psychotropic effects, they may serve as novel anticancer agents to selectively target and kill tumors of immune origin.” The study *Cannabinoids induce incomplete maturation of cultured human leukemia cells* (Murison et al. 1987), states: “the THC-treated cells failed to exhibit other monocyte markers such as attachment to the surface of tissue culture dishes or morphological maturation beyond the promonocyte stage.” In the report, *Δ9-Tetrahydrocannabinol-Induced Apoptosis in Jurkat Leukemia T Cells Is Regulated by Translocation of Bad to Mitochondria* (Jia et al. 2006), we read: “Plant-derived cannabinoids, including Δ9-tetrahydrocannabinol (THC), induce apoptosis in leukemic cells, although the precise mechanism remains unclear. . . . Together, these data suggested that Raf-1/MEK/ERK/RSK-mediated Bad translocation played a critical role in THC-induced apoptosis in Jurkat cells.”

Liver Cancer

Liver cancer may benefit from Cannabinoid therapy. In *Overexpression of cannabinoid receptors CB1 and CB2 correlates with improved prognosis of patients with hepatocellular carcinoma* (Xu et al. 2006), we read: “Our results indicate that CB1 and CB2 have potential as prognostic indicators and suggest possible beneficial effects of cannabinoids on prognosis of patients with HCC.” In the study, *Emerging role of cannabinoids in gastrointestinal and liver diseases: basic and clinical aspects* (Izzo and Camilleri, 2008), it is stated: “Cannabinoids have the potential for therapeutic application in gut and liver diseases. Two exciting therapeutic applications in the area of reversing hepatic fibrosis as well as antineoplastic effects may have a significant impact in these diseases. . . . other cannabinoid modulators are likely to have an impact on human disease in the future, including hepatic fibrosis and neoplasia.” In *Anti-tumoral action of cannabinoids on hepatocellular carcinoma: role of AMPK-dependent activation of autophagy* (Vara et al. 2011), we read: “In vivo studies revealed that $\Delta(9)$ -THC and JWH-015 reduced the growth of HCC subcutaneous xenografts, an effect that was not evident when autophagy was genetically or pharmacologically inhibited in those tumors. Moreover, cannabinoids were also able to inhibit tumor growth and ascites in an orthotopic model of HCC xenograft.”

Lung Cancer

As has been long known lung cancer may benefit from treatment with cannabinoids. In *Antineoplastic activity of cannabinoids*, a study from 1975 (Munson et al. 1975) we read: “Lewis lung adenocarcinoma growth was retarded by the oral administration of delta-9-tetrahydrocannabinol, delta-8-tetrahydrocannabinol, and cannabinal (CBN) . . . However, delta-9-THC administered daily for 10 days significantly inhibited Friend leukemia virus-induced splenomegaly by 71% at 200 mg/kg as compared to 90.2% for actinomycin D. Experiments with bone marrow and isolated Lewis lung cells incubated in vitro with delta-8-THC and delta-9-THC showed a dose-dependent (10^{-4} to 10^{-7}) inhibition (80-20%, respectively) of tritiated thymidine and ^{14}C -uridine uptake into these cells. CBD was active only in high concentrations (10^{-4}) That these compounds readily cross the blood-brain barrier and do not possess many of the toxic manifestations of presently used cytotoxic agents, makes them an appealing group of drugs to study.” In *Anticancer activity of cannabinoids*, a study from 1975 (Munson et al. 1975), we read: “Lewis lung adenocarcinoma growth was retarded by the oral administration of delta-9-tetrahydrocannabinol, delta-8-tetrahydrocannabinol, and cannabinal (CBN), but not cannabidiol (CBD). Animals treated for 10 consecutive days with delta-9-THC, beginning the day after tumor implantation, demonstrated a dose-dependent action of retarded tumor growth. . . . Delta-9-THC, delta-8-THC, and CBN increased the mean survival time (36% at 100 mg/kg, 25% at 200 mg/kg, and 27% at 50 mg/kg, respectively).” In *Inhibition of Cancer Cell Invasion by Cannabinoids via Increased Expression of Tissue Inhibitor of Matrix Metalloproteinases-1* (Ramer and Hinz, 2008), we read: “The role of TIMP-1 in the anti-invasive action of cannabinoids was analyzed by transfecting HeLa, human cervical carcinoma (C33A), or human lung carcinoma cells (A549) cells with siRNA targeting TIMP-1. . . . Increased expression of TIMP-1 mediates an anti-invasive effect of cannabinoids. Cannabinoids may therefore offer a therapeutic option in the treatment of highly invasive cancers.” In the work *Decrease of plasminogen activator inhibitor-1 may contribute to the anti-invasive action of cannabidiol on human lung cancer cells* (Ramer et al. 2010), we read: “Our data provide evidence for a hitherto unknown mechanism underlying the anti-invasive action of cannabidiol on human lung cancer cells.” In *Cannabidiol inhibits cancer cell invasion via upregulation of tissue inhibitor of matrix metalloproteinases-1* (Ramer et al. 2010), it is stated: “Altogether, these findings provide a novel mechanism underlying the anti-invasive action of cannabidiol and imply its use as a therapeutic option for the treatment of highly invasive cancers.” In *Cannabinoid Receptors, CB1 and CB2, as Novel Targets for Inhibition of Non-Small Cell Lung Cancer Growth and Metastasis* (Preet et al. 2011), we read: “Non-small cell lung cancer (NSCLC) is the leading cause of cancer deaths worldwide; however, only limited therapeutic treatments are available. Hence, we investigated the role of cannabinoid receptors, CB1 and CB2, as novel therapeutic targets against NSCLC. . . . These results suggest that CB1 and CB2 could be used as novel therapeutic targets against NSCLC.” In *Cannabidiol inhibits lung*

cancer cell invasion and metastasis via intercellular adhesion molecule-1 (Ramer et al. 2012), it is stated: “Overall, our data indicate that cannabinoids induce ICAM-1, thereby conferring TIMP-1 induction and subsequent decreased cancer cell invasiveness.” In *Δ^9 -Tetrahydrocannabinol inhibits epithelial growth factor-induced lung cancer cell migration in vitro as well as its growth and metastasis in vivo* (Preet et al. 2008), we read: “Tumor samples from THC-treated animals revealed antiproliferative and antiangiogenic effects of THC. Our study suggests that cannabinoids like THC should be explored as novel therapeutic molecules in controlling the growth and metastasis of certain lung cancers.”

Lymphoma

Lymphoma may be treated with cannabinoids. In *Targeting CB2 cannabinoid receptors as a novel therapy to treat malignant lymphoblastic disease* (McKallip et al. 2002), we read: “Together, the current data demonstrate that CB2 cannabinoid receptors expressed on malignancies of the immune system may serve as potential targets for the induction of apoptosis. Also, because CB2 agonists lack psychotropic effects, they may serve as novel anticancer agents to selectively target and kill tumors of immune origin.” In *Cannabinoid receptor ligands mediate growth inhibition and cell death in mantle cell lymphoma* (Flygare et al. 2005), we read: “Our data suggest that cannabinoid receptors may be considered as potential therapeutic targets in MCL.” In the paper *Expression of cannabinoid receptors type 1 and type 2 in non-Hodgkin lymphoma: growth inhibition by receptor activation* (Gustafsson et al. 2008), it is stated: “Together, our results suggest that therapies using cannabinoid receptor ligands will have efficiency in reducing tumor burden in malignant lymphoma overexpressing CB1 and CB2.”

Melanoma

Cannabinoids may be used to treat Melanoma. In *Cannabinoid receptors as novel targets for the treatment of melanoma* (Blázquez et al. 2006), we read: “Cannabinoid antimelanoma activity was independent of the immune status of the animal, could be achieved without overt psychoactive effects and was selective for melanoma cells vs. normal melanocytes. Cannabinoid antiproliferative action on melanoma cells was due, at least in part, to cell cycle arrest at the G1-S transition via inhibition of the prosurvival protein Akt and hypophosphorylation of the pRb retinoblastoma protein tumor suppressor. These findings may contribute to the design of new chemotherapeutic strategies for the management of melanoma.” In the work *Dronabinol for supportive therapy in patients with malignant melanoma and liver metastases* (Zutt et al. 2006), it is stated: “Loss of appetite and nausea due to liver metastases of malignant melanoma can be treated in individual cases supportively with Dronabinol.” In *Cannabinoid-induced apoptosis in immune cells as a pathway to immunosuppression* (Rieder et al. 2010), we read: “In this review, we will focus on apoptotic mechanisms of immunosuppression mediated by cannabinoids on different immune cell populations and discuss how activation of CB2 provides a novel therapeutic modality against inflammatory and autoimmune diseases as well as malignancies of the immune system, without exerting the untoward psychotropic effects.”

Neuroblastoma

Cannabinoids may be used to treat Neuroblastoma. In the article *Inhibition of neuroblastoma adenylate cyclase by cannabinoid and nantradol compounds* (Howlett, 1984), we read: “These data demonstrate that cannabinoid and nantradol compounds decrease cyclic AMP accumulation in neuronally derived cells, and that this results from an inhibition of basal and hormone-stimulated adenylate cyclase activity.” In *Cannabinoid inhibition of adenylate cyclase. Pharmacology of the response in neuroblastoma cell membranes* (Howlett and Fleming, 1984), we read: “Adenylate cyclase in plasma membranes was inhibited by micromolar concentrations of delta 8-tetrahydrocannabinol and delta 9-tetrahydrocannabinol and by levonantradol and desacetyllevonantradol. . . . The inhibition of adenylate cyclase was specific for psychoactive cannabinoids, since cannabinol and cannabidiol produced minimal or no response.” In *Interaction of delta-9-tetrahydrocannabinol with rat B103 neuroblastoma cells* (Cabral et al. 1987), it states: “The effect of delta-9-tetrahydrocannabinol (delta-9-THC) on the growth

kinetics and morphology of rat B103 neuroblastoma cells was assessed. . . . These results suggest that delta-9-THC interacts with cellular membranes, thereby altering neuroblastoma cell growth and behavior.” In the paper *Tau protein after delta-9-tetrahydrocannabinol in a human neuroblastoma cell line* (Lew, 1996), we read: “A human neuroblastoma cell line, SH-SY5Y, was used to determine the effects of delta-9-tetrahydrocannabinol (THC) on microtubule-associated tau protein. 2. After 48-hr treatment, THC (10(-9) M) decreased 50 kD tau protein in the cytoplasmic (supernatant) fraction, and in the membrane (pellet) fraction the drug (10(-7) M) also decreased 50 kD tau protein. 3. This reduction in tau protein was accompanied by a 27% reduction (P < 0.05) in the membrane (pellet) total protein after (10(-7) M) THC and a 28% increase (P < 0.02) in cytoplasmic (supernatant) total protein after 10(-9) M THC.” In *Stimulation of anandamide biosynthesis in N-18TG2 neuroblastoma cells by delta 9-tetrahydrocannabinol (THC)* (Burstein and Hunter, 1995), it is stated: “A concentration-related stimulation of anandamide (arachidonylethanolamide) synthesis by delta 9-tetrahydrocannabinol (THC) was observed in N-18TG2 neuroblastoma cells.” In *Anandamide induces apoptosis in human cells via vanilloid receptors. Evidence for a protective role of cannabinoid receptors* (Maccarrone et al. 2000), we read: “The endocannabinoid anandamide (AEA) is shown to induce apoptotic bodies formation and DNA fragmentation, hallmarks of programmed cell death, in human neuroblastoma CHP100 and lymphoma U937 cells.” In *Increasing Antiproliferative Properties of Endocannabinoids in N1E-115 Neuroblastoma Cells through Inhibition of Their Metabolism* (Hamtaux et al. 2011), we read: “The antitumoral properties of endocannabinoids received a particular attention these last few years. Indeed, these endogenous molecules have been reported to exert cytostatic, apoptotic and antiangiogenic effects in different tumor cell lines and tumor xenografts. Therefore, we investigated the cytotoxicity of three N-acylethanolamines – N-arachidonylethanolamine (anandamide, AEA), N-palmitoylethanolamine (PEA) and N-oleoylethanolamine (OEA) - which were all able to time- and dose-dependently reduce the viability of murine N1E-115 neuroblastoma cells.”

Oral Cancer

Oral cancer patients may benefit from treatment with cannabinoids. In *Peripheral Cannabinoids Attenuate Carcinoma Induced Nociception in Mice* (Guerrero et al. 2008), we read: “These findings support the suggestion that cannabinoids are capable of producing antinociception in carcinoma-induced pain.” In *Cannabinoids attenuate cancer pain and proliferation in a mouse model* (Saghafi et al. 2011), we read: “The systemic administration of cannabinoid receptor agonists may have important therapeutic implications wherein cannabinoid receptor agonists may reduce morbidity and mortality of oral cancer.” In the work *Cannabinoids Inhibit Cellular Respiration of Human Oral Cancer Cells* (Whyte et al. 2010), it is stated: “The primary cannabinoids, Δ9-tetrahydrocannabinol (Δ9-THC) and Δ8-tetrahydrocannabinol (Δ8-THC) are known to disturb the mitochondrial function and possess antitumor activities. These observations prompted us to investigate their effects on the mitochondrial O₂ consumption in human oral cancer cells (Tu183). . . . A rapid decline in the rate of respiration was observed when Δ9-THC or Δ8-THC was added to the cells. The inhibition was concentration-dependent, and Δ9-THC was the more potent of the two compounds. Anandamide (an endocannabinoid) was ineffective; suggesting the effects of Δ9-THC and Δ8-THC were not mediated by the cannabinoid receptors. Inhibition of O₂ consumption by cyanide confirmed the oxidations occurred in the mitochondrial respiratory chain. . . . These results show the cannabinoids are potent inhibitors of Tu183 cellular respiration and are toxic to this highly malignant tumor.”

Pancreatic cancer

Pancreatic cancer may be treated with cannabinoids. The paper, *Cannabinoids Induce Apoptosis of Pancreatic Tumor Cells via Endoplasmic Reticulum Stress-Related Genes* (Carracedo et al. 2006), states: “Pancreatic adenocarcinomas are among the most malignant forms of cancer and, therefore, it is of especial interest to set new strategies aimed at improving the prognostic of this deadly disease. . . . Knockdown experiments using selective small interfering RNAs showed the involvement of p8 via its downstream endoplasmic reticulum stress-related targets activating transcription factor 4 (ATF-4) and

TRB3 in Δ^9 -tetrahydrocannabinol-induced apoptosis. Cannabinoids also reduced the growth of tumor cells in two animal models of pancreatic cancer. In addition, cannabinoid treatment inhibited the spreading of pancreatic tumor cells. . . . In conclusion, results presented here show that cannabinoids lead to apoptosis of pancreatic tumor cells via a CB2 receptor and *de novo* synthesized ceramide-dependent up-regulation of p8 and the endoplasmic reticulum stress-related genes *ATF-4* and *TRB3*. In *Emerging role of cannabinoids in gastrointestinal and liver diseases: basic and clinical aspects* (Izzo and Camilleri, 2008), we read: “This review critically appraises the experimental and clinical evidence supporting the clinical application of cannabinoid receptor-based drugs in gastrointestinal, liver and pancreatic diseases. . . . cannabinoid modulators are likely to have an impact on human disease in the future, including hepatic fibrosis and neoplasia.” In the paper *Cannabinoids in pancreatic cancer: Correlation with survival and pain* (Michalski et al. 2008), we read: “Cannabinoids exert antiproliferative properties in a variety of malignant tumors, including pancreatic ductal adenocarcinoma (PDAC) Therefore, changes in the levels of endocannabinoid metabolizing enzymes and cannabinoid receptors on pancreatic cancer cells may affect prognosis and pain status of PDAC patients. . . . natural cannabinoids had been used by many societies until their prohibition at the beginning of the last century due to their addictive potential. However, the potential for addiction and psychotropic side effects seems to be by far overestimated, especially for patients with malignant tumors, for whom pain control, stable weight and quality of life are the main measures of medical therapy. . . . Cannabinoids have just recently been shown to exert growth inhibitory properties in pancreatic cancer. Taken together, our observation could—together with other reports—build the basis for a clinical testing of cannabinoids in the treatment of pancreatic cancer. Furthermore, our data strengthen the perception that cannabinoids may be useful in treating pancreatic cancer-associated pain.” In *TRB3 links ER stress to autophagy in cannabinoid antitumoral action* (Salazar et al. 2009), we read: “We find that THC stimulates an endoplasmic reticulum (ER) stress-related signaling pathway, which activates autophagy via inhibition of the Akt/mTORC1 axis. We also show that autophagy is upstream of apoptosis in cannabinoid-induced cancer cell death and that activation of this pathway is necessary for the anti-tumoral action of cannabinoids *in vivo*.” In *Gemcitabine/cannabinoid combination triggers autophagy in pancreatic cancer cells through a ROS-mediated mechanism* (Donadelli et al. 2011), we read: “These findings support a key role of the ROS-dependent activation of an autophagic program in the synergistic growth inhibition induced by GEM/cannabinoid combination in human pancreatic cancer cells.”

Prostate cancer

Prostate cancer is treatable with cannabinoids. In *Delta9-tetrahydrocannabinol induces apoptosis in human prostate PC-3 cells via a receptor-independent mechanism* (Ruiz et al. 1999), we read: “The effect of delta9-tetrahydrocannabinol (THC), the major psycho-active component of marijuana, in human prostate cancer cells PC-3 was investigated. THC caused apoptosis in a dose-dependent manner.” In *Expression of functionally active cannabinoid receptor CB1 in the human prostate gland* (Ruiz-Llorente et al. 2003), we read: “Although cannabinoids have functional and morphologic effects in the prostate gland, the expression of cannabinoid receptors in this tissue has never been investigated. The aim of this study was to analyze the expression of cannabinoid receptors in the human prostate gland and their regulatory effects on adenylyl cyclase activity. . . . The cannabinoid receptor expressed in the prostate negatively regulates adenylyl cyclase activity through a pertussis toxin-sensitive protein.” In *Cannabinoid Receptor Agonist-induced Apoptosis of Human Prostate Cancer Cells LNCaP Proceeds through Sustained Activation of ERK1/2 Leading to G₁ Cell Cycle Arrest* ([Sarfraz](#) et al. 2006), we read: “Based on these data we suggest that cannabinoid receptor agonists should be considered as novel agents for the management of prostate cancer.” In *Anti-proliferative and apoptotic effects of anandamide in human prostatic cancer cell lines: implication of epidermal growth factor receptor down-regulation and ceramide production* (Mimeault et al. 2003), we read: “The potent anti-proliferative and cytotoxic effects of ANA on metastatic prostatic cancer cells might provide basis for the design of new therapeutic agents for effective treatment of recurrent and invasive prostatic cancers.” In *Endocannabinoids in endocrine and related tumours* (Bifulco et al. 2008), we read: “Accumulated evidence indicates that CBs could be an important target for the treatment of cancer due to their ability to regulate signalling pathways critical for cell growth and survival. Several studies have produced exciting new leads in the search for

anticancer treatments with cannabinoid-related drugs.” In the work, *Inhibition of human tumour prostate PC-3 cell growth by cannabinoids R(+)-Methanandamide and JWH-015: Involvement of CB₂* (Olea-Herrero et al. 2009), we read: “We have previously shown that cannabinoids induce growth inhibition and apoptosis in prostate cancer PC-3 cells, which express high levels of cannabinoid receptor types 1 and 2 (CB₁ and CB₂). . . . This study defines the involvement of CB₂-mediated signalling in the *in vivo* and *in vitro* growth inhibition of prostate cancer cells and suggests that CB₂ agonists have potential therapeutic interest and deserve to be explored in the management of prostate cancer.” In *The endocannabinoid system and cancer: therapeutic implication* (Guindon and Hohmann, 2011), we read: “In this regard, cannabis-like compounds offer therapeutic potential for the treatment of breast, prostate and bone cancer in patients.” In *The endocannabinoid system in prostate cancer* (Díaz-Laviada, 2011), we read: “Moreover, several cannabinoids exert antitumoral properties against prostate cancer, reducing xenograft prostate tumor growth, prostate cancer cell proliferation and cell migration.” In *Induction of apoptosis by cannabinoids in prostate and colon cancer cells is phosphatase dependent* (Sreevalsan et al. 2011), it is stated: “We hypothesized that the anticancer activity of cannabinoids was linked to induction of phosphatases. . . . CBD and WIN inhibited LNCaP and SW480 cell growth . . . Cannabinoid receptor agonists induce phosphatases and phosphatase-dependent apoptosis in cancer cell lines.” In *Cannabinoid receptor type 1 (CB1) activation inhibits small GTPase RhoA activity and regulates motility of prostate carcinoma cells* (Nithipatikom et al. 2012), we read: “The CB1 and its endogenous and synthetic agonists are emerging as therapeutic targets in several cancers due to their ability to suppress carcinoma cell invasion and migration. . . . These results indicate the unique CB1 signaling and support the model that EC, through their autocrine activation of CB1 and subsequent repression of RhoA activity, suppress migration in prostate carcinoma cells.” In *The cannabinoid R+ methanandamide induces IL-6 secretion by prostate cancer PC3 cells* (Olea-Herrero et al. 2009), we read: “Our findings also suggest that CB2 agonists may offer a novel approach in the treatment of prostate cancer by decreasing cancer epithelial cell proliferation.” In the work *Receptors and Prolactin Receptors by Endocannabinoids Leads to Inhibition of Human Breast and Prostate Cancer Cell Proliferation* (Melck et al. 2000), we read: “These findings suggest that endogenous cannabinoids and CB1 receptor agonists are potential negative effectors of PRL- and NGF induced biological responses, at least in some cancer cells.”

Squamous cell carcinoma

Squamous cell carcinoma may be treated with cannabinoids. In the work, *A Population-based Case-Control Study of Marijuana Use and Head and Neck Squamous Cell Carcinoma* (Liang et al. 2009), we read: “Our study suggests that moderate marijuana use is associated with reduced risk of HNSCC.” In *Inhibition of skin tumor growth and angiogenesis in vivo by activation of cannabinoid receptors* (Casanova et al. 2003), we read: “In any event, the present report, together with the implication of CB₂- or CB₂-like receptors in the control of peripheral pain (40–42) and inflammation (41), opens the attractive possibility of finding cannabinoid-based therapeutic strategies for diseases of the skin and other tissues.” In the paper *Peripheral Cannabinoids Attenuate Carcinoma Induced Nociception in Mice* (Guerrero et al. 2008), we read: “These findings support the suggestion that cannabinoids are capable of producing antinociception in carcinoma-induced pain.” In *Cannabinoids as therapeutic agents in cancer: current status and future implications* (Chakravarti et al. 2014), we read: “Δ⁹-THC induced apoptosis in oral squamous cell carcinoma (OSCC), a malignant form of oral cancer.”

Thyroid cancer

Thyroid cancer may be treated with Cannabinoids. In *Inhibitory effects of cannabinoid CB1 receptor stimulation on tumor growth and metastatic spreading: actions on signals involved in angiogenesis and metastasis* (Portella et al. 2003), we read: “Our findings indicate that CB1 receptor agonists might be used therapeutically to retard tumor growth *in vivo* by inhibiting at once tumor growth, angiogenesis, and metastasis.” In *A new strategy to block tumor growth by inhibiting endocannabinoid inactivation* (Bifulco et al. 2004), it is stated: “These findings indicate that endocannabinoids tonically control tumor growth *in vivo* by both CB1-mediated and non-CB1-mediated mechanisms and that, irrespective of the

molecular mechanism of their anti-proliferative action, inhibitors of their inactivation might be used for the development of novel anti-cancer drugs.” In the work *Endocannabinoids in endocrine and related tumours* (Bifulco et al. 2008), we read: “recent evidence indicates that endocannabinoids influence the intracellular events controlling the proliferation of numerous types of endocrine and related cancer cells, thereby leading to both in vitro and in vivo antitumour effects. In particular, they are able to inhibit cell growth, invasion and metastasis of thyroid, breast and prostate tumours. The chief events of endocannabinoids in cancer cell proliferation are reported highlighting the correspondent signalling involved in tumour processes: regulation of adenylyl cyclase, cyclic AMP-protein kinase-A pathway and MEK-extracellular signal-regulated kinase signalling cascade.” In *Cannabinoid 2 receptor induction by IL-12 and its potential as a therapeutic target for the treatment of anaplastic thyroid carcinoma* (Shi et al. 2008), we read: “Given that cannabinoids have shown antitumor effects in many types of cancer models, CB2 may be a viable therapeutic target for the treatment of anaplastic thyroid carcinoma.

Cancer—General information

A point to consider: The reader may now be somewhat convinced that there is considerable multi-target mechanism-specific applicability of phytochemical cannabinoids and other constituents of cannabis in the amelioration of pathologies such as cancer and other diseases through a great number of highly interdigitated systemic mediations. Please continue on, and again observe the scope, level of degree of said *intra*-connectivity between this plant and human health and pathology, which possibly appears even from this incomplete and early vantage point to be part of a single coevolutionary environmental systemic dynamic of some kind, hence the stress on the prefix “intra-.” It appears even now, that this level of interwoven systemic mediation and multilayered systemic cross-relational complexity could imply some sort of long-term adaptation to explain the observed complexity and cross-mediatory dynamics, checks and balances of these therapeutic compounds. The specifics of phylogenetic receptor evolution will be dealt with in a later section.

In *Targeting CB2-GPR55 Receptor Heteromers Modulates Cancer Cell Signaling* (Moreno et al. 2014), we read: “These findings unveil the existence of previously unknown signaling platforms that help explain the complex behavior of cannabinoids and may constitute new targets for therapeutic intervention in oncology.” In *Endocannabinoids in the immune system and cancer* (Parolaro et al. 2002), it is stated: “The experimental evidence reviewed in this article argues in favor of the therapeutic potential of these compounds in immune disorders and cancer.” In *Therapeutic potential of cannabinoids in CNS disease* (Croxford, 2003), we read: “. . . delta(9)-THC, has been used successfully for increasing appetite in patients with HIV wasting disease, and cannabinoid receptor antagonists may reduce obesity. Acute adverse effects following cannabis usage include sedation and anxiety. These effects are usually transient and may be less severe than those that occur with existing therapeutic agents. . . . This review highlights recent advances in understanding of the endocannabinoid system and indicates CNS disorders that may benefit from the therapeutic effects of cannabinoid treatment.” In *Cannabinoid receptor systems: therapeutic targets for tumour intervention* (Jones and Howl, 2003), we read: “Much of our understanding of the signalling mechanisms activated by cannabinoids is derived from studies of receptors expressed by tumour cells; hence, this review provides a succinct summary of the molecular pharmacology of cannabinoid receptors and their roles in tumour cell biology. Moreover, there is now a genuine expectation that the manipulation of cannabinoid receptor systems may have therapeutic potential for a diverse range of human diseases. Thus, this review also summarises the demonstrated antitumour actions of cannabinoids and indicates possible avenues for the future development of cannabinoids as antitumour agents.” In *Changes in the Endocannabinoid System May Give Insight into new and Effective Treatments for Cancer* (Alpini & DeMorrow, 2009), we read: “Marijuana and its derivatives have been used in medicine for centuries, however, it was not until the isolation of the psychoactive component of Cannabis sativa (Δ^9 -tetrahydrocannabinol; Δ^9 -THC) and the subsequent discovery of the endogenous cannabinoid signaling system that research into the therapeutic

value of this system reemerged. Ongoing research is determining that regulation of the endocannabinoid system may be effective in the treatment of pain (Calignano *et al.*, 1998; Manzanares *et al.*, 1999), glaucoma (Voth and Schwartz, 1997), and neurodegenerative disorders such as Parkinson's disease (Piomelli *et al.*, 2000) and multiple sclerosis (Baker *et al.*, 2000). In addition, cannabinoids might be effective anti-tumoral agents because of their ability to inhibit the growth of various types of cancer cell lines in culture (De Petrocellis *et al.*, 1998; Ruiz *et al.*, 1999; Sanchez *et al.*, 1998, 2001) and in laboratory animals (Galve-Roperh *et al.*, 2000).” In *Use of cannabinoid receptor agonists in cancer therapy as palliative and curative agents* (Pisanti *et al.* 2009), it is stated: “Emerging evidence suggests that agonists of cannabinoid receptors expressed by tumour cells may offer a novel strategy to treat cancer.” In *Cannabinoid receptor ligands as potential anticancer agents--high hopes for new therapies?* (Oesch and Gertsch, 2009), we read: “Probably the most interesting question is whether cannabinoids could be useful in chemoprevention or in combination with established chemotherapeutic agents.” In *Multicenter, double-blind, randomized, placebo-controlled, parallel-group study of the efficacy, safety, and tolerability of THC:CBD extract and THC extract in patients with intractable cancer-related pain*, carefully noting *combinative* phytochemical effects and interaction with opioids (Johnson *et al.* 2010), we read: “This study compared the efficacy of a tetrahydrocannabinol:cannabidiol (THC:CBD) extract, a nonopioid analgesic endocannabinoid system modulator, and a THC extract, with placebo, in relieving pain in patients with advanced cancer. In total, 177 patients with cancer pain, who experienced inadequate analgesia despite chronic opioid dosing, entered a two-week, multicenter, double-blind, randomized, placebo-controlled, parallel-group trial. Patients were randomized to THC:CBD extract (n = 60), THC extract (n = 58), or placebo (n = 59). The primary analysis of change from baseline in mean pain Numerical Rating Scale (NRS) score was statistically significantly in favor of THC:CBD compared with placebo (improvement of -1.37 vs. -0.69), whereas the THC group showed a nonsignificant change (-1.01 vs. -0.69). Twice as many patients taking THC:CBD showed a reduction of more than 30% from baseline pain NRS score when compared with placebo (23 [43%] vs. 12 [21%]). . . . This study shows that THC:CBD extract is efficacious for relief of pain in patients with advanced cancer pain not fully relieved by strong opioids.” In *Targeting the endocannabinoid system for the treatment of cancer--a practical view* (Fowler *et al.* 2010), we read: “It is concluded that cannabinoids (or agents modulating the endogenous cannabinoid system) are an attractive target for drug development in the cancer area. . . .” In *Cannabis-derived substances in cancer therapy--an emerging anti-inflammatory role for the cannabinoids*, noting multiple effects of therapeutic systemic mediation (Liu *et al.* 2010), we read: “Recently, interest in developing cannabinoids as therapies has increased following reports that they possess anti-tumour properties. Research into cannabinoids as anti-cancer agents is in its infancy, and has mainly focussed on the pro-apoptotic effects of this class of agent. Impressive anti-cancer activities have been reported; actions that are mediated in large part by disruptions to ubiquitous signalling pathways such as ERK and PI3-K. However, recent developments have highlighted a putative role for cannabinoids as anti-inflammatory agents. Chronic inflammation has been associated with neoplasia for sometime, and as a consequence, reducing inflammation as a way of impacting cancer presents a new role for these compounds.” In *Antitumorigenic effects of cannabinoids beyond apoptosis, noting multiple effects of therapeutic systemic mediation* (Freimuth *et al.* 2010) we read: “Over past years, the antitumorigenic effects of cannabinoids have emerged as an exciting field in cancer research. Apart from their proapoptotic and antiproliferative action, recent research has shown that cannabinoids may likewise affect tumor cell angiogenesis, migration, invasion, adhesion, and metastasization.” In *Anticancer mechanisms of cannabinoids* (Velasco *et al.* 2016), it states: “In addition to the well-known palliative effects of cannabinoids on some cancer-associated symptoms, a large body of evidence shows that these molecules can decrease tumour growth in animal models of cancer. . . . Those observations have already contributed to the foundation for the development of the first clinical studies that will analyze the safety and potential clinical benefit of cannabinoids as anticancer agents.” In the paper *The endocannabinoid system and cancer: therapeutic implication* (Guindon and Hohmann, 2011), we read: “The endocannabinoid system is implicated in a variety of physiological and pathological conditions (inflammation, immunomodulation, analgesia, cancer and others). The main active ingredient of cannabis, $\Delta(9)$ -tetrahydrocannabinol ($\Delta(9)$ -THC), produces its effects through activation of CB(1) and CB(2) receptors. CB(1) receptors are expressed at high levels in the central nervous system (CNS), whereas CB(2) receptors are concentrated predominantly, although not exclusively, in cells of the

immune system. . . . Identification of safe and effective treatments to manage and improve cancer therapy is critical to improve quality of life and reduce unnecessary suffering in cancer patients. In this regard, cannabis-like compounds offer therapeutic potential for the treatment of breast, prostate and bone cancer in patients. Further basic research on anti-cancer properties of cannabinoids as well as clinical trials of cannabinoid therapeutic efficacy in breast, prostate and bone cancer is therefore warranted.” In *Cannabinoids, endocannabinoids, and cancer* (Hermanson and Marnett, 2011), we read: “Modulation of the endocannabinoid system by pharmacological agents in various cancer types reveals that it can mediate antiproliferative and apoptotic effects by both cannabinoid receptor-dependent and -independent pathways. Selective agonists and antagonists of the cannabinoid receptors, inhibitors of endocannabinoid hydrolysis, and cannabinoid analogs have been utilized to probe the pathways involved in the effects of the endocannabinoid system on cancer cell apoptosis, proliferation, migration, adhesion, and invasion. The antiproliferative and apoptotic effects produced by some of these pharmacological probes reveal that the endocannabinoid system is a promising new target for the development of novel chemotherapeutics to treat cancer.”

Colitis

Colitis may be treatable with cannabinoids. In *Agonists of cannabinoid receptor 1 and 2 inhibit experimental colitis induced by oil of mustard and by dextran sulfate sodium*, (Kimball et al. 2006) we read: “These findings validate the OM colitis model with respect to the DSS model and provide strong support to the emerging idea that cannabinoid receptor activation mediates protective mechanisms in experimental colitis.” In the paper, *Targeting endocannabinoid degradation protects against experimental colitis in mice: involvement of CB1 and CB2 receptors* (Storr et al. 2008), is stated: “Mice were treated with trinitrobenzene-sulfonic acid in presence and absence of the fatty acid amide hydrolase (FAAH) blocker URB597, the EC membrane transport inhibitor VDM11, and combinations of both. Inflammation was significantly reduced in the presence of URB597, VDM11, or both as evaluated by macroscopic damage score, myeloperoxidase levels, and colon length. These effects were abolished in CB(1)- and CB(2)-receptor-gene-deficient mice. . . . In conclusion, drugs targeting EC degradation offer therapeutic potential in the treatment of inflammatory bowel diseases.” In *Activation of cannabinoid (CB)1 receptors results in attenuation of experimental colitis* (Storr et al. 2009), we read: “Our aim was to examine the role of CB2 receptors in experimental colitis . . . We show that activation of the CB2 receptor protects against experimental colitis in mice. Increased expression of CB2 receptor mRNA and aggravation of colitis by AM630 suggests a role for this receptor in normally limiting the development of colitis. These results support the idea that the CB2 receptor may be a possible novel therapeutic target in inflammatory bowel disease.” In *Cannabidiol, a safe and non-psychotropic ingredient of the marijuana plant Cannabis sativa, is protective in a murine model of colitis* (Borrelli et al. 2009), we read: “In conclusion, cannabidiol, a likely safe compound, prevents experimental colitis in mice.” In *The Cannabinoid 1 Receptor (CNR1) 1359 G/A Polymorphism Modulates Susceptibility to Ulcerative Colitis and the Phenotype in Crohn’s Disease* (Storr et al. 2010), the text states: “The endocannabinoid system may influence the manifestation of inflammatory bowel diseases, suggesting endocannabinoids as potential target for future therapies.” In *The effects of Δ^9 -tetrahydrocannabinol and cannabidiol alone and in combination on damage, inflammation and in vitro motility disturbances in rat colitis* (Jamontt et al. 2010), we read: “In this model of colitis, THC and CBD not only reduced inflammation but also lowered the occurrence of functional disturbances. Moreover the combination of CBD and THC could be beneficial therapeutically, via additive or potentiating effects.” In *Cannabidiol Reduces Intestinal Inflammation through the Control of Neuroimmune Axis* (De Filippis et al. 2011), we read: “Our results therefore indicate that CBD indeed unravels a new therapeutic strategy to treat inflammatory bowel diseases.” In *Alternative targets within the endocannabinoid system for future treatment of gastrointestinal diseases* (Schicho and Storr, 2011), we read: “Many beneficial effects of herbal and synthetic cannabinoids on gut motility and inflammation have been demonstrated, suggesting a vast potential for these compounds in the treatment of gastrointestinal disorders. . . . Drugs that inhibit endocannabinoid degradation and raise the level of endocannabinoids are becoming increasingly promising alternative therapeutic tools to manipulate the ECS.”

Depression:

Those who suffer from depression could benefit from treatment with cannabinoids. In *Cannabinoids promote embryonic and adult hippocampus neurogenesis and produce anxiolytic- and antidepressant-like effects* (Jiang et al. 2005), we read: “The hippocampal dentate gyrus in the adult mammalian brain contains neural stem/progenitor cells (NS/PCs) capable of generating new neurons, i.e., neurogenesis. Most drugs of abuse examined to date decrease adult hippocampal neurogenesis, but the effects of cannabis (marijuana or cannabinoids) on hippocampal neurogenesis remain unknown. . . . X-irradiation of the hippocampus blocked both the neurogenic and behavioral effects of chronic HU210 treatment, suggesting that chronic HU210 treatment produces anxiolytic- and antidepressant-like effects likely via promotion of hippocampal neurogenesis.” In *Decreased depression in marijuana users* (Denson and Earleywine, 2006), we read: “Despite comparable ranges of scores on all depression subscales, those who used once per week or less had less depressed mood, more positive affect, and fewer somatic complaints than non-users. Daily users reported less depressed mood and more positive affect than non-users.” In *Do patients use marijuana as an antidepressant?* (Gruber et al. 1996), we read: “We review this literature and present five cases in which the evidence seems particularly clear that marijuana produced a direct antidepressant effect. If true, these observations argue that many patients may use marijuana to “self-treat” depressive symptoms.” In *Cannabinoids elicit antidepressant-like behavior and activate serotonergic neurons through the medial prefrontal cortex* (Bambico et al. 2007), we read: “These results demonstrate that CB1R agonists possess antidepressant-like properties and modulate 5-HT neuronal activity via the mPFCv.” In *Treating depression with cannabinoids* (Blaas, 2008), we read: “The presented observations suggest that dronabinol has an antidepressive potential that can readily be used in medical practice.” In *Antidepressant-like effect of Δ^9 -tetrahydrocannabinol and other cannabinoids isolated from *Cannabis sativa* L* (El-Alfy et al. 2010), we read: “Results of this study show that Δ^9 -THC and other cannabinoids exert antidepressant-like actions, and thus may contribute to the overall mood-elevating properties of cannabis.” In *Pharmacological exploitation of the endocannabinoid system: new perspectives for the treatment of depression and anxiety disorders?* (Saito et al. 2010), we read: “Animal experiments suggest that drugs promoting endocannabinoid action may represent a novel strategy for the treatment of depression and anxiety disorders.” In *Endocannabinoid system dysfunction in mood and related disorders* (Ashton and Moore, 2011), we read: “However, efficacy trials of cannabinoids in psychiatric disorders are limited but offer some encouragement. . . . Research is needed to elucidate the role of the EC system in psychiatric disorders and for clinical trials with THC, CBD and synthetic cannabinoids to assess their therapeutic potential.” In *Cannabinoids and emotionality: a neuroanatomical perspective* (McLaughlin and Gobbi, 2012), we read: “The endocannabinoid system has recently emerged as a promising therapeutic target for the treatment of stress-related emotional disorders. A growing literature base has collectively demonstrated that facilitation of endocannabinoid signaling promotes antidepressant- and anxiolytic-like responses in preclinical animal models, while disruption of this system profoundly affects emotion, cognition, and neuroendocrine functioning. . . . Accordingly, local pharmacological augmentation of endocannabinoid signaling within discrete corticolimbic subregions may serve as a promising therapeutic strategy for the treatment of these debilitating disorders.”

DIABETES

Diabetes may be treated with cannabinoids. In *Cannabidiol Preserves Retinal Neurons and Reduces Vascular Permeability in Experimental Diabetes* (Liou et al. 2004), we read: “CBD preserves retinal neurons and reduces vascular permeability in experimental diabetes. These results suggest that CBD could be a valuable new therapy for the treatment/prevention of diabetes' retinal complications.” In *Cannabidiol Arrests Onset of Autoimmune Diabetes in NOD Mice* (Weiss et al. 2008), we read: “Our data strengthen our previous assumption that CBD, known to be safe in man, can possibly be used as a therapeutic agent for treatment of type 1 diabetes.” In *Neuroprotective and Blood-Retinal Barrier-Preserving Effects of Cannabidiol in Experimental Diabetes* (El-Remessy et al. 2006), we read: “CBD

treatment significantly reduced oxidative stress; decreased the levels of tumor necrosis factor- α , vascular endothelial growth factor, and intercellular adhesion molecule-1; and prevented retinal cell death and vascular hyperpermeability in the diabetic retina.” In *Cannabidiol attenuates high glucose-induced endothelial cell inflammatory response and barrier disruption* (Rajesh et al. 2007), we read: “A nonpsychoactive cannabinoid cannabidiol (CBD) has been shown to exert potent anti-inflammatory and antioxidant effects and has recently been reported to lower the incidence of diabetes in nonobese diabetic mice and to preserve the blood-retinal barrier in experimental diabetes. . . . our results suggest that CBD, which has recently been approved for the treatment of inflammation, pain, and spasticity associated with multiple sclerosis in humans, may have significant therapeutic benefits against diabetic complications and atherosclerosis.” In *Mediation of Cannabidiol anti-inflammation in the Retina by Equilibrative Nucleoside Transporter and A2A Adenosine Receptor* (Liou et al. 2008), we read: “Cannabidiol (CBD), a non-psychoactive, non-toxic compound has been shown to block diabetes- and endotoxin-induced retinal damage. . . . These results suggest that the activated A2AAR in the retinal microglial cells plays a major role in anti-inflammation in the retina, and that CBD anti-inflammatory effects are linked to adenosine uptake inhibition.” In *Presence of functional cannabinoid receptors in human endocrine pancreas* (Bermúdez-Silva et al. 2008), we read: “Together, these results suggest a role for endogenous endocannabinoid signalling in regulation of endocrine secretion in the human pancreas.” In *Cannabidiol As a Putative Novel Therapy for Diabetic Retinopathy: A Postulated Mechanism of Action as an Entry Point for Biomarker-Guided Clinical Development* (Liou et al. 2009), we read: “This review is focused on cannabidiol, a non-psychoactive native cannabinoid, as an emerging and novel therapeutic modality based on systematic studies in animal models of inflammatory retinal diseases including diabetic retinopathy - one of the retinal diseases associated with vascular neuroinflammation. We present the postulated and preclinically documented novel mechanisms that may underlie cannabidiol mode of action in diabetic retinopathy.”

In *Cannabinoids as novel anti-inflammatory drugs* (Nagarkatti et al. 2009), we read: “Manipulation of endocannabinoids and/or use of exogenous cannabinoids *in vivo* can constitute a potent treatment modality against inflammatory disorders. This review will focus on the potential use of cannabinoids as a new class of anti-inflammatory agents against a number of inflammatory and autoimmune diseases that are primarily triggered by activated T cells or other cellular immune components. . . . Insulin-dependent Type 1 diabetes mellitus (T1DM) is an autoimmune disease resulting in destruction of insulin-producing pancreatic β cells, a process that is assumed to be mediated mainly by CD4 Th1 and CD8 T lymphocytes [125]. In rodents, T1D is induced by administration of multiple low doses of streptozotocin (MLDSTZ). This model is used for studying autoimmune processes associated with pancreatic β -cell pathogenesis. A study performed by Li *et al.* indicated that Δ 9-THC could exert a transient attenuation of MLDSTZ-induced autoimmune diabetes. Δ 9-THC treated (150 mg/kg) CD-1 mice exhibited reduced hyperglycemia and a significant decrease in the loss of pancreatic insulin. MLDSTZ-induced insulinitis was also significantly attenuated by decreases in CD3+ inflammatory cells in the pancreatic islets and in mRNA expression for IL-12, IFN- γ and TNF- α . It was suggested that in this model, the autoimmune component was most effectively modulated by Δ 9-THC treatment [126]. Similarly, CBD treatment has been shown to significantly inhibit and delay destructive insulinitis and inflammatory Th1-associated cytokine production in nonobese diabetes-prone (NOD) female mice. CBD-treated mice exhibited significant reduction of plasma levels of the proinflammatory cytokines IFN- γ and TNF- α , whereas production of the Th2-associated cytokines IL-4 and IL-10 was increased when compared with untreated control mice, thus shifting the immune response from Th1 to Th2 dominance [127]. A recent study indicated that treatment of 11–14-week-old female NOD mice, either in a latent diabetes stage (after 14 weeks) or with initial symptoms of diabetes (appearing up to 14 weeks) with CBD for 4 weeks, could lead to sustained inhibition of insulinitis [128]. CBD treatment inhibited specific destruction of the islets and reduced the infiltrates by mononuclear cells into the islets, thus preventing diabetes. Furthermore, cannabinoids have also been demonstrated to possess additional beneficial effects in animal models of diabetes. It has been reported that rats treated with CBD for periods of 1–4 weeks experienced significant protection from diabetic retinopathy [129]. Cannabinoids have also been shown to alleviate neuropathic pain associated with the disease. Mice injected with a cannabis receptor agonist experienced a reduction in diabetic-related tactile allodynia compared with nontreated controls [130]. Thus,

cannabinoids can be considered useful for controlling T1D due to their anti-inflammatory properties."

In *Biological effects of THC and a lipophilic cannabis extract on normal and insulin resistant 3T3-L1 adipocytes* (Gallant et al. 2009), we read: "Insulin-induced glucose uptake increased, while the rate of adipogenesis decreased with increasing THC concentration." In *Beneficial effects of a Cannabis sativa extract treatment on diabetes-induced neuropathy and oxidative stress* (Comelli et al. 2009), we read: "Neuropathy is the most common complication of diabetes and it is still considered to be relatively refractory to most of the analgesics. The aim of the present study was to explore the antinociceptive effect of a controlled cannabis extract (eCBD) in attenuating diabetic neuropathic pain. Repeated treatment with cannabis extract significantly relieved mechanical allodynia and restored the physiological thermal pain perception in streptozotocin (STZ)-induced diabetic rats without affecting hyperglycemia. In addition, the results showed that eCBD increased the reduced glutathione (GSH) content in the liver leading to a restoration of the defence mechanism and significantly decreased the liver lipid peroxidation suggesting that eCBD provides protection against oxidative damage in STZ-induced diabetes that also strongly contributes to the development of neuropathy. Finally, the nerve growth factor content in the sciatic nerve of diabetic rats was restored to normal following the repeated treatment with eCBD, suggesting that the extract was able to prevent the nerve damage caused by the reduced support of this neurotrophin. These findings highlighted the beneficial effects of cannabis extract treatment in attenuating diabetic neuropathic pain, possibly through a strong antioxidant activity and a specific action upon nerve growth factor." In *Cannabinoid-mediated modulation of neuropathic pain and microglial accumulation in a model of murine type I diabetic peripheral neuropathic pain* (Toth et al. 2010), we read: "The prevention of microglial accumulation and activation in the dorsal spinal cord was associated with limited development of a neuropathic pain state. Cannabinoids demonstrated antinociceptive effects in this mouse model of DPN. These results suggest that such interventions may also benefit humans with DPN, and their early introduction may also modify the development of the NeP state." In *Cannabinoid-induced apoptosis in immune cells as a pathway to immunosuppression* (Rieder et al. 2010), we read: "Studies from our laboratory have focused on mechanisms of apoptosis induction by natural and synthetic cannabinoids through activation of CB2 receptors. In this review, we will focus on apoptotic mechanisms of immunosuppression mediated by cannabinoids on different immune cell populations and discuss how activation of CB2 provides a novel therapeutic modality against inflammatory and autoimmune diseases as well as malignancies of the immune system, without exerting the untoward psychotropic effects." In *Cannabidiol attenuates cardiac dysfunction, oxidative stress, fibrosis, and inflammatory and cell death signaling pathways in diabetic cardiomyopathy* (Rajesh et al. 2010), we read: "Collectively, these results coupled with the excellent safety and tolerability profile of CBD in humans, strongly suggest that it may have great therapeutic potential in the treatment of diabetic complications, and perhaps other cardiovascular disorders, by attenuating oxidative/nitrative stress, inflammation, cell death and fibrosis." In *Diabetic retinopathy: Role of inflammation and potential therapies for anti-inflammation* (Liou, 2010), we read: "This review is focused on the therapeutic effects of cannabidiol (CBD), a non-psychoactive native cannabinoid, as an emerging and novel therapeutic modality in ophthalmology based on systematic studies in animal models of inflammatory retinal diseases including diabetic retinopathy - a retinal disease associated with vascular-neuroinflammation. Special emphasis is placed on novel mechanisms which may shed light on the pharmacological activity associated with CBD preclinically. These include a self-defence system against inflammation and neurodegeneration mediated by inhibition of equilibrative nucleoside transporter and activation of adenosine receptor by treatment with CBD." In *Cannabidiol as an emergent therapeutic strategy for lessening the impact of inflammation on oxidative stress* (Booz, 2011), we read: "This review discusses recent studies suggesting that cannabidiol may have utility in treating a number of human diseases and disorders now known to involve activation of the immune system and associated oxidative stress, as a contributor to their etiology and progression. These include rheumatoid arthritis, types 1 and 2 diabetes, atherosclerosis, Alzheimer disease, hypertension, the metabolic syndrome, ischemia-reperfusion injury, depression, and neuropathic pain." In *Cannabidiol Dampens Streptozotocin-Induced Retinal Inflammation by Targeting of Microglial Activation* (Liou et al. 2011), we read: "These data reveal a previously unrecognized role for CBD in attenuating diabetes-induced retinal inflammation by interfering with inflammatory signaling that occurs in activated

microglia. Moreover, these data present new thoughts as to how compounds similar to CBD may suppress retinal complications associated with diabetes.” In *The endocannabinoid system and plant-derived cannabinoids in diabetes and diabetic complications* (Horváth et al. 2012), we read: “The modulation of the activity of this system holds tremendous therapeutic potential in a wide range of diseases, ranging from cancer, pain, neurodegenerative, and cardiovascular diseases to obesity and metabolic syndrome, diabetes, and diabetic complications. This review focuses on the role of the endocannabinoid system in primary diabetes and its effects on various diabetic complications, such as diabetic cardiovascular dysfunction, nephropathy, retinopathy, and neuropathy, particularly highlighting the mechanisms beyond the metabolic consequences of the activation of the endocannabinoid system. The therapeutic potential of targeting the endocannabinoid system and certain plant-derived cannabinoids, such as cannabidiol and Δ^9 -tetrahydrocannabivarin, which are devoid of psychotropic effects and possess potent anti-inflammatory and/or antioxidant properties, in diabetes and diabetic complications is also discussed.”

EPILEPSY/ SEIZURES

The connection between epileptic conditions and amelioration of symptomatology with cannabis has clear modern precedent within medical literature. Epilepsy and seizures can be treated with cannabinoids, as has been shown in western medical circles, demonstrably since 1947-1949. In the 1949 document Reprinted from *Federation Proceedings, Federation of American Society for Experimental Biology*, vol. 8, 1949, p. 284. In the article *Anti-epileptic Action of Marijuana-Active Substances* (Davis and Ramsey, 1949), we read: “The demonstration of anticonvulsant activity of the tetra-hydrocannabinol (THC) congeners by laboratory tests (Loewe and Goodman, *Federation Proc.* 6:352, 1947) prompted clinical trial in five institutionalized epileptic children. All of them had severe symptomatic grand mal epilepsy with mental retardation; three had cerebral palsy in addition. . . . Two isomeric 3 (1,2-dimethyl heptyl) homologs of THC were tested, Numbers 122 and 125A, with ataxia potencies fifty and eight times, respectively, that of natural marijuana principles. Number 122 was given to two patients for three weeks and to three patients for seven weeks. Three responded at least as well as to previous therapy; the fourth became almost completely and the fifth entirely seizure free. . . . Other psychic disturbances or toxic reactions were not manifested during the periods of treatment.” In *Anticonvulsant action of cannabis in the rat: role of brain monoamines, noting the natural compound* ([Ghosh](#) and [Bhattacharya](#), 1978), we read: “The role of brain monoamines in the anticonvulsant action of Cannabis indica resin (CI), against maximal electroshock-induced seizures in albino rats, was investigated by using pharmacologic agents that influence brain monoamine activity. Delta-9-tetrahydrocannabinol content of cannabis resin was estimated to be 17%. The anticonvulsant action of CI (200 mg/kg, i.p.) was significantly inhibited after pretreatment with drugs that reduce brain serotonin activity but not by drugs that reduce brain catecholamine activity. Similarly, the anticonvulsant action of a subanticonvulsant dose (50 mg/kg, i.p.) of CI was potentiated by serotonin precursors but not by catecholamine precursors. Potentiation of the anticonvulsant action of CI by nialamide or by imipramine was inhibited after pretreatment with 5,6-dihydroxytryptamine. The results suggest that the anticonvulsant action of CI in the rat is serotonin- and not catecholamine-mediated.” In *The cannabinoids as potential antiepileptics* (Karler and Turkanis, 1981), we read: “The anticonvulsant nature of cannabidiol suggests that it has a therapeutic potential in at least three of the four major types of epilepsy: grand mal, cortical focal, and complex partial seizures.” In *Hypnotic and antiepileptic effects of cannabidiol* (Carlini and Cunha, 1981), we read: “Fifteen patients suffering from secondary generalized epilepsy refractory to known antiepileptic drugs received either 200 to 300 mg cannabidiol daily or placebo for as long as 4.5 months. Seven out of the eight epileptics receiving cannabidiol had improvement of their disease state, whereas only one placebo patient improved.” In *Effects of cannabidiol on behavioral seizures caused by convulsant drugs or current in mice* (Consroe et al. 1982), we read: “The differential effects of CBD suggest that the cannabinoid acts to inhibit seizure spread in the CNS by an action on GABA, but not glycine, mechanisms.” In *On the application of cannabis in paediatrics and epileptology* (Lorenz, 2004), we read: “THC effected reduced spasticity, improved dystonia, increased initiative (with low dose), increased interest in the surroundings, and anticonvulsive action.” In *Cannabinoids: Defending the*

Epileptic Brain (Wallace, 2004), we read: “Here, by using the rat pilocarpine model of epilepsy, we show that the marijuana extract 9-tetrahydrocannabinol (10 mg/kg) as well as the cannabimimetic, 4,5-dihydro-2-methyl-4(4-morpholinylmethyl)-1-(1-naphthalenyl-carbonyl)-6H-pyrrolo[3,2,1-i,j]quinolin-6-one [R(+)-WIN55,212 (5 mg/kg)], completely abolished spontaneous epileptic seizures. In *Development of pharmacoresistance to benzodiazepines but not cannabinoids in the hippocampal neuronal culture model of status epilepticus* (Deshpande et al. 2007), we read: Thus, the use of cannabinoids in the treatment of SE may offer a unique approach to controlling SE without the development of pharmacoresistance observed with conventional treatments.” In *The phytocannabinoid Δ9-tetrahydrocannabivarin modulates inhibitory neurotransmission in the cerebellum*, we read (Ma et al. 2008): The phytocannabinoid Δ9-tetrahydrocannabivarin (Δ9-THCV) has been reported to exhibit a diverse pharmacology; here, we investigate functional effects of Δ9-THCV, extracted from *Cannabis sativa*, using electrophysiological techniques to define its mechanism of action in the CNS. . . . our preliminary studies suggest that Δ9-THCV may be anti-convulsant in a developmental model of epilepsy (Weston *et al.*, 2006; see Pertwee, 2008). Our data support recent proposals that phytocannabinoids may represent important, but neglected, therapeutic agents (Mechoulam, 2005). It will be of interest in future studies to investigate how different phytocannabinoids may similarly modulate disease states in the CNS.” In *The cannabinoid anticonvulsant effect on pentylentetrazole-induced seizure is potentiated by ultra-low dose naltrexone in mice* (Bahremand et al. 2008), carefully noting interactive effects with other compounds (noting the interesting responsive systemic reactive up-mediation of opioids in low doses of naltrexone) we read: “Cannabinoid compounds are anticonvulsant since they have inhibitory effects at micromolar doses, which are mediated by activated receptors coupling to G(i/o) proteins. Surprisingly, both the analgesic and anticonvulsant effects of opioids are enhanced by ultra-low doses (nanomolar to picomolar) of the opioid antagonist naltrexone and as opioid and cannabinoid systems interact, it has been shown that ultra-low dose naltrexone also enhances cannabinoid-induced antinociception. . . . The present data indicate that the interaction between opioid and cannabinoid systems extends to ultra-low dose levels and ultra-low doses of opioid receptor antagonist in conjunction with very low doses of cannabinoids may provide a potent strategy to modulate seizure susceptibility.” In *Cannabidiol Displays Antiepileptiform and Antiseizure Properties In Vitro and In Vivo* (Jones et al. 2010), we read: “Thus, we demonstrate the potential of CBD as a novel antiepileptic drug in the unmet clinical need associated with generalized seizures.” In *Δ⁹-Tetrahydrocannabivarin suppresses in vitro epileptiform and in vivo seizure activity in adult rats* (Hill et al. 2010), we read: “These data demonstrate that Δ⁹-THCV exerts antiepileptiform and anticonvulsant properties, actions that are consistent with a CB1 receptor-mediated mechanism and suggest possible therapeutic application in the treatment of pathophysiologic hyperexcitability states.” In *The case for assessing cannabidiol in epilepsy* (Cilio et al. 2014), we read: “Over the past few years, considerable attention has focused on cannabidiol (CBD), the major nonpsychotropic compound of *Cannabis sativa*. Basic research studies have provided strong evidence for safety and anticonvulsant properties of CBD. However, the lack of pure, pharmacologically active compounds and legal restrictions have prevented clinical research and confined data on efficacy and safety to anecdotal reports. [Editor’s emphasis].

Heart Protection:

The heart may benefit from cannabinoids: In *Delta-9-tetrahydrocannabinol protects cardiac cells from hypoxia via CB2 receptor activation and nitric oxide production* (Shmist et al. 2006), we read: “Delta-9-tetrahydrocannabinol protects cardiac cells from hypoxia via CB2 receptor activation and nitric oxide production . . . Taken together, our findings suggest that THC protects cardiac cells against hypoxia via CB2 receptor activation by induction of NO production.” In *Does cannabis hold the key to treating cardiometabolic disease?* (Szmitko and Verma, 2006), we read: “By uncovering the cellular interactions of the cannabinoid ⁹-tetrahydrocannabinol (⁹-THC)—the major active component of marijuana—researchers have identified new molecular pathways for treating cardiometabolic disease. Studies have demonstrated that modulation of the endocannabinoid system holds great therapeutic promise for the treatment of obesity, dyslipidemia, insulin resistance and atherosclerosis . . . By contrast, CB₂ receptors are located primarily on blood cells and immune tissues, and stimulation of these receptors with ⁹-THC results in an immunosuppressive phenotype via the modulation of immune-cell cytokine

production.⁵ This molecular system might have a role in the development of obesity, the metabolic syndrome and atherosclerosis, and its modulation might form the basis of new therapeutic strategies for these pathophysiologically linked conditions.” In *Cannabidiol, a nonpsychoactive Cannabis constituent, protects against myocardial ischemic reperfusion injury* (Durst et al. 2007), we read: “Our study shows that CBD induces a substantial in vivo cardioprotective effect from ischemia that is not observed ex vivo. Inasmuch as CBD has previously been administered to humans without causing side effects, it may represent a promising novel treatment for myocardial ischemia.” In *Cannabinoid receptors in acute and chronic complications of atherosclerosis* (Mach et al. 2008), we read: “Thus, CB2 receptors are protective in myocardial ischaemia/reperfusion and implicated in the modulation of chemotaxis, which is crucial for the recruitment of leukocytes during inflammation. Delta-9-Tetrahydrocannabinol (THC)-mediated activation has been shown to inhibit atherosclerotic plaque progression in a CB2 dependent manner.” In *Low dose oral cannabinoid therapy reduces progression of atherosclerosis in mice* (Steffens et al. 2005), we read: “Our data demonstrate that oral treatment with a low dose of THC inhibits atherosclerosis progression in the apolipoprotein E knockout mouse model, through pleiotropic immunomodulatory effects on lymphoid and myeloid cells. Thus, THC or cannabinoids with activity at the CB2 receptor may be valuable targets for treating atherosclerosis.” In *Acute administration of cannabidiol in vivo suppresses ischaemia-induced cardiac arrhythmias and reduces infarct size when given at reperfusion* (Walsh et al. 2010), we read: “This study demonstrates that CBD is cardioprotective in the acute phase of I/R by both reducing ventricular arrhythmias and attenuating infarct size.” In *The cardiac and haemostatic effects of dietary hempseed* (Rodriguez-Leyva and Pierce, 2010), we read: “. . . hempseed no longer contains psychotropic action and instead may provide significant health benefits.” In *The Potential for Clinical Use of Cannabinoids in Treatment of Cardiovascular Diseases* (Durst and Lotan, 2011), we read: “. . . these studies provide evidence for the safety of cannabinoid compounds in humans. CBD, for example, which was shown to reduce infarct size, is currently being tested in inflammatory bowel disease, psychosis, and diabetes. The evidence of a potential role for cannabinoid in various cardiovascular pathologies, together with the safety data gleaned from various human intervention studies, indicate that now is the time to show efficacy across species and continue toward human trials.” In *Cannabidiol as an anti-arrhythmic, the role of the CB1 receptors* (Hepburn et al. 2011), we read: “Cannabidiol (CBD) has been shown to be anti-arrhythmic (Walsh *et al.*, 2010) and tissue sparing (Durst *et al.*, 2007) in an in vivo rat model of coronary artery occlusion (CAO), although the receptors through which this occurs have yet to be identified. . . . The observed synergism which persists when CB1 receptors are blocked prior to CBD administration, suggests cross-talk between CB1 and other CB receptors in the heart during ischaemia.”

HIV/AIDS

HIV/AIDS may be treated with cannabinoids, both to augment weight gain and also, to reduce disease load. In *Cannabinoid administration attenuates the progression of simian immunodeficiency virus* (Molina et al. 2011), we read: “ $\Delta(9)$ -Tetrahydrocannabinol ($\Delta(9)$ -THC), the primary psychoactive component in marijuana, is FDA approved to ameliorate AIDS-associated wasting. Because cannabinoid receptors are expressed on cells of the immune system, chronic $\Delta(9)$ -THC use may impact HIV disease progression. . . . However, chronic $\Delta(9)$ -THC administration decreased early mortality from SIV infection ($p = 0.039$), and this was associated with attenuation of plasma and CSF viral load and retention of body mass ($p = \text{NS}$). In vitro, $\Delta(9)$ -THC ($10 \mu\text{m}$) decreased SIV (10 TCID_{50}) viral replication in MT4-R5 cells. These results indicate that chronic $\Delta(9)$ -THC does not increase viral load or aggravate morbidity and may actually ameliorate SIV disease progression. We speculate that reduced levels of SIV, retention of body mass, and attenuation of inflammation are likely mechanisms for $\Delta(9)$ -THC-mediated modulation of disease progression that warrant further study.” In *Cannabinoid Inhibition of Macrophage Migration to the Trans-Activating (Tat) Protein of HIV-1 Is Linked to the CB2 Cannabinoid Receptor* (Raborn and Cabral, 2010), we read: “Macrophages and macrophage-like cells are important targets of HIV-1 infection at peripheral sites and in the central nervous system. After infection, these cells secrete a plethora of toxic factors, including the viral regulatory trans-activating protein (Tat). This protein is highly immunogenic and also serves as a potent chemoattractant for monocytes. . . . Collectively, the pharmacological and biochemical knockdown data indicate that

cannabinoid-mediated modulation of macrophage migration to the HIV-1 Tat protein is linked to the CB2 cannabinoid receptor. Furthermore, these results suggest that the CB2 cannabinoid receptor has potential to serve as a therapeutic target for ablation of HIV-1-associated untoward inflammatory response.” In *Chronic cannabinoid administration lowers viral replication in lymph nodes of SIV infected Rhesus macaques* (Walker et al. 2010), we read: “The primary psychoactive component of marijuana, Δ 9-tetrahydrocannabinol (Δ 9-THC), is used to mitigate AIDS-associated wasting. Cannabinoid receptors are expressed on cells of the immune system suggesting that chronic Δ 9-THC administration may impact on human immunodeficiency virus progression. Ongoing studies indicate that Δ 9-THC -treated, simian immunodeficiency virus (SIV)-infected rhesus macaques have increased survival and lower plasma viral loads. We hypothesized that chronic Δ 9-THC treatment decreases viral replication by anti-inflammatory effects at lymphoid tissues. . . . Chronic Δ 9-THC treatment resulted in lower plasma viral load (5.28 vs 6.11 log copies of gagRNA/ml plasma), lymph node proviral DNA (1.57 vs 1.99 log copies/10,000 cells) and viral gagRNA (1.14 vs 2.08 log copies/total RNA), irrespective of disease stage. Lymph node content of IL-1b, IL-6, IL-8, and MCP-1 positively correlated with levels of plasma viral load across all animals ($p < 0.05$). No effect of Δ 9-THC was found on cytokine expression. These results suggest that chronic Δ 9-THC treatment enhances control of viral replication but does not appear to be mediated by decreased inflammation.” In *The endocannabinoid system in gp120-mediated insults and HIV-associated dementia* (Bari et al. 2010), we read: “Endocannabinoids (eCBs) include a group of lipid mediators that act as endogenous agonists at cannabinoid (CB(1), CB(2)) and vanilloid (TRPV1) receptors. In the last two decades a number of eCBs-metabolizing enzymes have been discovered that, together with eCBs and congeners, target receptors and proteins responsible for their transport and intracellular trafficking form the so-called "endocannabinoid system" (ECS). Within the central nervous system ECS elements participate in neuroprotection against neuroinflammatory/neurodegenerative diseases like Alzheimer's disease, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and multiple sclerosis. More recently, a role for eCBs has been documented also in human immunodeficiency virus-1 (HIV-1) envelope glycoprotein gp120-mediated insults, and in HIV-associated dementia (HAD).” In the study *Cannabinoid neuroimmune modulation of SIV disease, taking close and careful note of the interdigitation of combined mechanisms in play* (Molina et al. 2011), we read: “ Δ 9-tetrahydrocannabinol (Δ 9-THC), the primary psychoactive component in marijuana, is FDA-approved to ameliorate AIDS-associated wasting. Because cannabinoid receptors are expressed on cells of the immune system, it is possible that chronic Δ 9-THC use may impact HIV disease progression. Until recently, longitudinal, controlled, systems-approach studies on the effects of cannabinoids on disease progression were lacking. Data from our controlled studies in non-human primates show chronic Δ 9-THC administration prior to and during simian immunodeficiency virus (SIV) infection ameliorates disease progression, attenuates viral load and tissue inflammation, significantly reducing morbidity and mortality of SIV-infected macaques. Identification of possible mechanisms responsible for this modulation of disease progression is complicated due to the multiplicity of cannabinoid-mediated effects, tissue specific responses to the viral infection, multiple cellular mechanisms involved in inflammatory responses, coordinated neuroendocrine and localized responses to infection, and kinetics of viral replication. Emerging results from our studies reveal that the overall mechanisms mediating the protective effects of cannabinoids involve novel epigenomic regulatory mechanisms in need of systematic investigation.” In *Cannabinoids inhibit migration of microglial-like cells to the HIV protein Tat* (Fraga et al. 2011), we read: “Microglia are a population of macrophage-like cells in the central nervous system (CNS) which, upon infection by the human immunodeficiency virus (HIV), secrete a plethora of inflammatory factors, including the virus-specified trans-activating protein Tat. Tat has been implicated in HIV neuropathogenesis since it elicits chemokines, cytokines, and a chemotactic response from microglia. It also harbors a β -chemokine receptor binding motif, articulating a mode by which it acts as a migration stimulus. Since select cannabinoids have anti-inflammatory properties, cross the blood-brain barrier, and target specific receptors, they have potential to serve as agents for dampening untoward neuroimmune responses. . . . Delta-9-tetrahydrocannabinol (THC) and CP55940 exerted a concentration-related reduction in the migration of BV-2 cells towards Tat. A similar inhibitory response was obtained when the endogenous cannabinoid 2-arachidonoylglycerol (2-AG) was used.”

Parkinson's may be treated with cannabinoids. In *Cannabinoids and neuroprotection in basal ganglia disorders* (Sagredo et al. 2007), we read: "cannabinoids may provide neuroprotection in different neurodegenerative disorders including Parkinson's disease and Huntington's chorea, two chronic diseases that are originated as a consequence of the degeneration of specific nuclei of basal ganglia, resulting in a deterioration of the control of movement. Both diseases have been still scarcely explored at the clinical level for a possible application of cannabinoids to delay the progressive degeneration of the basal ganglia. However, the preclinical evidence seems to be solid and promising. . . . Considering the relevance of these preclinical data and the lack of efficient neuroprotective strategies in both disorders, we urge the development of further studies that allow that the promising expectatives generated for these molecules progress from the present preclinical evidence till a real clinical application." In *Cannabinoids and neuroprotection in motor-related disorders* (De Lago and Fernández-Ruiz, 2007), we read: "Neuroprotective properties of cannabinoids have been extensively studied in the last years in different neurodegenerative pathologies. This potential is based on the antioxidant, anti-inflammatory and anti-excitotoxic properties exhibited by these compounds that allow them to afford neuroprotection in different neurodegenerative disorders like Parkinson's disease (PD), Huntington's disease (HD), multiple sclerosis (MS) and others. . . . Lastly, neuroprotective effects of cannabinoids exerted by the activation of CB1 but also CB2 receptors have been also identified in amyotrophic lateral sclerosis (ALS), another degenerative disease characterized by the selective death of spinal motoneurons. In the present review, we will collect the latest advances in the knowledge of the cellular and molecular mechanisms through which cannabinoids might arrest/delay the degeneration of specific neuronal subpopulations in these motor-related disorders. This should serve to encourage that the present promising evidence obtained mainly at the preclinical level might progress to a real exploitation of neuroprotective benefits of potential cannabinoid-based medicines." In *Cannabinoids and Parkinson's disease* (García-Arencibia et al. 2009), we read: "Cannabinoid-based medicines have been proposed as clinically promising therapies in Parkinson's disease (PD), given the prominent modulatory function played by the cannabinoid signaling system in the basal ganglia. . . . However, the potential of cannabinoid-based medicines in PD have been still scarcely studied at the clinical level despite the existence of solid and promising preclinical evidence. Considering the relevance of these preclinical data, the need for finding treatments for motor symptoms that may be alternative to classic dopaminergic replacement therapy, and the lack of efficient neuroprotective strategies in PD, we believe it is of major interest to develop further studies that allow the promising expectations generated for these molecules to progress from the present preclinical evidence towards a real clinical application." In *The endocannabinoid system as a target for the treatment of motor dysfunction* (Fernández-Ruiz, 2009), we read: "There is evidence that cannabinoid-based medicines that are selective for different targets in the cannabinoid signalling system (e.g. receptors, inactivation mechanism, enzymes) might be beneficial in basal ganglia disorders, namely Parkinson's disease (PD) and Huntington's disease (HD)." In *Role of CB2 receptors in neuroprotective effects of cannabinoids* (Fernández-Ruiz et al. 2008), we read: ". . . experimental models of these disorders, the activation of CB2 receptors has been related to a delayed progression of neurodegenerative events, in particular, those related to the toxic influence of microglial cells on neuronal homeostasis. The present article will review the evidence supporting that CB2 receptors might represent a key element in the endogenous response against different types of cytotoxic events, and that this receptor type may be a clinically promising target for the control of brain damage in neurodegenerative disorders." In *Cannabinoids as Therapeutic Agents for Ablating Neuroinflammatory Disease* (Cabral and Griffin-Thomas, 2008), we read: "Thus, the cannabinoid-cannabinoid receptor system may prove therapeutically manageable in ablating neuropathogenic disorders such as Alzheimer's disease, multiple sclerosis, amyotrophic lateral sclerosis, HIV encephalitis, closed head injury, and granulomatous amebic encephalitis." In *Cannabinoids and neurodegenerative diseases* (Romero and Orgado, 2009), we read: ". . . antioxidative, antiglutamatergic and antiinflammatory effects are now recognized as derived from cannabinoid action and are known to be of common interest for many neurodegenerative processes. Thus, these characteristics make cannabinoids attractive candidates for the development of novel therapeutic strategies."

References for this section found in **References, list two.**

Thanks to *Granny Storm Crow's MMJ Reference List- January 2012* for many leads in finding papers used to assemble the above section:

<http://www.medicinalgenomics.com/wp-content/uploads/2013/01/700-cannabis-studies-2012.pdf>

3. Phylogenetic analysis of the CB receptors.

The evolutionary intra-connectivity within our singular bio-system is manifest throughout the system. Evolution has shaped and crafted a great and intricate tapestry of homology and adaptation. Highly detailed empirically supported mathematical models derived from Time-Dependent Density Functional Theory indicate that life may well have evolved from photosynthetic prebiotic kernel systems in the Isua Greenstone Belt in Greenland some 3.7–3.85 billion years past (Tamulis et al., 2016). This common ancestry has branched into many individuated examples of evolutionary specificity, which can be observed to share fundamental commonalities, and homologies (Panksepp, 1998; 2012). So great is the commonality of evolutionary genetic origin that fruit flies and mice may tell us of human Parkinson's "Pink 1" genetic mutations influencing mitochondrial functioning, and primitive *Aplysia* have revealed the foundational epigenetic basis of memory, which persists and may be recalled by stimulus when neuronal connectivity has been disrupted (Chen et al., 2014; Morais et al., 2009; Clark et al., 2006; Yun et al., 2014). Neuronal activity affects gene expression (Panksepp, 1998 p. 93; Watanabe et al., 1994; Zhu et al., 1995). Epigenetic memory extends across generations in mice, *C-Elegans* and humans (Greer et al., 2014; Dias & Ressler, 2014; Yehuda et al., 2015). Through demonstration of extensive resultant primary-source inter-specie systemic commonality across divergent evolutionary presentation, it is possible to deduce automatic reflexive unconscious responses, archetypal and phylogenetic representations, adaptations and unconsciously instantiated human learning, may be somatically and epigenetically sourced (Norman, 2015, 2015a, b, c). The obvious commonality between emotive/affective bio-systemic expression amongst other animals and man has long been noted [see Darwin, 1872: *The Expression of Emotions in Man and Animals*]. Brain circuits mediating *panic* in the guinea pig, rat, primate, chicken and cat are highly conserved, and share origins near where physical pain may be generated by electrical stimulation of the midbrain PAG (Panksepp, 1998, p. 267-268, Panksepp et al., 1980; De Lanerolle & Lang, 1988; Jurgens & Ploog, 1988; Robinson, 1967). Play, or "Ludic" circuitry is demonstrated in humans and rats, the latter exhibiting something closely akin to laughter, and basic empathy (Panksepp, 1998 pp. 280-299; Panksepp & Panksepp, 2013). Rage system circuitry running from the medial amygdaloid areas downward via the stria terminalis to the medial hypothalamus then the midbrain PAG, and rage system neurochemistry, are conserved to a great degree across mammals (Panksepp, 1998 pp. 190-196; Miczek, 1987; Miczek et al., 1994). Fear circuitry stimulated from the lateral and central amygdala, anterior and medial hypothalamus and midbrain PAG is also commonly attributed across divergent mammalian organisms (Panksepp, 1998 pp. 207-214; Panksepp, 1990; Davis et al., 1994). Nearly identical chemistry is evidenced across species, such as seen in the similarly structured reptilian peptide vasotocin, the piscine peptide mesotocin, and human vasopressin and oxytocin, which produce sexual response in amphibians, fish and humans respectively (Panksepp, 1998, pp. 230-231). Not surprisingly, the CB receptors have also been forged in evolution's patient furnace.

What follows is mainly derived from the study (McPartland and Pruitt, 2002), and the citations therein, which this author [R.N.] advises should be read closely. The CB₁ and CB₂ receptors are truly ancient as is revealed in phylogenetic analysis. These receptors occur in mammals, birds, amphibians, fish, sea

urchins, mollusks, leeches, and in the primitive fresh-water polyp *Hydra vulgaris*. The first “primordial” receptor dates from 600 million years ago or earlier, approximately coinciding with the time of the Cambrian explosion revealing a fundamental system that predates the separation of vertebrates and invertebrates. The related Vanilloid G-protein coupled receptors [(VR) receptors] which regulate pain perception appear to predate the CB receptors, implying that anandamide served as the initial endogenous ligand to an evolutionarily primary VR receptor system. *It is to be closely noted* that the analysis we are about to derive, although supported by that supposition, is *not* dependent upon it. It is hypothesized and demonstrated in (McPartland and Pruitt, 2002), we believe rightly, that the CB receptors then acquired a mutation through lack of selective constraints (Baker 1997) permitting the receptors by way of evolutionary process to then couple also with 2-AG. Indeed, the system must and will adapt and evolve to its greatest advantage.

If amino acid correlations are compared between the two genes which encode the CB₁ and CB₂ receptors, the gene CNR1 (nucleotide sequence 1755 base pairs) and the gene CNR2 (nucleotide sequence 1776 base pairs), they are identical at only 44% of their translated amino acid residues (ibid. p. 75; Munro et al. 1993). These two ancient and related yet divergent receptors, CB₁ and CB₂, can be located as *homologs* in other species. A *homolog* is a similar structure, behavior, or other trait shared by different species. In (McPartland and Pruitt, 2002), (p.75) we read: “In the field of phylogenetics, homologs are divided into two groups: Orthologs are homologous genes found in different organisms, derived by descent from a common ancestor. Paralogs are homologous genes found in a given organism, derived by a gene duplication event.” CNR1 orthologs have been cloned from 62 species of mammals. Sequenced CNR1 orthologs from earlier vertebrates are abundant, including: *Taeniopygia guttata* the zebra finch; *Taricha granulosa* the newt salamander, and *Fugu rubripes* the puffer fish (ibid, p.76). CNR2 orthologs are evident in rodents such as *Rattus norvegicus* and *Mus musculus*. Invertebrates such as the leech *Hirudo medicinalis* demonstrate a CB₁ gene fragment. Non-molecular methods show that the sea urchins *Strongylocentrotus purpuratus* and *Paracentrotus lividus*, the leech *Theromyzon tessulatum*, the mollusk *Mytilus edulis*, and the very most primitive of all animals with a nerve network, the cnidarian *Hydra vulgaris* show evidence of these receptors (ibid. p. 76; Salzet et al. 2000). Other life forms such as the fruit fly *Drosophila melanogaster* and the nematode worm *Caenorhabditis elegans* appear to have amino acid substitutions at particular residues which imply the genes have been *lost or mutated* into pseudogenes. Similar results extend to various insects, such as *Apis mellifera*, *D. melanogaster*, *Gerris marginatus*, *Spodoptera frugiperda*, and *Zophobas atratus* (Di Marzo et al. 2000; McPartland and Pruitt, 2002).

It is plain at this juncture that the CNR1 and CNR2 genes (and hence CB₁ and CB₂ receptors) are shared as homologous orthologs across many life forms and species, and in other contrary examples such as many insects or C-Elegans, the genes which appear to *once have been present*, have been lost or suffered “crippling” amino acid substitutions. Clearly, these receptors and the genes which encode them are shared between many divergent species, and once were likely shared by more. How fully are the sequences conserved, and how far back can these processes be seen to extend? How deeply intertwined is the ever diverging evolutionary expression we see before us?

In order to answer those questions most clearly, we may first examine the phylogenetic evidence of initial CB receptor expression, homologous connectivity of orthologs and subsequent divergence, after which we will go back further still and consider the parent VR receptor, the initial split between plants and animals, hence the likely primeval source and then, proposed subsequent mechanisms of evolutionary expression.

The degree of sequence divergence is correlated with time. The rhesus monkey’s (*Macaca mulatta*) CNR1 sequence is identical to our human CNR1 sequence, however, the partial sequence for CNR1 from the leech (*H. medicinalis*) has only 58 percent in common. Humans and leeches diverged over a half billion years in the past, some 600 million years ago, in contrast to the scant 10 million years for the divergence between humans and monkeys.

A gene tree of available CB orthologs (McPartland and Pruitt, 2002, p. 87) was assembled and patterned based on the percentage of identical sequences measured between CNR1, its paralogs and orthologs (Feng and Doolittle 1996). The CB gene tree is based in the primary ancestral CB gene. The first bifurcation in the tree represents the divergence between CNR1 and CNR2 sequences in a duplication event which began separate paralogous lineages, the CNR1 orthologs and CNR2 orthologs (McPartland and Pruitt, 2002, p. 85). The basic amino acid percentages found are as follows.

Homologues of human CB1 receptors, with percent identity calculated with BLAST 2.0 algorithm. (McPartland and Pruitt, 2002, p. 86):

Percent identity with human CB1 gene sequence

Monkey (*Macaca mulatta*) CB1 100% of 472 amino acids
 Rat (*Rattus norvegicus*) CB1 97% of 473 amino acids
 Mouse (*Mus musculus*) CB1 97% of 473 amino acids
 Finch (*Taeniopygia guttata*) CB1 91% of 473 amino acids
 Newt (*Taricha granulosa*) CB1 83% of 473 amino acids
 Puffer fish (*Fugu rubripes*) CB1A 72% of 468 amino acids
 Puffer fish (*Fugu rubripes*) CB11B 59% of 470 amino acids
 Leech (*Hirudo medicinalis*) 58% of 153 amino acids
 Human CB2 47% of 360 amino acids

The puffer fish paralogs are the product of a second gene duplication event not evidenced in humans (ibid. p. 86).

Below find species expressing CB receptors marked with an “x” to the right, those not expressing CB receptors due to “crippling” amino acid substitutions marked with a “0,” in order of major taxonomic clades (ibid. p. 87).

Species expressing CB receptors: (x)

Species not expressing CB receptors: (0)

Human (vertebrate) CNR1 x
 Monkey (vertebrate) CB1 x
 Rat (vertebrate) CB1 x
 Mouse (vertebrate) CB1 x
 Finch (vertebrate) CB1 x
 Newt (vertebrate) CB1 x
 Fugu fish (vertebrate) CB1A x
 Fugu fish (vertebrate) CB1B x
 Strongylocentrotus (echinoderm) x
 Paracentrotus (echinoderm) x
 Hirudo (annelid) x
 Mytilus (mollusc) x

Caenorhabditis (nematode) 0
 Drosophila, Apis (arthropods) 0

Hydra (cnidarian) x

Saccharomyces (fungus) 0
 Arabidopsis, Cannabis (plants) 0
 Archaeoglobus, Methanococcus (archaeon) 0
 Bacillus, Escherichia, Xylella (bacteria) 0

Human (vertebrate) CNR2 x
Rat (vertebrate) CB2 x
Mouse (vertebrate) CB2 x

Clearly, this receptor is ancient as can be deduced by way of its genetic variance across species and even more so as made evident by the startling lack of sequence commonality between the genes encoding CB₁ and CB₂ receptors, indicative of a very ancient bifurcation, indeed! It appears a process of receptor adaptivity is taking place, and to see the diverse distribution of the receptor, which was also once part of those species in which it is not currently represented, implies that this dynamic adaptivity extends in all likelihood backward to a common ancestor and process from which life, and so the CB receptors themselves have sprung. In (McPartland et al. 2001) we learn that 2-AG has been derived from the neural structures of *A. mellifera* and *D. melanogaster*, although both lack CB receptors. Soderstrom et al. (1997) found green algae produces substances which bind to CB receptors; Tomato, soybean, and barley lipooxygenase enzymes can metabolize anandamide (van Zadelhoff, Veldink, and Vliegenhart 1998); pine trees produce an analog of 2-AG which shows cannabinoid activity (Nakane et al. 2000) (McPartland and Pruitt, 2002, p. 79). A common ancestry and process beneath the proliferation of life is implied. If we can deduce this process-commonality, perhaps, we may be able to understand the particular evolutionary reason for the “magic” we see, where one plant holds the singular and seemingly miraculous ability to positively affect so many pathologies. Perhaps this magic is not magic at all, but the sensible and necessary result of a discernible process. If so, we may then begin to advance toward the hopeful goal of treatment and cure, utilizing the very product and processes of evolution itself.

Analysis of the data suggest the ancient CB gene demonstrates a duplication event which created conditions for the emergence of the present day CNR1 and CNR2. Said event necessarily took place before the divergence of vertebrates and invertebrates, as orthologs of CB₁ are found in vertebrates (fish, amphibians, birds, and mammals) and invertebrates (the leech) (ibid. p. 88). CNR1/CNR2 divergence (47% identity) exceeds that of the divergence (58% identity) between the leech CB₁ gene and CNR1, indicating the duplication event’s age exceeds the age of leech CB₁ gene. As vertebrates and primitive metazoans (*Hydra vulgaris*) both express CB receptors the gene must have evolved prior to the species ancestral divergence, 600 millions years past (Lee, 1999; McPartland and Pruitt, 2002, p. 89).

Likewise, we may rightly infer from the deeper divergence demonstrated in VR phylogenetics that the common CB/VR ligand, anandamide, served the evolutionarily previous VR.

McPartland and Pruitt, 2002, p. 93:

“Comparing the CB gene tree . . . with the VR gene tree . . . illustrates deeper divergences in the latter. For example, human and rat orthologs of CB₁ share 97% identity, whereas human and rat orthologs of VR1 share only 85% identity. The VR gene tree has diverged into six major branches, while the CB gene tree has only two: CB₁ and CB₂. The lowest branch of the CB tree has 47% similarity, whereas the lowest branch of the VR tree has 30% similarity, again indicative of deeper divergence. The deeper sequence divergences reflect deeper physiological divergences. CB₁ and CB₂ still recognize each other’s ligands (although their relative affinities have diverged), whereas the VR homologs have widely diverged in their gating mechanisms. Since the degree of divergence is correlated with evolutionary time, this analysis suggests the primordial VR receptor predated the primordial CB receptor.”

With a few more pieces of information, we will soon begin to see our way around the problem. The connection between the secondary CB and evolutionarily primary VR systems is reflected in systemic cross-talk, neuronal co-localization and the commonality of ligands and various receptor affinities demonstrated, to the point that the two systems may arguably be categorized as belonging to one taxonomic classification (ibid. pp. 80-81; Szolcsányi 2000). The CB/VR systemic coupling is very complex, and counter-mediational in some cases, with the same ligand creating opposing effects at

different receptors in the same neurons (ibid.).

The primordial CB gene likely diverged from a related GPCR, like: EDG-1, 600 million years past. Those evolved from older GPCRs gated by biogenic amines, which date back some 1200 million years ago when plants and animals first diverged (Peroutka and Howell 1994). Then, we understand that all GPCRs are younger than the *ionotropic glutamate receptor* (iGluR) (Chiu et al. 1999), iGluRs being ligand gated ion channels related to VR1. VR1 belonging to the family of TRP gated ion channels, the ancestors of which are found in *D. melanogaster* and *C. elegans*, with receptors activated by arachidonic acid, anandamide's precursor (Harteneck, Plant and Schultz 2000; McPartland and Pruitt, 2002, p. 95). So, CB evolved from VR, and VR is related to iGluR. This author has deduced glutamate to be the very oldest of all neurotransmitters! See: (Norman, 2015d).

Now the analysis is clear:

1. Genes which encode receptors and so receptors themselves evolve using the known mechanisms of: Gene duplication events, splice variants, and single nucleotide polymorphisms (SNPs). These mutations are kept, *if said adaptation is advantageous*.
2. When plants and animals diverged after springing from a common ancestry, many similar active chemical products and genetic constituents emerged, as is in evidence even today as demonstrated above.
3. Animals consume plants, and hence, they consume the many biologically related constituents within plants.
4. The genes of our most distant ancestors after the initial split between plants and animals 1200 million years past adapted via the aforementioned mechanisms to both,
 - a. imbibed exogenous biologically related chemical constituents, and,
 - b. endogenous biochemistry as well,

and those mutations *which were advantageous*, were kept. Lifting of evolutionary selective constraints (as in the case yielding the CB₂ gene), permitted even greater functional advantage and divergence in those cases.

Ergo: The General hypotheses:

1. After 1200 million years the CB receptors *and* their pre-formative evolutionary predecessors (and those of other system components), have developed along with cannabis and its ancestors in turn, and so, the reason we find such complex and profound pharmacological utility in the phytochemistry of cannabis is no surprise: we have ONLY kept those mutations which have *brought advantage* from the addition of that mutation.
2. Cannabis is a treasure trove of complex pharmacology which works synergistically against pathology as a necessary consequence of the fact that over the course of 1200 million years, the CB receptors *and* their pre-formative evolutionary forbearers (and those of other system components), have adapted exactly as evolution would have them adapt: *to form advantage* of those exact chemicals, in ***those exact complex distributions***. Again: Mutations are kept, *if said adaptation is advantageous*.

No wonder this plant seems as if by “magic” to possess so many advantages! The “magic” is no surprise at all, it is a synergistic interactive dynamic born of 1200 million years of evolution. Due to *our* evolution, this plant *must* have these many benefits, and function to our greatest possible advantage.

Please do note, the process is ongoing even now! Splice variants in CNR1 have been found (Shire et al. 1995); (Tsai, Wang, and Hong 2000) located a microsatellite polymorphism in CNR1; Gadzicki, Muller-Vahl, and Stuhmann (1999) found a SNP, a point mutation in a CB₁ gene. And even more important: there are millions of SNPs in the human genome, including over a dozen in CNR1 and CNR2 (McPartland and Pruitt, 2002, p. 94). Anandamide's reduced affinity for VR1 in comparison to CB₁ may be seen in this context as evidence of the further effects of evolutionary processes. The process which has gained us this health, is ongoing.

We will now look to history and see if we can support this hypothesis, and also, attempt to understand why these very avenues which offer up a clear pathway to the treatment and cure of disease based upon profound evolutionary connectivity, are scorned and the the potential benefits left aside. Perhaps then we may advance past these barriers, to the benefit of all.

Note: There likely are now and will be in the future other interpretations of the complex emerging genetic data which may place or propose a different progenitor to the CB receptors and/or their ligands. Be that as it may, the essential process of receptor adaptation as here defined, should accommodate any such small analytic alteration of lineage in stride. Whatever the lineage: We and our ancestors have developed along with cannabis and its ancestors in turn, and so, the reason we find such complex and profound pharmacological utility in the phytochemistry of cannabis is no surprise: we have ONLY retained those mutations which have *brought advantage* from the addition of that mutation.

Due to *our* evolution, this plant *must* have these many benefits, and function to our greatest possible advantage.

References for this section found in **References, list three.**

4. The History and the Future

We are now in a position to present evidence and historical information in support of our hypotheses as currently derived, then sharpen those hypotheses into final form. Primarily, if our supposition of evolutionary adaptivity is correct, we should see evidence of the complex products of advantageous adaptivity. Next, a more detailed examination and analysis of the now explicable evolutionarily founded synergistic effects will be articulated. We will then look to history and along with what we have derived from empirical studies advance preliminary recommendations concerning the safety and utility of the raw drug, next, we will draw our hypotheses into specific form, and with the addition of further historical information, clear recommendations for future research will be defined. To those ends we will outline:

a. deep and complex interwoven systemic involvement of cannabis and cannabinoids within the context of broad therapeutic augmentation of many diseases as a necessary consequence of perhaps over a billion years of advantageous adaptation.

b. evidence of the synergistic evolutionarily derived proliferative dynamics between phytochemical constituencies within human pathology yielding a potential pathway to the treatment and possible cure of many diseases: *utilization of the full or partial spectrum of the full proliferation of phytochemical constituencies*—to utilize rather than fight evolution.

c. the long historical record of the utility of cannabis demonstrative of its remarkable efficacy, excellent

risk/benefit profile and hence supporting the copious and safe *utility of the raw drug and its basic preparations*.

d. The General, Strong and Weak hypotheses.

e. Further history, analysis and subsequent assessment of causes of current problems and impediments, then, the proper course to advance toward cure for both the individual and industry.

Evidence of evolutionary complex-adaptivity as “advantage” manifest across pathologies

Remembering quite strictly that the rather substantial aforementioned empirical data presented here is deeply condensed, highly abbreviated and limited as to disease types and the specific mechanisms through which those pathologies are affected, we may condense the data even further using only a few of the many diseases mentioned without risk of losing our way. Let us ask the question implied by point “a” above:

“As we examine the evidence, is it more reasonable to deduce that: We do indeed see evidence of hypercomplex deeply interdigitated systemic phytochemical mediational processes within human biology across diverse pathologies indicative of millions, or perhaps over a billion years of advantageous evolution?—or—Do we not?”

Let us omit from our already abbreviated list all reference to: Allergy, Asthma, Autism, Brain Trauma, Cystic Fibrosis, Dystonia, Fibromyalgia, GERD, Herpes, MRSA, Cholangiocarcinoma, Cervical cancer, Lymphoma, Melanoma, Oral Cancer, Squamous Cell Carcinoma, Thyroid Cancer, Colitis, Depression, Diabetes, Epilepsy/Seizures, Parkinson’s and most all information concerning Heart Protection which has been previously presented in this text. To further condense what remains *after* said omissions we have [all references in sub-section below found in Clinical Applicability **References, list two**]:

ALS (Lou Gehrig’s Syndrome):

In (Bilsland and Greensmith, 2008) we read: “Cannabinoids exert anti-glutamatergic and anti-inflammatory actions through activation of the CB(1) and CB(2) receptors, respectively. Activation of CB(1) receptors may therefore inhibit glutamate release from presynaptic nerve terminals and reduce the postsynaptic calcium influx in response to glutamate receptor stimulation. Meanwhile, CB(2) receptors may influence inflammation, whereby receptor activation reduces microglial activation, resulting in a decrease in microglial secretion of neurotoxic mediators. Finally, cannabinoid agents may also exert anti-oxidant actions by a receptor-independent mechanism. Therefore the ability of cannabinoids to target multiple neurotoxic pathways in different cell populations may increase their therapeutic potential in the treatment of ALS.”

Alzheimer's Disease:

CBD blunts β -amyloid induced neuroinflammation by suppressing IL-1 β and iNOS expression; CBD demonstrates a combination of neuroprotective, anti-oxidative and anti-apoptotic effects against beta-amyloid peptide toxicity, and that inhibition of caspase 3 appearance from its inactive precursor, pro-caspase 3, by cannabidiol is involved in the signalling pathway for this neuroprotection. Also, due to its interaction at PPAR γ , CBD was observed to stimulate hippocampal neurogenesis. CBD is able to modulate microglial cell function. Cannabidiol inhibits inducible nitric oxide synthase protein expression and nitric oxide production in beta-amyloid stimulated PC12 neurons through p38 MAP kinase and NF-kappaB involvement. The marijuana component cannabidiol inhibits beta-amyloid-induced tau protein hyperphosphorylation through Wnt/beta-catenin pathway.

THC the active component of marijuana, Delta9-tetrahydrocannabinol (THC), competitively inhibits the enzyme acetylcholinesterase (AChE) as well as prevents AChE-induced amyloid beta-peptide (Abeta) aggregation, the key pathological marker of Alzheimer's disease. Δ 9-tetrahydrocannabinol not only inhibits acetylcholinesterase activity it limits amyloidogenesis which may improve cholinergic

transmission and delay disease progression. (Esposito et al. 2007; Iuvone et al. 2004; Esposito et al. 2007; Martin-Moreno et al. 2011; Esposito et al. 2006; Esposito et al. 2006; Campbell and Gowran, 2007.)

Arthritis:

Diseases involving inflammation, activation of the immune system and associated oxidative stress may be ameliorated to suppress T-cell-mediated immune responses by primarily inducing apoptosis and suppressing inflammatory cytokines and chemokines. Cannabinoid receptor–ligand interactions may constitute a novel window of opportunity to treat inflammatory and autoimmune disorders. Cannabinoid receptor system present in the synovium may be an important therapeutic target. The cannabinoid CB(2) receptor plays a critical role in cannabinoid-mediated antinociception, particularly in models of chronic inflammatory pain. (Nagarkatti et al. 2009; Richardson et al. 2008; Rieder et al. 2010; Cox et al. 2007; Booz, 2011).

Atherosclerosis:

From (Pacher and Ungvári, 2008):

“These new findings, coupled with recent evidence demonstrating that CB2 receptor activation also attenuates TNF- α -induced endothelial cell activation, transendothelial migration of monocytes and monocyte/neutrophil-endothelial adhesion . . . , and decreases TNF- α -induced proliferation and migration of human coronary vascular smooth muscle cells by . . . modulating distinct signaling pathways, provide important new mechanistic insights on the possible pleiotropic effects of CB2 activation in atherosclerosis and other inflammatory disorders.” From (Pacher and Steffens, 2009): “. . . activation of CB2 receptors in immune cells exerts various immunomodulatory effects, and the CB2 receptors in endothelial and inflammatory cells appear to limit the endothelial inflammatory response, chemotaxis, and inflammatory cell adhesion and activation in atherosclerosis and reperfusion injury.”

Breast cancer:

CBD represents the first nontoxic exogenous agent that can significantly decrease Id-1 expression in metastatic breast cancer cells leading to the down-regulation of tumor aggressiveness. THC fails to act as an estrogen or androgen and appears to reduce 17 β -estradiol-induced proliferation of breast cancer cell lines by a mechanism which is independent of AR and probably does not involve ER either. These results support the notion that THC controls cell proliferation through activation of cannabinoid receptors, independently of AR and ER, and thus might also be used in patients with hormonesensitive tumors. The mechanism of Delta(9)-tetrahydrocannabinol (THC) antiproliferative action in these cells, . . . involves the modulation of JunD, a member of the AP-1 transcription factor family. Cannabinoids reduce ErbB2-driven breast cancer progression through Akt inhibition. Δ 9-Tetrahydrocannabinol Inhibits cell cycle progression in human breast cancer cells through Cdc2 Regulation. (McAllister et al. 2007; Von Bueren et al. 2008; Caffarel et al. 2008; Caffarel et al.2010; Caffarel et al. 2006).

Colorectal cancer:

The cannabinoid δ 9-tetrahydrocannabinol inhibits RAS-MAPK and PI3K-AKT survival signalling and induces BAD-mediated apoptosis in colorectal cancer cells. Both CB1 and CB2 cannabinoid receptor activation induces apoptosis in colon cancer cells, and this is mediated by the *de novo* synthesis of ceramide. Signaling through CB1/CB2 receptor increases ceramide production via a mechanism that involves TNF- α . Cannabinoids inhibit cyclooxygenase enzyme activity. Cannabinoid receptor agonists induce phosphatases and phosphatase-dependent apoptosis in cancer cell lines; however, the role of the CB receptor in mediating this response is ligand-dependent. (Greenhough et al. 2007; Cianchi et al. 2008; Ruhaak et al. 2011).

Glioma (brain cancer):

THC-induced apoptosis in glioma C6.9 cells may rely on a CBI receptor-independent stimulation of

sphingomyelin breakdown. Cannabinoids cause decreased VEGF levels and VEGFR-2 activation in the tumors. Cannabinoids work to signal apoptosis by a pathway involving cannabinoid receptors, sustained ceramide accumulation and Raf1/extracellular signal-regulated kinase activation. Different sensitivity to the anti-proliferative effect of CBD in human glioma cells and non-transformed cells that appears closely related to a selective ability of CBD in inducing ROS production and caspase activation in tumor cells. Cannabinoids inhibit glioma cell invasion by down-regulating matrix metalloproteinase-2 expression. Delta 9-tetrahydrocannabinol inhibits cell cycle progression by downregulation of E2F1 in human glioblastoma multiforme cells: Delta(9)-THC is shown to significantly affect viability of GBM cells via a mechanism that appears to elicit G(1) arrest due to downregulation of E2F1 and Cyclin A. Local administration of Delta(9)-tetrahydrocannabinol (THC), the major active ingredient of cannabis, down-regulates TIMP-1 expression. CBD exerts its antitumoral effects through modulation of the LOX pathway and of the endocannabinoid system, suggesting a possible interaction of these routes in the control of tumor growth. THC stimulates an endoplasmic reticulum (ER) stress-related signaling pathway, which activates autophagy via inhibition of the Akt/mTORC1 axis. (Sánchez et al. 1998; Blázquez et al. 2004; Galve-Roperh et al. 2000; Massi et al. 2006; Blázquez et al. 2008; Galanti et al. 2008; Blázquez et al. 2008; Massi et al. 2008; Salazar et al. 2009).

Leukemia:

Cannabidiol, acting through CB2 and regulation of Nox4 and p22(phox) expression, may be a novel and highly selective treatment for leukemia. Delta-9-tetrahydrocannabinol and delta8-tetrahydrocannabinol inhibited RNA and protein synthesis in a fashion analogous to the inhibition of DNA synthesis in L1210 murine leukemia. Two non-psychotropic cannabinoids, cannabidiol (CBD) and cannabidiol-dimethylheptyl (CBD-DMH), induced apoptosis in a human acute myeloid leukemia (AML) HL-60 cell line. Caspase-3 activation was observed after the cannabinoid treatment, and may represent a mechanism for the apoptosis. Synergistic interactions between THC and the cytotoxic agents in leukemic cells are present. Raf-1/MEK/ERK/RSK-mediated Bad translocation played a critical role in THC-induced apoptosis in Jurkat cells. (McKallip et al. 2006; Tucker et al. 1977; Gallily et al. 2003; Liu et al. 2008; McKallip et al. 2006; Jia et al. 2006).

Lung Cancer:

Cannabidiol inhibits cancer cell invasion via upregulation of tissue inhibitor of matrix metalloproteinases-1. Increased expression of TIMP-1 mediates an anti-invasive effect of cannabinoids. Cannabinoids induce ICAM-1, thereby conferring TIMP-1 induction and subsequent decreased cancer cell invasiveness. Decrease of plasminogen activator inhibitor-1 may contribute to the anti-invasive action of cannabidiol on human lung cancer cells. (Ramer and Hinz, 2008; Ramer et al. 2010; Ramer et al. 2010; Ramer et al. 2012).

Neuroblastoma:

Cannabinoid and nantradol compounds decrease cyclic AMP accumulation in neuronally derived cells, and that this results from an inhibition of basal and hormone-stimulated adenylate cyclase activity. The inhibition of adenylate cyclase was specific for psychoactive cannabinoids, since cannabinol and cannabidiol produced minimal or no response. A concentration-related stimulation of anandamide (arachidonylethanolamide) synthesis by delta 9-tetrahydrocannabinol (THC) was observed in N-18TG2 neuroblastoma cells. The endocannabinoid anandamide (AEA) is shown to induce apoptotic bodies formation and DNA fragmentation, hallmarks of programmed cell death, in human neuroblastoma CHP100 and lymphoma U937 cells. (Howlett, 1984; Howlett, and Fleming 1984; Burstein and Hunter, 1995; Maccarrone et al. 2000).

Pancreatic Cancer:

Cannabinoids induce apoptosis of pancreatic tumor cells via endoplasmic reticulum stress–related genes, via the involvement of p8 via its downstream endoplasmic reticulum stress–related targets activating transcription factor 4 (ATF-4) and TRB3 in Δ 9-tetrahydrocannabinol–induced apoptosis. THC stimulates an endoplasmic reticulum (ER) stress-related signaling pathway, which activates autophagy via inhibition of the Akt/mTORC1 axis. Autophagy is upstream of apoptosis in cannabinoid-induced cancer cell death and activation of this pathway is necessary for the anti-tumoral action of cannabinoids *in vivo*. As to combined effects: ROS-dependent activation of an autophagic program in the synergistic growth inhibition induced by GEM/cannabinoid combination in human pancreatic cancer cells is also indicated. (Carracedo et al. 2006; Salazar et al. 2009; Donadelli et al. 2011).

Prostate Cancer:

The cannabinoid receptor CB1 expressed in the prostate negatively regulates adenylyl cyclase activity through a pertussis toxin-sensitive protein. Cannabinoid receptor type 1 (CB1) activation inhibits small GTPase RhoA activity and regulates motility of prostate carcinoma cells. Endogenous cannabinoids and CB1 receptor agonists are potential negative effectors of PRL- and NGF induced biological responses. (Ruiz-Llorente et al. 2003; Nithipatikom et al. 2012; Melck et al. 2000).

HIV/AIDS:

Identification of possible mechanisms responsible for this modulation of disease progression is complicated due to the multiplicity of cannabinoid-mediated effects, tissue specific responses to the viral infection, multiple cellular mechanisms involved in inflammatory responses, coordinated neuroendocrine and localized responses to infection, and kinetics of viral replication. Emerging results from our studies reveal that the overall mechanisms mediating the protective effects of cannabinoids involve novel epigenomic regulatory mechanisms in need of systematic investigation. Macrophages and macrophage-like cells are important targets of HIV-1 infection at peripheral sites and in the central nervous system. After infection, these cells secrete a plethora of toxic factors, including the viral regulatory trans-activating protein (Tat). This protein is highly immunogenic and also serves as a potent chemoattractant for monocytes. . . . Collectively, the pharmacological and biochemical knockdown data indicate that cannabinoid-mediated modulation of macrophage migration to the HIV-1 Tat protein is linked to the CB2 cannabinoid receptor. Delta-9-tetrahydrocannabinol (THC) and CP55940 exerted a concentration-related reduction in the migration of BV-2 cells towards Tat. Endocannabinoids (eCBs) include a group of lipid mediators that act as endogenous agonists at cannabinoid (CB(1), CB(2)) and vanilloid (TRPV1) receptors. In the last two decades a number of eCBs-metabolizing enzymes have been discovered that, together with eCBs and congeners, target receptors and proteins responsible for their transport and intracellular trafficking form the so-called "endocannabinoid system" (ECS). Within the central nervous system ECS elements participate in neuroprotection against neuroinflammatory/neurodegenerative diseases like Alzheimer's disease, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and multiple sclerosis. More recently, a role for eCBs has been documented also in human immunodeficiency virus-1 (HIV-1) envelope glycoprotein gp120-mediated insults, and in HIV-associated dementia (HAD). (Molina et al. 2011; Raborn and Cabral, 2010; Fraga, 2011; Bari et al. 2010).

We may now answer the question posed in point *a.*:

“As we examine the evidence, is it more reasonable to deduce that: We *do* see evidence of hypercomplex deeply interdigitated systemic phytochemical mediational processes within human biology across diverse pathologies indicative of millions, or perhaps over a billion years of advantageous evolution?—or—Do we not?”

The answer is plain:

Yes. We *do* see evidence of hypercomplex deeply interdigitated systemic phytochemical mediational processes within human biology across diverse pathologies indicative of millions, or perhaps over a

billion years of advantageous evolution. Point *a.* may be taken as evident.

Next we will review the evidence for the seemingly magical interactive synergies, complex conjunctive and proposed phytochemical entourage effects which our theory has made sensible to us.

Complex conjunctive and proposed phytochemical entourage effects: Evolution's answer.

We do hope the reader has taken note of those instances we have pointed out where combinative effects are evident with other substances such as opioids with which we have also evolved such as: In *Tetrahydrocannabinol (Delta 9-THC) Treatment in Chronic Central Neuropathic Pain and Fibromyalgia Patients: Results of a Multicenter Survey* (Weber et al. 2009), we read: "The present survey demonstrates its ameliorating potential for the treatment of chronic pain in central neuropathy and fibromyalgia. A supplemental delta 9-THC treatment as part of a broader pain management plan therefore may represent a promising coanalgesic therapeutic option. . . . Opioid doses were reduced and patients perceived THC therapy as effective with tolerable side effects." In the paper *Synergy between Δ^9 -tetrahydrocannabinol and morphine in the arthritic rat* (Cox et al. 2007), taking careful note of the relation between opioids (morphine) and THC in terms of tolerance and analgesic efficacy we read: "The isobolographic analysis indicated a synergistic interaction between Delta(9)-THC and morphine in both the non-arthritic and the arthritic rats. Since Freund's adjuvant-induced alteration in endogenous opioid tone has been previously shown, our data indicate that such changes did not preclude the use of Delta(9)-THC and morphine in combination. As with acute preclinical pain models in which the Delta(9)-THC/morphine combination results in less tolerance development, the implication of the study for chronic pain conditions is discussed." It appears from this informed vantage point, that cannabinoids could reduce tolerance to and hence dosages of opioids, alleviating the many deaths each year caused by the glut of profitable synthetic opioid prescriptions, ensuing tolerance and overdose, a hypothesis supported in present studies (Boehnke et al., 2016).

Please note, that cannabis had been used in Britain to treat drug addiction for many years [web ref. 2].

And we quote Russo and Marcu, (2017) for emphasis of this vital point:

"Perhaps most relevant to current clinic and public health issues is the ability of THC to displace opiates from the μ -opioid receptor, as well as allosterically modulate the μ - and δ -opioid receptor to inhibit their activity between 1 and 10 μ M (Lichtman, Sheikh, Loh, & Martin, 2001; Pertwee et al., 2010). This perhaps underlies the potential of cannabis as part of a viable solution to the opiate crisis in terms of treating addiction, withdrawal, and harnessing the benefits of cannabinoid-opiate coadministration in the clinic (Americans for Safe Access, 2016). When THC and morphine are coadministered, 1/4th the dose of morphine is required to reach significant reductions in pain (Naef et al., 2003)."

Note also, that synthetics underperformed compared to phytochemical constituencies of Cannabis. In *Cannabinoids selectively inhibit proliferation and induce death of cultured human glioblastoma multiforme cells*, the text states (please note the synthetic drug's lesser performance): "Evidence of selective efficacy with WIN 55,212-2 was also observed but the selectivity was less profound, and the synthetic agonist produced a greater disruption of normal cell morphology compared to Delta(9)-THC." See evidence of increased efficacy of proliferations/extracts, phytochemical combinations and other synergies in: (Russo 2011; Carlini et al., 1974; Fairbairn and Pickens, 1981; Wilkinson et al., 2003; Ryan et al., 2006).

Note the complex multisystemic functionality of pathological amelioration: *Cannabinoid neuroimmune modulation of SIV disease* (Molina et al. 2011 [ref. list 2]): "Identification of possible mechanisms responsible for this modulation of disease progression is complicated due to the multiplicity of cannabinoid-mediated effects, tissue specific responses to the viral infection, multiple cellular mechanisms involved in inflammatory responses, coordinated neuroendocrine and localized responses to infection, and kinetics of viral replication. Emerging results from our studies reveal that the overall

mechanisms mediating the protective effects of cannabinoids involve novel epigenomic regulatory mechanisms in need of systematic investigation.”

It appears that there is more happening here than single compounds mediating single systems. The full phytochemical proliferation seems to be involved as a complex and complimentary function of evolution and advantage, as will be supported below. Let us look more deeply into the details of those functional processes.

In the excellent studies (McPartland and Russo, 2001; Russo, 2011; Russo and Marcu, 2017) and references therein from which much of the following is derived, a plethora of interactive bio-mediational dynamics are revealed which enhance the pharmacological efficacy of other constituent phytochemical compounds or otherwise modulate the activity of those compounds so as to perhaps alleviate side-effects, such as that of THC related anxiety which is alleviated by CBD. In *Cannabidiol Enhances the Inhibitory Effects of Δ^9 -Tetrahydrocannabinol on Human Glioblastoma Cell Proliferation and Survival*, closely noting the interactive effects (Marcu et al. 2010 [ref. list 2]), we read: “Our results suggest that the addition of cannabidiol to Δ^9 -THC may improve the overall effectiveness of Δ^9 -THC in the treatment of glioblastoma in cancer patients.” Others have beneficial effects of different sorts. Terpenoids and flavonoids increase cerebral blood flow, enhance cortical functioning, kill respiratory pathogens and act as anti-inflammatory agents, and yet other beneficial effects are created through secondary constituent interactions. The raw drug, complete with all the interactive phytochemistry produces fewer side effects such as, dysphoria, depersonalization, anxiety, panic reactions, and paranoia than synthetic THC alone (McPartland and Russo, 2001; Grinspoon and Bakalar 1997). Throat irritation may be ameliorated by anti-inflammatory constituents, smoke borne mutagens by anti-mutagens and bacterial contamination by anti-bacterial elements (McPartland and Russo, 2001; Russo, 2011).

Synthesized within secretory cells the most prolific of which are the glandular trichomes, phytocannabinoids [see table one below for examples and synergies] and terpenoids [see table two below for examples and synergies] are both derivative of geranyl pyrophosphate, which is formed via the the deoxyxylulose pathway in cannabis (Fellermeier et al., 2001; Russo, 2011 p.1345). It appears that studies such as (Williamson, 2001) indicating the potentiation, antagonism and summations indicative of synergies across active and ‘inactive’ phytochemical components may be present, as demonstrated in CBD/THC interactions yielding reduced side effects demonstrative of antagonism. 4 basic synergistic interactivities as exemplified by Cannabis are postulated by (Wagner and Ulrich-Merzenich, 2009): (i) multi-target effects; (ii) pharmacokinetic effects such as improved solubility or bioavailability; (iii) agent interactions affecting bacterial resistance; and (iv) modulation of adverse events. (McPartland and Russo, 2001; Russo, 2011).

THC is a partial CB₁ and CB₂ agonist analogous to AEA allowing the endocannabinoid system to be targeted yielding therapeutic effects such as: analgesic, muscle relaxant and antispasmodic, bronchodilator, neuroprotective antioxidant, antipruritic agent in cholestatic jaundice, possessing 20 times the antiinflammatory power of aspirin and double that of hydrocortisone, without the problems associated with COX-1 and COX-2 inhibitors (Russo, 2011 p. 1348). THC stimulation of CB₁ receptors induces in animals including: suppression of locomotor activity, hypothermia, catalepsy, and antinociceptive effects, CB₂ stimulation with pain relief and antiinflammatory activities, but not appetite stimulation (Russo and Marcu, 2017).

THC CB₁ receptor stimulation inhibits forskolin-stimulated adenylate cyclase, and induces inhibition N-, Q-, L-type calcium channels. Ion channels can be modulated in CB₁ stimulation through G proteins which activate inwardly rectifying potassium channels, and, MAP kinases (Russo and Marcu, 2017). MAP kinase pathways then, alter the activity of ERK1/2, c-Jun N-terminal kinase (JNK), p38 MAP kinase, and/or ERK5 proteins, controlling cell growth and metabolism. In (Russo and Marcu, 2017) we learn that: “CB₁ protein is located in the nucleus of solitary tract (i.e., antiemetic effects), hypothalamus, motor systems, motor cortex, basal ganglia, cerebellum, spinal cord (motor neurons in spinal cord), eye, sympathetic ganglia (also enteric nervous system), immune system (bone marrow, thymus, spleen,

tonsils), breast cancer cell lines, and other peripheral sites such as the heart, lungs, adrenals, kidneys, liver, colon, prostate pancreas, testes, ovaries, and placenta.”

THC CB₂ receptor stimulation leads to inhibition of forskolin-stimulated AC activation (ibid.) and likewise stimulates MAP kinases, however, lacks ion channel effects as with CB₁. Cell types include: bone marrow, thymus, spleen, tonsils, T and B lymphocytes, monocytes, NK cells, PMN, and mast cells, uterus, lung, bone (osteoclasts, osteoblasts, osteocytes), microglia, and brainstem neurons (ibid.). Please note, we read: “*11-hydroxy metabolites of THC that are generated by the liver from oral administration of THC interact more efficiently at CB₁ receptors.*” Emphasis added, reader do take note. Receptor independent mechanisms as mentioned earlier are also in play, particularly at higher concentrations.

Receptor and channel interactions are dose specific (Russo and Marcu, 2017):

At <1 μM: activates GPR18, GPR55, peroxisome proliferator activated receptor gamma (PPARγ) nuclear receptors and TRPA1 and TRPV2 cation channels, while enhancing non-CB receptors on sensory neurons mediating the release of calcitonin gene-related peptide (migraine effector) while potentiating glycine-gated ion channels (pain relief), while also, antagonizing 5-HT_{3A} ligand-gated ion and the TRPM8 cation channel (ibid.).

Between 1 and 10 μM: Activation of PPARγ nuclear receptor, TRPV3 and TRPV4 cation channels, activation of β-adrenoceptors. Furthermore, THC inhibits: T-type calcium (Cav3) voltage-gated ion channels, potassium Kv1.2 voltage-gated ion channels and “conductance in Na⁺ voltage-gated ion channels (–), and conductance in gap junctions between cells at concentrations between 1 and 10 μM” (ibid.). Interactions with phospholipases, lysophosphatidylcholine acyl transferase, lipoxygenase, Na⁺-K⁺-ATPase, Mg²⁺-ATPase, CYP1A1, CYP1A2, CYP1B1, CYP2B6, CYP2C9, and monoamine oxidase activity are also in evidence, while, synaptic conversion of tyrosine to noradrenaline and dopamine is augmented, and also, norepinephrine-induced melatonin biosynthesis is inhibited (ibid.). THC has shown benefits for graft-vs-host-disease (GVHD) (ibid.).

Tetrahydrocannabinolic Acid (THCA-A)
(immunomodulatory/antiinflammatory/neuroprotective/antineoplastic) condensed from Russo and Marcu (2017): (THCA-A) is a primary cannabis metabolite void of psychotropic effects which is synthesized in glandular trichomes and is the natural precursor to THC. THC is synthesized through (THCA-A) that is decarboxylated by UV exposure, prolonged storage, or heat. Representing up to 90% of the total THC in the cannabis plant, ~70% converts to THC when smoked. (THCA-A) can be found in the serum, urine, and oral fluid of cannabis users up to 8 hours past usage. A weak agonist of CB₁ and CB₂ receptors, THCA-A has a higher affinity for CB₁. THCA-A inhibits tumor necrosis factor-alpha (TNF-α) release, interacts with TRPM8 channels, stimulates and in turn desensitizes various TRP cation channels, inhibits enzymes which break down endocannabinoids and COX-1 and -2, stimulating the endocannabinoid system through increase of endogenous cannabinoids (Russo and Marcu, 2017 p. 15). Neurite morphology and cell life was increased in a Parkinson’s model (Moldzio et al., 2012), and, reduced cell viability of various cancer cell lines in vitro (Moreno-Sanz, 2016). Access of THCA-A to the CNS is limited by the BBB.

Cannabidiol (CBD): Sedative, THC associated anxiety reduction, modulates THC as: a. an antagonist/reverse-agonist, b. signal transduction modulation via perturbing the fluidity of neuronal membranes, or, by affecting G-proteins that carry intracellular signals, c. reduction of cytochrome P450 3A11 metabolism blocking creation of *11-hydroxy THC which is 4 times as psychoactive as THC* and also *4 times as immunosuppressive*. CBD is a potent antipsychotic, which paradoxically increases dopamine activity and norepinephrine activity, while acting as a 5-HT uptake blocker, and, CBD does NOT decrease ACh activity in the hippocampus (associated with short term memory defects), unlike THC. CBD may help alleviate THC induced psychosis (Iseger and Bossong, 2015). CBD has antioxidant effects and, protects against glutamate toxicity, helps with Huntington’s, and acts as an anticonvulsant. It appears to reduce airway inflammation caused by THC, inhibits erythema over THC, and halts

cyclooxygenase activity (associated with cancer, pain and inflammation) (Williams, et al. 1999). CBD kills bacteria and fungi, so the Cannabis plant, may itself be more healthy to utilize as medication being to some increased degree free of said contaminants (McPartland and Russo, 2001).

CBD antagonizes CB1 receptors if THC is present although it has no affinity for those receptors, it down-mediate the THC induced symptoms of anxiety, tachycardia, hunger and sedation and, has been utilized within the one to one THC:CBD formulation of Sativex®, a well studied commercially available drug; CBD is an analgesic, a neuroprotective antioxidant more potent than ascorbate or tocopherol and a TRPV1 agonist without the noxious effects associated with capsaicin, which inhibits the uptake of AEA, and to some degree its hydrolysis, an antagonist on GPR55, and also on GPR18, helpful in disorders involving cell migration, notably endometriosis; it is an anticonvulsant, acts against nausea, is cytotoxic in breast cancer and other such cell lines, while being being cyto-preservative for normal cells, is an antagonist of necrosis factor-alpha in experiments involving arthritis, and stops prion accumulation and neuronal toxicity (Russo, 2011). Extracts show greater potency than the pure compound. CBD affects *methicillin-resistant Staphylococcus aureus* (MRSA) with a minimum inhibitory concentration (MIC) of 0.5–2 mg·mL⁻¹ (Russo, 2011; Appendino et al., 2008).

Cannabidiolic acid, condensed from Russo and Marcu (2017):

Cannabidiolic acid is the natural precursor to CBD and along with CBD represents the most prolific two phytochemical components of European hemp, and can target GPR55, TRPA1, TRPV1, and TRPM8 at concentrations between 1 and 10 µM. and at higher concentrations can inhibit ECS degradation enzymes. Like CBD it can enhance 5-HT_{1A} receptor activation with greater receptor affinity than CBD, but, is not a CB1 agonist or antagonist.

Cannabinol (CBN): CBN is a non-enzymatic oxidative by-product of THC (Russo, 2011) the product of THC degradation, and enhances the effects of THC in man, increases the production of follicle-stimulating hormone and testicular testosterone (McPartland and Russo, 2001), has anti-convulsant effects, and, possesses anti-inflammatory properties as well. Its effects on dopamine and norepinephrine are not clear, and reports conflict. A CB₁ agonist and CB₂ agonist of 3 times greater affinity, implying immune system cell modulatory functioning. CBN stimulates the binding of GTP-γ-S half as well as THC, and, modulates thymocytes by attenuating the activity of the c-AMP response element-binding protein (CREB), nuclear factor κB (NF-κB), and interleukin-2 (IL-2) (McPartland and Russo, 2001, p. 107). CBN is a TRPV2 (thermo-sensor) agonist and could be utilized in burn treatment, appears to promote bone formation via the recruitment of quiescent mesenchymal stem cells in marrow, and inhibits breast cancer resistance protein, a cause of drug resistance to chemotherapeutic agents. CBN inhibits enzymes cyclooxygenase, lipoxygenase, and cytochrome P450 (CYP) enzymes (e.g., CYP1A1, CYP1A2, CYP2B6, CYP2C9, CYP3A4, CYP3A5, CYP2A6, CYP2D6, CYP1B1, and CYP3A7) (Russo and Marcu 2017). Also it stimulates the activity of phospholipases, and, recruitment of quiescent mesenchymal stem cells in marrow (10 µM), encouraging bone formation, and affecting breast cancer resistance proteins at increased concentrations (ibid.).

Cannabichromene (CBC): CBC reduces inflammation with analgesic effects and inhibits prostaglandin synthesis, while exhibiting potent antibacterial activity and some antifungal activity, superior to THC. Lacking effects upon cytochrome P450 enzymes it is not an anticonvulsant, yet, potentiates changes in heart rate created by THC. CBC demonstrates anti-inflammatory and analgesic activity, the ability to reduce THC intoxication in experiments, anti-fungal and antibiotic effects, and cytotoxicity in cancer cell lines (Ligresti et al., 2006). A TRPM8 antagonist, it may help with prostate cancer (De Petrocellis and Di Marzo, 2010), and have powerful effects against MRSA (MIC 1 mg·mL⁻¹) (Russo, 2011 p. 1349). A strong AEA uptake inhibitor, and a moderate 5-HT_{1A} antagonist, it may function as an antidepressant (McPartland and Russo, 2001; Russo, 2011) [web ref. 1.]. CBC creates its pain reducing and anti-inflammatory effects as it stimulates and desensitizes TRP ankyrin-type 1 (TRPA1) cation channels, and, interacts with TRPV4 and TRPV3 cation channels, and desensitizes TRPV2 and TRPV4. It exerts a positive effect upon the viability of mammalian adult neural stem cell progenitor cells. TRP cation channels TRPA1, TRPV1–4, and TRPV8 are interactive with CBC (Russo and Marcu, 2017).

Cannabigerol (CBG): the biosynthetic precursor of CBC, CBD, and THC is a weak agonist at CB₁ and CB₂ receptors (Russo, 2011), which in rodent models inhibits 5-HT and norepinephrine uptake with less effectiveness than THC and CBD, and in older work is shown to inhibit GABA uptake with greater potency than THC and CBD (McPartland and Russo, 2001). Analgesic effects, inhibition of erythema, and lipoxygenase blocking exceed THC. Antibacterial and like effects are greater than CBD, CBC and THC against gram-positive bacteria, mycobacteria, and fungi (McPartland and Russo, 2001). Next down in efficacy from CBD, CBG shows effects against breast cancer (Ligresti et al., 2006; Russo, 2011), and acts as a potent TRPM8 antagonist with possible application in prostate cancer (De Petrocellis and Di Marzo, 2010); a strong uptake inhibitor of AEA (De Petrocellis et al., 2011); and a potent agent against MRSA (Appendino et al., 2008; Russo, 2011 p. 13448). CBG is a powerful α -2 adrenoreceptor agonist with analgesic effects, and a 5-HT_{1A} antagonist of moderate proportion, suggesting possible antidepressant effects (Russo, 2011, p. 1349). Pain, inflammation, heat sensitization and possible effects upon prostate cancer are mediated by CBG through mechanisms including: antagonizing TRPV8 receptors and stimulating TRPV1, TRPV2, TRPA1, TRPV3, TRPV4, and α -2 adrenoreceptor activity (Russo and Marcu 2017).

Delta-8-THC (Δ 8-THC): An isomer of delta-9-THC and effective antiemetic that is easy to synthesize which is free of psychoactive effects when administered to human subjects between the ages of 2-13 years (McPartland and Russo, 2001).

Tetrahydrocannabivarin (THCV) is a propyl analogue of Δ 9-THC, 25% as psychoactive as Δ 9-THC with abilities to moderate THC effects with faster onset and shorter duration, perhaps useful in treatment of migraine, demonstrating evidence of synergy with THC (McPartland and Russo, 2001; Russo, 2011). A CB₁ antagonist at low doses, and a CB₁ agonist at high doses, it may produce weight loss as demonstrated in experimental rodent models, increase energy expenditure and perhaps prevent seizures in the rodent cerebellum and pyriform cortex, and may also reduce pain (Russo, 2011; McPartland and Russo, 2001). It is a fractional component of southern African cannabis chemotypes (Russo and Marcu 2017).

Terpenoids:

The cannabis terpenoids limonene, myrcene, α -pinene, linalool, β -caryophyllene, caryophyllene oxide, nerolidol and phytol share the precursor geranyl pyrophosphate with phytocannabinoids and have been designated *Generally Recognized as Safe* by the US Food and Drug Administration and other regulatory agencies. Phytocannabinoid-terpenoid interactions could produce synergy with respect to the treatment of pain, inflammation, depression, anxiety, addiction, epilepsy, cancer, fungal and bacterial infections (including *methicillin-resistant Staphylococcus aureus*) (Russo, 2011 p.1344).

Cannabis derives its potent scent from the 200 terpenoids found in the plant (Russo, 2011 p. 1349) [see chart two below for examples]. Terpenoids are formed of repeating units of isoprene (C₅H₈), such as monoterpenoids (with C₁₀ skeletons), sesquiterpenoids (C₁₅), diterpenoids (C₂₀), and triterpenoids (C₃₀) (McPartland and Russo, 2001). Terpenoids can range from “simple linear chains to complex polycyclic molecules, and they may include alcohol, ether, aldehyde, ketone, or ester functional groups.” (McPartland and Russo, 2001 p. 109). Terpenoids are essential oil (EO) or volatile oil components. They ordinarily vaporize at the same temperatures as THC ~157°C, and being lipophilic, they permeate lipid membranes, and, may also cross the Blood-Brain Barrier once inhaled. They may modulate THC effects and activity by *a.* binding to cannabinoid receptors; *b.* modulate the affinity of THC for its own receptor via THC sequestering, perturbation of annular lipids around the receptor, or by increasing neuronal membrane fluidity (ibid. p. 110). Terpenoids may remodel G-proteins, and alter the pharmacokinetics of THC by modification of BBB permeability. Some act as Prozac affecting uptake of 5-HT, others as tricyclic antidepressants affecting norepinephrine activity, dopamine activity as MAO inhibitors, and increase GABA as do the benzodiazepines. Effects upon 5-HT_{1A} and 5-HT_{2a} receptors support synergies within cannabis creating mood effects. β -caryophyllene, α -humulene, α -terpineol, and

limonene, terpenoids present in cannabis, have been demonstrated to affect *Cryptococcus neoformans* strains isolated from HIV patients with *cryptococcal meningitis*. Monoterpenes in cannabis resin (ibid p. 112-114): “(1) inhibit cholesterol synthesis, (2) promote hepatic enzyme activity to detoxify carcinogens, (3) stimulate apoptosis in cells with damaged DNA, and (4) inhibit protein isoprenylation implicated in malignant deterioration (Jones 1999).” β -myrcene is the most prolific terpenoid in cannabis, an analgesic functioning as CBD, CBG, and CBC: through blocking the inflammatory effects of prostaglandin E₂ (Lorenzetti et al. 1991). Other cannabinoids in cannabis smoke perform similar functions, like carvacrol which is more effective than THC in this capacity. The effects may be cumulative. We read (McPartland and Russo, 2001 p. 115): “unfractionated cannabis essential oil exhibits greater antiinflammatory activity than its individual constituents, suggesting synergy (Evans et al. 1987).”

The cannabis terpenoids include but are not limited to:

Cannabis Monoterpenoids

- 1 β -Myrcene
- 2 D-Limonene
- 3 β -Ocimene
- 4 γ -Terpinene
- 5 α -Terpinene
- 6 α -Terpineol
- 7 α -Pinene
- 8 β -Pinene
- 9 Linalool
- 10 Camphene
- 11 Terpinolene
- 12 α -Phellandrene
- 13 γ -Cadinene
- 14 Δ^3 -Carene
- 15 ρ -Cymene
- 16 Fenchol
- 17 1,8-Cineole (Eucalyptol)
- 18 Pulegone

Cannabis Sesquiterpenoids

- 1 β -Caryophyllene
- 2 Caryophyllene Oxide
- 3 Humulene (α -Caryophyllene)
- 4 β -Elemene
- 5 Guaiol
- 6 Eudesmol Isomers
- 7 Nerolidol
- 8 Gurjunene
- 9 γ -Cadinene
- 10 β -Farnesene

We will review some few of those here.

Myrcene, a primary cannabis monoterpene, acts to synergize the antibiotic effects of other constituents against *Staphylococcus aureus*, *Bacillus subtilis*, and *Pseudomonas aeruginosa*, and, inhibits cytochrome P450 2B1, an enzyme involved in the activation of promutagens, such as Aflatoxin B1, which is produced by moldy cannabis. Once aflatoxin B1 is acted upon by P450 2B1, it becomes hepatocarcinogenic. Hence, myrcene, just like limonene, α -pinene, α -terpinene, and citronellal, blocks this pathogenic process. The plant contains the antidotes to its own naturally occurring environmentally

inculcated pathogens. Myrcene decreases inflammation via prostaglandin E-2 (PGE-2) and blocks hepatic carcinogenesis by aflatoxin (Russo, 2011 p. 1350). It is used in sleep preparations in Germany, and may be the predominant THC combinative synergistic sedative agent in Cannabis. β -Myrcene is the most prevalent terpene in chemovars in the United States, and is likely responsible for sedative effects in commercial preparations (Russo and Marcu 2017). It halts carcinogenic effects of aflatoxin in the liver, and may work as an analgesic through narcotic effect interactions mediated by α -2 adrenoreceptors. Osteoarthritis may be affected via inhibited NO production by IL-1 β and, also lowered IL-1 β -induced iNOS mRNA and protein by significant amounts well over 70% at even higher concentrations. Increased glutathione in tissues was associated with treatment of peptic ulcers with oral preparations. Synergies with THC and CBD are implied (Russo and Marcu 2017).

β -Caryophyllene (BCP) is the most common sesquiterpenoid in cannabis demonstrative of anti-inflammatory effects, and it is shown to decrease the vascular permeability of histamines with gastric cytoprotective effects, and, antimalarial effects (McPartland and Russo, 2001 p. 115). It gains its anti-inflammatory effects via PGE-1, with comparable potency to the toxic compound phenylbutazone (Russo, 2011 p. 1352). Caryophyllene is a full selective agonist at CB₂, which serves its antiinflammatory capacities, as said effects are reduced in CB₂ knockout animals (Russo and Marcu 2017). The same mechanism is responsible for effects upon nociception and pain, colitis and nephrotoxicity. β -Caryophyllene synergizes with THC to create antipruritic effects and gastric cytoprotection, and, with CBD to create antiinflammatory benefits (ibid.). Experiments demonstrate: "cardioprotective, hepatoprotective, gastroprotective, neuroprotective, nephroprotective, antioxidant, antiinflammatory, antimicrobial, and immunomodulator activities" (Russo and Marcu 2017). "BCP activates peroxisome proliferated activator receptors (PPARs) isoforms, inhibits pathways triggered by the activation of toll-like receptor complexes (i.e., CD14/TLR4/MD2), reduces immunoinflammatory processes, and exhibits synergy with μ -opioid receptor pathways" (Sharma et al., 2016; Russo and Marcu 2017). BCP is a homomeric nicotinic acetylcholine receptors (7-nAChRs) antagonist, and shows no effects mediated by serotonergic and GABAergic receptors (ibid.).

Limonene is a monocyclic monoterpenoid, the second most common terpenoid in some strains (chemovars) of cannabis which has demonstrated inhibition of thymic involution in stress-induced immunosuppression in mice (Ortiz de Urbina et al. 1989). Limonene may eliminate the need for synthetic antidepressant medications (Komori et al. 1995). Limonene inhibits *Aspergillus fungi* and their aflatoxins, and limonene as other terpenoids suppresses many fungi and bacteria (McPartland, 1997). d-Limonene blocks carcinogenesis by multiple mechanisms. It detoxifies carcinogens by inducing Phase II carcinogen-metabolizing enzymes (Crowell, 1999). It selectively inhibits the isoprenylation of Ras proteins, thus blocking the action of mutant *ras* oncogenes (Hardcastle et al. 1999). It induces redifferentiation of cancer cells (by enhancing expression of transforming growth factor β 1 and growth factor II receptors), and it induces apoptosis of cancer cells (Crowell, 1999; McPartland and Russo, 2001, p. 116). Cannabinoids and Limonene both interfere with quorum-sensing in biofilm formation, indicating likely synergy (Russo and Marcu 2017). Chemotherapeutic properties, inducing apoptosis of breast cancer cells have been demonstrated; gastro-esophageal reflux is effected; inflammation, oxidative damage in human lens epithelial cells via regulation of caspase-3 and -9, Bax, and Bcl-2, as well as inhibition of p38 MAPK phosphorylation, suggesting utility in cataract treatment; an agonist at A_{2A} adenosine receptors to synergize activity with both THC and CBD; mitochondrial biogenesis, activated the AMPK energy regulator, increased brown adipocyte markers PGC-1 α UCP1, and induced "browning" of 3T3-L1 adipocytes by activating β -3-AR and ERK signaling pathway to possibly ameliorate obesity, and, synergize with anorexic effects of CBD and THCV, and, modulatory effects of THC on weight balance (Russo and Marcu 2017).

Linalool is a noncyclic monoterpenoid, with sedative anxiolytic effects like the weaker citronellol and α -terpineol which are also found in cannabis. Combinations generate synergistic sedative effects, may mitigate THC associated anxiety and produce antidepressant effects (McPartland and Russo, 2001 p. 117). Terpenoids act synergistically with non-psychoactive CBD, which may decrease corticotropin-releasing factor (CRF) by inhibiting IFN- γ (Malfait et al. 2000). Linalool demonstrates antiglutamatergic

activity (Russo, 2011 p. 1352). Immune potentiating effects of Linalool, analgesic and anticonvulsant effects in general, and, some anticonvulsant effects from the very small quantities in cannabis are implied (Russo and Marcu 2017). Anesthetic effects akin to procaine and menthol are evidenced. *P. acnes* are substantially improved in Linalool therapy. The pharmacokinetics of cannabis administration may be altered by Linalool via effects upon CYP enzymes, experiments with rodents suggest. Antileishmanial activity (acting against *Leishmania* parasites), possible effects reducing opioid dosages, and possible anticancer applications as bound into nano-component dosage structures are being fruitfully explored (Russo and Marcu 2017).

From (Nunes et al., 2010, p. 303; Russo, 2011 p. 1352) we may deduce a general effective mechanism: “Overall, it seems reasonable to argue that the modulation of glutamate and GABA neurotransmitter systems are likely to be the critical mechanism responsible for the sedative, anxiolytic and anticonvulsant properties of linalool and EOs containing linalool in significant proportions.”

Pulegone, a monocyclic monoterpenoid is found in cannabis and may alleviate the THC side effect of loss of short-term memory consolidation, perhaps having applications in Alzheimer’s. AChE inhibition is the functional basis of the reduction in pathology, a property shared by other terpenes such as, limonene, limonene oxide, α -terpinene, γ -terpinene, terpinen-4-ol, carvacrol, l- and d-carvone, 1,8-cineole, p-cymene, fenchone, and pulegone-1,2-epoxide (McPartland and Russo, 2001).

1,8-Cineole, a bicyclic monoterpenoid, is found in cannabis, the inhalation which increases cerebral blood flow and improves cortical activity. Antinociceptive analgesic and anti-inflammatory actions are in evidence and, antibacterial activity against *Bacillus subtilis*, as well as, antifungal properties against *Trichophyton mentagrophytes*, *Cryptococcus neoformans*, and *Candida albicans*, and 1,8-Cineole was effective in killing *Candida albicans* and *Escherichia coli*, stopped the reproduction of *Staphylococcus aureus*, and is antiviral against *Herpes simplex 2*. (McPartland and Russo, 2001, pp. 117-118).

α -Pinene, a bicyclic monoterpenoid has anti-inflammatory properties and acts as a bronchodilator. α -Pinene inhibits acetylcholinesterase implying Alzheimer’s may be treated thus. α -pinene, α -terpineol, and terpinen-4-ol demonstrate antibiotic effects against *Staphylococcus aureus*, *S. epidermidis* and *Propionibacterium acnes*. α -Pinene and its isomer β -pinene are both effective against Hep-G2 (human hepatocellular carcinoma) and Sk-Mel-28 (human melanoma) tumor cells *in vitro* (Setzer et al. 1999; McPartland and Russo, 2001, pp. 118). This terpenoid is the most widely found in nature, occurring in conifers and many other plants (Russo, 2011 p. 1350), and functions as a broadspectrum antibiotic with action against MRSA. α -Pinene constitutes a memory aid, functioning as an acetylcholinesterase inhibitor (ibid.). α -pinene inhibited BEL-7402 human hepatoma cell growth (Chen et al., 2015).

α -Terpineol, terpinen-4-ol, and γ -terpineol are related monoterpenoids with possible sedative and radical scavenging and antioxidant effects (McPartland and Russo, 2001 p. 118). Terpinen-4-ol, α -terpineol, and α -pinene act as antibiotics suitable to affect *Staphylococcus aureus*, *S. epidermidis* and *Propionibacterium acnes*. Antimalarial effects are also possible (Campbell et al. 1997; McPartland and Russo, 2001).

Cymene, (p-cymene), is a monoterpenoid with biological actions against *Bacterioides fragilis*, *Candida albicans*, and *Clostridium perfringens* (Carson and Riley 1995; McPartland and Russo, 2001).

Borneol is a bicyclic monoterpenoid in cannabis which functions as an external treatment for purulent otitis media without toxicity.

Δ^3 -Carene is a bicyclic monoterpenoid and marker of “sativa” strains (chemovars) with anti-inflammatory properties (McPartland and Russo, 2001; Russo and Marcu, 2017).

Flavonoids present in cannabis, condensed from (McPartland and Russo, 2001):

Cannabis contains 20 aromatic, polycyclic phenols, or *flavonoids*, constituting ~ 1% of its weight some of which retain pharmacological activity after being vaporized into smoke where they may modulate the pharmacokinetics of THC in a way similar to CBD through the inhibition of P450 3A11 and P450 3A4 enzymes. Suppression of P450 is chemoprotective, via inhibition of activation of benzo[α]pyrene and aflatoxin B1, which are procarcinogens found in cannabis smoke.

Apigenin (Anxiolytic/Anti-inflammatory/Estrogenic): perhaps alongside THC, inhibits tumor necrosis factor- α (TNF- α) which induces and maintains inflammation, thereby possibly alleviating symptoms of rheumatoid arthritis and multiple sclerosis. Apigenin and other flavonoids affect estrogen receptors, and may inhibit estradiol-induced proliferation of breast cancer cells. Apigenin is a flavone that binds to central benzodiazepine receptors to foster anxiolytic effects without side effects associated with synthetics.

Quercetin (Antioxidant/Antimutagenic/Antiviral/Antineoplastic): a flavonol and a potent antioxidant which works synergistically with other such compounds. McPartland and Russo (2001) speculates these compounds may “recycle” CBD inducing its chemical reactions as an antioxidant. Flavonoids block free radical formation: by scavenging superoxide anions; by quenching intermediate peroxy and alkoxy radicals, and by chelating iron ions (McPartland and Russo, 2001, pp. 121). Free radicals activate a transcription factor protein NF- κ B leading to a chain of pathological events. Quercetin stops NF- κ B formation through blocking the PKC-induced phosphorylation of an inhibitory subunit of NF- κ B called I κ B (Musonda and Chipman 1998), stopping carcinogenesis and inflammation, and may suppress HIV-1, and may synergize with CBN, which also downregulates NF- κ B and counteracts the effects of THC, which could increase NF- κ B activity (Daaka et al. 1997).

Cannflavin A (COX inhibitor/LO inhibitor): a prenylated flavone and a potent inhibitor of prostaglandin E2 in human rheumatoid synovial cells, and, inhibits cyclooxygenase (COX) enzymes and lipoxygenase (LO). The question of its volatility remains as preparations with alcohol may influence results obtained, so its activity within the context of smoking is unknown.

Russo (2011) draws the many threads together for us, and speculates along the following lines as to the *possible therapeutic targets* to best explore in order to make use of these interactive entourage effects across the proliferation of active and ‘inactive’ constituents:

Acne:

Lipid production in human sebocytes of sebaceous glands is under functional mediation of the endocannabinoid system, as apoptosis is controlled by AEA in a dose dependent way. CBD may attenuate the increased sebum production which is causal in acne. Limonene and pinene may offer supportive synergistic augmentation of effects (Russo, 2011 pp. 1352-1353).

MRSA:

CBD and CBG inhibit MRSA (MIC 0.5–2 mg·mL⁻¹) (Appendino et al., 2008). Pinene may augment effects (Russo, 2011 p. 1352).

Depression, insomnia, anxiety, dementia and addiction:

Addiction: Changes associated with opioid addiction in α -amino-3-hydroxyl-5-methyl-4- isoxazole-propionate glutamate and CB₁ receptor expression in the nucleus accumbens may be reversed with CBD. Left insula activation is associated with addictive mediation, and CBD down mediates left insula activation, implying an addictive treatment option. This author [R.N.] wonders if OCD could be treated with CBD also (perhaps with supplemental caryophyllene, see below), as the same insula activation may support symptoms in this case as well (Nakao et al., 2014; Stein et al., 2006). CBD appears to modify

the ability of drugs to reenforce addictive behavior (and hypothetically, to restructure reward and reinforcement of obsessive behaviors as well). Myrcene, pinene and particularly *caryophyllene* could offer supplemental benefit to CBD treatment in addiction (Russo, 2011 p. 1354).

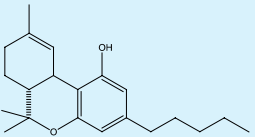
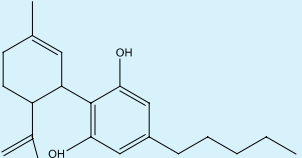
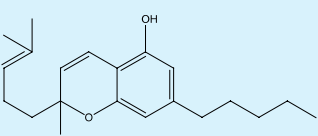
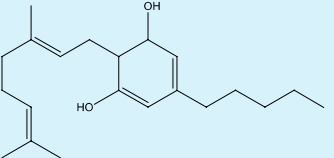
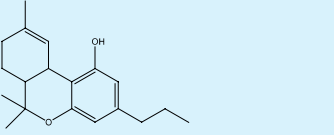
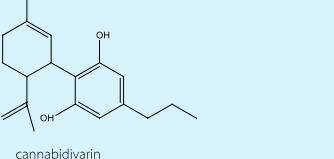
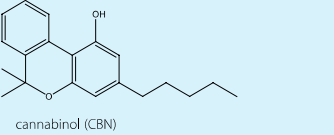
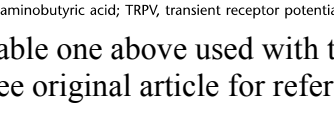



The endocannabinoid system mediates depression, anxiety from post traumatic stress disorder or physical pain, and also, the endocannabinoid system is involved with the mediation of psychosis (Russo, 2011 p. 1353). CBD- or CBG-predominant preparations including appropriate terpenoids and other secondary constituents may offer a safe alternative in the treatment of depressive symptomatology, by way of promotion of neurogenesis and increased plasticity. More sure is the complex role of CBD on 5-HT_{1A} activity, which theoretically underlies the demonstrated anti-anxiety effects and statistically valid improvements noted in experiments with social anxiety disorder (Russo, 2011 p. 1353). Anxiolytic limonene and linalool could be the proper synergistic additions in this sort of therapy (ibid.). Sleep promoting effects of cannabis (Russo et al., 2007) could potentially be increased by adding caryophyllene, linalool and myrcene (Russo, 2011 p. 1353).

THC is a acetylcholinesterase inhibitor that inhibits amyloid β -peptide aggregation in Alzheimer's (ibid.; Eubanks et al., 2006). CBD may also reduce β -amyloid in Alzheimer's with its attendant dementia (Iuvone et al., 2004; Esposito et al., 2006a,b), and also, offers potent antipsychotic effects (Iseger et al. 2015; Zuardi et al., 1991; 2006; Zuardi and Guimaraes, 1997; Russo, 2011). Limonene, pinene and linalool could improve needed effects. Interestingly, CBD in proportional doses to THC eliminates cognitive and memory deficits in cannabis smokers (Iseger et al. 2015; Russo, 2011).

Please see tables one and two below for examples of terpenoids, phytocannabinoids and their synergies (Russo, 2011).

Table 1

Phytocannabinoid activity table

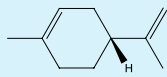

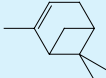

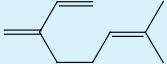

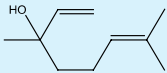





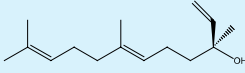



| Phytocannabinoid structure | Selected pharmacology (reference) | Synergistic terpenoids |
|---|---|---|
|  delta-9-tetrahydrocannabinol (THC) | Analgesic via CB ₁ and CB ₂ (Rahn and Hohmann, 2009) AI/antioxidant (Hampson <i>et al.</i> , 1998) Bronchodilatory (Williams <i>et al.</i> , 1976) ↓ Sx. Alzheimer disease (Volicer <i>et al.</i> , 1997; Eubanks <i>et al.</i> , 2006) Benefit on duodenal ulcers (Douthwaite, 1947) Muscle relaxant (Kavia <i>et al.</i> , 2010) Antipruritic, cholestatic jaundice (Neff <i>et al.</i> , 2002) | Various Limonene <i>et al.</i> Pinene Limonene, pinene, linalool Caryophyllene, limonene Linalool? Caryophyllene? |
|  cannabidiol | AI/antioxidant (Hampson <i>et al.</i> , 1998) Anti-anxiety via 5-HT _{1A} (Russo <i>et al.</i> , 2005) Anticonvulsant (Jones <i>et al.</i> , 2010) Cytotoxic versus breast cancer (Ligresti <i>et al.</i> , 2006) ↑ adenosine A _{2A} signalling (Carrier <i>et al.</i> , 2006) Effective versus MRSA (Appendino <i>et al.</i> , 2008) Decreases sebum/sebocytes (Biro <i>et al.</i> , 2009) Treatment of addiction (see text) | Limonene <i>et al.</i> Linalool, limonene Linalool Limonene Linalool Pinene Pinene, limonene, linalool Caryophyllene |
|  cannabichromene | Anti-inflammatory/analgesic (Davis and Hatoum, 1983) | Various |
|  AEA | Antifungal (ElSohly <i>et al.</i> , 1982) | Caryophyllene oxide |
|  cannabigerol | AEA uptake inhibitor (De Petrocellis <i>et al.</i> , 2011) | – |
|  cannabidiol | Antidepressant in rodent model (Deyo and Musty, 2003) | Limonene |
|  tetrahydrocannabivarin | TRPM8 antagonist prostate cancer (De Petrocellis <i>et al.</i> , 2011) GABA uptake inhibitor (Banerjee <i>et al.</i> , 1975) Anti-fungal (ElSohly <i>et al.</i> , 1982) Antidepressant rodent model (Musty and Deyo, 2006); and via 5-HT _{1A} antagonism (Cascio <i>et al.</i> , 2010) Analgesic, α-2 adrenergic blockade (Cascio <i>et al.</i> , 2010) ↓ keratinocytes in psoriasis (Wilkinson and Williamson, 2007) Effective versus MRSA (Appendino <i>et al.</i> , 2008) | Cannabis terpenoids Phytol, linalool Caryophyllene oxide Limonene |
|  cannabidiol | AI/anti-hyperalgesic (Bolognini <i>et al.</i> , 2010) | Various adjunctive role? Pinene Caryophyllene <i>et al.</i> . . . |
|  cannabidiol | Treatment of metabolic syndrome (Cawthorne <i>et al.</i> , 2007) | – |
|  cannabidiol | Anticonvulsant (Hill <i>et al.</i> , 2010) | Linalool |
|  cannabidiol | Inhibits diacylglycerol lipase (De Petrocellis <i>et al.</i> , 2011) | – |
| cannabidiol | Anticonvulsant in hippocampus (Hill <i>et al.</i> , 2010) | Linalool |
| cannabidiol | Sedative (Musty <i>et al.</i> , 1976) | Nerolidol, myrcene |
| cannabidiol | Effective versus MRSA (Appendino <i>et al.</i> , 2008) | Pinene |
| cannabidiol | TRPV2 agonist for burns (Qin <i>et al.</i> , 2008) | Linalool |
| cannabidiol | ↓ keratinocytes in psoriasis (Wilkinson and Williamson, 2007) | adjunctive role? |
| cannabidiol | ↓ breast cancer resistance protein (Holland <i>et al.</i> , 2008) | Limonene |

5-HT, 5-hydroxytryptamine (serotonin); AEA, arachidonylethanolamide (anandamide); AI, anti-inflammatory; CB₁/CB₂, cannabinoid receptor 1 or 2; GABA, gamma aminobutyric acid; TRPV, transient receptor potential vanilloid receptor; MRSA, methicillin-resistant *Staphylococcus aureus*; Sx, symptoms.

Table one above used with the kind permission of Dr. Ethan Russo, from (Russo, 2011). See original article for references in chart above.

Table 2

Cannabis Terpenoid Activity Table

| Terpenoid | Structure | Commonly encountered in | Pharmacological activity (Reference) | Synergistic cannabinoid |
|------------------------|---|---|--|---|
| Limonene |  |  Lemon | Potent AD/immunostimulant via inhalation (Komori <i>et al.</i> , 1995) Anxiolytic (Carvalho-Freitas and Costa, 2002; Pultrini Ade <i>et al.</i> , 2006) via 5-HT _{1A} (Komiya <i>et al.</i> , 2006) Apoptosis of breast cancer cells (Vigushin <i>et al.</i> , 1998) Active against acne bacteria (Kim <i>et al.</i> , 2008) Dermatophytes (Sanguinetti <i>et al.</i> , 2007; Singh <i>et al.</i> , 2010) Gastro-oesophageal reflux (Harris, 2010) | CBD CBD CBD, CBG CBD CBG THC |
| α -Pinene |  |  Pine | Anti-inflammatory via PGE-1 (Gil <i>et al.</i> , 1989) Bronchodilatory in humans (Falk <i>et al.</i> , 1990) Acetylcholinesterase inhibitor, aiding memory (Perry <i>et al.</i> , 2000) | CBD THC THC?, CBD |
| β -Myrcene |  |  Hops | Blocks inflammation via PGE-2 (Lorenzetti <i>et al.</i> , 1991) Analgesic, antagonized by naloxone (Rao <i>et al.</i> , 1990) Sedating, muscle relaxant, hypnotic (de Vale <i>et al.</i> , 2002) Blocks hepatic carcinogenesis by aflatoxin (de Oliveira <i>et al.</i> , 1997) | CBD CBD, THC THC CBD, CBG |
| Linalool |  |  Lavender | Anti-anxiety (Russo, 2001) Sedative on inhalation in mice (Buchbauer <i>et al.</i> , 1993) Local anesthetic (Re <i>et al.</i> , 2000) Analgesic via adenosine A _{2A} (Pena <i>et al.</i> , 2006) Anticonvulsant/anti-glutamate (Elisabetsky <i>et al.</i> , 1995) | CBD, CBG? THC THC CBD CBD, THCV, CBDV |
| β -Caryophyllene |  |  Pepper | Potent anti-leishmanial (do Socorro <i>et al.</i> , 2003) AI via PGE-1 comparable phenylbutazone (Basile <i>et al.</i> , 1988) Gastric cytoprotective (Tambe <i>et al.</i> , 1996) Anti-malarial (Campbell <i>et al.</i> , 1997) Selective CB ₂ agonist (100 nM) (Gertsch <i>et al.</i> , 2008) Treatment of pruritus? (Karsak <i>et al.</i> , 2007) Treatment of addiction? (Xi <i>et al.</i> , 2010) | ? CBD THC ? THC THC CBD |
| Caryophyllene Oxide |  |  Lemon balm | Decreases platelet aggregation (Lin <i>et al.</i> , 2003) Antifungal in onychomycosis comparable to ciclopiroxolamine and sulconazole (Yang <i>et al.</i> , 1999) Insecticidal/anti-feedant (Bettarini <i>et al.</i> , 1993) | THC CBC, CBG THCA, CBGA |
| Nerolidol |  |  Orange | Sedative (Binet <i>et al.</i> , 1972) Skin penetrant (Cornwell and Barry, 1994) Potent antimalarial (Lopes <i>et al.</i> , 1999, Rodrigues Goulart <i>et al.</i> , 2004) | THC, CBN – ? |
| Phytol |  |  Green tea | Anti-leishmanial activity (Arruda <i>et al.</i> , 2005) Breakdown product of chlorophyll Prevents Vitamin A teratogenesis (Arnhold <i>et al.</i> , 2002) \uparrow GABA via SSADH inhibition (Bang <i>et al.</i> , 2002) | ? – – CBG |

Representative plants containing each terpenoid are displayed as examples to promote recognition, but many species contain them in varying concentrations. 5-HT, 5-hydroxytryptamine (serotonin); AD, antidepressant; AI, anti-inflammatory; CB₁/CB₂, cannabinoid receptor 1 or 2; GABA, gamma aminobutyric acid; PGE-1/PGE-2, prostaglandin E-1/prostaglandin E-2; SSADH, succinic semialdehyde dehydrogenase.

Table two above used with the kind permission of Dr. Ethan Russo, from (Russo, 2011). See original article for references in chart above.

We may now address point **b.** raised above and ascertain if we may draw a sound evidence-based conclusion:

b. evidence of the synergistic evolutionarily derived proliferative dynamics between phytochemical constituencies within human pathology yielding a potential pathway to the treatment and possible cure of many diseases: *utilization of the full or partial spectrum of the full proliferation of phytochemical constituencies*—to utilize rather than fight evolution.

Please read above and observe the highly complex, emergent evolutionary adaptive intricacy of phytochemical constituents mediating bio-systemic outcomes and therapeutic dynamics, a synergy between the 400 active and ‘inactive’ chemicals in this plant. We may take point **b.** as evident.

A further potentially important augmentation of this basic stance will be articulated below as the Strong and Weak hypotheses, and their implications derived in subsequent analysis.

With over 400 chemicals within its constituency and evolutionary advantage shaping the intricacies of bio-systemic interactivity, systemic intra-relations, cross-mediational complexities and responses, we might begin to understand the nuanced, diverse and copious utility of this plant to some small degree. Next, we will address the history of this utility, and attempt to ascertain if the raw drug does indeed demonstrate past evidence of what appears to be both clear utility without addiction, and an excellent safety profile. Are these hundreds of studies actually valid science? If so, we should see a long history demonstrating just that if we are to recommend the raw drug with confidence as safe and useful. Is there evidence of safe use for thousands of years, or is this a dangerous, useless and addictive drug as the United States government says? Is such a history available in support of the hundreds of studies we have presented, or is this drug actually dangerous and ineffective?

Historical record of safe and effective use of cannabis

In (Russo, 2002) an excellent accounting of the basic history of the medicinal use of cannabis for pain is presented. The following is mainly condensed from that work and the references therein, save for the first paragraph. Other sources are noted separately.

The ability of Cannabis to alter conscious states has been known for some 12,000 years (Able, 1980; McPartland and Pruitt, 2002), and Cannabis has been cultivated for at least 6000 years (Atakan, 2012; Li, 1973). Evidence exists of traditional knowledge in China dating back 5000 years to the emperor of old, "Divine Plowman," Shen-Nung. The historical written record indicates extracts of *Cannabis Sativa* have been known to produce medicinal effects apart from their psychoactive properties as early as the third millennium BC, from which time Chinese texts describe therapeutic amelioration of pain and cramps (Mechoulam, 1986; Pacher et al. 2006). Chinese emperor Shen-nung (ca. 2700 B.C.) had recorded in the text *Pen-ts'ao Ching*, that cannabis positively affects rheumatism as if the condition were reversed, hence indicating possible anti-inflammatory actions (Hui-Lin, 1975; Burstein & Zurier, 2009). Recent archeological evidence of the usage of Cannabis can be found in the 2700-year-old grave of a Caucasoid shaman: “. . . tetrahydrocannabinol, the psychoactive component of cannabis, its oxidative degradation product, cannabinal, other metabolites, and its synthetic enzyme, tetrahydrocannabinolic acid synthase, as well as a novel genetic variant with two single nucleotide polymorphisms. The cannabis was presumably employed by this culture as a medicinal or psychoactive agent, or an aid to divination.” (Russo et al. 2008). [See "**References, list one**" for references in preceding paragraph, "**References, list four**" for the remainder].

Julien (1849) described surgical procedures of physician Hoa-tho in the early 2nd century using hemp preparations as general anesthetics (Russo, 2002 p. 357):

“He gave to the sick person a preparation of hemp (Ma-yo), and, in a few moments, he became so insensible that it were as if he was plunged into rapture of loss of life. Then, following this instance, he

practiced some overtures, incisions, amputations, and removed the cause of the malady; then he repaired the tissues with suture points, and applied liniments,” (p. 197, translation EBR).

Dating between 1400 and 2000 BCE the Indian The Atharva Veda includes mention of bhang, the modern word for cannabis, as a sacred grass. Medical references date to Susruta in the 6th to 7th centuries BCE (Chopra & Chopra, 1957). Ayurvedic and Arabic traditional preparations using cannabis for migraine, neuralgic, and visceral pains is found in Dwarakanath (1965) (Russo, 2002, p. 358). Nunn (1996) demonstrated that Cannabis was used medicinally in ancient Egypt, in support of “the view of Dawson that the hiero-glyphic shemshemet means cannabis” (Russo, 2002 p. 358). Hemp remnants were found in the tomb of Akhenaten (Amenophis IV) from ~1350 BCE, cannabis pollen in the tomb of Rameses II from ~1224 BCE. Cannabis was used since the time of the pharos orally, rectally, vaginally, topically, in the eyes, and by fumigation (Russo, 2002 p. 358).

Taken from an ancient Papyrus, Ramesseum III, 1700 BCE: "A treatment for the eyes: celery; hemp; is ground and left in the dew overnight. Both eyes of the patient are to be washed with it early in the morning" (Mannische 1989 p. 82). One thinks at once of modern treatment for glaucoma. From (Ebers Papyrus 821) we see the 19th century usage as an aid in childbirth with a vaginal introduction of cannabis prepared in this case, with honey (Ghalioungui, 1987).

Assyrian medical documents mainly from second millennium BCE, according to Thompson (1924; 1949) indicate the presence of analgesic and other psychological effects. Thompson (1924) concludes:

"The evidence thus indicates a plant prescribed in AM [Assyrian manuscripts] in very small doses, used in spinning and rope-making, and at the same time a drug used to dispel depression of spirits. Obviously, it is none other than hemp, Cannabis sativa, L." (p. 101). Sumerian texts tell of internal use for depression and staying the menses and presumably arthritis as referred to by “poison” of all limbs (p.222).

Ancient Israel/Palestine/Judea: a tomb in BeitShemesh contained the skeleton of a 14-year-old girl. Gray carbonized material was analyzed, and chromato-graphic and nuclear magnetic resonance spectroscopy evidence of delta-6-tetrahydrocannabinol was recovered. (Zias, et al., 1993): "We assume that the ashes found in the tomb were cannabis, burned in a vessel and administered to the young girl as an inhalant to facilitate the birth process" (p. 363).

Greek and Roman Empires: 1st century CE, Dioscorides’ Materia Medica (Dioscorides, 1968): "Cannabis is a plant of much use in this life for ye twistings of very strong ropes, ... but being juiced when it is green is good for the pains of the ears" (p. 390). Pliny (1951): "The root boiled in water eases cramped joints, gout too and similar violent pains. It is applied raw to burns, ..." (Book XX, XCVII, p. 153).

The Islamic World:

9th century, Sabur ibn Sahl in Persia in his dispensatorium, Al-Aqrabadhin Al-Saghlr in (Kahl, 1994), interpretation of the text by Dr. Indalecio Lozano: “ibn Sahl prescribed a compound medicine containing cannabis juice that was used to treat a variety of aching pains and migraine that was instilled into the nostril of the afflicted patient.” (Russo, 2002 p. 358). 12th century, Al-Biruni (Biruni & Said, 1973): "Galen says: "The leaves of this plant [cannabis] cure flatus — Some people squeeze the fresh (seeds) for use in ear-aches. I believe that it is used in chronic pains" (p. 346). 13th century Umar ibn Yusuf ibn Rasul suggested cannabis for ear and head pains (Lewis, Menage, Pellat & Schacht, 1971). 17th century in Indonesia, Rumphius studied cannabis treatment of pleuritic chest pains and hernias (Rumpf & Beekman, 1981). (Russo, 2002 p. 359).

Western Medicine:

England 1640, from the Theatrum Botanicum: The Theater of Plants (Parkinson & Cotes, 1640) John

Parkinson writes: "Hempe is cold and dry. the Dutch as one saith doe make an Emulsion out of the seede, for it openeth the obstructions of the gall, and causeth digestion of choller therein: the Emulsion or decoction of the seede, stayeth laskes and fluxes that are continuall, easeth the paines of the collicke: and allayeth the troublesome humours in the bowels: . . . The decoction, of the roote is sayd to allay inflammations in the head or any other part, the herbe it selfe, or the distilled water thereof performeth the like effect; the same decoction of the rootes, easeth the paines of the goute, the hard tumours, or knots of the joynts, the paines and shrinking of the sinewes, and other the like paines of the hippes: it is good to be used, for any place that hath beene burnt by fire, if the fresh juyce be mixed with a little oyle or butter," (p. 598)

1758, Marcandier *Trait.4 du chanvre* [Treatise on Hemp] translated into English (1764): "The grain and the leaves being squeezed, while they are green, and applied, by way of cataplasm, to painful tumours, are reckoned to have a great power of relaxing and stupefying. The root of it boiled in water, and applied in the form of a cataplasm, softens and restores the joints of fingers or toes that are dried and shrunk. It is very good against the gout, and other humours that fall upon the nervous, muscular, and tendinous parts. It abates inflammations, dissolves tumours, and hard swellings upon the joints. Beat and pounded in a mortar, with butter, when it is still fresh, it is applied to burns, which it relieves greatly when it is often renewed," (pp. 24, 26). Linnaeus notes pain reducing properties *Materia Medica* (Linne, 1772): "narcotica, phantastica, dementans, anodyna, repellens," (p. 213). Chomel (1782) points out hemp seed oil for pain and healing of burns.

O'Shaughnessy (1839) introduced his ideas on "Indian Hemp" used in extract form to treat patients suffering from rabies, cholera, tetanus, infantile convulsions, and painful rheumatological conditions. Clendinning (1843) published results of 18 patients with headaches, abdominal pain and tumor, lacerations, joint pains and gout. Hemp extracts proved effective: "I have no hesitation in affirming that in my hand its exhibition has usually, and with remarkably few substantial exceptions, been followed by manifest effects as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cough and cramp; and as a nervine stimulant in removing languor and anxiety, and raising the pulse and spirits; and that these effect have been observed in both acute and chronic affections, in young and old, male and female" (p. 209). Donovan (1845) describes the use of cannabis resin with success in treating neuropathic and musculoskeletal pain, and hemp leaf oil on hemorrhoids and neuralgic pains with few side effects (Russo, 2002 p. 359).

Christison (1851) advocates cannabis as a successful treatment of tetanus, augmenting labor, and neuralgic and musculoskeletal pain. Grigor (1852) found success in 7 cases of 16 tested using cannabis to augment labor and remarked: "the contractions acquire great increase of strength . . it is capable of bringing the labour to a happy conclusion considerably within a half of the time that would other have been required" (p. 125). Sir John Russell Reynolds, physician to Queen Victoria successfully treated her dysmenorrhea with a cannabis extract throughout her adult life. Do closely note his comments! Reynolds (1868): "This medicine appears capable of reducing over-activity of the nervous centres without interfering with any one of the functions of organic, or vegetal life. The bane of many opiates and sedatives is this, that the relief of the moment, the hour, or the day, is purchased at the expense of tomorrow's misery. In no one case to which I have administered Indian hemp, have I witnessed any such results" (p. 160). (Russo, 2002 pp. 359-360). Silver (1870) treated cases of menorrhagia and dysmenorrhea, and his associate treated over 100 cases with success within three doses of cannabis. *Practical Therapeutics* (Waring, 1874) stated of cannabis: "Of a good extract, gr. 1/4 to gr. 1/2, rarely gr. j, in the form of pill, is very effective in some forms of neuralgia" (p. 159). Michel (1880) endorsed cannabis for neuralgic afflictions after extensive review. Two letters to the *British Medical Journal* endorse Cannabis Indica extract for menorrhagia treating pain and bleeding within several doses (Batho, 1883; Brown, 1883; Russo, 2002 p. 360).

Rennie (1886) reports cure using cannabis tinctures of acute and chronic dysentery and its attendant pain. Dr. Hobart Hare (1887) published an article within which we find the text: "CANNABIS INDICA has been before the profession for many years as a remedy to be used in combating almost all forms of

pain, yet, owing to the variations found to exist as to its activity, it has not received the confidence which I think it now deserves. I have found the efficient dose of a pure extract of hemp to be as powerful in relieving pain as the corresponding dose of the same preparation of opium. . . . During the time that this remarkable drug is relieving pain a very curious psychical condition sometimes manifests itself; namely, that the diminution of the pain seems to be due to its fading away in the distance, so that the pain becomes less and less, just as the pain in a delicate ear would grow less and less as a beaten drum was carried farther and farther out of the range of hearing” (pp. 225-226). This author [R.N.] would like the reader to see this statement in light of the role of cannabis as a “dissociative anesthetic.”

Farlow (1889) wrote of rectal preparations of cannabis: "Cannabis has few equals in its power over nervous headaches such as women with pelvic troubles are subject to" (p. 508). Aulde (1890) stated: "As a remedy for the relief of supraorbital neuralgia no article perhaps afford better prospects than cannabis . ." (p. 118). Suckling (1891) in his article "On the Therapeutic Value of Indian Hemp states: "I have met with patients who have been incapacitated for work from the frequency of the attacks [of migraine], and who have been enabled by the use of Indian hemp to resume their employment" (p. 12). Mattison (1891) states: Indian hemp is not here lauded as a specific. It will, at times, fail. So do other drugs. But the many cases in which it acts well, entitle it to a large and lasting confidence. My experience warrants this statement: cannabis indica is, often, a safe and successful anodyne and hypnotic” (pp. 270-271).

Mackenzie (1894) describes utility treating “neuralgias, headache, including chronic daily headache, tabetic (syphilitic) pain, functional gastrointestinal pain (corresponding to modern idiopathic bowel syndrome, or "spastic colon"), and pruritic disorders” (Russo, 2002 p. 360). An American 1898 drug handbook (Lilly, 1898) states: "Not poisonous according to best authorities, though formerly so regarded. Antispasmodic, analgesic, anesthetic, narcotic, aphrodisiac. Specially recommended in spasmodic and painful affections ..." (p. 32). The famous British pharmacologist Dixon (1899) stated: "In cases where an immediate effect is desired the drug should be smoked, the fumes being drawn through water. In fits of depression, mental fatigue, nervous headache, and exhaustion a few inhalations produce an almost immediate effect, the sense of depression, headache, feeling of fatigue disappear and the subject is enabled to continue his work, feeling refreshed and soothed. I am further convinced that its results are marvellous in giving staying power and altering the feelings of muscular fatigue which follow hard physical labour" (p. 1356). Migraine, dental neuralgia, gastralgia, enteralgia, cerebral tumor, and herpes zoster may be treated with cannabis indica according to Shoemaker (1899).

As to acute and prophylactic treatment of migraine the acknowledged father of modern medicine Sir William Osier (Osier & McCrae, 1915) stated: "Cannabis indica is probably the most satisfactory remedy. Seguin recommends a prolonged course of the drug" (p. 1089). The Dispensary of the United States of America (Remington, et al. 1918) (p. 280) contains the text: "Cannabis is used in medicine to relieve pain, to encourage sleep, and to soothe restlessness. . . . For its analgesic action it is used especially in pains of neuralgic origin, such as migraine, but is occasionally of service in other types" (Russo, 2002 p. 361). Hare (1922) states: "For the relief of pain, particularly that depending on nerve disturbance, hemp is very valuable" (p. 181). Horchester (1930) notes concerning use in labor: "As far as is known, a baby born of a mother intoxicated with cannabis will not be abnormal in any way" (p. 1165). “Morris Fishbein (Fishbein, 1942), editor of the Journal of the American Medical Association notes even though it had become by that time a political impossibility that, oral preparations of cannabis are the best choice in the treatment of menstrual (catamenial) migraine. In Britain the drug was permitted to be used in practice somewhat longer, its virtues and uses touted as being “above opiates and barbiturates in the treatment of the pain of hospitalized patients with duodenal ulcers” (Douthwaite, 1947; Russo, 2002 p. 361).

We are now in a position to draw sound conclusions based firmly on sufficient evidence, and so answer the following questions posed, and recommend for or against the prescription and use of the raw drug: cannabis. To the following questions:

Is there evidence of safe use for thousands of years, or is this a dangerous, useless and addictive drug as

the United States government says? Is such a history available in support of the hundreds of studies we have presented, or is this drug actually dangerous and ineffective?

We may answer rightly without fear of error: *Yes*, cannabis is safe and effective, and then in turn, *No* cannabis is not physically addictive or dangerous. That accusation is groundless and false. There is both copious modern empirical evidence and copious historical evidence of safe, effective medical use of cannabis stretching back many thousands of years; *cannabis* having served many ancient cultures including the ancient Egyptians. Read closely and know: this is not a physically addictive drug and in simple fact, is and has been used to curb tolerance and addiction to addictive opiates and reduce their dosages. As to point *c.* above:

c. the long historical record of the utility of cannabis demonstrative of its remarkable efficacy, excellent risk/benefit profile and hence supporting the copious and safe *utility of the raw drug and its basic preparations*.

The historical record along with modern empirical evidence is now accounted for in support of the efficacy of the raw drug. We may take point *c.* as evident.

We may make our first recommendation:

The raw drug cannabis is safe and effective, and so, cannabis should be available for prescription and medicinal use in those areas where it is legal to do so.

We will soon be in a position to review additional history supporting these ideas of adaptation and advantage and also understand why a drug with such a long-proven record of safe and effective usage has been turned into a pharmacological pariah, and then advance a particular course of action which may lead to a swift and hopeful outcome for the treatment of many diseases. To accomplish that, we must first distill our general hypotheses into specific forms.

The General, Strong and Weak hypotheses.

From the General hypotheses, the Strong and Weak hypotheses may then be drawn.

The General hypotheses:

1. After 1200 million years the CB receptors *and* their pre-formative evolutionary predecessors (and those of other system components), have developed along with cannabis and its ancestors in turn, and so, the reason we find such complex and profound pharmacological utility in the phytochemistry of cannabis is no surprise: we have ONLY kept those mutations which have *brought advantage* from the addition of that mutation.
2. Cannabis is a treasure trove of complex pharmacology which works synergistically against pathology as a necessary consequence of the fact that over the course of 1200 million years, the CB receptors *and* their pre-formative evolutionary forbearers (and those of other system components), have adapted exactly as evolution would have them adapt: *to form advantage* of those exact chemicals, in ***those exact complex distributions***. Again: Mutations are kept, *if said adaptation is advantageous*.

The Strong hypothesis:

Systemic adaptation in humans stemming from human ancestors/progenitors involving cannabis and its ancestors/progenitors is sufficiently deep due to 600 million to 1.2 billion years of evolution including times of famine, that the removal of dietary cannabis and longstanding medicinal preparations has actively led *to the new emergence of disease*. Hence, cannabis and its seeds, medicinal preparations, the raw drug and extracts may prevent, treat or cure disease to restore a missing dietary and medicinal

constituent.

The Weak hypothesis:

Systemic adaptation in humans stemming from human ancestors/progenitors involving cannabis and its ancestors/progenitors is sufficiently deep due to 600 million to 1.2 billion years of evolution including times of famine, that dietary cannabis, medicinal preparations, the raw drug and extracts may prevent, treat or cure many diseases.

With a few brief pieces of history and analysis, we will be able to present our final recommendations.

The suppression of cannabis in modern medicine: “Anecdotal Evidence,” law, research funding and the credibility barrier.

Those who have bothered to take note all have noticed the incomprehensible dearth of research into what by all informed accounts is a treasure trove of potential medical benefit: *the interactive medicinal constituency within cannabis*. One finds a great many studies aimed at ***single synthetic chemical molecules*** (with those relatively few studies concerning phytocannabinoids focusing again, mainly on *single* component actions). This bazaar strategy which ignores a full 1.2 billion years of evolution in an unlikely attempt to find a *single synthetic molecule* which will do the job evolution has wisely ascribed to a host of evolutionarily justified phytochemicals, has quite predictably been a failed effort, as one would expect. The drug companies are as the reader will soon understand, in a rare position of power which enables them to misdirect research into the endocannabinoid system along unlikely pathways in an effort to create profits, even as the more likely pathway evolution has cleared toward cure is left aside, to the painful or even deadly detriment of millions, creating a true unacknowledged human tragedy under the name of “the patentable molecule” [Appendix 1.]. We will now detail the history which has wrongly changed the course of medical research and its chosen pharmacological targets, make plain the difficulty and in so doing find with equal clarity what we believe to be the correct solution.

The United States is arguably the largest influence on worldwide medical scientific research and, its database PubMed is the very benchmark of reputable trustworthy information to which all turn as the gold standard of “real” science. Although today, the drug companies themselves have full legal rights to arbitrate the distribution of funding for applicable PubMed studies, meaning studies are routinely by law denied publication *unless funded by approved agencies* or, are part of a particular approved journal in a disciplinary niche which is in the main dismissed, thus rigging the system as will be articulated below...it was not always so. The history of cannabis in America is surprising, and its seeming erasure from the minds of the public even more so.

The first marijuana law in America was to make growing indian hemp mandatory in 1619 in Jamestown colony Va. More such laws followed in Massachusetts in 1631, Connecticut in 1632, and the Chesapeake colonies in the mid 1700s. Cannabis hemp was legal tender in the Americas from 1631 to the 1800s, and one could pay one's taxes in cannabis hemp for over 200 years. George Washington grew cannabis as did Thomas Jefferson, and, between 1763 and 1767 one could be jailed for NOT growing hemp in Virginia. The US census of 1850 counted 8327 hemp plantations of at least 2000 acres each. Cannabis extract medicines were the second or third most prescribed medications between 1842 and the 1890s, and were sold and produced through the 1930s by Eli Lilly, Squibb, Smith Brothers, Parke-Davis, Tildens, and others, during which time, not one single death was reported due to these medicines, nor were there reports of abuse or mental disorders, save for reports of new user disorientation. (Herer, 1990; Herndon, 1963; Able, 1980; Allen, 1900; Mikuriya, 1973; Cohen and Stillman 1976; Roffman, 1982; Clark, 1929).

It is very important to understand that cannabis was the main source of strong, soft cloth; hemp fabric has been woven since ~8000 BC, and being one of the strongest natural fibers on the planet it is also used for ropes and sails, fiber and paper as George Washington himself was aware, for he used hemp

paper to break away from American dependency upon the paper products of England; it is used in paints, the seeds are pressed to gain oil for lubrication, diesel combustion and fueling lamps, methanol fuel can cheaply be produced from cannabis hemp as Henry Ford demonstrated, and so can gasoline by using cracking technology of the usual sort; food oils and protein may be gained from the seeds for humans and animals alike (cannabis seed once sustained American bird populations), and this protein source which was once the mainstay of porridges and gruel sustained populations through famine in Australia (along with the leaves eaten for roughage) and served those same dietary purposes in other countries throughout history (Frazier, 1972; Herer, 1990 pp. 26,42), being uniquely well suited to consume, as it contains 65 percent globulin *edestin* (from the Latin for edible) and high levels of albumin (Herer, 1990; Cohen and Stillman, 1976). It was the uses of cannabis hemp for *paper, fiber and fuel* which first led to its censorship and illegality, as the petrochemical industries, paper and synthetic fiber giants came into their own and wished to crush the competition. If used today, the hemp pulp process created in 1916 [see: Dewey and Merrill 1916 Bullrtin #404 USDA] could replace 40 to 70 percent of all pulp paper using cannabis, an *annual crop* which surpasses trees in productivity by a ratio of one acre of cannabis hemp equalling 4.1 acres of trees in paper pulp production over a twenty year rotation, with up to 7 times less pollution (Herer, 1990). At first, the drug companies just as many other industries and even the AMA itself, were *all set against* the legal stricture of cannabis. Power itself—paper and the petrochemical giants had other ideas. Cannabis could end the need to cut down forests or use the processes these paper making industries depended upon, cannabis hemp challenged the use of new synthetic fibers and fuels made from petrochemicals and so, cannabis represented a potential billion dollar threat in the monetary valuation of the time (Pop. Mech, Feb, 1938; Herer, 1990 p. 21) A uniquely American mixture of greed, falsehood, politics, racism and corrupt legal process led to the divisive result we see before us today. [the following in the main condensed from (Herer, 1990; Bonnie and Whitebread, 1974; Mikuriya, 1973)].

William Randolph Hearst was the publisher of newspapers and the father of the despicable propaganda known as *yellow journalism*. In his papers he relentlessly attacked African Americans, and Mexicans. Hearst owned the paper companies which supplied his newspapers, such as Hearst Paper Manufacturing Division, Kimberly Clark USA, St. Regis, and, virtually all other timber, paper, and large newspaper holdings. DuPont had just patented a new sulphuric acid process for wood pulp paper in 1937 which would *account for 80% of its railroad shipping for the next 50 years* (Herer, 1990, p. 22). Hearst himself was responsible by weight of sheer repetition for the new word, *Marijuana*, which was ascribed to the cannabis plant with two results: 1. The sinister sounding name allowed him to demonize the drug and those populations using it, and 2. The scientific, medical and industrial communities were unaware that the benevolent plant *cannabis* and not some other named *marijuana*, was in fact being attacked and primed for suppression.

In the mid 30s cannabis hemp fiber stripping machines became very efficient in the conservation and separation of the fiber from the high-cellulose hurd used to make paper. Dupont's new synthetic fibers could not compete with cannabis, nor could petrochemical fuels, a fact which was demonstrated by Henry Ford's very *inexpensive* production from cannabis hemp of methanol at his plantation "Iron Mountain," which kept Standard Oil (Rockefeller) and Shell Oil (Rothschild) subsidizing oil prices for years to snuff the threat (Herer 1990 p. 43). DuPont's enormous wealth was backed by even more wealth, that of Andrew Mellon, of The Mellon Bank of Pittsburg. Also, in the prejudicial view of these powerful men, 'objectionable' populations in need of suppression such as African Americans and Mexicans smoked this substance, which was somehow also tied into the insidious music these men hated, Jazz, and later, Rock and Roll. Power understood, it was time to secretly use the legal system and the press to make cannabis illegal, and demonize its users (Herer, 1990).

Mellon was Hoover's secretary of the treasury, and in 1931 he appointed his nephew-in-law Harry J. Anslinger to be head of the Federal Bureau of Narcotics and Dangerous Drugs, a post he retained for 31 years. In apparent anticipation of the success of the suppression which would yield the market to *sulphuric-acid-processed tree-based paper, synthetic fibers and petrochemicals*, the DuPont stockholder annual report advised investment even though the depression was evident, and foreshadowed the

collusion between government and industry which has become so very common today as to be the norm: it was anticipated that there would be “radical changes” from “the revenue raising power of the government...converted into an instrument for forcing acceptance of sudden new ideas of industrial and social reorganization.” (ibid. pp. 22-23). Taxes and laws were to be created, society shaped with propaganda, and money made.

Tax codes introduced for machine guns were the springboard (Bonnie and Whitebread, 1974), the legislation which had been designed in secret meetings over the last two years was ready, and quickly advanced through the Ways and Means committee rather than normal channels, so as to avoid scrutiny. The public and medical profession, industry and conservation groups were unaware that the scant talk of a bill prohibiting some demon plant named marijuana, was in fact referring to cannabis. Two days before the 1937 hearing to pass the marijuana bill, the AMA understood that the plant which Congress was to outlaw, was none other than cannabis, the benign substance used at that time in the United States safely for over one hundred years. Dr. James Woodward of the AMA noted that the reason he knew nothing of it, was that the meetings had been held *in secret* by the treasury department for the last two years! He argued to the Committee, that science was just beginning to understand the many chemicals in this medication, and this would deny the world any such medical advancements. His testimony was dismissed curtly (Bonnie and Whitebread. 1974; and congressional testimony in Herer, 1990). When the bill came up two days later for review in Congress, a lie was told. The floor raised the question as to the position of the AMA and if they had indeed been consulted. Representative Vinson answering for the Ways and Means Committee replied with a bold faced lie as follows: “Yes we have, a Dr. Wharton [note wrong name] (and the AMA) are in complete agreement.” Upon that lie, the law was codified in September of 1937. (Herer, 1990, p. 25; Mikuriya, 1973; Bonnie and Whitebread 1974). The testimony consisted mainly of Anslinger reading from Hearst’s fictitious yellow journalism newspaper articles aloud. Anslinger stated at one point to Congress in 1937 that: “Marijuana is the most violence causing drug in the history of mankind.” Anslinger also stated to Congress as fact that approximately 50% of all violent crime in the US was caused by Spaniards, Mexican Americans, Greeks, and Negroes, and that all these crimes could be traced directly to marijuana. Each and every such assertion has been proven false (Bonnie and Whitebread, 1974; Sloman, 1979). It is interesting to note in this context that soon, Hearst would claim in the midst of the red scare, converse to his previous propaganda, that cannabis would lead not to rampant *violence*, but instead to “Zombie Pacifism.”

Doctors continued to prescribe cannabis, and Anslinger prosecuted them to the tune of 3000 doctors in 1939, turning the AMA to the side of the government in exchange for dropping said prosecutions. Now, the AMA would accept the line of the federal government, evidence not withstanding (Herer, 1990 p. 27).

The next truly relevant and we believe tragic event, took place in the 1970s. In 1964 the famed Dr. Raphael Mechoulam synthesized THC. Just as the amazing potential of cannabis was so clear in the 1930s to the AMA, now again the fact began to surface, the research/cannabis ban had been softening, and the intellectual tenor become more positive. In November of 1975 all of America’s leading cannabis researchers met at the Alisomar Conference Center in Pacific Grove, California. All participants appeared to agree, the need for research into this most promising drug was profound, as was the hope which could be available. Mechoulam himself believed cannabis would soon be one of the world’s major medicines. However, in 1976 a tragic turn of events took place. From (Herer, 1990 p. 32):

“This time the research ban was accomplished when American pharmaceutical companies successfully petitioned the federal government to be allowed to finance and judge 100% of the research.

The previous 10 years of research had indicated a tremendous potential for the therapeutic uses of marijuana, and this potential was quietly turned over to private hands—not for the benefit of the public, but to suppress the information.

This plan, the drug manufacturers petitioned, would allow our private drug companies time to come up

with patentable synthetics of the cannabis molecules, at no cost to the federal government, and a promise of ‘no highs.’”

See also: (Dach et al. 2015) p. 165.

Now the dearth of research into the fruitful pathway of evolution’s proper design and the poor result of modern science to make use of this plant is explained. Indeed, this author [R.N.] has felt the sting of this cheat. My team had uncovered a new approach to pharmacology that used quantum information alone to create nontoxic drug *effects*, with no need for any costly, toxic pharmaceutical drugs whatsoever. The published paper written by myself along with three qualified coauthors: a retired senior mathematics and physics lecturer and *two* MDs, was refused by PubMed because: *It was not funded by an approved source* (Norman et al. 2016).

The effect is clear: the science is either not created at all as it is unfunded, or it is not read, taken seriously, seen or believed if it is published. When a fact is placed before a scientist, they rightly reply: “That is not believable. There is only anecdotal evidence.” Of course that is true—The research has been suppressed! Evidence of “cure,” without a carefully controlled well funded study is worthless science, “anecdotal evidence.” This means we must understand the situation and reverse the typical insight to find the actual fact, and so deduce—*anecdotal evidence becomes primary*, for that evidence is all which remains for us to see of the intentionally hidden pathway to treatment and cure.

We are now in a position to analyze such evidence and then, make our conclusive recommendations.

There are many hundreds of anecdotal examples of treatment and cure. Rather than list them all, each unsubstantiated by study, it will be most helpful to select the best example available which demonstrates *repeatability* and the *full potential best case result* and use what then is presumably due to both repeatability and demonstrated best case outcome the most reliable and important evidence to conduct our analysis.

The case of Rick Simpson is that which fits the bill. We see many repeatable cures: Cancers. Diabetes. Heart problems. Depression. Pain. Ulcers. Anxiety. Allergy. More. All with an: *Excellent safety profile*. Some 60 pieces of patient testimony along with doctors’ confirmations of cures of those various patients’ illnesses were readied, yet not permitted into court as evidence in support of the medical efficacy of cannabis preparations in Simpson’s trial for violation of laws concerning controlled substances. Approximately four dozen accounts from those effectively treated and/or cured were dismissed in earlier proceedings, then, 10 pieces of patient testimony of successful treatment with six doctors’ confirmations of cure were refused admission into the final proceedings: *a total of some 60+ pieces of suppressed evidence*. In light of the many studies presented here demonstrating just those sorts of effects claimed, the ancient history of safe use of cannabis, and, the current climate of suppression, these claims although untested by strict scientific measures, are certainly possible. These cases and this likely incidence of suppression are taking place in Canada, where we see the same combination of money and law, influencing a familiar and in this author’s opinion, perhaps even a *criminal* outcome [web ref. 6 Rick Simpson, Run From the Cure].

The method of treatment is a highly concentrated extract made from cannabis-indica [web ref. 6,7,8]. Video footage of the extremely simple production process and further detail are available in [web ref. 6] which must also be viewed and understood closely to gain the necessary basics of this information. The following is quoted from [web ref. 7]. **READER DO NOTE**, we *do not recommend* the following procedure which is presented here for informational purposes *only*. The following are the *exact method of production and the authentic dosage instructions* used to create the claimed curative effects. Take heed: *it is essential to utilize a fan and directly ventilate rapidly accumulating flammable fumes. The following procedure must only be conducted out of doors in a safe location free of debris to avoid fire*. Only use cannabis which has been tested and approved for pesticide residues, mold and contamination. The following instructions are from Rick Simpson’s own site, presented mainly complete with little

editing or modification. [web ref. 7,8].

“PRODUCING THE OIL

Place the starting material in a bucket of good depth to prevent the oil solvent mix from splashing out during the washing process. Then, dampen the bud with the solvent being used and then crush the bud material using a length of wood such as a piece of 2×2. After the bud has been crushed, add more solvent until the bud material is completely immersed in the solvent. Work the bud material for three to four minutes with the length of wood you used to crush it.

Then slowly pour the solvent oil mix off into another clean container, leaving the starting material in the original container, so it can be washed for the second time. To perform the second wash, add fresh solvent to the starting bud material again, until it is once more immersed in the solvent, and then work it for another three to four minutes, with the piece of wood you have been using.

Then, pour the solvent oil mix from the second wash, into the same container that is holding the solvent oil mix from the first wash you did. Trying to perform a third wash on the remaining plant material, produces very little oil and it would be of much less medicinal value as a medicine. But if you chose to do so the resulting oil from the third wash, could be used to help treat minor problems such as skin conditions.

The first wash dissolves 75 to 80% of the available medicinal resins off the starting material; the second wash then removes most of whatever resin that is of benefit, which remains. Oils produced from the first wash are the most potent medicinally but if high-grade starting material is used, oil from the second wash also has strong medical benefits as well.

If, for some reason, you have to work with material that is not as medicinally active as it should be, it is best to use the oil from the first wash only for internal use and then start to grow, or look for starting material that is of better quality. Remember, quality is more important than quantity and the more medical values the finished oil contains, the better it will work as a medicine.

Use something such as clean water containers, with a small opening at the top and insert funnels into the openings, then put large coffee filters in the funnels. Pour the solvent oil mix from the first and second washes, into the coffee filters and allow the solvent oil mix to drain into the containers, which are holding the funnels and filters to remove any unwanted plant material etc.

The more funnels and containers you use, the faster the oil solvent mix will be filtered. Once the oil solvent mix has been filtered, it is now ready to have the solvent boiled off. I should also mention that if you are using high quality bud, after the oil solvent mix has been filtered it often looks about the same as gasoline or at times it can be somewhat darker.

Remember that the solvent you are using was clear, so the yellow or darker color the solvent has taken on, is actually due to the healing resins which are now dissolved within it. If you do not already own one, you can purchase an inexpensive large rice cooker with an open top that has both high and low heat settings, to boil the solvent off the oil effectively. But make sure that the rice cooker is set up in a well-ventilated area and then place a fan nearby, to blow away the fumes as the solvent boils off.

This will prevent the fumes from condensing and posing a danger. Rice cookers are designed not to burn the rice as it cooks. So the temperature sensors which are built into these devices, will automatically switch the cooker back on the low heat setting, if the temperature within the cooker begins to get too high.

When producing oil, if the temperature gets a little over 300°F (148°C), it will begin to vaporize the cannabinoids off the oil and, of course, you do not want this to occur. If a rice cooker is working properly, it will automatically come off the high heat setting at roughly 210 to 230°F or (100 to 110°C), which is above the temperature where most people say decarboxylation is said to occur.

This temperature is still well below the point that THC and other cannabinoids will vaporize off the oil, which remains in the rice cooker. This is why I strongly recommend the use of a rice cooker, to those who have never produced oil before, since it eliminates any danger of harming the oil in question. Plus the resulting oil is decarboxylated, which is also important, so the oil can achieve its full medicinal benefits.

I suggest that people should not try to use crock-pots and similar appliances to produce oil. When I first tried to produce the oil, I used a crock-pot and since I did not know how much heat these devices can generate, the oil overheated and was ruined.

So I think it's only sensible that a beginner should start out by using a rice cooker and follow my instructions carefully. For by simply doing so, it can save someone new to producing this oil a lot of grief. A distilling device can also be used to produce this medication and reclaim the solvent that is being used. This method really does make more sense than using a rice cooker.

But stills which are designed to boil off solvents safely are expensive and most people, do not know how to operate one of these devices properly. If one is available, I prefer to use a still myself, but, in some countries, owning a still is against the law. If one is serious and wants to produce large amounts of oil, look into distilling and educate yourself in the proper use of this equipment.

Always make sure there are no sparks, open flames, or red-hot elements in the area while you are filling the rice cooker or boiling the solvent off, because the fumes produced from solvents are very flammable and quite toxic. I have used this same process hundreds of times and have never had a mishap, but for your own safety, please follow the instructions and make sure the area is well ventilated. I also caution you to avoid breathing in the fumes that solvents produce, since they can have unpleasant effects on anyone nearby.

It is also important to note that some of the airflow from the fan, should be directed towards the bottom of the rice cooker, since fumes from the solvent can often accumulate there. If you look at the bottom of a rice cooker you will find one or two small vents and if the fumes from the solvent enters these vents it could cause a fire.

So I have found that by aiming the airflow from the fan at approximately the center of the rice cooker, the airflow will still carry the fumes from the top of the rice cooker away and will also prevent these fumes from accumulating under the rice cooker at the same time. Make sure that the fan is running and produces enough airflow to blow away the fumes and if you are using a multi speed fan you will probably find that the lower speed settings will accomplish this task.

Then fill the rice cooker until it is about three quarters full of oil solvent mix, this allows room for the oil solvent mix to boil off without splashing over. Place the rice cooker on its high heat setting and then begin boiling the solvent off. Never attempt to do this without the use of a fan, since the solvent fumes could accumulate and if they come into contact with the heating element within the rice cooker, it could cause these fumes to ignite.

As the level in the rice cooker drops, continue to carefully add the solvent oil mix you have remaining, until you have nothing left. When the level in the rice cooker comes down for the last time and has been reduced to about two inches of solvent oil mix remaining. Add about 10 to 12

drops of water to the solvent oil mix, which remains in the rice cooker. This small amount of water allows the remaining solvent, to boil off the oil which remains in the rice cooker more readily and it also helps to cleanse the oil of solvent residue, as the last of the solvent is being boiled off.

When there is very little remaining in the cooker, I usually put on a pair of gloves and then pick up the cooker and begin swirling its contents. This is done with the airflow from the fan still taking the fumes away and it can speed up the finishing process slightly. As the heat within the rice cooker increases, the cooker will automatically switch from the high heat setting and then go to its low heat setting, which prevents the oil within the cooker from overheating.

As the last of the solvent is being boiled off, you will hear a crackling sound from the oil that is left in the cooker and you will see quite a bit of bubbling taking place in the oil that remains. Also, you will notice what looks like a small amount of smoke coming off the oil in the rice cooker, but don't be concerned, since this is mostly just steam produced from the few drops of water that you added.

After the rice cooker has automatically switched to its low heat setting, I usually let it cool until it can be switched to the high heat setting again. After the cooker has automatically switched itself to the low heat setting for the second time, I then take the inner pot out of the cooker and pour its contents into a stainless steel measuring cup.

I have found that some strains of cannabis can produce an oil, which is actually finished and ready to use after the rice cooker has switched itself to the low heat setting for the second time, but in most cases it is still best to finish the oil properly. There will be a small amount of oil remaining in the pot that you will find almost impossible to get out, unless you use something like dry bread to absorb the oil, while it is still warm. Then, small amounts of this bread can be eaten as a medicine, but remember it can sometimes take an hour or more before you feel its effects.

. . . . [omitted material]. . . .

Take the oil that you poured into the stainless steel measuring cup and put it on a gentle heating device such as a coffee warmer to evaporate off whatever water remains in the oil. Quite often, it only takes a short time to evaporate the remaining water off, but also some strains produce more natural terpenes and flavonoids than others. These terpenes and flavonoids can cause the oil you now have on the coffee warmer to bubble for quite some time and it may take a while for such oils to cease this activity.

When the oil on the coffee warmer has little or no bubbling activity visible, take the oil off the coffee warmer and allow it to cool a bit, after which it can be drawn up into the plastic syringes for use.

Another way to finish the oil without the use of a coffee warmer, is to put the oil in an oven set at 120°C or about (250°F) for about thirty minutes to an hour. Both of these methods work very well to bring the oil to a finished state.

Then, using plastic applicators or syringes with no needles that should be available from your local drug store, use the plunger of the syringe, to slowly draw the warm oil up into the syringes and then allow it to cool. As the oil comes down to room temperature, the resin or oil which contain the healing cannabinoids, will become a thick grease-like substance and it is then ready to use as a medicine. Sometimes the resin is so thick that it can be hard to force it out of the syringes when cooled. If such a thing happens, simply put the syringe in a cup of hot water, then in a short time you should be able to squeeze your dosage out more easily.

There are times when a patient could force too much oil from the syringe, but if this happens, just pull back on the plunger of the syringe and the excess oil can usually be drawn back into the syringe, without too much difficulty. On average, a dry pound of material will require about 2 gallons (8-9 liters) of solvent to do the two washes which are required. If you plan to produce the oil from more or less starting material, simply do the math to determine roughly how much solvent will be needed.

From start to finish, it usually takes three to four hours to accomplish the whole process, and then the medicine is sitting there ready to be used. It should also be mentioned that this oil has an extremely long shelf life. But for long-term storage, I would put it in a dark bottle with a tight lid or a stainless steel container. If kept in a cool dark place when stored, it can maintain its medicinal potency for a great number of years. At first, it may seem daunting for some to try to produce their own medicine but in reality, this process is extremely simple." [web ref. 7]

Let the reader be aware of the fact that these extracts may be created using the above method with grain alcohol (ethanol) in the highest proof available (~190) so as to negate the possibility of toxins from the solvent remaining in the final product due to improper methods of manufacture. See also [web ref 6] for background information concerning this very simple method of manufacture utilized in these many reportedly successful treatments.

Here are Rick Simpson's exact dosage instructions as per this best case of anecdotal evidence, presented mainly unaltered, as detailed in [web ref. 8]:

DOSAGE INSTRUCTIONS

It usually takes the average person about 90 days to ingest the full 60 gram or 60 ml oil treatment. I suggest that people start with three doses per day, about the size of a half a grain of short grained dry rice. The patient should take this dosage every 8 hours, early in the morning, then again in the afternoon and then they should take their final dose of the day, about an hour before bedtime. It should also be noted that as a patient begins to ingest this oil, the patient does not normally feel the oil's effects until about an hour after they have taken their dosage, so please be aware of this fact. A beginner's dose such as I am describing would equal about ¼ of a drop.

After four days at this dosage which should be taken three times a day, most people are then able to increase their doses by doubling the amount of their dosage every four days. By following this simple procedure, many patients have reported that they felt that they had not experienced the high, which this oil can cause. But in truth no two of us are the same and we all have different tolerances, so some will be able to up their dosages more quickly than others. In reality, even if one does become what is commonly referred to as being high this will not harm them in any way, if the oil they are ingesting was produced from the sedative strains of Indica, which I recommend and the resulting oil was produced in the proper way.

It takes the average person anywhere from 3 to 5 weeks to get to the point where they can ingest 1 gram or 1 ml per day. Once they reach this dosage they can continue at this rate until their medical issues are brought under control. This means that after the patient has become accustomed to the oils use, each dose they are ingesting will equal 8 to 9 drops every 8 hours and in many cases, I have seen patients that have had no trouble ingesting even far more. It takes a dosage roughly the size of two grains of short grained dry rice to equal one drop, so once the patient has become accustomed to the oils use they are actually ingesting doses which equal 16 to 18 grains of rice per dose.

In some cases I have even seen patients who had no fear of this medication, ingest the full 60 gram treatment in one month and after doing so, many of them were declared to be cancer free.

By using the method which I am describing, it allows your body time to build up a tolerance for this medication slowly and once the patient becomes accustomed to the oils effects, most patients actually report that they enjoy taking it.

We all have different tolerances for any medication and your size or body weight has little to do with your tolerance for hemp oil and even children can take the same dosage as adults, with no detrimental effects.

WARNING ABOUT THE USE OF THIS MEDICATION WHEN USING OTHER DRUGS

We are not medical doctors, so for any questions regarding the use of RSO alongside various pharmaceuticals please consult a medical doctor who supports the use of medical cannabis and who has experience with it.

Be aware when commencing treatment with hemp oil that it will lower your blood pressure, so if you are currently taking blood pressure medication, it is very likely that you will no longer require its use. Often patients will try to continue using their blood pressure medication, but if it is taken along with the oil their combined effect, can bring the patient's blood pressure down to uncomfortable levels. It's a good idea for those beginning treatment with the oil, to check their blood pressure often and then reduce their intake of other blood pressure medications as their blood pressure levels reduce. In the event that a patient is already suffering with low blood pressure, I have had reports from people who have this condition and they stated that simply drinking some water when they began to feel uncomfortable did help to some degree. Those who have low blood pressure, may in some cases find it necessary to ingest even smaller doses of this medication and to increase their dosages accordingly. But since this medication really does not present a danger, I think that their bodies will adjust to the oil's effects in a short time, after which they should experience little or no difficulty with its use.

Diabetics should also be aware that they will usually find that their need for insulin will be reduced and it may even decrease to the point, where they will no longer require its use at all and the same goes for most other pharmaceuticals as well. Diabetics are diagnosed with type1 or type 2 diabetes and no matter what type you suffer from, it is still beneficial to use this oil because not only will it decrease your need for insulin, it will also protect your body from all the other harm this disease can cause.

Also, please be aware that when the patient takes RSO (Rick Simpsons Oil) many people find if they are using any pharmaceuticals such as **steroids / painkillers / morphine** it makes horrible side effects when mixed, so many people reduce their medications by half on day one – then reduce and stop the medications over 7 to 14 days – mixing the medications with the oil can produce undesirable side effects – the symptoms / side effects of the medications can be exacerbated.

The main conditions / medications we warn about are the heart, blood pressure and diabetes and to closely monitor the levels over 3 months or so.

INGESTING YOUR DOSAGES

Many people today are suggesting that patients should be placing the dosage they are ingesting under their tongue, or they should be sticking their dosage to their gums, which is now known as tacking. Although methods such as this can get the medicinal cannabinoids into the patient's body, I really do not agree with these methods because oils can often have a bad taste that can linger in the mouth for quite some time. I feel that by simply placing the dosage in the patient's

mouth, would have benefits for those who have gum infections and problems of this nature, but in most cases I believe that their dosage should just be swallowed. The proper oil is a thick grease like substance, so when I ingest my dosage I simply put it on my finger and then place it on my teeth, after which I drink cold water and then use my tongue to remove it from my teeth and then I swallow. By using this method, I can usually take my dosages without hardly tasting the oil at all and I think that most patients would prefer to do the same, but there are also other simple methods which can be used to avoid the bad taste.

The patient's dosage can be placed on a small piece of bread and the bread can then be folded over to cover the dosage and then it can be placed in the patient's mouth and swallowed much like a pill with water. Another good method to avoid the taste, is to place the dosage between two thin slices of fruit such as bananas and then place it in the patient's mouth so it can be swallowed as well. If the oil is produced properly, often it really does not have an unpleasant taste that will linger, but the simple methods I have described should help patients ingest their dosages more easily. The name of the game, is to simply get the oil into the patient's body in the easiest and most pleasant way possible, so I think following the methods I have described should be given serious consideration.

SUPPOSITORIES

For quite some time now, many people have been showing an interest in using this medication in suppository form, because they think that by doing so they can avoid becoming high and for some, this might be somewhat true. I have used this oil in suppository form myself, but when I took quite a large dose in this manner I cannot say that I did not feel its effects. I actually think that in some cases using suppositories is a very good idea, since I believe the oil should be placed as close as possible, to the medical problem which is being treated.

Therefore, for someone who is suffering with something such as prostate or bowel cancer, I believe that it could be more beneficial for their medical problems, to use the oil in this manner.

But still, I have seen many patients with these same medical disorders, heal themselves by simply ingesting their dosages by mouth, so I will leave the method you wish to use up to you.

When the oil is used as a suppository, the medicinal cannabinoids this oil contains go directly into the blood stream by passing the liver.

But for those who are suffering with such things as stomach or liver cancer etc. I believe that it would be more beneficial to ingest the oil by mouth. If you intend to use suppositories to treat your medical problems, then the suppositories should contain the same amount of oil, you would normally ingest by mouth and the dosage should be increased in the same manner.

Suppositories are fairly simple to prepare, but one should be careful about how much oil they contain, so in the beginning it may take some effort on your part to get the dosage right. Usually drugstores will supply suppository molds and all you have to do, is use a substance such as shay butter and then apply heat until it becomes a liquid, at which point you can add the oil and then fill the molds. It's a good idea to put the molds after being filled in a refrigerator, to allow the substance they now contain to harden up and after doing so, the suppositories are then ready for use. In addition, drugstores can usually supply empty gel caps and the patient's dosage can be put into the gel caps and then used as a suppository or can be taken by mouth, the gel cap will then disintegrate leaving the oil where you need it to be placed.

As I stated I do think that suppositories do have their uses, but I find this method to be quite time consuming and one must be careful about the amount of oil being added, so I still prefer to take my doses by mouth.

It should also be mentioned that this oil has many anti-aging qualities and it can also rejuvenate vital organs. So don't be surprised if the patient who is using it, begins to look a bit younger and any other problems they were having with their kidneys or other vital organs could simply disappear as well.

When people are ingesting the oil, I like to see them stay within their comfort zone, but the truth is, the faster you take the oil the better your chance of surviving, if you are suffering from a serious condition such as cancer.

MAINTENANCE DOSES

At the end of their treatment most people continue taking the oil, but at a much reduced rate. *About 1 to 2 grams a month would be a good maintenance dose*, just a drop or two at night before bedtime is all that is generally required to maintain good health. Often I am asked if this oil must be taken with food, but from my experience it seems to make little difference, so I will leave that for the patient themselves to decide. I feel that there is little need in most cases for anyone to overdose on the oil, unless they actually have a life threatening condition such as stage 4 cancer, which is putting their life in danger and they wish to bring this disease under control more quickly. Even in cases like this, it is usually not necessary to take overdoses but if one chooses to, then I really have no problem with them taking the oil in excess. Since in reality, unlike many pharmaceutical medications which our medical systems supply, an overdose of hemp oil really does not do any harm and cannot bring about your death.

The main side effect of this medication is sleep and rest, which plays a very important role in the healing process. Usually, within an hour or so after taking a dose, the oil is telling you to lay down and relax. Don't try to fight the oil's sleepy effects, just lay down and get comfortable, then allow the oil to give you the rest and relaxation you require to heal properly. The effects of the oil may cause your mind to wander a bit and often patients will be somewhat unsteady on their feet when they begin to use this medication. But as the patient builds up their tolerance, these effects will diminish quickly. Usually within 3 to 4 weeks, the daytime tiredness associated with this treatment after the patient takes their dosage just fades away, but the patient continues to sleep very well at night.

I also suggest that *patients should not try to drive their cars*, until they become more accustomed to the oil's effects, after which they are then able to drive safely once more. Once you become used to the oil's effects it does not impair your ability to drive in any way, because unlike alcohol and many pharmaceuticals, this oil does not impair your motor skills.

DISCONTINUING THE USE OF DANGEROUS ADDICTIVE PAIN MEDICATIONS

The only time I would recommend that people start out with larger doses, would be if their life was really in danger or to get them off addictive and dangerous pain medications, supplied by the medical system.

When patients begin the oil treatment and they have been using these addictive medications to alleviate the pain, they usually cut their pain medications in half and they will also probably find that they no longer require the use of most other pharmaceutical drugs as well. Many dangerous pain medications like hydro-morphine are very addictive in nature and patients, will have a hard time ceasing their use due to the withdrawal symptoms they will suffer, because they have become badly addicted to these substances. The oil will allow patients who are ingesting it, to suffer much less withdrawal symptoms from the medications they were using and it can usually replace the use of these dangerous medications in 2 to 3 weeks and often even less time is required. The object is to ingest enough oil to reduce the pain and to help the patient, get off

these dangerous medications as quickly as possible.

For the most part, pharmaceuticals are little more than toxins anyway and once the patient begins ingesting the oil, often the presence of these toxic drugs can begin to give them stomach problems. This is caused because the oil recognizes these chemicals and poisons for what they really are and the oil wants to expel them from the patient's body. Once the patient stops ingesting these so-called drugs, their stomach problems will then just disappear and in most cases they will find that the only medication they really require is the oil. For those who are suffering from terminal cancer, the oil will either cure their cancer or in cases where it is too late to affect a cure, the oil will allow them to experience little or no pain and at least then they can die with dignity. Even if a patient has been given only a short time to live by the doctors, do not think of their situation as being hopeless, for very often the oil is still able to bring them back to a state of good health.

If the cancer cannot be reversed with the use of this oil, it is not unusual for the patient to live on for many month's longer than expected and during that extra time the oil gives them, they often can experience a very good quality of life.

DOSAGE INSTRUCTIONS FOR THOSE WHO HAVE BEEN DAMAGED BY CHEMOTHERAPY AND OR RADIATION ETC.

Hemp oil has a very high success rate in the treatment of all forms of cancer and now there is no shortage of testimonials available on the internet, from individuals who have used this oil successfully to do just that. But unfortunately, many people who came to me seeking help, had already been badly damaged from the chemotherapy and radiation treatments the medical system supplied. The damage such treatments can cause have a lasting effect and people who have suffered the effects of such treatments are the hardest to cure. But even those who have suffered all this horrible damage to their bodies, still have a good chance to make a full recovery, if they follow my instructions. When those who have been damaged from these so-called treatments ask for my advice, I tell them to ingest 180 grams or 180 ml's of high quality oil, as quickly as they can and this will give them the best chance to survive.

The extra 120 grams or 120 ml's that I advise them to ingest, is needed to undo all the damage that these horrible treatments have left behind in the patient's body. Once the patient has become accustomed to the oil's use, they should not encounter any problems ingesting 180 grams or 180 ml's in 5 to 6 months and often they can even accomplish this much more quickly.

TREATING SKIN CANCER

If you can acquire a small quantity of properly produced oil, it will definitely work to treat skin cancer effectively and usually it only takes a few grams of this oil to accomplish the task. Grow or purchase some good high quality bud from sleepy sedative strains of Indica, which have a THC content of 20% or more. Then take about 30 grams of this bud and produce the oil from it, following my instructions which I have made available on my website phoenixtears.ca.

It should also be mentioned that in the treatment of skin cancer, oils produced from Sativa strains can be used effectively as well, since when applied topically the patient does not experience its energizing effects.

This amount of starting material should produce 4 to 5 grams of high grade oil. Apply the oil to the skin cancer and cover it with a bandage, apply fresh oil and a new bandage every 3 or 4 days and the cancer should soon disappear. I always tell people to continue treatment until the cancer is gone, then they should continue to treat the area for about two more weeks just as if the cancer was still there, for this will eliminate any cancer cells which could still remain. Doing this will ensure that all the cancer cells are dead and I have never seen a skin cancer return if my

instructions are followed. If you've had skin cancer for quite some time and the cancer is well established, it may take some time to cure.

But usually even in quite severe cases the cancer will disappear in less than three weeks. In an extreme case it may take longer but if so, then just keep up the treatment until it is gone. Many people can cure their skin cancer in no time, but it all depends on your own rate of healing and how deeply embedded the cancer has become. One should also remember that I am not just talking about cancer here, apply this oil to a third degree burn and watch what happens, the burn heals painlessly in a very short time and leaves no scars. When one considers all the suffering that patients in burn units are put through, why is this simple herbal medication not available to burn victims? This is only the tip of the iceberg folks, for the simple truth is, if you have properly produced oils from the cannabis plant at your disposal, you will probably find that it is the most effective medication to treat any medical condition you can name. I do not call properly produced oils from different varieties of this plant, a cure all for no good reason and once the truth about its true healing powers become better known, I'm sure that everything I am now telling you will become common knowledge." [web ref. 8]

Please note, the instructions provided for cancer [web ref. 6] clearly indicate *oral consumption* as the correct route of administration in that case. Review of video testimonial and other evidence revealed a pattern: heavy sedation for a month before tolerance developed. We are now in a position to present our analysis, recommendations and conclusions concerning the endocannabinoid system in human pathology.

Recommendations and conclusions concerning the endocannabinoid system in human pathology.

An initial observation:

The strange "moral" preoccupation with removing the "high" from cannabis in order to create acceptable medical treatments is a relic of the *false moral justifications used to suppress research* and impose a social agenda upon the people for overarching monetary, usury purposes (see above). If a patient with a painful, injurious or terminal disease is perhaps sleepy, smiling, happy, or too dreamy to operate a motor-vehicle for three months as they heal is utterly unimportant. The objection to a "high" in such a case, is farcical, silly, and cruel. This is simply an attempt to *generate profit* by creating patentable, ineffective, synthetic molecules while leaving aside the lives and health of our fellow humans with no concern. The objection to a "high" experienced by someone suffering of disease, is truly asinine. *Asinine*. I hope that is clear as a bell. My first recommendation: begin research into drug effects in all cases for *any and all disease types*, with *no concern whatsoever* for a "high." Let the warm glow this drug provides, help the sick as it is intended to do. To do otherwise is cruel, unethical, *foolish*, and wrong.

Analysis and recommendations:

I:

Oral consumption of extracts and cancer (with monitoring of ER+ or triple-positive breast cancer): a proposed modus operandi explaining dramatic anecdotal results and further implications:

1. The clear effects of THC in causing apoptosis in cancer cells while preserving healthy cells is remarkable (see section describing clinical efficacy and many mechanisms of effects). We may recall that 11-hydroxy THC is produced via first pass metabolism of delta-9-THC in the small intestine and liver when orally consumed, and, that 11-hydroxy THC is *four times* as immunosuppressive, and also, *four times* as psychoactive. The heavy initial sedation of patients indicates this preponderance of 11-hydroxy THC.

2. **Key inference:** The production of 11-hydroxy THC in first pass metabolism is likely why oral administration is most effective.

Ergo:

3. a. Preparations pre-laden in additional 11-hydroxy THC and possessing delta-9-THC to encourage further 11-hydroxy THC production upon consumption may well be more effective than current methods.

b. Tumoral injections supplemented with, or constituent of 11-hydroxy THC may be more effective than using delta-9-THC alone in glioma surgery.

Recommendation:

The success of Rick Simpson's method using cannabis indica extracts in cases of severe cancer may be due to the route of *oral administration*, which yields high levels of 11-hydroxy THC, implying that the *supplemental addition of 11-hydroxy THC to basic extracts used may speed recovery, possibly extend benefits to more cases, and, could produce more efficacious surgical interventions in cases such as glioma.*

4. It is possible that CBD in a one to one (or other) ratio may aid the ability of delta9- and added 11-hydroxy THC to permeate cancerous tissues (a supposition derived from CBD's effects in fluidizing cell membranes (Pertwee, 2014)), and also, affect cure by other THC independent mechanisms (see clinical efficacy section above). [Note: CBD interferes with the synthesis in first pass metabolism of 11-hydroxy-delta9-THC from delta-9-THC via inhibition of cytochrome enzymes (Pertwee, 2014)].

Please do note: Clinical studies appear to *contradict* the following clinical observation: Breast cancers of the ER+ or triple-positive type, require a 1:1 or less ratio of delta-9-THC to CBD, even so far as 1:3 may be beneficial. Such cancers could *possibly spread* with THC in high doses, an unexpected situation determined by clinical experience. Other breast cancer types respond well to a typical high 4:1 THC to CBD ratio. A 1:1 THC to CBD ratio appears safe for all breast cancer types. [Web ref. 3,4].

As these observations are apparently contradicted by clinical studies, it is unclear if any problem exists or not, hence, we recommend monitoring of these specific cases with great care to account for any uncertainty.

Recommendation:

[CBD:delta9-THC:11-hydroxy-delta9-THC] extracts for oral consumption in cases of cancer, and pure mixtures suitable for surgical interventionary measures should be tested.

II:

Profile restored preparations:

The General Strong and Weak hypotheses all imply the possibility of increased healing effects created by way of Profile Restored Preparations. The patient 1.2 billion year evolutionary advantage gained through the resultant hypercomplex synergies which mediate overall bio-systemic expression have been partially lost to focus the medicinal profile by way of creating an extract rich in primary active constituents. Please recall that extracts made with heat often lose mono-terpenoids and of course, lack other primary constituents found in the original phyto-profile which could aid overall therapeutic efficacy, a property based in evolutionary processes and the complimentary complexity of their result.

Recommendation:

Studies should be conducted analyzing the comparative efficacy of ordinary extracts with those extracts which restore the original chemical profile of the plant from which that extract is derived to create a

restored preparation which contains trace amounts of the lost original elements.

III:

Strong and Weak implications for receptor adaptive compounds and prophylactic implications:

In Pertwee's (2014) "The handbook of cannabis" he concludes that cannabis is part of an evolutionary matrix through which over 30 million years of evolution and coadaptation, the fit for mammalian herbivore physiology was created and, that thousands of years of accelerated adaptivity followed at the hands of human interaction and intention. We have advanced the more radical idea, that the ancestors of these later mammalian species also did adapt in like fashion alongside the ancestors of cannabis, to find a figure of 600 million years for the primordial CB gene, and then 1.2 billion years at the split between plants and animals to include complete cannabinoid receptor and other pre-formative adaptive evolutionary component process.

Other animals and man both sustained themselves by eating cannabis seeds which form in the female plants' buds, which are of course rich in flowering terpenoids and other cannabinoids in various proportions—most of all THCA-A. We propose this as the interaction through which receptor and systemic adaptivity proceeded in herbivores.

The Weak hypothesis then implies we may treat disease and be kept healthy to add to our diets both cannabis seed, and the juice of the buds of the fresh mature female plant which contain the active cannabinoid THCA-A in preponderance, and other cannabinoids and phytochemicals in the correct proportions.

The Strong hypothesis implies we may treat disease and be kept healthy to add to our diets both cannabis seed, and the juice of the buds of the fresh mature female plant which contains the active cannabinoid THCA-A in preponderance, and other cannabinoids and phytochemicals in the correct proportions, and, this hypothesis *also implies that diseases themselves*, such as Alzheimer's disease and cardiovascular disease, inflammatory disorders, Parkinson's and cancers, may actually *emerge not to have these basic dietary constituents* to which we have adapted included in our diet. The cancer clusters and disease increases we see, may be attributable in some part to the intentional 'legal' removal of cannabis from the diet.

Recommendation:

I advise all who read this work to add these non-psychoactive constituents to their diet at once. Hulled hemp seeds are readily available in most countries.

IV:

Strong and General-(2) hypotheses, the population derivative proliferative spectrum and pathology

The Strong and General-(2) hypotheses imply that the proliferative spectrum of phytochemical constituents as distributed within those specific varieties of cannabis with which populations have evolved, should provide the greatest benefit by way of evolutionarily selected advantage. The implication is that one may analyze cannabis samples and so derive the proliferative constituent profile associated with those cannabis strains (chemovars) which were most used by each individual population. Those particular cannabis constituent profiles then, should demonstrate the greatest efficacy available for prophylactic use against the potential onset of pathology, and perhaps also, demonstrate superior efficacy within treatment regimens derived. The Strong and General-(2) hypotheses then go further, and suppose *the actual emergence of pathology* may in fact be due in part to the absence of these same phytochemical distributions. It appears possible that to add *these* distributions to augment specific pathology-targeted preparations and extracts might facilitate synergistic effects as profile restored preparations.

Populations *absent* cannabis treatable disease types *may* indicate associated strain (chemovar) proliferative spectrum specific efficacy against said disease.

Recommendations for Industry:

The pharmaceutical industry seems not to recognize the unique position it is in. In cannabis it is quite clear that we see the opening of the gateway to the future through the patient reserve and careful processes of our evolutionary past. In the case that *even some portion* of the many claimed patient reports of cure and their doctors' supporting testimony from those people receiving the treatment provided by Rick Simpson are accurate, by implication, we can infer through the worldwide yearly cancer death toll of ~8.2 million for 2012 [web ref. 5], that the suppression of this research although accomplished by *legal means*, may constitute a *criminal act* by any sound ethical standard. This purposeful avoidance of the pathway evolution has so well prepared for us in order to secure patentable molecules at the expense of human lives is short sighted, sure to fail to gain much ground as it is set against the very design of the bio-system, and most importantly, this is a very foolish approach *from the perspective of generating profit*. I insist and assert: The drug companies stand on the cusp of the most astronomical windfall they have ever conceived of reaping! Mankind may benefit, and massive profits will then come rolling in as never before for the pharmaceutical companies, all without any need to curtail the medical rights of humane access each person is due to this plant.

Obviously it is impossible to deny that it is inhumane and wrong, *a criminal act*, to refuse humans who are ill access to this medication through medical channels or otherwise, should it be legal to do so. People must always have full rights to the maintenance of their own health *themselves*, or we see crime. With this in mind and without any implied conflict: massive amounts of money in excess of any ever produced could be made by the pharmaceutical companies if they were to patent specific proliferations of cannabis derived phytochemicals which are demonstrated to cure and treat disease more effectively and with greater consistency and superior known shelf-life over the crude extracts available to the public through those aforementioned proper channels. The public would pay massively to have assured quality, reliable effects of higher potency and a tested product known not to be deteriorated as it is properly preserved and prepared. In this way, all could have what they need: the poor could have the raw extract through proper channels and so have this option concerning their health, and the rich could buy a more reliable and effective version assuring the pharmaceutical giants more money than they have ever known, and a real boost in their public image as well. Greed need not curtail human rights to a benevolent plant, to be twice satisfied and fat with new wealth. No crime is needed to reap even these untold benefits for both humanity and industry.

How is this to be accomplished? The answer is plain: through controlled breeding of cannabis to focus the plant's production of cannabinoids, terpenoids and other vital constituents. The esteemed Dr. Russo was kind enough to send a pre-print of a paper under consideration for review, which the reader should look for when it is available: *Pharmacological Foundations of Cannabis Chemovars: No "Strain," No Gain*, by Mark A. Lewis, Ethan B. Russo and Kevin Smith presently under review at the journal *Planta Medica* at the time of this writing. This is ideal science suitable as a sustainable approach to the controlled derivation of potent and well targeted therapies using the correct phytochemicals and full component proliferations evolution as provided. In this way the cannabis plant may produce the appropriate phytochemicals needed to create targeted preparations, drugs and extracts using combinative synergies with control and accuracy.

I will likewise caution clearly and in the strongest possible terms *directly against the forced genomic manipulation/engineering of the cannabis plant using gene editing technology*, as once again, evolution has in her patient and right way slowly and carefully woven the fabric of health for us in great complexity and nuance, and only in greedy arrogance and abject foolishness could we imagine any but

the worst possible result to naively cut and arrange the very threads of the evolutionary fabric which sustains us. Such foolishness could well represent *a crime with irretrievable and tragic results*. The deep and unpredictable consequences of such irresponsible, overarching usury behavior are clearly well beyond our ability to predict. Evolution's complex weaving may heal us should we be wise enough to approach her gifts with respect, rather than pry them apart in avarice and hubris.

Conclusion:

The human endocannabinoid system has evolved from a primordial CB gene which dates back some 600 million years, and in turn, that ancient gene evolved from genetic progenitors 1.2 billion years distant marking the separation of plants and animals themselves. The patient forge of evolution has created an interdigitated tapestry of bio-systemic phytochemical interactive complexity resultant of advantageous design. Her "magic" is in fact but slow and careful progress. For this reason mankind has utilized cannabis for millennia for nourishment, fiber, fabric and also to treat and heal a prolific variety of maladies. However, historically recent legal obstructions and falsehoods have curtailed progress toward the development of the many benefits promised in this phytochemical pharmacopeia. One may even hypothesize due to the deep evolutionary connections and subsequent systemic adaptation that the suppression of this once socially and medically fundamental plant which served and fed mankind for eons, might actually produce the emergence of disease. The fact that cannabis *treats* disease is no longer open for debate, nor has it been for thousands of years. To imagine otherwise, is to neglect all of history.

We have proven with hundreds of studies and documented historical detail that the raw drug cannabis is *safe, non-addictive and effective*, and so, cannabis should be available for prescription by medical professionals to aid in those conditions treatable with its effects.

We have articulated the legal maneuverings and history behind the current suppression of proper research, and suggested that therefore, anecdotal evidence must then assume priority. Analysis of such evidence indicates: a. the possibility of these claims being accurate is supported by the depth of the phylogenetics; b. the possibility of these claims being accurate is supported by a massive amount of empirical science articulating effects on the systems and pathologies in question; c. the possibility of these claims being accurate is supported by the historically recorded multitude of uses stemming from an ancient evolutionary profile of advantageous adaptation in human systemic balance and functioning, hence, the seemingly 'magical' ability of cannabis to affect multiple pathologies. This profound medical utility is in fact *a necessary result* of evolution and advantage.

Modern history offers us a dichotomy:

"Humanity may choose to make wise and potent use of the evolutionary gifts provided by cannabis, or, humanity may seek to make profit and set its sights against the better course in order to exploit human misery for monetary gain."

This dichotomy frames modern medicine's bitter choice. We suggest that this dichotomy is in the case of cannabis: *False*—and that massive profits can be made by the pharmaceutical companies by way of patenting proven rightly preserved targeted phytochemical proliferations of high quality and reliable standards (instead of molecules), while allowing the less effective raw drug and general simple extracts to remain available, thereby reaping enormous profit while allowing the basic rights of humankind to be fulfilled unimpeded by arbitrary and cruel law.

Cannabis as a medicine has been suppressed entirely due to financial and political motives. It is effective, cheap and safe. The time has come, and is in fact long overdue, for research to be established in human cancer trials utilizing hyper-potent general and targeted cannabis indica extracts. It appears possible that millions of lives could be improved, or even saved. The idea of "no highs" as a benchmark for treatment of deep illness is absurd, cruel and utterly contemptible. Patients should have a choice of treatment options which include this remedy. *11-hydroxy-delta9-THC* appears to be an *unacknowledged key* in creating beneficial effects in many stubborn cancers. Treatment options of greater efficacy are

implied so, this new and clear pathway must be tested.

A program involving consenting patients exploring the above mentioned claims concerning cancers and the basic extract as outlined, then preparations involving supplemental *11-hydroxy-delta9-THC* (and other combinations) could begin to help those afflicted immediately.

Profile restored preparations, and the *Population derivative proliferative spectrum* may aid progress, and, the reintroduction of cannabis into the diet appears to this author as a prophylactic necessity.

Only openly permitted and well funded research conducted by honest uninfluenced researchers will reform the system and bring the medicinal fruits of this plant to careful harvest and so, provide health to those in need. Free and unfettered access to this information aimed at doctors and the public may begin the process of ending the research suppression, and also, apparent suppression of this treatment option. This document is intended to provide that suppressed information and begin the process of initiating worldwide independent research and dissemination of these treatment options. It is possible that *cancer and a host of other disorders may be treated and in some cases cured using phytochemicals derivative of cannabis*. The suppression of this fact, may well be harming millions, and creating great suffering. The medical research system is a shambles of deception, and in bringing this information to patients and medical professionals directly, it may be possible to plainly expose the falsehood of monetary influence, provide these options to doctors and the public directly for immediate voluntary use and subsequent proper empirical evaluation, and in this way circumvent the effect of these deplorable maneuverings and the system which supports them and so, end the deception, suppression and suffering. That is the hope and opinion of this author.

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Appendix: reprinted from:

Beyond the Veil: Deception, Truth and the Hidden Promise of Science (2016) written by Jeremy Dunning-Davies and Richard Lawrence Norman, Standing Dead Publications). Section below written by Rich Norman.

Monetary priority and medical practice: the 'patentable molecule.'

There are two sides to the conundrum of greed in medicine: the 'patentable molecule.' On one side, the drugs produced, just as Pasteur's lucrative yet deadly vaccines, carry with them a monetary incentive which affects bias toward confirmation of drug efficacy. That implies that drugs may be produced and sold which are ineffective and/or harmful so as to make money. The other side to this dirty coin, is the lack of incentive to bring forward treatment strategies or specific options which although effective and healthful, are not patentable and so, cannot extract money from the health of mankind.

Parkinson's and profit, un-patentable molecules and studies:

Parkinson's Disease (PD) is a common cause of neuro-degeneration in the geriatric population. This prolific and dread affliction may be ameliorated with a variety of substances which are unavailable for patent. This is not an assertion based in a soft-headed holistic naturopathic daydream. The following facts are extracted from detailed studies which are in the main available on the single most conservative source of modern mainstream orthodox science, the U.S. National Library of Medicine National Institutes of Health's archive at PubMed. Other sources below, are also from trustworthy peer reviewed journals. Please investigate the sources which I will reference with a simple link in the text, and assure yourself with a click as to the quality and reliability of the science. In place of the traditional reference list I will include a bibliography.

It should be noted that among the many compounds which are included below are some derived from cannabis, the international and local laws concerning which being quite arbitrary and various. In England doctors are legally and, I believe rightly, permitted to prescribe heroin in cases of severe pain, yet are not permitted to prescribe the much less dangerous drug cannabis, under any circumstance. One constituent in the highly complex assemblage of active compounds in cannabis, namely CBD, may well be efficacious in the amelioration of various pathologies from Parkinson's to seizure disorders, and causes no intoxicating side effects. It appears logical to reexamine the laws concerning cannabis and the rights of doctors to prescribe it, and/or its constituents. (The cannabis based pharmaceutical drug Sativex [GW pharmaceuticals] is the lone exception permitted for prescription in England to treat spasticity in multiple sclerosis). I do not recommend or advise any treatment strategy which does not adhere to the laws and legal codes where you reside.

Condensed facts [Cannabis/THC/CBD, Pregnenolone, Cinnamon, Thiamine, K2, D, Glutathione]:

Cannabis/THC/CBD and the uninvestigated role of pregnenolone:

a. From, [Modifications of neuroactive steroid levels in an experimental model of nigrostriatal degeneration: potential relevance to the pathophysiology of Parkinson's disease. Melcangi et al.](#)

"Among the neuroactive steroid levels assessed (i.e., pregnenolone, progesterone, dihydroprogesterone, tetrahydroprogesterone, isopregnanolone, testosterone, dihydrotestosterone, 3 α -diol, dehydroepiandrosterone, 17 α -estradiol, and 17 β -estradiol), we observed a significant decrease of pregnenolone in the striatum."

b. From, [Cannabis \(medical marijuana\) treatment for motor and non-motor symptoms of Parkinson disease: an open-label observational study. Lotan et al.](#)

"RESULTS: Mean (SD) total score on the motor Unified Parkinson Disease Rating Scale score improved significantly from 33.1 (13.8) at baseline to 23.2 (10.5) after cannabis consumption ($t = 5.9$; $P < 0.001$). *Analysis of specific motor symptoms revealed significant improvement after treatment in tremor ($P < 0.001$), rigidity ($P = 0.004$), and bradykinesia ($P < 0.001$).* CONCLUSIONS: *There was also significant improvement of sleep and pain scores. No significant adverse effects of the drug were observed. The study suggests that cannabis might have a place in the therapeutic armamentarium of PD.* [Emphasis added].

c. From, [Pregnenolone Can Protect the Brain from Cannabis Intoxication. Vallee et al.](#)

"Pregnenolone is considered the inactive precursor of all steroid hormones, and its potential functional effects have been largely uninvestigated. The administration of the main active principle of *Cannabis sativa* (marijuana), Δ^9 -tetrahydrocannabinol (THC), substantially increases the synthesis of pregnenolone in the brain via activation of the type-1 cannabinoid (CB₁) receptor." [Emphasis added].

d. There are antioxidant effects and others ascribed to CBD as well. From, [Prospects for cannabinoid therapies in basal ganglia disorders. Fernandez-Ruiz et al.](#)

"This CB(2) receptor up-regulation has been found in many neurodegenerative disorders including HD and PD, which supports the beneficial effects found for CB(2) receptor agonists in both disorders. In conclusion, the evidence reported so far supports that *those cannabinoids having antioxidant properties and/or capability to activate CB(2) receptors may represent promising therapeutic agents in HD and PD, thus deserving a prompt clinical evaluation.*" [Emphasis added].

e. From, [Evaluation of the neuroprotective effect of cannabinoids in a rat model of Parkinson's disease: importance of antioxidant and cannabinoid receptor-independent properties. García-Arencibia et al.](#)

"In summary, our results indicate that those cannabinoids having antioxidant cannabinoid receptor-independent properties provide neuroprotection against the progressive degeneration of nigrostriatal dopaminergic neurons occurring in PD. In addition, the activation of CB2 (but not CB1) receptors, or other additional mechanisms, might also contribute to some extent to the potential of cannabinoids in this disease."

f. From, [Cannabinoids provide neuroprotection against 6-hydroxydopamine toxicity in vivo and in vitro: relevance to Parkinson's disease. Lastres-Becker et al.](#)

"In summary, our results support the view of a potential neuroprotective action of cannabinoids against the in vivo and in vitro toxicity of 6-hydroxydopamine, which might be relevant for PD. Our data indicated that these neuroprotective effects might be due, among others, to the antioxidant properties of certain plant-derived cannabinoids, or exerted through the capability of cannabinoid agonists to modulate glial function, or produced by a combination of both mechanisms."

We may conclude that Cannabis/THC/CBD may be helpful in the treatment of Parkinson's.

K2 and Mitochondrial function:

a. Parkinson's is a disease of energetic deficiency stemming from mitochondrial dysfunction. From, [PINK1 Loss-of-Function Mutations Affect Mitochondrial Complex I Activity via NdufA10 Ubiquinone Uncoupling. Morais et al.](#)

"A second hypothesis suggests that PINK1 has a direct effect on mitochondrial complex I, affecting the maintenance of the electron transport chain (ETC) resulting in decreased mitochondrial membrane potential and dysfunctional mitochondria."

And from [Mitochondrial Biology and Parkinson's Disease. Perier and Vila.](#) "Whether a primary or secondary event, mitochondrial dysfunction holds promise as a potential therapeutic target to halt the progression of dopaminergic neurodegeneration in PD."

b. Mitochondrial electron carrier, vitamin K2, rescues Parkinson's disease models based on this theory. From, [Vitamin K2 is a mitochondrial electron carrier that rescues pink1 deficiency. Vos et al.](#)

"We found that vitamin K(2) was necessary and sufficient to transfer electrons in Drosophila mitochondria. Heix mutants showed severe mitochondrial defects that were rescued by vitamin K(2), and, similar to ubiquinone, vitamin K(2) transferred electrons in Drosophila mitochondria, resulting in more efficient adenosine triphosphate (ATP) production. Thus, mitochondrial dysfunction was rescued by vitamin K(2) that serves as a mitochondrial electron carrier, helping to maintain normal ATP production."

We may conclude that K2 may be helpful in the treatment of Parkinson's.

Vitamin D:

Vitamin D has been demonstrated to slow the physical deterioration associated with Parkinson's. From, [Randomized double blind placebo controlled trial of vitamin D supplementation in Parkinson disease. Suzuki M, et al.](#)

"Compared with the placebo, vitamin D3 significantly prevented the deterioration of the HY stage in patients [difference between groups: $P = 0.005$; mean \pm SD change within vitamin D3 group: $+0.02 \pm 0.62$ ($P = 0.79$); change within placebo group: $+0.33 \pm 0.70$ ($P = 0.0006$)]."

We may conclude that Vitamin D may be helpful in the treatment of Parkinson's.

Glutathione:

According to Dr. Julian Whitaker, from his newsletter of September, 2014:

"Glutathione is the major antioxidant produced in neurons and cells throughout the body. Oxidative stress and inflammation are implicated in the dysfunction and ultimate death of dopamine-producing cells. Restoring depleted glutathione stores slows this destructive process and improves symptoms in patients with Parkinson's. IV administrations helps ensure it gets into the brain.

"I'll never forget one of the first patients we treated at the clinic with IV Glutathione. He had a significant tremor in his left arm and arrived in a wheelchair. After his second IV treatment, his tremor decreased and he was up and walking, albeit with an unsteady gait and his arms stiff at his sides. After his third infusion, he was walking more or less normally, with a confident stride, arms swinging—and no tremor."

Also see: [Reduced intravenous glutathione in the treatment of early Parkinson's disease. Sechi G, et al.](#)

"All patients improved significantly after GSH therapy, with a 42% decline in disability. Once GSH was stopped the therapeutic effect lasted for 2-4 months. 4. Our data indicate that in untreated PD patients GSH has symptomatic efficacy and possibly retards the progression of the disease."

Also see: [Glutathione and Parkinson's disease: is this the elephant in the room? Zeevalk et al.](#)

Nasal administration may also be effective. See [Central nervous system uptake of intranasal glutathione in Parkinson's disease. Mischley et al.](#)

We may conclude that Glutathione may be helpful in the treatment of Parkinson's.

Thiamine:

From, [Long-Term Treatment with High-Dose Thiamine in Parkinson Disease: An Open-Label Pilot Study. Costantini et al.](#)

"CONCLUSIONS:

Administration of parenteral high-dose thiamine was effective in reversing PD motor and non-motor symptoms. The clinical improvement was stable over time in all the patients. From our clinical evidence, we hypothesize that a dysfunction of thiamine-dependent metabolic processes could cause selective neural damage in the centers typically affected by this disease and might be a fundamental molecular event provoking neurodegeneration. Thiamine could have both restorative and neuroprotective action in PD."

From, [High-dose thiamine as initial treatment for Parkinson's disease. Costantini et al.](#)

"Injection of high doses of thiamine was effective in reversing the symptoms, suggesting that the abnormalities in thiamine-dependent processes could be overcome by diffusion-mediated transport at supranormal thiamine concentrations."

From, [The Beneficial Role of Thiamine in Parkinson's Disease: Preliminary Report. Luong et al.](#)

"Five PD patients presented with stone face, right-hand tremors, Parkinsonian gait and bradykinesia with occasional freezing. Two patients presented with sialorrhea and the plasma transketolase activity was low in one patient. All of the patients received 100 - 200 mg daily doses of parenteral thiamine. Within days of thiamine treatment, the patients had smiles on their faces, walked normally with longer steps, increased their arm swings, and experienced no tremors or sialorrhea."

We may conclude that Thiamine may be helpful in the treatment of Parkinson's.

Cinnamon:

From, [Cinnamon treatment upregulates neuroprotective proteins Parkin and DJ-1 and protects dopaminergic neurons in a mouse model of Parkinson's disease. Khasnavis and Pahan.](#)

". . . However, oral treatment of MPTP-intoxicated mice with cinnamon powder and NaB reduced the expression of iNOS and protected Parkin/DJ-1 in the nigra. These findings paralleled dopaminergic neuronal protection, normalized striatal neurotransmitters, and improved motor functions by cinnamon in MPTP-intoxicated mice. *These results suggest that cinnamon may be beneficial for PD patients.*" [Emphasis added].

We may conclude that Cinnamon may be helpful in the treatment of Parkinson's.

Conclusion:

In the case of Parkinson's disease a safe, inexpensive, nontoxic, efficacious supplement might easily be developed based in this science. It may well offer substantial prophylactic protection against the onset of full blown symptomatology, and aid in the curtailment of disease processes when symptoms are evident. Those without active symptoms who have the dread LRRK2 mutation, or those with a family history of Parkinson's may be wise to take it, and those who display symptoms as well. Clearly, a diet rich in these pharmacologically active nontoxic compounds, may provide substantial benefit. I hypothesize as these studies are well known, that the only reason this obvious benefit has yet to be brought to fruition and these ideas are not in current clinical practice, is due to the fact that they are natural molecules and hence, cannot be patented. When money dictates medical practice, people remain ill and *pay*. Inexpensive effective treatments which do not benefit a large drug company or industry, are

simply left to wither. This is why those effective treatments which are currently available are toxic and costly.

Oxytocin:

The category of 'unprofitable but safe' molecular constituents is large. I will choose very quickly oxytocin (OT) as an additional example. With antidepressant properties (Panksepp, 1998) and possible benefits extending from neurosis and sexual dysfunction to schizophrenia, alongside clear effects in creating neural plasticity, there are a great many who might benefit from different modes of treatment. [I have constructed several such treatments](#) but am unable to fund the studies to advance them. Why is this safe neuropeptide not already in clinical practice after years of detailed study?

"Although intranasal OT appears quite safe and tolerable, there are several practical barriers to its therapeutic drug development in humans. These include the lack of intellectual property ownership of the actual hormone, lack of US Food and Drug Administration (US FDA) approval for any psychiatric indication and challenges around the actual availability of the drug." [\[MacDonald and Feifel, 2012\]](#)—
Oxytocin in schizophrenia: a review of evidence for its therapeutic effect.

The list of stated practical "clinical hurdles" articulated in that study is painfully weak. Only money has prevented this substance from serving the greater good and health of man.

Profit from poison:

The other face of the 'patentable molecule', this dirty coin of the realm in for-profit medical science, is to be found in toxic harmful compounds which although of little or no clinical use, do cause harm to those who take them and yield profit for the companies which develop and pedal them to consumers and physicians.

Statin drugs (such as Lipitor or Crestor), are not heart protective, they are a money making racket. They do lower cholesterol, but the benefits have been falsified. These drugs can CAUSE heart failure, and sabotage the energy production mechanisms of the cell. They cause the problems they are supposed to prevent. These deadly pills are, however, some of the very best selling drugs of all time.

An enzyme is blocked by statins which thereby suppresses the production of a coenzyme: CoQ10—that harms the ATP production process. The drugs are toxic to mitochondria. They interfere with K2 production. That leads to hardening of the arteries. These drugs can *cause* heart failure! Glutathione is interfered with leading to oxidative stress. As is known, statins are associated with cataracts, liver damage, kidney disease, cancer, sexual dysfunction, depression, memory loss, and diabetes. How have we citizens and many doctors been fooled?

["Relative Risk Reduction" statistical analysis has been falsely applied](#) to create the impression that, what are ~one/two percent benefits...revealing a worthless treatment, which harms a great many, are "in fact" 30 and 50 percent gains in the amelioration of pathology. With annual lobbying for the pharmaceutical/health giants amounting to [~\\$235,107,261](#) in 2015, it appears, *the government is in bed with the corporations*. The modern system of money and scientific advancement is flawed, ugly and dangerous. An entirely new way to fund science is required.

From an important PubMed paper on the topic [\(Okuyama et al., 2015\)](#), we can see what this means for each of us:

"An impairment of selenoprotein biosynthesis may be a factor in congestive heart failure, reminiscent of the dilated cardiomyopathies seen with selenium deficiency. Thus, the epidemic of heart failure and atherosclerosis that plagues the modern world may paradoxically be aggravated by the pervasive use of statin drugs. We propose that current statin treatment guidelines be critically reevaluated."

[Emphasis added]. [\[Statins stimulate atherosclerosis and heart failure: pharmacological mechanisms. Okuyama et al.\]](#)

Just in case you imagine that to be a fluke, a simple mistake from our benevolent and protective monetary-based authoritarian government and for-profit scientific and medical industries...please note the following: It is official that the top grossing drug in America (in 2014) was ***an anti-psychotic***: Abilify. Complete with the usual anti-psychotic profile of side-effects, such as *permanent ticks and motor symptoms*: [Tardive Dyskinesia](#). Now, prescribed for depression, typically with an SSRI (such as Prozac or Zoloft), which are themselves potentially associated with suicide upon withdrawal, and their own permanent condition, [Tardive Dysphoria](#). Let's be clear: these "nonaddictive" SSRI drugs, do not themselves cause death upon withdrawal. SSRI drugs (used for depression and OCD) are only correlated with death via one of the most certain findings in all of psychiatry: low 5-HT is associated with suicide. Withdrawal therefore, may lead to death. Not an addictive drug. Simply know, if you stop from high doses, you may die by suicide. Taper very gradually, and only attempt withdrawal under a doctor's supervision, knowing, there may or may not be permanent damage. Now [Abilify with its anti-psychotic profile of damage](#) is also handed out like anti-psychotic candy for depression. American medicine...is a racket...nearly as lucrative as war. These drugs do most assuredly have a valid place in medicine, they are indispensable for those few who need them. Please do understand: using them as high dollar substitute jelly beans is not it. [~7 billion dollars in sales from Abilify, in one year \(2014\). Money makes for deadly, toxic medicine.](#)

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For a sample of Richard's scientific and creative work please enjoy the entire of *Mind Magazine* www.mindmagazine.net. The "New Ideas" section contains some of his papers and articles detailing potential new medical treatments without toxicity; affective analysis of quantum Clifford algebraic theory; analysis of relativistic theory; analysis of subjective quantum theory; analysis of aqueous systems; analysis of objective reality; analysis of wave/particle duality and light; analysis of quantum unconscious isomorphism; psycho-ontology and fractal dimension; temporal field theory; Bohmian mechanics; quantitative approaches to the human unconscious; new approaches to pharmacology; mnemonic connectionist modeling as a holographic paradigm; ontological calculus; semi-regressive plastic

attachment therapy; temporal process as tripartite pre-temporal simultaneity; quantitative unconscious theory; re-polarization theory; homeostatic conductance and parasympathetic basis alteration (new approaches to Parkinson's; OCD; Depression); the hard problem of consciousness (new solution); informational pleomorphism; somatic adaptivity and ego process; new methods proposed to treat degenerative nerve disease and others, some utilizing quantum information mediated through aqueous systems in place of drugs.

Other papers are available here:

https://www.researchgate.net/profile/Rich_Norman/publications

Hadronic paradigm reassessed: neutroid and neutron synthesis from an arc of current in Hydrogen gas

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Abstract:

The hadronic paradigm may be reassessed around the evidence gathered in an inexpensive and easily replicable experiment where neutrons and an intermediate spin zero state prior to the full neutron synthesis known as *neutroids* are synthesized from an arc of current in hydrogen gas. We will review the history of this experiment in its various forms, as well as offer a recounting of the history related to neutrino theory in order to then provide an alternative model which rightly fits experimental results. Once quantum theory and hadronic science admits these experimentally derived conflicts and solutions, then the new paradigm offered in *Hadronic Mechanics* and *Hadronic Chemistry* may allow for new sources of energy and the stimulated decay of nuclear waste.

Key words: Neutron, Neutroid, Hadron, Rutherford, Hydrogen

I. INTRODUCTION AND HISTORY.

Although quantum theory is unquestionably one of mankind's greatest and most useful achievements, it must be remembered that even its most accurate inculcation as demonstrated in Quantum Electro Dynamics (QED) does not proceed from a firm causal basis, as it is renormalized [1] (p. 128). This situation admits new possibilities which might more closely approach the truth in order to create new solutions to the intransigent problems which have beset mankind. Hadronic science offers us just such a new avenue where a simple and easily replicable experiment could allow insight permitting paradigm adjustment and new solutions. Toward that end, we will first review the experimental history of the synthesis of neutrons and an intermediate spin zero state prior to the full neutron synthesis known as *neutroids* (see section so named below) from an arc of current in hydrogen gas proceeding conceptually and experimentally from Rutherford to Ernest Sternglass, Edward Troupson then Don Carlo Borghi and R. M. Santilli, after which we will articulate the overarching implications for theoretical physics.

Rutherford (1920) [2] first proposed the notion that neutrons might actually be synthesized within the furnace of stars as compressed hydrogen atoms:



as Chadwick [3] experimentally confirmed in (1932):



where ν symbolizes a neutrino, meaning "little neutral one." The neutral charge, zero mass neutrino was proposed by Wolfgang Pauli under the name of neutron [4,5,6] so as to account for how beta decay conserves energy, momentum and angular momentum, even though Pauli had such severe reservations [4] as to call his proposed solution a "desperate remedy." Later Pauli's "neutron" was renamed as the "neutrino" by Enrico Fermi [7], a name humorously suggested by Eduardo Amaldi [8,9] to avoid subsequent confusion after Chadwick's discovery [3] of the neutron proper in 1932 [7,8,9,10]. It should be remembered that, although great expense has been incurred attempting to detect neutrinos directly, no direct detection of neutrinos has ever occurred; their "existence" has been *inferred entirely from signature effects* involving gamma ray production from electron positron annihilation and also gamma ray production stemming from cadmium neutron interactivity, allowing signature-specific timing differentiation between two supposedly neutrino induced gamma sources [11].

In assessing the likely plausibility of his own "desperate" solution, we read (translated) from his 1930 communication to the *Physical Institute of the Federal Institute of Technology*, Zurich [4]:

" . . . I have hit upon a desperate remedy to save the "exchange theorem" of statistics and the law of conservation of energy. . . . I admit that my remedy may seem almost improbable because one probably would have seen those neutrons [here meaning neutrinos], if they exist, for a long time. "

Also, on the Berkley Center for Theoretical Physics web site [7a] we find:

"Because neutrinos interact so weakly with matter, Pauli bet a case of champagne that nobody would ever detect one."

II. EXPERIMENTAL RESULTS.

The initial successful synthesis of neutroids from an arc of current in hydrogen gas and subsequent synthesis of neutrons by a process of substance-specific nuclear transmutation was performed by Earnest Sternglass in 1951 while completing his Ph.D. thesis at Cornell. He wrote to Einstein of his inexplicable results, which seemed to occur in conditions lacking sufficient energy to synthesize the neutrons his experiments had indeed somehow apparently created.

From the Rare Manuscript Collection division of Cornell University Library as represented in [12]:

*Ithaca, N.Y.
August 26th, 1951
518 Dryden Rd.*

Dear Professor Einstein,

You may be interested to learn that in the course of the past two months I have been able to obtain experimental evidence for the formation of neutrons from protons and electrons in a high-voltage hydrogen discharge.

The experiments were carried out with a demountable gas X-ray tube capable of dissipating 1,200 watts filled with hydrogen and surrounded by about 6 inches of paraffin on all sides. Voltages up to 35 kV and currents up to 40 mA were used and silver and indium foils were placed near the tube walls. The neutron induced beta--activities were measured with a thin-walled aluminum Geiger-Muller counter in a lead housing of about 3-4" thickness giving a background count of 15 counts per minute. The initial activities in indium and silver were found to be 6--7 counts above background, decaying with the respective mean lives of 2.4 min for Ag and 54 min. for In. Having a standard neutron source, this arrangement could be calibrated roughly so that the rate of neutron formation can be determined to be on the order of 10--20 neutrons/sec at 38 mA and 25 kV and an estimated pressure of 10^{-2} mm of mercury in the discharge.

The possibilities of cosmic--ray produced neutrons was eliminated by exposing the foils without turning the discharge on. Contamination of anode & cathode with materials that could give rise to neutrons was eliminated by replacing them with freshly machined parts. The possibility of a deuteron--deuteron reaction was eliminated by a calculation using famous values of the cross--section for this process

leading to a factor of 10^5 - 10^6 too small a rate of neutron formation by the slight admixture of deuterium in normal hydrogen. So far, no one in the department here has been able to suggest any nuclear reaction that could be made to account for the activity at such a low energy. During the next few weeks we intend to make measurements on the activities in a salt-mine, 2000 ft. below ground as to improve the statistics of our counts. Professor Cocconi and Professor Ieiri will setup the equipment for this experiment after which we shall feel ready to announce it possibly at the Chicago meeting.

The indicated rate of formation is consistent with a cross-section of $2.5 \times 10^{-24} \text{ cm}^2$ for the case of an isolated proton capturing an electron in the process calculated by C.G. Darwin in 1913. It is not consistent with the cross-section of 10^{-42} cm^2 predicted by neutrino theory. This seems to lend strongly support to the view that the neutron is a purely electromagnetic entity composed of a proton and a highly "distorted" electron as I have outlined to you in my last letter.

I remain sincerely yours,

Ernest J. Sternglass [12] (pp. 8-9)

Although Einstein firmly advised that the results must be published even though they apparently contradicted standard theory, Sternglass refused due to the stultifying preponderance of contrary opinion and so, his results were preemptively excluded under orthodox pressure within the discipline [12,13] leaving them unpublished. Edward Trousion, a physicist working at the Naval Ordnance Laboratory repeated the experiment and again gained successful results but they too, were not published [12,13].

It will be demonstrated that Sternglass' experiments could only have synthesized *neutroids*, which were then subsequently transformed into neutrons by a process of substance-specific nuclear transmutation. (See the section entitled *Neutroids* below.)

The next to synthesize neutroids and hence neutrons via an intermediate process of substance-specific nuclear transmutation was Don Carlo Borghi. His seminal experiment involved a cylindrical metal chamber named a "klystron," containing low pressure hydrogen gas irradiated with microwaves at 10^{10} s^{-1} frequency and also using an electric arc of 500 V and 10 mA [14]. Santilli [14a, 15] later discovered that microwave irradiation of the gas was not necessary to create the experimental effects, although the influence of such radiation was not excluded as to its possible contributory influence. In both the experiments of Don Carlo Borghi and those of Santilli, *delayed neutron synthesis* was sometimes observed. From Santilli [14a,15]:

"A first series of measurements was initiated with Klystron I on July 28, 2006, at 2 p.m. Following flushing of air, the klystron was filled up with commercial grade hydrogen at 25 psi pressure. We first used detector PM1703GN to verify that the background radiations were solely consisting of photon counts of $5 - 7 \mu\text{R/h}$ without any neutron count; we delivered a DC electric arc at 27 V and 30 A (namely with power much bigger than that of the arc used in Don Borghi's tests . . .), at about 0.125" gap for about 3 s; we waited for one hour until the electrodes had cooled down; and then placed detector PM1703GN against the PVC cylinder. This resulted in the detection of photons at the rate of $10 - 15 \mu\text{R/h}$ expected from the residual excitation of the tips of the electrodes, but no neutron count at all.

However, about three hours following the test, detector PM1703GN entered into sonic and vibration alarms, specifically, for neutron detections off the instrument maximum of 99 cps at about 5' distance from the klystron while no anomalous photon emission was measured. The detector was moved outside the laboratory and the neutron counts returned to zero. The detector was then returned to the laboratory and we were surprised to see it entering again into sonic and vibrational alarms at about 5' away from the arc chamber with the neutron count off scale without appreciable detection of photons, at which point the laboratory was evacuated for safety. After waiting for 30 m (double neutron's lifetime), we were surprised to see detector PM1703GN go

off scale again in neutron counts at a distance of 10' from the experimental set up, and the laboratory was closed for the day.” [14a,15] (Santilli, 2006 pp. 4-5, 2007 p. 715)

Neutron counts registering much higher and in these cases arising more rapidly, some necessitating the actual evacuation of the laboratory, were obtained by first increasing the arc energy to 700V and 1.2 amps via a transformer, noting closely that manual impact of the experimental device and also a triggering-implosion from oxygen admixture yielding oxygen/hydrogen combustion both dramatically increased synthesis effects. Once hydrogen pressure was stepped up to 100 psi, dangerous experimental results were assured. It appears from analysis of this first series of Santilli’s experiments [14a, 15] that arc energies are associated with the possible delayed creation/detection of neutrons if those energies are low (by a particular mechanism to be specified), or the immediate synthesis of neutrons may be encouraged if the energies achieve some higher energetic constituency.

| | | |
|----------------|---------------------|--------|
| Alarm, neutron | 9/1/2006/5:57:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/5:58:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/5:59:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:01:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:01:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:01:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:02:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:02:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:02:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:03:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:03:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:03:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:03:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:04:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:04:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:04:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:04:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:05:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:05:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:05:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:07:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:08:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:08:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:09:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:09:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:09:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:10:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:10:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:10:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:11:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:11:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:14:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:14:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:15:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:15:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:15:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:15:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:16:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:16:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:16:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:16:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:17:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:17:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:17:00 AM | 99 Cps |
| Alarm, neutron | 9/1/2006/6:17:00 AM | 99 Cps |

FIG. 1.

Print-out reproduction of a typical scan of detector PM1703GN indicating neutron alarms that required evacuation of the laboratory [15] (Santilli 2007). (Used with permission of Ruggero Santilli/Hadronic Journal).

Experimental apparatus used by Santilli in [14a,15] as represented in [16]:



FIG. 2.

[16] (Santilli, 2014) (Used with permission of Ruggero Santilli/Journal of Computational Methods in Sciences and Engineering)

The next tests discussed [16] (Santilli, 2014) were conducted using several different more advanced pieces of experimental apparatus. (See below).



FIG. 3. Second reactor constructed with schedule 40 steel used in tests with hydrogen gas at 100 psi. [16] (Santilli, 2014). (Used with permission of Ruggero Santilli/Journal of Computational Methods in Sciences and Engineering)



FIG. 4. One experimental setup, equipment from the left: SAM 940 neutron and gamma detector; a Polimaster, a Berkeley Nucleonics PalmRad; and a Ludlum neutron and gamma detector (not shown in this figure); the reactor; the specially built rapid DC pulsing power unit (patent pending) with incorporated capacitors in it; and the hydrogen bottle. [16] (Santilli, 2014). (Used with permission of Ruggero Santilli/Journal of Computational Methods in Sciences and Engineering)

In these new experiments neutrons were synthesized immediately upon the condition that the arc energy was sufficient to exclude the production of neutroids (see section below) which are indeed excluded at energies of a $\sim 500J$ [16]. Santilli states in regard to the striking result concerning synthesis of thermal neutrons: “. . . a reactor comprising an essentially pure hydrogen gas at 30 psi, when exposed to a high voltage DC discharge with about 3 kVA at about 15 kV and a frequency of about 1 Hz through a 3/16" gap between 1/4" tungsten electrodes, produces thermal neutrons with less than 1 MeV.” [16] (p. 412).

This is a decidedly practical result considering the usual bulky, hazardous and costly mechanisms of spallation sources and research reactors currently used in the production of thermal neutrons.

We see in this series of tests [16] the expected positive correlation between arc energy, gas pressure and neutron synthesis rates such that at 100 psi hydrogen gas pressure and arc strength of 50 kVA radiation of such potency is produced so as to necessitate the closure of the lab and preclude even the proper collection of data.

Recent tests reported privately to us by Santilli clearly state that a nonlinear relation exists between arc pressure, gas pressure and neutron production [17]. From one such correspondence:

“ . . . neutrons are not synthesized in appreciable numbers of CPS for arc voltage less than 3 kV and energy less than 3 mJ and that, beyond the threshold values, the number of neutron CPS increases non-linearly with the increase of the hydrogen pressure, the arc voltage and the delivered energy.” [17] (p. 3).

It may be concluded that: *Only such energies as those used in the work of Santilli which exceed threshold energy values as specified can directly produce neutrons.* The mechanism of neutroid interactive substance-specific nuclear transmutation involved in delayed neutron synthesis at low arc

energies will be defined shortly. In our consultations Santilli has strictly specified that a low energy continuous arc can only produce neutroids (see below), and threshold minimum energies expressed in a pulsing arc (fig. 4) are required for the most efficient direct neutron production.

Clearly, the arc energy was below threshold values in the experiments of Sternglass and Borghi to have accounted for the direct production of neutrons and so we propose, only *neutroids* would have been synthesized from the $35kV\ 30mA$ and $500V\ 10mA$ currents used, hence those *neutroids were then only subsequently transformed into neutrons*. Next, it will be demonstrated how this proposed delayed transformation occurs.

III. THEORETICAL ANALYSIS.

History:

In order to address and repair the limitations of quantum theory and relativity so as to allow new solutions to be derived, a mathematical covering of existing theory was required. The new model which has achieved this, that of Santilli's Hadronic Mechanics, is based on new mathematics called "Iso-mathematics" which has been extended to include several new methods of calculation [18,19,20,21,22,23,24].

To condense briefly from references [18,19,20,21,22,23,24]:

Isomathematics is derived through an isotopic lifting of the conventional associative product between generic quantities into an iso-product. In this way, the mathematics and differential calculus of Newton-Leibniz might be reformulated so as to find new answers and solutions to old problems. Lie's theory has been augmented to articulate non-linear, non-local and non-Hamiltonian systems (meaning, variationally nonself-adjoint systems not representable with a Hamiltonian). Fundamental time evolution invariance was accounted for in Santilli's Iso-Differential calculus. A summary of these ideas is available here: [19,23,24]. The Schrodinger-Santilli isoequations underlying hadronic mechanics and the Heisenberg-Santilli isoequations constituting a *completion* of existing quantum theory have been created. [22] (pp. 64-65).

Experimentally demonstrated inconsistencies articulated in this paper regarding orthodox quantum mechanics and relativity have been addressed and new theoretical solutions which fit experimental results have been offered by way of the successful *covering* of existing theory. The resulting model includes relativistic and nonrelativistic treatment of *all characteristics* of the neutron in its synthesis from a proton and an electron using isomathematics and related isomechanics which allow the representation of the proton with its actual extended shape, as can be seen here:[14a,15,16,19,20,25,26,27,28,29].

Further theoretical explanation may be found below.

Applied theory:

Quantum mechanics is unable to account for these experimental results. Further explanation will follow; note initially that:

$$E_p = 938.272\text{ MeV}, E_e = 0.511\text{ MeV}, E_n = 939.565\text{ MeV}, \quad (3a)$$

$$E_n - (E_p + E_e) = 0.782\text{ MeV} > 0, \quad (3b)$$

indicating the rest energy of the neutron is 0.782 MeV greater than the combined rest energies of the proton and electron, demonstrating both "positive binding energy" and "mass excess" which are both *disallowed* by quantum mechanics.

The Neutroid:

Don Borghi and his scientific associates coined the name "neutroid" (symbolized here as \tilde{n}). The neutroid was proposed as an intermediate particle mutation preceding synthesis of actual neutrons. Neutroids have also been experimentally created by Santilli. Santilli defines the proposed neutroid as a (spin zero) particle having the values (in standard nuclear units: A = total number of nucleons; Z = number of protons; (N = number of neutrons); J the total angular momentum; with $amu.$ = mass),

$$A = 1, Z = 0, J = 0, m = 1.008amu.$$

Santilli then writes:

$$p^+_{\uparrow} + e^-_{\downarrow} \rightarrow \tilde{n}(1, 0, 0, 1.008) \quad (4)$$

where $J = 0$ avoids a spin anomaly in the synthesis [29].

In order to fully articulate the proposed formalism and mechanics of neutroid to neutron transformation within a process of substance-specific nuclear transmutation yielding experimentally demonstrated delayed neutron synthesis, we must return to the idea of the neutrino and offer a new piece of theory.

The Santilli Aetherino:

The currently accepted theory of weak interactions has been applied in a model of inverse beta decay with proposed collective electron effects in order to explain the creation of neutrons from hydrogen catalyzed through nuclear reactions on metallic hydride surfaces [12, 30]. However, the high probability of inelastic scattering in these low energy experiments has not been addressed to the satisfaction of the discipline within those explanations offered in this model [12].

A causal model and specific explanation of neutron synthesis detailing internal hadronic structure is available in Hadronic Mechanics [19], Hadronic Chemistry [31] and the theory of the Santilli Aetherino [32]. A new mathematical construct (with flexible $-/+$ signs) along with experimental demonstration the existence of neutroids and the synthesis of the neutron with over 340 tests will soon be published as: *Experimental confirmation of the synthesis of neutrons and neutroids from a hydrogen gas*: [33].

In standard theory neutron synthesis as here discussed requires emission of a neutrino, or absorption of an antineutrino:

$$p^+ + e^- \rightarrow n + \nu, \quad (5a)$$

or

$$p^+ + e^- + \bar{\nu} \rightarrow n. \quad (5b)$$

Logically, this is assertion is necessarily revealed as flawed:

1. A positive binding energy of 0.782 MeV is indicated to account for the rest energy difference between the constituent components of the neutron, the electron and the proton, and the neutron itself. However the Schrödinger equation does not admit such positive binding energies and can not account for the bound state of the electron within the hyper-dense medium of the proton.
2. Experiments plainly demonstrate a positive binding energy. However in classical anti-matter theory the antineutrino is ascribed negative energy, contrary to experimentally derived data.
3. Antineutrinos have a *null cross section* for electron and proton interactions, contrary to experimental results.

4. Paradoxical results seem to indicate neutrino scattering effects implying some “particle” mass, yet no particle is detected. Such “particle scattering” sans particle implies another solution: a longitudinal impulse moving through a substantial surrounding energy density interacting with targets: *the Aetherino* (symbolized as: “*a*”) [32].

The Aetherino carries mass and charge zero, spin 1/2 and 0.78 energy according to the synthesis $p^+ + a + e^- \rightarrow n$.

A. Neutron from substance-specific neutroid absorption and aetherino:

We may now directly approach the delayed synthesis of neutrons demonstrated in low energy experiments by way of articulating the formalism used to define Aetherino/Neutroid interactivity within the context of detector and experimental substance-specific nuclear transmutation and then applying that formalism to the specific compounds actually used in the experiments and detectors [15, 29]. The basic equation is written as:

$$\tilde{n}(1,0,0,1.008) + a \rightarrow n(1,0,1/2,1.008) \quad (6)$$

The basic component interaction is given by:

$$N(Z, A, J) + \tilde{n}(0, 1, 0) + a(0, 0, 1/2) \rightarrow \quad (7)$$

where N is a nuclide. The probable transformation of the neutroid is that of a neutron given by,

$$\tilde{n} + a \rightarrow n, \quad (8)$$

that of the predicted form,

$$N(Z, A, J) + \tilde{n}(0, 1, 0) + a(0, 0, 1/2) \rightarrow N'(Z, A + 1, J + 1/2). \quad (9)$$

In Don Borghi's tests, gold appears to act as a neutron source through the absorption and subsequent transformation of neutroids via the calculation:

$$Au(79, 197, 3/2) + \tilde{n}(0, 1, 0) + a(0, 0, 1/2) \quad (10)$$

$$\rightarrow Au(79, 198, 2) + a(0, 0, 1/2)$$

$$\rightarrow Hg(80, 198, 0) + \beta^-(1, 0, 1/2) + \gamma(0, 0, 1)$$

The silver in Sternglass' experiments absorbed neutroids to produce neutrons as given by:

$$Ag(47, 107, 1/2) + \tilde{n}(0, 1, 0) + a(0, 0, 1/2) \quad (11a)$$

$$\rightarrow Ag(47, 108, 1) + a(0, 0, 1/2) \rightarrow$$

$$\rightarrow Cd(48, 108, 0)[stable\ isotope] + e^-(1, 0, 1/2)$$

$$Ag(47, 109, 1/2) + \tilde{n}(0, 1, 0) + a(0, 0, 1/2) \quad (11b)$$

$$\rightarrow Ag(47, 110, 1) + a(0, 0, 1/2) \rightarrow$$

$$\rightarrow \text{Cd}(48, 110, 0)[\text{stable isotope}] + e^{-}(-1, 0, 1/2)$$

The *Li*-activated detectors in Santilli's experiment function as mediators of aetherino and neutroid interactivity yielding neutrons by:

$$\text{Li}(3, 7, 3/2) + \tilde{n}(0, 1, 0) + a(0, 0, 1/2) \quad (12)$$

$$\rightarrow \text{Li}(3, 8, 2)$$

$$\rightarrow 2 \text{He}(2, 4, 0) + 2 \gamma(0, 0, 1)$$

We may deduce: *the substances used for neutron detection are themselves the neutron source by way of neutroid absorption and subsequent nuclear transmutation. Li based detectors that can register thermal neutrons are best for this experimental work.* New mathematics and theory will soon be available here: [33].

IV. THE ROLE OF PHYSICAL THEORY

Physical theory explains experimental and observational results.

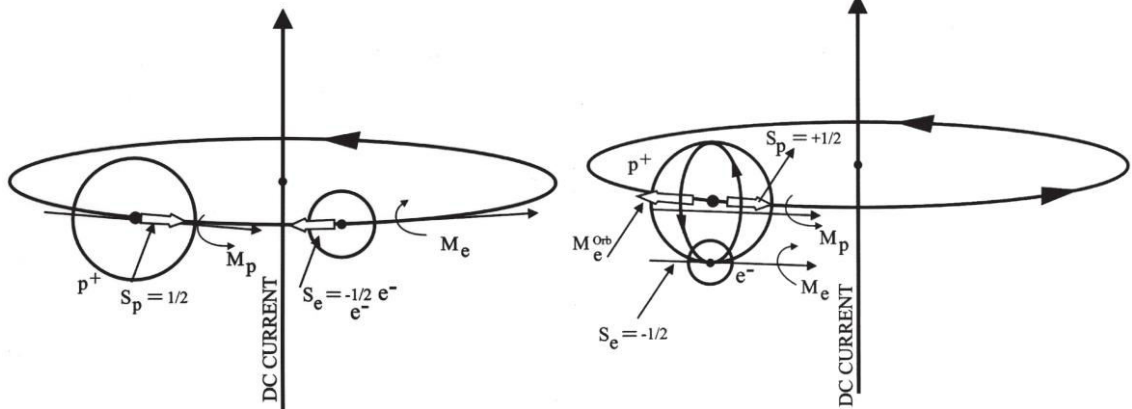


FIG. 5a. top

FIG. 5b. below

A schematic view of the tangential alignment of protons and electrons along the tangent to a magnetic force line (Fig. 5a), and a view of the compression of the electron against the proton caused by opposing electric and magnetic polarities (Fig. 5b) [16] (Santilli, 2014) (Used with permission of Ruggero Santilli/Journal of Computational Methods in Sciences and Engineering).

Hadronic mechanics offers a clear causal mechanism to explain these results. The electrons and protons constituting the hydrogen gas become ionized in the arc, and by way of its tangential relation to the magnetic force lines the electron breaches the proton's hadronic horizon via opposing magnetic and electric polarities, leading to singlet coupling. The mass difference of the order of 2000 times between the heavy proton and the light electron ensure that the proton is not mutated, while the electron demonstrates constrained angular momentum orbiting then within the proton's hadronic sphere. In this way, a stable singlet coupled particle with the proper spin is created: the neutron.

Hadronic structure is defined within Hadronic Mechanics and Chemistry as a contact type interaction characterized by full emergence of one wave-packet within the other. The dynamic tangential relations between the proton and electron ionized gas constituents mediated by DC magnetic force lines so as to breach the hadronic proton horizon and compress the electron within the proton and bind them together in singlet coupling as a neutron, offer us a specific physical mechanism to explain observed inelastic scattering probabilities:

The electron collapses into the proton from attractive Coulomb forces due to opposing charges and magnetic moments [14a].

Further detailed theory and mathematical explanation may be found here: [19,29,31,32].

See [14a,15,16] for further examples of neutron and neutroid syntheses under various experimental conditions and constraints.

Possible implications for quantum theory

The parsimonious interpretation of the empirically derived internal neutron structure is that of an electron bound within a proton. If this is so, axiomatic adjustments to the current Hadronic and Quantum paradigms are logically indicated:

1. The Schrödinger equation fails to produce correct physical solutions in the case of the experimentally indicated 0.782 MeV *positive binding energy* over the rest energies of the proton and electron which is required to synthesize neutrons.
2. Quantum mechanics forbids the synthesis of the spin 1/2 neutron from the bound state of the spin 1/2 proton and spin 1/2 electron.
3. The electron being bound into the proton for the 15 *m* life of an isolated neutron is not permitted in quantum mechanics.
4. The magnetic moments of the proton and electron are insufficient to account for the magnetic moment of the neutron according to quantum theory.
5. The uncertainty principle does not allow the electron to be bound permanently within the proton in stable nuclei such as the deuteron.
6. The interpretation of internal neutron structure which is most parsimonious, is that of an electron bound within a proton, not that of quarks. A simpler neutron structure has been articulated. The undetectable free quark is no longer required.
7. The model of Hadronic Mechanics and Chemistry implies new hadronic fuels, possible stimulated nuclear decay and rapid safe elimination of radioactive nuclear waste (see below) [31].
8. The neutron can be re-conceptualized as the hadronic bound state of the hydrogen atom with the electron orbiting within a proton (see figure 6 below). Ergo: the ordinary energy levels of the hydrogen atom may be rightly conceptualized as the excited states of the neutron.

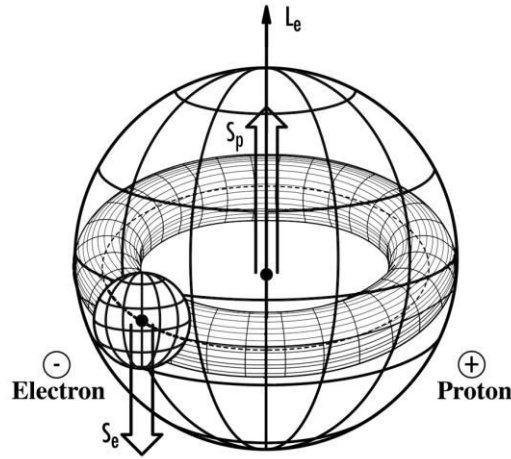


FIG. 6. Image of the hydrogen atom's electron orbiting within the proton forming a neutron in singlet coupling. The neutron is the hadronic bound state of the hydrogen atom. Used with Permission of Ruggero Santilli.

V. PRACTICAL BENEFITS OF PARADIGM SHIFT

Should physics choose to adjust the paradigm to fit the experimental results afforded by this simple experiment rather than suppress those results, the potential benefits to mankind and the sciences are extensive in their scope.

An alternative method for disposal of high-level radioactive waste.

An alternative method for disposing of high-level radioactive waste has been proposed by Santilli. It is a form of neutralisation but does not use the conventional methods currently being researched. Indeed, classical formulations of quantum chemistry and nuclear models do not even permit the practical method proposed. This new method arises from a number of discrepancies between the theoretical and measured values using the current formulation of quantum mechanics. Conventionally, the probability for beta-decay of a neutron into a proton, electron and neutrino is very low for radioactive elements on a nuclear timescale; for stable isotopes, the lifetime of neutrons is effectively infinite. Hadronic mechanics predicts that such a reaction may be stimulated within the nuclei of radioactive materials.

In essence, a radioactive nucleus is in an excited energy state and is attempting to return to its ground state energy. Under normal circumstances, this is achieved by spontaneous fission or radioactive emission; the time taken to decay being dependent on how much excess energy the nucleus has. This can vary between

⁻³¹
 10^{-31} seconds and millions of years. An excited nucleus can return to its ground state through emission of a photon (gamma emission), an electron (beta emission), or by spontaneous fission, where alpha emission is assumed to be a form of fission. The latter two processes cause a change in the nature of the parent nucleus, altering its nuclear properties. The energy value of the excited state determines the method by which the nucleus returns to its ground state. If the decay process involves the emission of a beta particle, it may be extrapolated that a neutron will have to decay to achieve this.

From the theoretical calculations, it is hypothesised that this decay can be stimulated by bombarding the nucleus with so-called 'resonant' photons with an energy of 1.294 Mev [31]. Under normal circumstances the probability of this interaction is extremely low. However, Santilli claims that there is a large resonance peak in the reaction cross-section (that is, the probability of the said interaction occurring) for incident photons with an energy of 1.294 Mev.³⁸

1. It is also feasible, though not stated, that the simple existence of an excited nucleus makes it open to interaction with resonant photons, regardless of the means of decay ultimately used to return to its ground state energy. Once a neutron is

If this interaction is found to be true, its application for the disposal of radioactive waste is profound. Photons with the correct resonance energy can be produced easily within a piece of equipment of small volume, such that the neutraliser could be built on the same site as the parent reactor itself. Effectively, it would allow all radioactive waste to be fissioned until all the isotopes form stable nuclei. However, a point to note is that, taking a typical sample of waste, the resultant treated material would not be radioactively dangerous but chemically could be a totally unknown concoction of elements and compounds, which may well contain high levels of toxins. Another point to note is that stimulated fission would release a considerable amount of heat energy from the fuel, and so some sort of effective coolant would be required. However, since this heat energy could be used to produce even more power, there seems no reason in principle to suppose that what might be termed a secondary 'waste reactor' could not be built.

To continue quantitative scientific studies of the proposed new method for the disposal of nuclear waste essentially requires a few basic experiments to be performed. All should be of reasonable cost and are certainly realisable with present-day technology. It seems sensible to perform these experiments to decide whether or not the claims are valid. If they are, the rewards would be tremendous; if not, little would have been lost.

A. Hadronic fuels:

From the very beginning, one of the main driving forces behind Ruggero Santilli's hadronic science has been an urgent desire to help find new clean forms of energy for the benefit of all. To this end, hadronic mechanics has been developed and it is found that all energies predicted are suitable for the clean production of electricity and so may be used in the production of fuels acceptable in a so-called green economy. These new energies are found to be of three types; one at each of the particle, nuclear and molecular levels. These are all discussed in detail in the book on hadronic chemistry [31], although that volume does really concentrate on molecular aspects. However, the vitally important point to remember at all times is that the new proposed hadronic mechanics agrees with conventional theories everywhere except at short distances of the order of 10^{-13} cm. It is also important to remember that, at these short distances, many effects are non-potential ones and so may not be examined via the use of a Hamiltonian. These new effects are extremely short range and exhibit a number of unusual features:

- (i) the non-hamiltonian interactions due to the deep mutual overlapping of the particle wavepackets in singlet coupling are attractive and are so attractive as to overcome repulsive Coulomb interactions,
- (ii) they occur without any binding energy,
- (iii) these new interactions imply a mutation of the intrinsic characteristics of particles, characterised by irreducible representations of the Poincaré-Santilli isosymmetry. e.g. a deformation of the charge distribution of protons and neutrons is representable by hadronic mechanics and allows an exact representation of nuclear magnetic moments.

The attractive nature of these new interactions combined with their lack of energy exchange and the possible alteration of the intrinsic character of particles allow for truly new clean energies. It remains to consider briefly these three types of new energy as alluded to earlier;

- (1) Firstly consider that occurring at the elementary particle level.

It seems that the neutron harbours a huge reservoir of clean energy which could be.

converted into a proton plus reaction products, a number of possibilities could occur. Firstly, the new nucleus could be a stable isotope, in which case further interactions with the resonant photons would be unlikely and the waste would have been effectively neutralized. Secondly, the new isotope could form a new neutron deficient nucleus and one of the following could then occur: the nucleus undergoes spontaneous fission, forming two new nuclei and possibly a number of neutrons, which could interact with other fissile elements in the fuel and generate excess heat; the neutron deficient nucleus could form a new excited energy state which can simply be categorized as another target radioactive nucleus for the resonant photons.

made available to mankind. It is a naturally unstable particle with spontaneous decay

$$n \rightarrow p^+ + e^- + \bar{\nu}, \quad (13)$$

which releases electrons with huge kinetic energies up to 0.8MeV. Here, and later, the traditional notation incorporating the symbols for anti-neutrino and neutrino are used.

The capture of these electrons via a conducting screen provides a dual source of energy called hadronic energy. The first source is due to the creation of an electric potential difference, while the second is due to the creation of a large quantity of heat. This source is clean because no dangerous radiation is emitted and there is no harmful waste.

As is explained in detail in the book on Hadronic Chemistry [31], this so-called hadronic energy is based on three predictions:

- (a) A peripheral neutron belonging to a group of light, natural, stable elements $N(A, Z)$, called hadronic fuels, may be stimulated to decay via a flux of photons γ with a resonating frequency of 1.294MeV,

$$\gamma + n \rightarrow p^+ + e^- + \bar{\nu}; \quad (14)$$

- (b) The resulting nuclei $N(A, Z+1)$ are naturally unstable with spontaneous beta decay

$$\gamma + N(A, Z) \rightarrow N(A, Z + 1) + e_1^- + \bar{\nu}_1 \rightarrow N(A, Z + 2) + e_2^- + \bar{\nu}_1 + \bar{\nu}_2; \quad (15)$$

- (c) The final nuclei $N(A, Z+2)$ of the class of hadronic fuels are light, natural, stable elements and so, there is no deposit of harmful waste material.

Examples of these so-called hadronic fuels are $Z_n(70, 30)$ and $M_0(100, 42)$. It should be noted also that the energy of the original resonating photon is not lost but remains available in the final usable energy. Also, for each resonating photon there are two electrons and related kinetic energy produced. Again, in essence, the suggested process transforms the original nuclei into nuclei having smaller mass while producing large amounts of energy - large enough in fact to ensure a positive energy output after allowing for that needed to produce the original resonating photons. Obviously, hadronic energy is highly acceptable environmentally and it would seem that the suggested process readily delivers large amounts of usable energy. However, the entire theoretical discussion lies outside the realms of traditional theoretical physics, indicating a process which is impossible for traditional quantum mechanics. As will be noted again later, it does appear that this is what provides the most vociferous denunciation of this mentioned theory and the implied benefits for mankind if, in fact, the idea works. It does seem, though, to be a process worth evaluating independently both theoretically and experimentally since it could prove extremely beneficial for mankind if it works as expected.

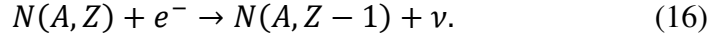
(2) New Clean Energies occurring at the Nuclear Level.

As mentioned already, one of the biggest obstacles facing these new proposals is the firmly established position of quantum mechanics within scientific circles. Orthodox quantum mechanics simply doesn't allow for some of these developments; for example, it doesn't even allow the possibility of low energy stimulated nuclear transmutations but, even if such processes are admitted, it is claimed such are accompanied by the emission of harmful neutrons. Experimental verification of stimulated nuclear transmutations at low energy without the emission of neutrons would indicate direct support for this new theory which, in a very real sense, simply extends, or covers, existing quantum mechanical theory to include physical situations not addressed by that existing theory. However, in the present context, the crucial point is that the new theory predicts a totally new model for the structure of nuclei. In this new model, hadronic mechanics, they are reduced to being composed of electrons and protons but recovering the conventional structure in terms of protons and neutrons in first approximation. These new models are, as mentioned previously, a consequence of neutron model as a hadronic bound state of a proton and an electron as originally conceived by Rutherford. It follows that the new clean energies of classes 1 and

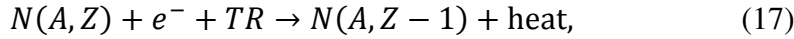
2 are very deeply interconnected, to the extent that experimental evidence of one is experimental evidence of the other.

Three types of new clean energies emerge in this class but possibly the first is the most obvious:

- (a) This first source reignites thoughts about electron capture; that is, the spontaneous capture of electrons by certain nuclei under normal conditions on Earth. In truth, such electron capture implies the synthesis of neutrons from protons and electrons, leading to low energy transmutations of the form

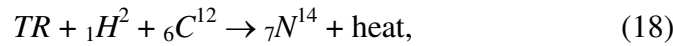


This reaction is spontaneous but hadronic mechanics has indicated how such transmutations may be stimulated with a release of energy:



- (b) A second group of energies of this second type may be identified by noting that the Earth's core is still so hot, after billions of years, that it must possess an internal source of heat which could well be due to nuclear transmutations such as envisaged above. It appears that observations, conformed by hadronic mechanics, indicate that such nuclear transmutations may well be reproducible here on Earth.
- (c) A third group utilises the fact that, millions of years ago, the earth's atmosphere might have been composed of only 40% nitrogen. It is thought that the ensuing doubling of nitrogen content might well be due to nitrogen being synthesized in the atmosphere from other natural elements via a low energy nuclear process without the emission of harmful radiation. This is a process permitted by hadronic mechanics but not by conventional quantum mechanics.

It seems quite possible that the trigger required to provoke this process is simply lightning. Also, the most plausible candidates as the natural elements to be in these processes are carbon and deuterium which occurs in small amounts in ordinary water. The stimulated synthesis of nitrogen predicted by hadronic mechanics would then follow



where the trigger in this case is lightning together with related events such as extreme magnetic fields. The low rate of such synthesis may be attributed to the low concentration of heavy water in our atmosphere. It should be noted that the energy output associated is impressive, [31]

As an interesting aside, it might be noted that the instantaneous availability of these large quantities of energy in this process provides an obvious explanation for thunder.

(3) New Clean Energies occurring at the Molecular Level.

In this class, the idea is to tap the energy within molecules; for example, via the transition from given molecules to structures at lower energy with practical use being made of the energy difference. These transitions would be utilised in hadronic reactors of molecular type, also called PlasmaArcFlow reactors, which are, incidentally, already in industrial production. More details of this category are readily available. [31]

It should be realised that the hadronic reactors of each of the three types considered are based on the same principle – that of stimulating the decay of considered bound states via resonating effects acting on the nonpotential component of binding forces. This constitutes a totally different approach as compared with conventional approaches utilising traditional quantum mechanics. The main physical principles behind each of the three classes discussed are identical. Hence, the experimental verification of one class gives immediate support for the existence of the other two classes. It is to be hoped that independent attempts at verification will be forthcoming soon because, if these classes do exist – and the present existence of operating PlasmaArcFlow reactors would appear to suggest that

such attempted verification would be successful – the World's energy problems could be a thing of the past.

VI. CONCLUSION

The purpose of physical scientific theory is to explain physical systems as revealed in observation and experimental results. Theory must not refute facts but instead be able to account for them. Many experiments using various designs have now synthesized neutroids and neutrons from an arc of current in hydrogen gas, [12,14,14a,15,16,17] revealing the neutron in its internal hadronic structure as being that far more parsimonious interpretation of an electron within a proton as first proposed by Rutherford, not that of quarks [32]. We propose that contact type interactions of full wave-packet penetration at distances of 10^{-13} cm or less characterize hadronic structure as is the case with the neutron, which is defined and properly described in the model of Hadronic Mechanics and Chemistry [20, 31]. Direct neutron production from an arc of current in hydrogen gas requires a minimum arc voltage of 3 kV and energy of 3 mJ, or only neutroids will be produced which may potentially by way of substance-specific absorption and subsequent nuclear transmutation within particular materials then become neutrons. These specifics of hadronic and neutron structure as well as neutroid to neutron transformations are fully defined within the theoretical context of Hadronic Mechanics and Chemistry [20,31] permitting new approaches to the production of energy, and the clean up of nuclear waste. *Within the province of this one simple experiment and its variants, the hadronic paradigm itself may be reassessed.*

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The Tangible Self

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Introduction

I ask you to forgive this preliminary self-indulgence by way of artistry. As a rule, I am loathe to present any idea, particularly the truth, without artistry, and I assure you, that sacrilege is exactly what I intend. So first I will sum the outlines in a dream, a parable, even if the meaning is overly plain, I must turn above and away before I begin the dissection. Here, come with me, for a moment, let us look and laugh, to see before we know.

Civilized man is a pitiful thing. He is an affliction to himself. A wolf once proud enough not to need pride, lived without need of reflection upon himself and was as we all are, but a meal, or a predator embracing of his instincts without thought. So close together are we, now, it has placed the wolf in a cage of his own construction where back and forth he paces his permitted two steps of ground, wearing his flesh and coat raw chafing against the bars. So sick is he that he wonders of himself and his cage and asks himself in his sickness, if he is not being pursued. Who chases him from behind his shame, always lurking and sneaking? Who follows me? In what form will I be made to find the fear brought against me, who follows me so sly and reproaching? So thinks the wolf of his instincts as he hopes to have forgotten them, so the bars will not rub, and he is quieted to know that the bars pursue him, for he has forgotten himself, as is his wish.

Freud was creative as most who make science *and* paradigm their own are. A strange breed to create and be rational— As a scientist he was cautious of this creativity and never published a work where he postulates that a period of development in the history of man may be the germ of each neurosis, a historical predisposition now ontologically realized in each life. It is the ice age, we are the brothers in the primal horde which the tyrannical father has banished, and the earth is boiling, a seething black and shimmering yellow blue convulsion. The trees are a green tangle of frost, patches of stark white and boiling eternity swallow my thoughts into the heaving earth, its turgid colors and black forgetting...oh, such forgetting...the thing is known but unknown—what has happened to me? I am a child before the unknowing, what specter haunts me from these trees, what ghost and whose black breath does conceal my torment, my innocence so torn, each bruise is a tear and I shudder to feel my innocent flesh against the breeze of an unforgiving winter, with laughing trees and boiling earth. Where are the dogs? Ten minutes...and then...as I return and shed the tears of happiness and pain, I am again suddenly hunted and each green is a black, and where is the thing—who pursues me? They appear...the dogs.

The small one is near in happy abandon. She has a gift for me. A beautiful squirrel...dead. A stripe of shit down its tail from when it died and evacuated itself in terror. Its eyes are black with the film of early death, a whitish glaze which sealed its terror within itself, so innocent and beautiful as it died, soiled and killed, for no damn reason. I looked at the dog and reproached it. It cocked its head and was confused. The dog stared at me as if I were an idiot, utterly unashamed and confused it stared at me. "You are an idiot...so stupid I do not even comprehend you, so I will ignore you." So said its look, so wise was this dog.

Now the scene of ice and snow is an ancient script again of the primal horde of brothers so cruelly cast out, and death howls as a wind to embrace all stupid things, so quietly do they die. Long ago she was mine...yes, so long ago, but I have forgotten that it is she who has saved me, she who has let me feed her and in exchange drops all that is precious at my feet. The squirrel is dead—it has given everything and lost! Look here! I drop the food so you may have it, and so, I trust to be fed, and now we both live! My dog has again saved me and offered me my supper instead of an empty belly for the wind to have and hold— I have food! So does she give! And so are our instincts to us, to we wise and "uncivilized" men who know it! Your instincts are there for a reason, to fill a need, a hunger! So they do not serve you,

they do not pursue you, they are you! The open mind releases all things and we are whole...forgetting and whole to know it. I am given a gift to embrace it again...the squirrel is mine. I live, open my mind to myself, and am complete. If you want more than squirrel, you will suffer, if you give yourself less than that, you will suffer. You are your instincts, never fear them, you are them. We have won! The squirrel is yours! Cook it and rejoice! Never yell at your dog, or shame your instincts. Let them serve you dinner instead.^{[1](#)}

Selective Serotonin Reuptake Inhibitor withdrawal

I have been a lifelong student of psychology by way of necessity. Although my interest was keen, I had yet to read some important things, and if I had, it would not have mattered. It would have been too unbelievable. I understand why such knowledge is so out of favor. Many fine books commit errors of omission so grotesque, they far exceed the subject matter which was omitted. I was therefore astonished and surprised to see firsthand, what I had as of yet, not read or heard anything about. The experience caused me to begin writing books for a number of concurrent causes which will become evident. I will explain in the language of psychology as I now understand it, the causes and structure of what is best described as a specific case of obsessive nosogenesis: The full constellation of personality aspects and causes made direct and evident, as well as their interrelations, and relation to the infantile causal genesis of neurotic predisposition.²

What has brought this information to light is a specific life choice, or rather, a series of life choices which blame no one. This is as it should be. All have done their best. But...I have information:

I had experienced what I can now rightly describe as the eruption of an unconscious replacement gratification from the unconscious into consciousness—a highly disturbing event with sadistic overtones which drove me to seek treatment. Typical of obsessional neurosis, the level of frustration was a trigger, in my case within the sphere of my career which had for years continued in a state of deterioration which had frustrated me enormously, and now, suddenly, all at once in my mind's eye a single fantasy so intense and disturbing, a thought erupted into consciousness, a highly cathected³ ideational presentation of such vivid, sudden and enormous violence directed against a country music listener in the line of stopped traffic, that I feared for my self-control and sought treatment. The fluoxetine worked. I was as yet undiagnosed. I presented to the physician, a general practitioner, as highly aggressive in affect, but as of that time, still in control. The situation again escalated some few months later after a tour as band leader in Europe with fruitful performances ended prematurely due to the divisiveness of certain participants, who profited enormously as a result. Although the recordings were good, the tour which was years in the making now lay in irretrievable ruins. My time living in Europe had been entirely wasted. The name of my band stolen. This was devastating and I needed more fluoxetine. A fine doctor helped me. He instantly understood that I was an obsessional neurotic without having to be told of the typical onset of symptoms. He rightly followed protocol and adjusted the dose accordingly to reflect the greatly increased severity of the situation. I was so very lucky to have this doctor, and briefly another over the next fourteen or fifteen years as my symptoms were in the main controlled.

However, I had no better luck with my life and continued along the same course. Things grew steadily worse. I decided to change my life, moved to the woods and stopped taking fluoxetine. After being on doses as high as 120 mg., the drug had supersaturated my system and was self-tapering. A latency period of approximately 100 days where symptoms were tolerable ensued. Then, a profound change which is clearly recognizable as the nearly complete elimination of repression occurred. Unconscious material was directly exposed to consciousness in sudden and copious profusion. Not a *single* thought, like the one which drove me to seek treatment, but *many hundreds* all at once. As an obsessional neurotic with a predispositional fixation centered around the sadistic component, I beheld the surreal proliferation of fantasies, although at that time I was entirely unaware that these names and labels existed. I just saw it in my mind's eye, month after month, looking at it. It destroyed my ego entirely. Personality was shattered. This brings me to the first useful bit of information: Non-contradictory Analysis.⁴

The obsessive compulsive personality is built upon reaction formations, often of an anal sadistic character.⁵ Many of these are brought under repression largely at the behest of the superego and hence, the guilt felt in the ego as the fantasies are witnessed has a destructive effect, a masochism is produced as the guilt is added to the highly energetic sadistic component. This is dangerous not unlike melancholia. The solution is to unbind the teeth of the hyper-punitive superego, gut the neurotic conscience, loosen its teeth set into the flesh of the ego with the following idea designed to strike at the primacy of the wish in neurotic thought: "The mind may think anything. Like ancient Greek justice, you

may have any thought, any 'intention' is only a harmless thought, it is deeds which matter, actions, not thoughts. So... There are no dissonant thoughts. Actions judge moral worth, thoughts are of no consequence, you may think anything without consequence, stop judging, and simply look." This Non-contradictory Analysis stopped the guilt and I beheld. This allowed me to see the sights which confirmed much of my later reading and was written of first in *This New Day* before I had found the particular Freud texts dealing with the subject.⁶ Although unaware of it, I was looking at the reaction formations. These had evidently been going on throughout all of my life. They were both reaction formations, and replacement gratifications. They were there in number, from every period of my life. I knew *nothing of them*, except in early childhood, when they were conscious. That will be discussed in a later context.

So when withdrawal is effected from SSRI drugs from high doses over long periods, specifically fluoxetine, unconscious material which is highly ego dystonic is exposed resulting in a possible masochism. However, another possibility exists. The kernel of sadism may supersede the guilt and become dominant. The effect of the constant gravity to participate in the theatre of the mind's eye, to live within the scenes of sadism, or whatever perversion, and all will be found, is an enormous tax, a magnetism all but impossible to resist—a current toward introversion. This is a clear manifestation of potentially psychotic symptomatology evidenced in SSRI withdrawal—a current toward introversion. To be plain: An hallucinatory neurosis. Neurosis not psychosis, because I knew what was happening, operated power equipment and chainsaws, felled trees etc. Self-identity and reality testing were intact.

At this point I will attempt to sharpen a dull term with a categorization of various types of hallucination. This term means little until it is localized within specific manifestations, some positive some not. Each case is specific.

1. External hallucinations. By far the most rare, this category coincides with the popular conception of the term. I see a thing, an object which is not there. The "pink elephant."

2. Textural hallucinations. Changes in the surface, the texture of perception. {An observational correlate: These are often but not always charged with affect, an animation of emotional states. Think of descriptions of LSD euphoria or the presentation of sexual shame from *Mind Map* that is reprinted in the appendix. This description also contains additional elements including olfactory hallucination.⁷}

3. Olfactory hallucinations.

4. Auditory hallucinations.

5. Gestalt hallucinations. Hallucinations brought about by modifying perceptual groupings of environmental stimulus. The principle at its most basic can be seen in finding shapes and faces in clouds, or the Rorschach Inkblot Test. The flawed or new re- grouping of available visual data.

6. Peripheral hallucinations. Hallucinations caught out of the corner of the eye, hints of objects, erroneous inferences of objects which come from peripheral vision and "disappear," that is to say can not be confirmed, when viewed directly.

7. Visual field hallucinations. The entire visual field appears to warp, ripple or flex, like a piece of Plexiglas being bent or shaped in multiple distortions.

8. Introversion hallucination. This hallucination which is not an hallucination as such, but the flowing backward of the ego into the world of fantasy in the mind's eye, this world of the id, the wishes once symbolized, **or not**, and so charged with enormous primal energy calls out to introvert the ego, to engage the ego with the world in the mind's eye as if it were real. This is the current to introversion found in SSRI withdrawal, an hallucination that is a super-energized dream, a "supersexualized"⁸ replacement gratification very close to or directly representing the id, into which the ego enters as if it were real (A dynamic analysis of the process will follow). In the case of severe SSRI withdrawal, this is the primary

danger: an introverted hallucinatory state leading to the psychotic *identification* with sadism, masochism or other unconscious material which threatens to swallow the ego.

Direct observation of unconscious structures⁹:

Now let me return to the situation as we left it: The ego can (although in a diminished capacity) with the aid of Non-contradictory Analysis now observe the forbidden workings of the id which before SSRI withdrawal was unconscious, and is now directly observable. At this point there are two avenues before us. The first is to examine the external presentation and origin of the process in question. I hypothesize from my specific observations: *In neurotic introversion hallucination, the bodily disposition and attitude will reflect the particular fixation found in the predisposition toward neurosis.* I believe this generalization derived from the specific of my case will likely have application in discovering other aspects of neurotic symptomatic presentation, and will find a home in unriddling other psychogenic disorders.¹⁰ The repetition compulsion will recreate in the posture and attitudes of the body to as great an extent as is possible the earliest impressions of ontological neurotic nosogenesis. The earliest impressions of fixation will strive for repetition. The further case history and results of Native Psychoanalysis will reveal the basis for this hypothetical inductive assertion: *As introversion proceeds, the body will reflect some element of the earliest deeply fixated impressions.* Empirical study in many other cases would be required to determine this proposition's general validity. I believe a causal element is repeated—predisposition made evident.

The other avenue of discussion is the unconscious structure of obsessional neurosis which was revealed. The reaction formation elements which were so severely repressed at the behest of the hyper-punitive superego became visible first. Like a shingle on a roof to protect it, they are most numerous and are stacked in several basic configurations. I must jump ahead and first interject a further piece of information in that the reaction formations are of course feelings of reaction, themselves invoked by other elements, stressful painful events which are causal in invoking them, although the structures soon repeat without but symbolic cause, they are there for a reason. Here are the basic formations:

A. In this construction which is common, a painful event has caused a reactive response. A feeling of **powerlessness** from any number of situations in upbringing leave a child wounded and so he engages in sadistic fantasy, he substitutes power, rage and strutting superiority for his enfeebled pained condition. This healing balm born of the anal sadistic period as I will demonstrate in specific, is morally repugnant to the one it heals whose conscience demands that this first reaction formation of power for powerlessness is supplanted in consciousness by an additional reaction formation, where "I love them," replaces "I hate them," in consciousness. A cause, then a two-tier formation. Pain—Hate—Conscious love. This is the ambivalence in disguise which the superego demands.

B. This is the reverse of "A." Where the idea of a positive attachment is unbearable, the hateful reaction becomes dominant in consciousness. Here the hurt at the bottom of the structure might be unmet longing, approval or love. The love which persists and will never be met becomes intolerable. The structure is: Hurt—Love—Hate in consciousness.

C. The most prevalent formation is by far the simplest. The dominant fixated characteristic in its intensity and depth determines the preponderance and severity of the unconscious formations. All perversions will be represented, some in partial or minute quantities, some as elements in other formations, but all available to see. The most multitudinous form is the ego reacting with very painful but simple anxiety to maintain repression, and if repression fails, anxiety before and as the superego and or ego dissonant sight is exposed. A single repressed replacement gratification, a single hidden reaction formation alone. It will be associated with a hurt or frustration. So many thousands, each from a different period.

In general, it is anxiety which the ego uses to shield unconscious formations. In the appendix¹¹ is the section from *Mind Map* which describes the presentation of unconscious material during SSRI withdrawal—note the olfactory hallucination and its significance, character and meaning as the primal

carrier of shame, in light of the fixated period. More information in this connection will be forthcoming later as the fixation is made plain. (See "Native Psychoanalysis example #1.")

In *This New Day* I put forward what amounts to the following proposition: "Increased proximity to the repressed, fosters creativity." I have demonstrated the truth of this beyond doubt by means of my own relative increase in personal endeavor, however another axiom springs to mind. I paraphrase a psychoanalytic idea, "Return of the repressed causes symptom formation." So perhaps artistic endeavor is just a substitute symptom as is all such sublimation of repressed energies! I will make more specific use of this later in the chapter on creative psychology, but let it be known that the energies liberated in SSRI withdrawal need not eradicate the ego permanently. So with this hopeful idea let us take heart and look at the result of withdrawal from a quantitative and qualitative perspective in terms of neurotic presentation.

SSRI withdrawal—a structural and dynamic analysis

As Freud so rightly noted long ago, the question of the likelihood of neurosis can be seen in terms of the secondary qualitative, and the primary quantitative factors. The conjunction of the two need be considered to understand the general outline of the case. You may permit me the indulgence of an analogy for personality: Think of the handle of a fasces, a bundle of rods fastened together with straps into a whole. Personality is like that. Here the libidinal, realistic and aggressive aspects are represented by the rods, and the bands holding them fast are repression, that is what makes them work together as one under the auspices of the ego. The ego's integrity vanishes without repression, just as the fasces falls apart. Qualitatively then, several things are in play, both the removal of repression that spares the ego painful memories and the subsequent exposure of the underlying predisposition toward neurosis, some conflict between ego and libido, some unresolved tension will be exposed, a neurotic predisposition to which we all share some successfully or unsuccessfully repressed trait. Also, and this effects both qualitative and quantitative factors, the "active unconscious"¹² is removed or reduced to pathological effect. So... the qualitative change is enormously detrimental to the ego, personality integrity and stability. What were successful repressions return to form symptoms. The fasces falls apart.

Now for the primary quantitative factor. A sudden increase or decrease in libido increases the likelihood of illness. By removing repression we release in a single flash all of the sum total of the libido stored in the id, and increase the quantitative primary factor *astronomically*. This can, and does, cause in the best case, the most severe neurosis, and in the worst, *psychosis with paranoid, masochistic and sadistic identifications*.¹³ At age 45, every repressed sadistic, erotic, painful and reactive feeling and emotional energy stored in the unconscious id began to emerge. The quantitative factor is off the damn scale. Enough said.

The quote from Freud regarding the goal of psychoanalysis is, "All repressions are to be undone."¹⁴ If you thumb ahead to the curious section on "Ontological Calculus," you will see that the equation for psychoanalysis and hallucinatory psychosis/neurosis differ by only one character: regression. It is in ego extroversion that neurosis is defeated after the basic conflicts in personality have been exposed. That is the process which I have successfully undertaken in my own case which I will impart in the pages on "Native Psychoanalysis." So let us not feel too gloomy over the sure misery which awaits our SSRI withdrawal case. Soon he will have sexuality and libido enough to sublimate and turn his thoughts and his desires rather than the symptoms of his neurosis. But to find these heights we must first descend into the depths. Not any lying, artistic, general, easy, false thing wrapped in philosophical meaning, but a specific case, where we might just see how it's done, and so, find reason to believe that it *can* be done...perhaps, even a little better.

So having offered you that, let me take it away again and draw our preliminary conclusion plainly: SSRI withdrawal from high doses after an extended latency period can cause an exacerbation and exposure of the psychical structures underlying symptom formation which become conscious. Repression itself is defeated. In this case the result is a marked tendency toward introversion hallucination and regression of the ego into severe neurosis, perhaps bordering on psychosis with sadistic, paranoid or masochistic identifications of personality. The extreme quantitative influx of ego dystonic libidinal components, sexualized aggressive elements and ontological particulars of repressed mental life return to consciousness. During periods of ego regressive introverted hallucination, the posture and position of the body can in part, be assigned an origin in the earliest examples of the fixation which formed the predisposition to neurosis. In short: A case of obsessive neurosis, after withdrawal, becomes a near hallucinatory psychosis. The original condition has been amplified and further modified by the removal of repression to become a more morbid and severe manifestation, where the unconscious components of the illness have become en masse, both conscious, and active symptom creators of the worst possible order.

At this point let us again stop to recognize that we have but one modification to make, the removal of regression which reverses the perceptual process to find reality reflected from within, and we have the ideal formula for psychoanalysis—the removal of all repressions, which liberates their repressed energies and constitutes a further economic savings of mental energy as the repressions are not reinstituted. So with that let me add the unhappy but happy fact that after three years, many unconscious structures are, although to a lesser degree, still directly observable to me, and so, no longer deserve the name unconscious. I believe that a lifelong small maintenance dose of the drug would restore some measure of balance to my brain chemistry, but I am far from seduced! No more, please! The lack of repressive facility can be likened to a large tub filled with viscous oil which might represent the unconscious. Let a cork be a thought to repress. As an obsessive I will apply one of my life- long but now ineffective tricks and apply a reaction formation, use enough hate, like a stick to push the idea under so that it should go away for a month, but in five minutes the idea is back in consciousness and I am exhausted! The oil in our experiment is no longer viscous, it is now water and all ideas return to the surface at once. The conflicts at the base of the problem must now be solved if I am to be well. A positive side-effect is found in the liberation of libidinal energies for all purposes, cerebral and sexual now so late in life, and a very negative side-effect is found in a reduced frustration tolerance which is equally marked and profound. As is often the case, necessity is painful, but her sting can open the eyes to something new.

One result of the evidently permanent change in the function of repression in my case is that I can see in the mind's eye the formerly invisible (unconscious) hallmark of neurosis, the "replacement gratification." Even the most small and modest libidinal substitutive fantasy has more than enough energy to breach my now nonexistent defenses, and become conscious. I am sure if I am ill or well. I can not fake it. I will feel instant anxiety, and then I move toward it and open up the mind to the pain, and observe directly. I have by deductive methods reverse engineered this aberrance which at first forced itself upon me, but which I can now use at will.¹⁵ By observing the nature of my relation to unconscious content I have deduced a method which will endeavor to offer a clear way to direct unconscious observation for the user without need for the circuitous route of free association. I am sure the method works for me, and I am sure the result is the absence of neurosis. The question is if my reverse engineering is sufficient. I need you to help here. Someone else who needs this must try it. Even if the full expectation is not met, this promises to be at least another tool, another approach to get an analysis unstuck and going again. There are also new insights into language, the association of unconscious content with symptom presentation and the validity of constructions. At worst another tool. At best, this may offer a more direct route to the hidden unconscious memories, fears and fantasies which are the true fundamental kernel of the fixations which form the predisposition to neurosis, and once discovered, remove obsessional and hysterical symptoms instantly. The secondary benefit comes in increased energy and mental flexibility. Thought is powered by erotic energy. All repressed ideas have large numbers of associations which remind one of them. All these topics must be avoided and the mind becomes stiff *not* to think of so many things, dead and dried out to withhold so many things under repression, deprived of the energy in the repressed thoughts, and the constant energy spent in repressing them, a constant drain to press and repress... There is a feeling which can be identified, repeated and learned, the feeling of not repressing, and I will put that into place later, but first let us dissect the "professor"—I will offer up my case to the knife so you may see it in perspective, and then we will dissect the dissection, and make method of my new health.

The obsessive personality is like a high pressure cap, a dynamic active seal over the unconscious, a high pressure oil well head if you will. The obsessions serve a primary and secondary function. Primarily they occupy all of consciousness and thereby are an agent of the most potent repression by way of blocking all other thoughts from entering into consciousness. Obsessive behaviors serve an adaptive function as specified in *Mind Map* and *This New Day*, and are sexually reinforced with a neurochemically active libidinal element.¹⁶ This unconscious libidinal component is the power source of the obsession, and by way of the obsessive symptom's symbolic equivalent value, the symptom acts also as a way to vent the repressed energies onto the symbolic thought or behavior. So two functions are served outside of the evolutionary purpose, or rather, that purpose is achieved by these means: 1. Consciousness is blocked

from seeing the source energizing component which remains repressed, and so serves obsession's primary purpose, which is to maintain repression. 2. The symptom partially decaffects¹⁷ some of the repressed libidinal component which gains substitutive satisfaction as it energizes the symptom. Thereby, repression is maintained and a small portion of libido is expressed by way of transference, or a sort of sublimation into the symptom, whereby some of the underlying libidinal energy can be discharged without the repressed source being consciously recognized. The entire obsessive personality is based on, and designed to maintain repression at all costs, so as to insulate the ego from the hyper-developed, hyper-energized, hyper-potent content of the id, and shield itself from the recriminations that would surely follow issuing from the superego if this material were known directly. Even when obsession maintains repression it is clear why an "unconscious sense of guilt" often accompanies obsessional neurosis, which is so closely bound up with the hyper-punitive conscience and its tendency for exaggerated and overly punitive cruel self-reproach. Here the superego knows the id better than the hapless ego, which often suffers the guilty result, as the guilt

is displaced onto endless symbolic trivialities.¹⁸

So what happens to a personality type which is based on repression, when that most basic component of almost all ego defense, the very keystone of the personality's construction, is removed? What transformations take place in subsequent symptom formation, and how are these to be used and interpreted therapeutically, and furthermore, how is this knowledge applicable to the general case of the transference neuroses? Before I answer these questions and reveal the particular methodology born of it, I will cover some familiar theoretical ground so that we can make better sense of the result by placing it in a known analytical framework.

Native Psychoanalysis

The idea of Native Psychoanalysis can be best understood through its relation to the familiar process of psychoanalysis. My discovery of the method of Native Psychoanalysis was entirely necessary and intuitive, but its *modus operandi* acknowledges unconscious processes and dynamics, and so might most precisely be explained with the familiar terms ascribed to psychoanalysis, which rightly describe the true state of affairs in the divided mind of man. In psychoanalysis there are several basic avenues of therapeutic entry into the unconscious of the patient. Dream interpretation, the study of the patient's unconscious defenses which dam the pathways of reminiscence and offer other obstacles, free association, and along with dream interpretation the most mysterious tool: "the transference," which as the analysis gains steam finds its ultimate expression in "the transference neurosis." The transference neurosis is an artificial substitute neurosis particular to the psychoanalytic process. This artificial illness develops as the patient transfers the various sum total of his complex in an act of overdetermined displacement onto the person of the therapist. All of the patient's complexes are transferred onto the person of the therapist thusly, those of both positive and negative character, and the therapy can proceed with analyzing the resistances and complexes once they have been transferred in this way.¹⁹ However useful this is, it is a manifestation of the aggregate of the patient's complexes, *and is a resistance by way of the repetition compulsion*. The idea is that as the patient bumps into associations which close in on the tender spots in his hidden complex, he stops remembering and reminiscing as he should, and adds to the transference, until the transference becomes an example of the repetition compulsion. All instincts are regressive and want only to repeat.²⁰ The situation in the development of the transference neurosis is: First the patient remembers, then he repeats.²¹ The end stage in the transference as it presents in the transference neurosis is an example of the repetition compulsion (as is much of neurosis in general). These examples of the repetition compulsion are defended with the utmost tenacity by the patient, who often loses respect for the rules of psychoanalytic therapy in defending them with all his might.

This *artificial* illness which is created in therapy, the transference neurosis, has many parallel examples which occur in daily life, *native* examples of transference which are brought about independent of any psychoanalytical therapeutic situation. Much of neurosis is a symbolic transference of unconscious complexes onto the world. These examples of "Native Transference," can be easily recognized, and each can be traced back to a formative infantile impression or experience which has been repressed and harkens only to return to consciousness, and so cathects our perception of the world as to create a transference and release part of its energy, even if only in symbol, so as to appease its need to decathect its energies, and the ego's need to keep the ego dystonic wish or event repressed. These examples of Native Transference are compromise formations along these lines, as are most all neurotic symptoms like the obsessions I outlined, compromises between the release of repressed libidinal energy, and the ego's need to conceal the source impression (which along with other more superficial determinants) power and define the symptom.

Because of the very specific structure of these examples of Native Transference, there is an equally specific emotional character to them which can be easily recognized. As they are super-energized examples of the repetition compulsion, they bear its distinctive symptomatic signature of overreaction. An obsessive symptom *appears* as an overreaction to the trivial topic to which it has symbolically attached itself, but a *displacement* from the real mental object or idea which *is* of this heightened level of importance to the person effected, is responsible for the "overreaction." So Native Transference can be recognized by its appearance as an overreaction, but in reality it is not. The mechanism is a displacement of affect from the real hidden internal excitation onto the symbolic object or triviality which is then invested with the affect appropriate to the hidden source— overreaction and obstinate adherence to a position which is inappropriate in strength and proportion, along with an obsessive persistence of the overreaction. In short: the extreme inappropriate presentation of affect and its obsessive insistence. These are the hallmarks of Native Transference. There are two basic (but far from exhaustive) presentations of Native Transference: Tantrum and Insecurity.

In *This New Day* I say over and over, "Move toward your pain." That goes double here. I have learned to recognize the feeling of the tantrum, the squalling, obstinate, over-excited pushing against the symbol as I defend myself, this has a sound and a feeling. The rise of blood in the face and the set of the jaw, the need to defend a trivial point well past its value, and then persist...that is the feeling. Reason holds no sway, the repetition compulsion is an insistence, a necessity, a must, it never ducks and often defends to within an inch of good taste and then goes further. The other type of common presentation is as a niggling insecurity that seeks reassurance beyond all reason, going on and on, insatiable and ever so insecure. If you pay attention you can feel the pushing, or the empty ache and fear which will not be filled, pressing, so angry and sure, so insecure, furious and red faced, or just interminably insecure and squirming, on and on, worrying and perhaps vacillating endlessly between two mental positions, back and forth, over and over. It is a compulsion to make too much of something, a hurt feeling, an insecurity, or a self-righteous bluster that keeps going at all costs. The energy from the repressed which is being transferred onto the present situation gives it its signature, so much too much affect and importance for the actual issue which has fallen under a hyper-energized transference from a submerged complex or memory. Native Transference, whatever its character, always displays disproportional affect. Learn to feel it. Catch yourself—move toward your pain and unmask yourself. It hurts to do that. Make it a habit. Remember the feeling.

Before I surrender an example of how to use the technique, another concept is needed. It is a vital and strange idea which is meant to make real the notion of "moving toward your pain." First off, that sounds like a terrible idea, doesn't it? Why should you want to move *toward* your pain? What am I, a masochist? No! I am a psychological reverse engineer!

Free association accesses unconscious material through a circuitous route of links which might be described as elliptical—the long way around. Also, there is no small measure of interpretation needed for the results to be used, that is to say, the practitioner must be very honest and not refuse any painful subject that comes to mind, then make sense of what he finds. This state of free association involves removal of censorship from the train of thought, but the maintaining of attention which is directed at observing the thought processes. The act of attention itself, although lessened by removing attention directed at the censorship of topics, still impedes the flow of ideas as thoughts are observed, attention blocks that which it gathers, like an object in the unconscious stream which interrupts its flow. Half of attention, half of the object has been removed, the censorship of thoughts is gone, but half still remains to observe.²²

Freud rightly understands the purpose of the unconscious is found in the mediation of mental suffering. This is exactly true. The unconscious contains nothing but drives which cause the ego pain as they are paired with moral repudiation, painful wishes, painful events, unlookable sights and unthinkably disturbing thoughts. It has many vital energies, but all are bound into painful unlookable sights and ideas. It houses much libido which is painfully dissonant, aggressive urges which are morally untenable and shameful, and other memories and thoughts, all too horrible to know for the ego. With only one exception, one minuscule thought I will recount later, the entire sum of unconscious non-preconscious content, but repressed content proper as I have observed, is but variations on one theme—mental suffering for the ego. Only dissonance. The energies there are the stuff divinity is made of, but all, and I mean all of it, is bound in forms of sheer agony for the ego. Nothing but pain. Only pain. Later we will discover how to liberate those energies and find what happiness lies under pain, but for now know it—the unconscious is filled with nothing but suffering for the ego—for you.

Don't worry though, that is just a perception of the fearful ego, and all those thoughts can't hurt, once they are conscious, each is like a twenty dollar bill which yields its energies to fuel our ascension, but the relationship as it stands now between the ego and the unconscious, one of pain and repression is in fact, our ticket in, our compass to a new habit which will permit us a less circuitous route to unconscious repressed impressions from childhood. When the painful contradictory repressed infantile component is retrieved and made conscious, the symptoms disappear instantly!

The need for a comprehensive analysis of the upper layers of personality and an understanding of how the infantile retrieved material fits together with it is no less vital now, perhaps even more so, as memories are retrieved more often than constructions are used, and so, can shock the ego with their sudden emergence. This is no substitute for the hard work of a comprehensive analysis, but a supplement to its expeditious conclusion.²³

The idea I use in substitution for free association, and it may be used in conjunction with it as well, is a path of direct unconscious access which finds the hidden by the painful signature which is meant to insure its secrecy. It is the painful quality of the memories and thoughts which will allow us to track them down. This state of mind which I now call the “Open Emotional Posture” or previously the “creative emotional

posture,” has several various beneficial aspects.²⁴ Firstly in the case of Native Psychoanalysis, it clears away the amnesias which shield unconscious memories and fantasies. Secondly, in less severe cases, it can in and of itself stem neurosis by reinstituting libidinal flow from unconscious repressed sources. Thirdly, it accesses unconscious energies and so, **greatly enhances creative potential**. I personally maintain it at all times to the best of my ability, and in so much as I am successful, I have found a narrow path to defeat neurotic symptoms even before the infantile component has been recovered. The Open Emotional Posture can access undifferentiated libidinal energy—what I call liquid libido (as I will describe later) from a fixation, even before the fixation has been overcome. Although it is not a substitute for the removal of a fixation (it is far less stable), it can actually provide usable libido from an unconscious fixation or perversion while the neurosis is still intact. In this way feeling, libido, can be derived directly from the id to be used for any healthy purpose.²⁵ As almost all neurosis in some part creates its ill-effects by keeping part of libido under repression, the idea should be universally helpful in treating neurosis. Again, I have used the posture countless times in my own case and can only hope that you will take the time to try it yourself and see if it has the potential I believe it possesses as a psychological tool. Further empirical verification is in order!

You should take the time to read the thought experiments from *Mind Map* in the appendix²⁶ as well as this more clinical description. The exercise from the appendix with the reaction formation in it is for instances where affect was repressed for survival or other reasons. This secondary reactive component, the fighting back, is an inhibition to the Open Emotional Posture and will be of value in some cases where repressed affect must be expressed, but problematic in our current context. The Open Emotional Posture has proven itself to be a Swiss army knife of sorts, a tool with many uses which has been reverse engineered from the worst of my experiences.²⁷

The Open Emotional Posture

Pain is what we repress. Libidinal cathexes which are dissonant to the ego, painful events and memories, painful reactions real or imagined, unacceptable thoughts of all and any variety, our aggressive urges and all the rest. We have developed a reflex. A fine and right minded but flawed reflex to avoid unpleasant things and internal perceptions. Later in development the reality principle takes its place and even painful things, if real, must be attended their due. It occurred to me as I was writing that in a way, the Open Emotional Posture makes a meditation of the reality principle in order to locate a painful stimulus: the unconscious. Since the unconscious exists to alleviate mental suffering it stands to reason that we can access its contents by pursuing the same. Pursuing is the wrong word, "being open to" serves the idea better, for like a Chinese finger puzzle where the harder one tries to escape the more difficult it becomes, to pursue them, all hidden things flee to be chased, and must be ensnared after the fact, if at all. This is one way that free association differs from the Open Emotional Posture. Attention is entirely withdrawn after finding the way. We do not pursue, we do not look. Although a painful internal stimulus is used to discover the feeling of being open to the unconscious rather than repressing it, the stimulus is allowed to dissipate and decathect its energies and the feeling of being open to it is kept. That feeling does require attention be spent so as to record it. Remember the feeling of being open to the painful memory, the memory is of no matter, the emotional posture, the feeling of being open, of allowing it through into your mind without impediment, without resistance, is the key. Feel it and remain that way. That is the Open Emotional Posture. Creativity is fostered, the "active unconscious" (a vital term explained in the appendix²⁸), has its entire perceptual and emotional effect diminished to heighten experience and libido, liquid libido as explained later, undifferentiated for sublimation into thought, or simply to grace the world with the sexual sublimation of beauty, liquid undifferentiated libido comes directly into the sphere of the ego. However this is also a tool to trace repressed memories, even infantile ones which remain buried. This function of the Open Emotional Posture is proportionally aided by the heightened severity and libidinal cathexis of the repressed symptom creator.

The Open Emotional Posture is the philosophy of "moving toward your pain" made specific as psychology. We find a painful memory, one which is near to repression, a sad memory, not an angry or hurtful response or reaction, but a sad memory which wants to run away. Then we open the mind to it, let it through without any resistance, invite it in by not resisting, be open—do not seek. Let it fill your eyes with tears and smell the scent of salt and sorrow. Remain open to the pain and let it fill you. Pain can fill you with a warm ache and we understand: "Pain born as tears is Eros"—filling and warming, wetting the soul and healing us in the contractions and shudders of sorrow, the current of tears bears the mark of Eros and heals, rebinds us and also marks the way to her forbidden shamed places: The Unconscious! Now that you have opened yourself to your pain in this one place, let it flow freely through you until it is spent and then...remain open, in exactly this emotional posture. That is it. Remember it and practice it. An increase in creative ability, mental acumen and aesthetic pleasure as experience and thought are sexualized and powered by undifferentiated libidinal energy is the result. A neurotic antidote. If used during active symptom formation with the method of Native Psychoanalysis described below, the earliest memories powering the symptomatic phenomenon which are its transferred infantile predispositional component can be directly made conscious and the symptom eradicated on the spot. That is my experience and the best possible outcome on a declining continuum of usefulness, but hopeful nonetheless.

Also, a technique not unlike unconscious fishing where a piece of language or an idea serves as the worm will be discussed, whereby similar results may be achieved, although with somewhat greater effort. It is vital to remember that once the Open Emotional Posture is achieved, no attention is offered in the mind to *find* any subject, for that will act like an obsession and block the process. "Invite but do not suggest," or, "Look and you will not find."

Native Psychoanalysis— A Case of Obsessive Nosogenesis

While all serious neurotic manifestations are the result of multiple determinants which coalesce to form the end result of neurosis, there are primary determinants which are of the greatest importance, and leave their stamp on all, or almost all symptomatic presentations of the disease. This first example of the application of the technique of Native Psychoanalysis is also a case of obsessive nosogenesis in the sense of having as its result, the bringing to consciousness of the primary determinant toward the predisposition to neurosis, which once revealed to consciousness, coincided with the disappearance of the current symptom, and a permanent fundamental change in the obsessive and compulsive character of personality. There are many, but this is the single most fundamental, influential and energetic component, the first signature at the heart of the fixation. The fixation proper will be examined later and its multi-reinforcing developmental constituents discussed at that time, along with other issues. This first example will serve as a model for the full technique. The later examples are characteristic of the ease with which the process is now at my command, and the tracing backward to remove amnesias, which is still required of me in some recent cases, is now the unusual occurrence, as I seem to be able to reach right back and open up to the early memory with fewer and fewer steps.

A preliminary note on distinguishing fantasy from reality in memory retrieval: I am stunned to read that there is often confusion in this regard. My case is the reverse. There is no confusion at all. The two present differently. I will analyze the mechanisms of fantasy in defense of the ego from libidinal components later, but for now simply state that real memories are experienced in the first person. If you are looking on at the scene from the third person, as an outside observer who sees yourself, this is a screen memory, likely a useful analyzable condensation of many events or symbolic equivalent of one or many repressed events (more distortion = more repression). Fantasy presents as a plastic, idealized creation, one often looks on and the scene changes so as to invite you to look further. Actual memories and events are experienced in the first person. They are exactly as they were at the moment they were formed (or more correctly, the moment they were repressed). I have read many differing views on whether impulses or memories decay in the unconscious. There is no debate. They do not. Period. Visual memories may or may not be paired with audio memories which may or may not be paired with tactile memories. Yes, tactile memories. This is weird and quite horrifying until you have experienced it a few times. Here is the real source of many legends—the incubus and succubus for example. As the repressed returns, invisible hands are felt to touch *exactly as the sensation presented when it was repressed*. In the instance under present discussion, the earliest visual impressions, in one case also paired with audio impressions, were preserved and presented in the mind's eye with near hallucinatory clarity. One guesses at fantasy, as is its aim, one is shocked by the sudden reality of a first person memory. The two are in no way similar and can not be confused.

Lastly, before presenting the case I must discuss the most universally applicable aspect of the approach: Language. We use the language presented in the symptom to trace it backward in the life history of the subject, until the earliest formative repressed memory which is responsible for powering and giving form to the now blossoming symptom is recovered. The language is key.²⁹ Language is a conscious nodal point onto which conscious and unconscious determinants all attach en masse, and so the symptoms will present language as they are described, or better still, of their own accord, that is to say language *from within the symptom*, not just a description of it which comes to mind, this is the key which guides the process backward: The Language. The language is the compass needle backward and downward, the language is the plumb bob we follow down to it.

Here is the rule I have found regarding the relationship of the language to the unconscious source material, and it is to be found in the presentation of the language, the more "hysterical," the better. Here, and only when specified, I mean the colloquial definition of the word hysterical, hysterical as in eruptive and dramatically overcharged with affect—an eruption of language, uncensored and spontaneous, hysterical over-amplified and entirely unthinking eruptive language is best. Although not necessary, this

is the ideal condition. Such utterances proceed all but directly from the repressed, from the unconscious id.³⁰ This first case is of this model. More obsessive and muted presentations which are not as "hysterical" (again used colloquially), will demonstrate a mutation in the language as one follows the path backward, but a kernel of meaning from the repressed, concealed in pun or veiled by association will inevitably be available—it has to be, or the symptom could not vent the repressed, a consistent core meaning which refers to the repressed is always maintained throughout the linguistic transformations. The usage of language in deducing primary determinants and so aiding in the trustworthy assembly of reliable constructions of unconscious structures where memories are unavailable, will be discussed later.

Example 1. Native Psychoanalysis of an obsessive/hysterical symptom presentation and subsequent cure by way of revealing the primary determinant in obsessive nosogenesis

The "shadow of hysteria" which is at the core of obsessive illness has indeed been revealed in my case. Certain I believe, more hazardous, and without question, more noisy aspects of symptom formation *never before* displayed in the long history of obsessive manifestations had become prevalent after the withdrawal from SSRI's. Some of these more hysterical manifestations include anxiety of a debilitating "accelerating" sort, *accompanied by severe pains in my back*. In obsession the risk of suicide is low. It hurts terribly, but like a car chained to a pole, one goes on and on, revving against the resistance slowly straining and burning out little by little. The presentation after withdrawal is different. It is analogous to a car with the accelerator floored, left out of gear—revving out of control ready to explode. Accelerating anxiety. Different and more dangerous, undoubtedly a higher suicide risk. I feel justified in using the traditional medical term hysterical for the *severe psychogenic back pains* which had become prevalent in symptom presentation, along with the accelerating anxiety. These were new manifestations of an hysterical character, manifestations of neurosis never observed before SSRI withdrawal.

So what is it that makes one an obsessive, a type of obsessive—a perfectionist who achieves the goal, one of the highest standards who builds the cross, gets on it and nails himself in place...perfectly?³¹ I have found the answer.

I had succumb to the enormous creative tide now available to me from exposure to unconscious material³² and written a book, a novel entitled *Ever Deeper Never Better*. This is both a happy and an unhappy fact. I now have the unenviable task of presenting the work, or some description thereof, to hundreds and hundreds of disinterested literary agents. My wife is kind enough to help. She is not an obsessive, and by my standards at the time, she thinks little of making an innocent mistake, and so, is somewhat haphazard about checking an email query to one of the 500 agents on the list, all of whom are sure never to even read my precious submission. Blair, my wife, mistakenly only sends part of the sample off to one of the hundreds of literary agents.³³ I am watching and notice her mistake.³⁴ Something in me snaps, boils to see it. I go into an uncontrollable frenzy of reproach. Here we see the signature of Native Transference clearly: overreaction.³⁵

Although there are hundreds and hundreds of literary agents, I react as if it were *a life and death matter*. A sample of my thoughts: My back begins to hurt as the desperation and panic, the gravity of the error sinks in! I can not stop my fury at having been shamed! The overreaction is out of all proportion and is unstoppable in its compulsive, constant, insistent drilling—something must be done! That night I sleep little. My back! The shame! How could she! If it were me, I would be engaged in weeks of endless self-reproach for such an error! But she sleeps! This goes on for a few days.

Here I found an intuitive idea: what I now call Native Psychoanalysis. I knew I had to find out what was so very wrong with me, and could sense how to find it. I had already found relief in the Open Emotional Posture and used this skill to try to find the cause. I went looking for the earliest time in my life when I had displayed that symptom. I used the Open Emotional Posture and language to do it. This is the first and the most primary of the dozens and dozens of memories I have now recovered.

Language: As I am pressed to the ground in a squatting position³⁶ from the back pain, I cry out, "It's like pieces of obsidian, hard and black, like chips of sharp pressed shit poking out of my back!" I see in my mind the pattern of the imaginary eruptive protrusions projecting from my upper back.

Language: At the peak of my rage and reproach I shout over and over, "**No filthy mistakes! No more filthy mistakes!** Don't you know there are penalties for that?" When I say those words, "No more filthy mistakes!" I was pressing and raging with such energy that the words all but lit up. They summed the entire feeling and were the key.

I went looking for the first time I could remember acting like this, the first time I remembered feeling this way. My back was killing me and I needed relief. I was all too happy to look at my pain. To move toward it, that is the key. I couldn't find it. Nothing. I looked for the next one back, instead of looking to childhood, I opened my mind to my pain using the Open Emotional Posture after thinking of the language, "No more filthy mistakes." I let the words disappear and opened the mind and there it was! I was practicing drums and missed a note and exploded with the words. I remembered the whole affair. Again I cast the net and let the words come into my mind then fade and I thought of my last breakdown and how it had destroyed my *Time Travel* cd (see *This New Day*) and the feeling was exactly the same: Shame! Next I tried again and went many years back to thoughts of some painful events which were long ago well forgotten but now jumped into my mind. The filthy mistake was letting myself be used, of being stupid when I was younger and the mistakes and the shame that cost. The feeling was identical. Here I wanted to stop, as if that were the end of it, the earliest impression but that was resistance! It had to be! I still hurt and was still obsessed. So back again I cast the loop, used the language and let it fade as I opened the mind to my pain and now, I am close! My age is eight or seven and my friend Reggie is playing my drum practice pad and looking at the music on the stand. He is not doing it properly! "Reggie! You idiot! Stop that! No filthy mistakes!— Idiot!" Wow! That was a real memory! I was a mean little kid! But I still hurt. So back again and now it is I who am masochist before my will, a severe will cutting into me as always, cruel beyond measure. I am six or seven, and this scene has many replays, oh so many versions! I am practicing and can not get the notes right. "Idiot! Aaaaa! No filthy mistakes! No errors!" I am livid and shaking with frustration and mom says, "You don't have to do this if you don't want. It's okay." "No! I will get it right!" There are many of these, mostly I am alone, or fail to recognize anything beyond the sphere of my attention, but *the feeling and the language are all but identical*. But I am still sick, the black chips poking through the skin of my back—so I have not found it. Again, I remember the words, the fish hook, the language, "No more filthy mistakes," and then let it fade and open my mind. Now a scene of such clarity, so old and yet so pristine and crisp in its visual presentation fills my mind. I am in the tile bathroom. My nurse, a dear blessed woman who has stood so well and been proven so caring throughout so many retrieved memories, is there. I am sitting. She is holding my soiled underwear open before me, holding it open so I may see the marks I have left. Two vertical stripes, one broad one narrow, are clear to observe. She speaks, "Honey, no more of this. No more filthy mistakes." Her tone is serene. I am flabbergasted! My back is better! Suddenly the idea is so repellent I am getting worse! Then I remember that I am not this small child, I am a forty-six year old man, no longer a child! Now the symptoms are gone! I do not care about the trivial error my wife has made! My back is fine! I am well! Soon, we will see why.

But first—two days later I am thinking of the revelation, of retrieving the memory and I then open the mind. I have baited the hook to think of the memory and let it fade to open the mind and another scene, clear and bright comes into my mind's eye, it is significantly earlier and has no audio component. I am again in the same bathroom and again I see soiled underwear for me to inspect. This is much earlier and the pants are so small! The pattern in them is clear to see, a series of horizontal dashes in two vertical columns—the same pattern as the chips pressing through my back, the "chips of sharp pressed shit" that were poking through my back in the hysterical innervation! I knew at once that I was looking at my signature instance, *my primary impression of guilty shame*! There it was! And I also knew I had already successfully completed toilet training before the second much later event. I had *regressed back* to this behavior. In examining the rest of the fixation we can understand the significance of this more clearly.

It should be noted that the thought of being separate from the repressed memory is vital to achieve positive results. The two thoughts, the memory and the idea of being separate from it must both remain conscious, and be kept conscious at all times. The memory will try to escape and go back under repression. We will discuss that later, but suffice it to say a few weeks of active retrieval are all that is needed.³⁷

After discovering the source memory I knew I had found a primary component which shaped all aspects of my personality. I lost the compulsive insistent quality to begin self-reproaches and obsess. When I was almost killed due to an error felling a tree, instead of the lifelong response I would have expected for

such a mistake, a week of uninterrupted self-reproach, I laughed—I am still alive! I hardly cared that I had missed the cut (but don't worry, I do now endeavor not to fell trees if distracted). The result is clear: personality was fundamentally altered!

Another clue to the primacy of this formative impression is to be found in the unstoppable presence of puns—jokes—puns and double entendres abounded without relent for about ten hours. Everything I said reflected the realization, and the freed energy from repression found every joy in overcoming what was left of my resistance with jokes! "I sure got to the bottom of that!" "No shit, that's it!" and oh so many more terrible puns and jokes which came of their own accord and revealed themselves only after being spoken. Laughter! Terrible puns for hours, none of which were intentional. This infantile memory left its mark on everything! Pun intended.

Now we will have to pause and learn a bit about the fixation itself to understand the significance of the language, the obsession and the symbols. After that I will give a few more examples to make the technique and its variations clear, and shed some light upon what unconscious content one may expect to find in association with some particular symptoms.

The Fixation

When we are small we can not control our worlds. Even as adults the proposition is dubious. As children our bodies are our only sure province of control, and so, as events move in indifference to our needs, we control what we can. This may be akin to looking in the wrong room for a lost object because the light is better, but as children, it's all we've got. As a fixation like this one develops, what is a physical manifestation, a physical response where a period of development has been reverted to, or stayed too long at, there are two possible outcomes, or an admixture of those two. Either the actual physical infantile event is overcome and then symbolized in relation to outside events in the world, or the worse outcome, it is never overcome and remains unabated. There can also of course be a successful repression, but that outcome is not our concern here.

So some time after toilet training was successfully completed, my father disappeared. My parents were divorced and my mother had gotten my father's word he would not trouble us. It would be a confusing influence to have him around. My mother is the type who makes unsettling unpleasant things disappear. Although there was no prohibition on the topic per se, it was never discussed unless I brought it up. His pictures were gone. I have no photo of the man to this day. When I inquired as to why he was gone, where he was, etc., the reply was as follows: "We got a divorce. He was a kind man but he was weak. He was not ambitious. He did not have any *drive*." Next came the addition of my stepfather. He was a kind, then savage and cruel tempered man, an unpredictable man who struck out from internal conflict, leaving one unaware of the reason, only sure you were to blame.

My real father left no trace but a hacksaw. Soon after he left I became attached to it. I looked at it often. I did what was available to me as a child—I controlled my body. I stopped defecating. I would release nothing. Nothing more would escape. I stopped eating anything except certain foods I picked. Again, control and power demonstrated with the body. I ate only Quisp sugared cereal and peanut butter and jelly sandwiches prepared a certain way. I refused all else. My mom believed the soiled underwear was the result of loose bowels, a dirty problem. For the next few years, the misdiagnoses of the withholding of feces for the absence of control and loose bowels led to constant administering of the wrong medications, Kaopectate and Paregoric, which *helped* me withhold feces and **reinforced** the fixation. Now I rarely soiled the pants even to withhold. I defecated but few times each month and with the aid of the medications I could withhold enormous pressures and volumes within myself. This reversion to the anal sadistic period of development had certain fantasies associated with it, fantasies of control for a child who had none. These fantasies are how I answered those feelings of powerlessness. I have recovered the fantasies that I estimate in at least three years and probably more of constant reinforcement achieved a state of sheer violence and focused attention so as to become the model for introversion hallucination itself.

A certain reasoning created a death grip of intensity to the masturbatory withholding of feces, in this severe regression to the anal sadistic period of pre-genital organization. The fixation was centered all but entirely around the sadistic component. Here was the train of thought which was another collateral reinforcing stream, of which there were many, "I have made mistakes (soiling of underwear). My father made a mistake (weakness of ambition and character). The result of his terrible mistake was to disappear—**Death!** He is not discussed and his image is gone. She says divorce but what is the difference? **The penalty for mistakes is death.** Look at my father!" The language from the original symptom about there being "penalties" for mistakes becomes clear!³⁸ The child knows nothing of such adult subtleties and false nuance, like distinctions between divorce and death—the child knows only the true effect—the truth to him! The penalty for mistakes is death!³⁹

So you can see my previous statement that the displacement in obsessive symptom formation conceals the fact that the affect is *not* an overreaction when the real object to which it refers, the real situation behind the transference is discovered, is true! {pages 19-20.} My wife's error was trivial but the reaction

was appropriate, appropriate to the unconscious penalty for "mistakes"—Death! Now the reason for my endless rehearsal time, my obsessive practice sessions which yielded error-free performances were not just practice—the practice was a protective ritual—prevention and protection against shame, soil and death! Pollution as error, perfection as safety.⁴⁰

It is interesting to note several fantasies which have always accompanied my drum practice and sometimes in daily living (applied to others) which bring the above mentioned determinant into focus. While practicing I always have pictured myself with a “c-clamp” like device attached to my head with a gun barrel on one end. Here castration and death which are near equals to the ego conspire!⁴¹ The notion is clear enough. If I make an error, I am to be shot.

Now it is clear why I am always the last to lose focus of attention in any discussion, or in earlier days, why I was always the last one standing in any drinking or drug contest, the last one still focused and thinking, always concentrating no matter what, now it is becoming clear, now it is coming into obsessive focus!⁴²

Please recall my previous inductive assertion that severe neurotic introversion and its symptoms carry in some substantial part the bodily signature of the initial fixation in their presentation. I have proposed that hypothesis from the following observation: When the process of introversion hallucination takes place, the aforementioned regression can be observed. As the ego is drawn in to the theatre of the mind's eye to participate in the fantasies, I noticed after learning to detect the process, that my hands would always raise up toward my head, and the fingers assume a bizarre splayed configuration, or a few other less noteworthy but strange and consistent poses. It seemed as if the raising of the hands and one of these few and particular positions or motions with the fingers was an irresistible part of the hallucinatory process. It can be accomplished without allowing the hands into their position, but the automism is all but irresistible. I also recognize this behavior in the many schizophrenics who roam our city streets. These bodily postures mean something.⁴³

As I recalled the countless memories of the active fixation in its formative years, I understood. The body held this position from the waist up during the holding of feces. The anal masturbation, the holding of feces, was always accompanied by these same bodily postures, the hands by the head, fingers balled or splayed, sometimes the fingers moving, the hands as if holding a camera before the face or positioned to the side of the head. The accompanying crossed legs and all the anal sensations of the lower body during these early prototypes of the fixation are missing. Only the hands are the same. The original memories reveal exactly what you would expect: super-potent introversion hallucination where the entire body shudders constantly in rage and hate. The scenes are sadism. Some early mild prototypes from kindergarten and first grade were aimed at Mark C., a boy who enjoyed hurting my arm on the jungle gym. The fantasies were of breaking his arm back at the elbow on the jungle gym, and went from there. As my stepfather added his tantrums of impotent rage to my soul, a sense of deep insecurity about how events could spin out of control and I could be blamed was

answered with the same tonic—more hate.⁴⁴ I never possessed any optimism or spiritual buoyancy—I always possessed will...will for ten. The hyper-punitive conscience was soon to follow to repress the hate and sadism.⁴⁵ Such powerful energies! So ill and conflicted to bury them! Once repressed the road to obsessional neurosis is wide open, the predisposition clearly defined. The ambivalence toward parental objects also extends to a point of particular origin. The reversal of positive for sadistic cathexes is first found in these years, and in this regression to the anal sadistic set the stage for obsessive illness. All of these particular points of fixation were found using the above mentioned method, and do be sure, if the case is severe, a confluence of trends is sure to be at work. Our illnesses are over-determined, if unanimous in cooperation and the creation of conflict.

It should be noted at this point that a cruel but wise doctor whose hurtful remarks still hang in my ear some forty years later, identified and ended the behavior for good by prescribing mineral oil in quantity, thereby putting a stop to the holding of feces which had been going on for several years. The "cure" was

effective and no trace of this behavior remained from that time forward, either in the form of absolution rituals or any other remnant, that is to say, I am never constipated, etc. This "cure" was far from addressing the psychological causes and was no real success, as other somatic manifestations soon took the place of the original behavior, such as persistent vomiting and severe allergic response. These symptoms were either ignored or misunderstood to no good end.

So now we have enough under our belt to understand a fair piece of it—where the fixation found its strength and depth of predispositional influence, what the significance of the language was, and how there are many simultaneous determinants to encourage the result. The method of Native Psychoanalysis does not assemble the puzzle, the need for that is undiminished or even increased as the potentially disturbing material retrieved must be understood, to be of benefit. With that in mind let us examine another simpler instance of a more typically obsessive character and see the way that the language is modified, and what unconscious content is found beneath a typical symptom of this sort. In this case I did not need to use the stair-step approach, following the language from one instance to the next one farther back. I simply found the event after a few hours of misery caused by the symptom. The language shows the characteristic retention of meaning with modifications typical of less eruptive and less hysterical (in the colloquial sense) symptom presentations.

Native Psychoanalysis example 2

Much of mental health is an unfamiliar habit. My neurosis had taught me a lifelong habit, the male habit, the habit of always withholding one's feelings. What is of the body, becomes symbol for the mind.⁴⁶ It is automatic, habitual for me to revert to the ingrained behavior and try to repress my thoughts, but now it never works, and symptoms result. Likewise, I am always "falling apart and coming together" as the result of new failed repressions—reclaiming further repressed material. In each case once the symptom is solved the result is the same: more energy—more libido. It seems health is just a more honest regrouping of what was already present. The subject of the reintegration of ego- contrary repressed libidinal components into the ego will be discussed later.

The symptom: I am expecting a book back from the printer and am struck by a sense of moral shame and dread. I have been trying not to notice it but it is clear now. I saw one of the terms I had used in a novel way in a preexisting text, and it was a term which was already part of the standing vernacular of psychology, and indeed, it was used in the way I had intended. I often find things I have discovered in the vacuum of my ignorance are although newly discovered, long ago noted in an old text of which I am unaware, so this is a small familiar example of a discouraging and also heartening event common in my psychological researches. It's nice I got it right, but it's a shame my original idea is already known! I became neurotic over the trivial episode, and an instance of Native Transference ensued. I kept vacillating between two lines of thought. I remembered coming up with the idea before reading the text, I was walking, all good ideas come only to the active body, and then I thought of it. I remember thinking of it and laughing because my friend Laurie would surely like it, she is a bright one, and a fine judge of intellect. Laughter! An innocent moment of happiness, this creative moment! That was the one train of thought which was expressed in my thoughts as, "An innocent moment of happiness." The other contrary current went: "I must have already read the text somewhere before, the coincidence is too striking, you are a thief! A plagiarist!" I will add here that I regard plagiarism and theft as two of the supreme expressions of man's worst nature—"the bad" personified. Now I observe the fact that the term was rightly used and part of the common psychological vernacular, not subject to any restrictions of usage, but common, used the same way hundreds of times in other texts as I now knew with certainty. I had used it properly and there was no conflict. The logic was of no use. The obsession continued. The signature of overreaction, vacillation and clinging to a non-rational logic—these are the key signs of Native Transference in this sort of obsession. As we will see the form of the moral debate itself holds the key to what is in the unconscious. Back and forth, doing and undoing, I am good it was a moment of innocent happiness— I am lying I am bad, a plagiarist and a thief. Back and forth, over and over, imagining the moment of innocent creative discovery, then the punitive reproach, I am innocent in happiness, I am a thief and a plagiarist, I am innocent, I am bad. Over and over, back and forth as is the form of obsessive moral debate—over and over, back and forth. Hmmmm...wonder what we'll find?

So I finally realize that I have forgotten my habit! I have returned to my habitual emotionally repressed posture which no longer works! That is why I am symptomatic. I sit on the porch swing in my yard and resume the Open Emotional Posture. I can feel the connection, a small sensation is available, a *mental sensation* of a sexual feeling as the debate goes through its cycle. Soon the real infantile component which has been symbolized and partially decaethed in the symptom becomes available. Once the debate, the obsession clears out, repression fails. The obsession was there to institute repression of and partly decaethed this memory: I am suddenly being touched. An actual sensation of contact more intense and sensitive than any current experience, an old experience from when the body was still very sensitive, my arms are at my sides but the hand on my genitals is my own! I feel the actual tactile stimulation of a masturbation, which once interrupted and discouraged by my nurse (this is inferred from an associated screen memory) was put under repression—the *actual physical stimulation was banished under repression* and now emerges just as it was experienced—entirely undiminished, preserved in every way. Here we have the true heart at the kernel of the myths of the incubus and succubus: repressed sexual experiences returning to consciousness, undoubtedly both shamed masturbations and molestations from

childhood are the small true kernel in these myths. The spiritual explanation jumps to mind! How could it be? I am being touched—by invisible hands! So the *structure* of the moral character of the debate is really a transference, a displacement of an infantile equivalent. The *form* of obsessive moral debate, back and forth, is the form of masturbation, it is from this that it gets its symbolic attachment to the symptom. The two moral currents, each produce in their conscious occurrence, a part of the masturbatory process. ***Here the repressed experience becomes symbolized by the expression of the guilt which suppresses it.***⁴⁷ Like a dream where the form of the dream is itself the symbol, however many valid current triggering and associative causes are determined in an obsessive symptom, there is likely to be an infantile masturbatory experience at work as the main hidden energizer of the symptom and the major energetic contributor to the transference which creates it.⁴⁸

When the repressed memory was recovered the usual result of first, shock, then amazement and laughter coincide with the disappearance of the symptom. Each time a memory like this is recovered, the libidinal energy causes an almost manic escalation in mood and the mind begins to spin as if energized by a huge influx of current. Thought, is libidinally powered. Once a repressed libidinal component is brought to consciousness in

conjunction with proper Non-contradictory Analysis,⁴⁹ the entire experience of perception, thought and reality, the visual, intellectual, emotional and aesthetic alike, all respond as if the essence of youth and joyous restless happiness has fallen into the present, as if a bucket of youth had been poured over one's head. It's utterly splendid! Know it! The road to beauty is available to those willing to look upon the ugly places! What remains ugly, once we can look?

So let us take stock of what we have learned so far in respect to the method of Native Psychoanalysis. First, the strong upward drive of the repressed is a decisive factor, the strength of symptom presentation is our guarantee of that. Once we have learned to recognize instances of Native Transference, we "red flag" the repetition compulsion, we assign it language either by description, or better yet, by looking within the symptom itself for striking examples of eruptive language. Then we use the language as a hook for our fishing expedition into the unconscious, but a special method is used to bait this hook. We imagine, we think of the language (or perhaps a key feeling) *then dispense with attention altogether* and open the mind using the Open Emotional Posture, where through opening ourselves to an elusive past painful experience we have learned the feeling, recorded in our mind the emotional posture, of becoming unresisting and open to, and remaining open to our pain. The unconscious houses almost nothing but pain, so being open to an elusive past painful perception is being open and unresisting to the repressed. We remember and learn to repeat this emotional posture, noticing that once the painful emotion has bled out, the emotional posture is maintained. Now we use this skill to bait our hook, release the language and open the mind. The better one becomes at this the less the need to clear away each representation of the symptom as one travels backward and downward to the source impression, but the surest way is to follow the stair-steps backward. Each instance must be fully remembered in turn, each part freed from partial amnesias. Then move to the next. The symptoms will disappear as the earliest memory which is from the fixation's formative period proper, is reintegrated into consciousness. The idea of being separate from the recovered memory is necessary as a simultaneous additional conscious thought if positive rather than profoundly negative results are to be obtained.

Once the infantile libidinal component has been revealed, although it has been heavily defended, it will hold little threat for the ego, and yields its wondrous energies which power thought, beauty, pleasure and happiness alike that are then absorbed into the ego which is thusly fortified and need no longer renounce this fuel and banish it under repression. It is amazing how little the ego cares about the memory! It "melts its energies into the present." Of course, a statement as poetic and imprecise as this calls for further explanation. So before I proceed to some more complex examples of Native Psychoanalysis and study the relationship between language, fantasy, memory, the ego and repression, I will relate a few ideas about the cycle of libidinal energy and the formation of wishes.

The cycle of libidinal energy and the formation of wishes

Anyone who has tried to recover a lost word or phrase has seen the paradox of the unconscious at work. What a strange system! When you **try** to find the lost name it disappears like a slippery fish, always eluding your grasp. If you forget about it and relax, it may yet come to you.⁵⁰ It is like a Chinese finger puzzle. If you fight and pull, it gets tighter and you never escape. If you relax the puzzle falls away.⁵¹ When I spoke of finding lost memories and the emotional posture I said "seek and you will not find,"—that's the sort of thing. Well it seems straightforward and non-paradoxical enough. We don't like an idea, we repress it and it's gone! No paradox! Unfortunately this simplicity is but illusion. In the best case, repression succeeds but takes constant energy, and in the worst, it fails and leads to neurosis. So how on earth do we work the system if you lose both ways?

There is another complication to consider before we answer the question. A thought experiment will bring all the pieces to light. I have taken on the foolish idea to analyze one of my recent poems for hidden psychological determinants. It will surely ruin the poem for me, but I do it anyway. "Oh my! Look here!" I notice the unmistakable meaning in an image, a homo-erotic component to be sure! The idea is not particularly disturbing to me, as I long ago understood how much good comes of the sublimated erotic urges from both currents. No moral taint exists, both are useful, etc. etc. But here I betray a deep discomfort at the idea to have gone on about it like this... Hmmmm...I think as I look at my beautiful woods and garden. As I have mentioned, I am all but unable to institute a decent repression and can tell if I am harboring a replacement gratification in my unconscious. The quality of my visual impressions also vary in accordance with the neurotic or healthy distribution of mental energies. I think of an image, a fantasy, a wish which the symbols might imply and immediately a thought comes up, "At least I have never had a thought like that." In Ontological Calculus {page 109} "I have never," or "I do not," which all mean "not I" are a symbol, the symbol for the unconscious which is all that we deny, or in our symbolic language: "not I"=(-I). Since (-I) is the symbol for the unconscious the real meaning can be derived as: "At least I have never had a thought like that."="I will keep this idea unconscious."⁵² That also means by definition of the ego/superego-centered repressive process, "I am ashamed of this idea and feel guilt over it," for guilt and shame, and their close attendant, *anxiety*, are how the thought is repressed by the ego. Guilt and shame are the anxiety source, often summoned up by the superego's reproaches. Now the lawn looks paltry and thin, the sky seems flat and dull...the thought is gone. I am anxious. I understand the meaning and open the mind to release the thought into consciousness with ***no resistance or judgment***. The non-contradictory nature of thoughts and the Open Emotional Posture permit this. Now the image returns but soon fades, melts away and the lawn is thick and double green, dew and the hue of prised sun pour themselves over the emerald carpet as the azure curve of heaven spreads herself before my happiness. So what has happened here? In a micro version we have all the components necessary to explain the genesis of neurosis, mental health and beauty, but for now, let us see...just what has happened?⁵³

This small bit of meta-psychological theorizing is no attempt to supplant existing theories of libidinal cathexes and the like. This is a modest but sure bit of theory. Freud says⁵⁴ that he assumes the existence of a non-differentiated libidinal energy which is displaceable. I agree. The libido has demonstrated just such a quality the presence of which I have deductively inferred countless times. This is the energy which is redistributed from a given drive to effect the work of sublimation. Other sources will be considered later. I have named this non-specific undifferentiated mobile libido, "Liquid Libido." As I have implied this most essential mental component is sublimated into our perceptions which reflect in their presentation to consciousness quite variable results.⁵⁵ The world seems utterly changed for its presence or absence. When we make a thought unconscious by repression, if we do the job right and bury it below preconscious recognition, it becomes "eternal." It exists as long as the person retains the repression. We can see many examples of such repressions where the wish becomes stronger, more active when repressed, such as in OCD (obsessional neurosis) and hysteria. It grows in OCD when left unchecked in the unconscious. It becomes directly active to make symptoms in hysteria. Forgive my

brevity but I wish to make a point: when a thought is repressed, in neurosis it becomes: 1. Fixed—fixated—eternal, and 2. Active. So we can start to see our way about the problem now. As I took the malleable symbol language of the poem and extracted a likely specific fantasy, a specific wish having homo-erotic content, a *particular* scenario, a *wish was concretized*. In this the liquid libido was *temporarily* "frozen," "solid,"—a *momentary stasis*. Now I denied my true shame and guilt at the thought and repressed it. The accompanying anxiety was the way the repression was accomplished. The wish is then an active replacement gratification in the unconscious. The energy it draws diminishes my perceptual and aesthetic experience. This is neurosis, a part of libido withdrawn and active, becoming a substitute for the sexual activity of the neurotic. I recognize the state of affairs and use Non-contradictory Analysis and the Open Emotional Posture to return the fixated wish to consciousness, a wish which would have remained permanently as an active symptom producer if kept unconscious. Now conscious again, it is again in a temporarily solid form as a particular wish. While keeping the thought gladly conscious without judgment or shame it returns to its liquid state and is then resublimated into my perceptual experience of the world.

So wishes are made both permanent and potentially active as symptom producers, made solid and fixated in the act of *removing* them from consciousness. It is in *resisting* the wish that it becomes immortal, eternal and intransigent. A wish is never self-definition, it is a fixation, a twenty dollar bill to be changed into liquid libido to spend as *you* wish. It is in resisting and repressing that character is made permanent. The Chinese finger puzzle—the paradox of the unconscious: "That which we deny, defines us eternally." So the contrary ascending thought then also presents itself: Any neurotic fixed aspect or "repellent" wish can be made liquid and fuel our ascension if reintroduced into consciousness...or...that which is ugly is just beauty preserved, waiting, for one willing to look. Sorry...once a philosopher always a poet.

Native Psychoanalysis example 3

The next example is one which presents some complications that are apt to be encountered. It demonstrates the utility of the Open Emotional Posture in some new aspects, as well as its limitations in the face of resistances. Although of a personal and distressing nature, I will offer it up in the driest possible language which still captures the experience, so as to permit a direct glimpse on a micro level into the formation of the perversions, and the purpose of some hallucinatory and motor symptoms in relation to repression. I will add, that in no small part, the libidinal energy derived from reclaiming this repression is responsible for writing this book, in the sense that the fuel, the liquid libido which powers thought and permits energetic sublimation into productive mental spheres was in its available quantity greatly increased by the re-assimilation of this repressed series of events into consciousness. Furthermore, it was necessary to use a construction to aid the process, and along with a few other examples, I have come to the heart of what constitutes a predictably accurate indicator of a construction's validity in terms of how likely it is to reflect unconscious content in its form and magnitude of importance. Due to the number and the importance of these issues I decided to offer the following.

For years I had had a disturbing idea infrequently cross my mind. Its dystonic character stemmed from the sense of reality of the image, which in fact, could not possibly be real: A few animated scenes observed from the third person with temporally anachronistic elements and characters. It was impossible for it to be real. That was obvious and had always been, but the character of absolute terrifying, horrifying certainty was unabated to know this—this was real. Period. That was the impression.⁵⁶ The events were of a sexual character where a voice, always the same, presented commands which were obeyed. I now understand full well this to be a screen fantasy, a screen memory, a symbolic equivalent both distorted and condensed for a few highly charged and highly repressed events from some decades before, outside of my home, which took place while I was incapacitated. During the current analysis the familiar voice let me know this was undoubtedly a symptom from this regrettable period of my life, and fixed the likely scenario in these terms. The screen fantasy, if I may use the term, presented emotionally as reality. At the time, I repudiated and rejected the disturbing memory with all the force of repulsion and disgust, hate and savage refusal at my command, and it would blessedly disappear for four or six months, sometimes longer. Unpleasant, but it couldn't be real, impossible, so I ignored it. The symbolic mental presentation had worked. I was fooled. I mistook symbol for reality and declared it invalid, so it went under repression by process of reaction formation.

Once SSRI withdrawal was complete and the worst of the withdrawal period was over, a partial return of repressive function allowed life to continue, but I had a "hole in the tub" as it were, and all of my repressions with sufficient libidinal cathexis to have powerful upward drive, powerful amounts of energy which will assert an equally strong influence in order to return to consciousness, began to do just that.⁵⁷ As this process occurs, "the return of the repressed," we have created the circumstances to energize the mechanism of symptom formation. The first persistent symptom was the persistence of the screen fantasy in consciousness. I had at this time begun using Native Psychoanalysis and had retrieved the material in example number one. I now knew better than to resist the process and with my knowledge of the paradox of the unconscious I thought I understood what must be happening, and opened up the mind to invite the memory into consciousness. This brought on the emergence of a symptom which can be described as of both an obsessive and a compulsive character, although not at all like the ones displayed in my previous manifestations of illness. Here, the obsessive aspect was found in the nature of my attempts to retrieve the memory. It was a mystery! I invited it after my previous success, and my wife and I enjoyed speculation, guessing and supposing, while I had found a key: some of the language from the voice in my screen fantasy. It seemed to unlock the real memory, it appeared that it began a particular scene to which it belonged, I was sure that voice must be real, that voice, and I used it as a hook with my new trick, the Open Emotional Posture. But this was different. Very different. A weird sexual feeling invited me to try and try to open the memory, which had cathected the language with a

forbidden feeling. The memory would not emerge. I observed that I myself was blocking its return to repeat the language and re-experience the feeling. So I observed my own rule and stopped obsessively repeating the language, and it came closer.⁵⁸

Now the Open Emotional Posture had two effects. When I maintained it, they both persisted. The libidinal stream which came from the memory was primarily liquid libido!—Undifferentiated energy which ran my thoughts like a windmill, and on this current, on the emerging liquid libidinal current with its attendant increase in creativity and the rest, came more of the memory, but still cloaked in defense, more potent in its presentations—fantasies coming from the mutating screen memory, and an accompanying compulsive component in the need for sexual expression.

Now I will tell you my attitude at the result of this obvious progress directly toward a deeply repressed libidinal component had a joyous tone to it, playful and mocking, I was happy to see it all and understood these manifestations of its gravity, my dark star, as I neared it. This was a happy chase, playful and strange. My wife and I watched in amazement as my regular pedestrian nature in sexual matters began to change.

I would walk for miles each day, and still do, but these days I would open up to the weird hidden memory and it would present fantasies in its stead. These were not real. No. Sometimes like strange plastic rubberized mobile clowns, they shifted in constant metamorphosis, changed and varied trying to get me, the ego, to look at them and participate. Many had a sense of reality to them, due to their relation to the repressed. These were variations of the scene accessed but never accessed with the language and presented like dreams all based on the screen fantasy. Not cartoonish like the others. Impossible but real, ever shifting and changing elements, finding new configurations, looking for a way that the ego and superego can stand it, how close to the real thing, how many modifications will it take until I will look? Some few sudden flashes, microseconds from the real memory flashed through, a bit of real light from a real memory seen in the mind once early in the onset and again once here, but this had only happened twice. The rest was convincing but impossible. As the repressed got closer and closer and exerted more and more libidinal energy the vividness of the presentations and their attendant sense of reality increased.

A word about the fantasies. As I look in retrospect a formula for interpreting them comes to mind. The unconscious content can be inferred. I had moral objection to them on unusual grounds, but did not recognize it. I am ordered about to perform one act or another by the voice, and comply. I object to being passive—I can not stand being a passive participant! That is what I say to myself. But here I make a basic error, one I am in no way inclined to make, and so must be inclined to make most strongly! I am always **performing** an act in various circumstances. **Performing=Active!** However, **I experience** sensations along with the acts I do to others. My part in the fantasy is always active! How could I have missed it? Well, that was defense. So the way to discover what a group of fantasies conceal lies in a reversal of their common element. I imagine that is likely to be a pivotal dynamic element central to personality like active/passive, or some other distortion which is common amongst the group of fantasies. Reverse that, and the concealed unconscious wish or memory, traumatic or otherwise will most probably be derived. Reverse the common element and you will find what is most threatening, and so, most deeply repressed. That is what the reversal had shielded by distortion. These fantasies were impossible distortions, but my objection to them, surely one resulting from knowledge flowing through the superego which knowing the true contents of the unconscious/id, was not fooled, and had led to an undistorted objection, "I object to being passive." The objection fit the real state of affairs, not the fantasies against which the objection was raised. As we know, passivity, and the acceptance of castration which it implies, are most objectionable indeed! Not to trivialize the topic of castration, which will be taken up in earnest in another context later.

As I got closer and closer to the source and sped its emergence with all my knowledge, a clear and happy, but also obviously unhealthy, mutation of undeniable strength took place in my sexual appetites. The fantasies became more and more vivid and the ego's participation, more and more complete, and the

form, frequency and type of sexual expression changed in proportion, with playful but very frequent and unusually various forms of mutually satisfying expression often ending in laughter. The undignified quality of the sexual expression was extremely humorous and my wife and I referred to this presumably transient incarnation of my personality as "the monkey"...a bonobo to be sure.

I note how these symptoms in an unhealthy constellation, attempt the ideal synthesis found in healthy sexuality, where *all* libidinal cathexes find attachment points and simultaneous expression in life's highest sublimation, or union of currents, if that is too poetic... Here the form is cast by a repression, a fixated element, there, by a similar process, but to healthy ends, a similar displacement of secondary object cathexes to a new object to achieve satisfaction has occurred, a sublimation of various currents to attempt a unity. Here in symptom formation we observe both the plasticity of the erotic instincts, and the emergence of a perversion.

Its construction is clear. A highly charged libidinal component is put under repression and if the charge is great enough, or the repression weak or partial, the memory remains close enough to the surface to present highly charged symptoms, symptoms charged enough to deserve the name "compulsive" attached to their intensity.⁵⁹ This is not to say that the suppression of the urge was impossible, just nearly so, as it would continue in the mind unabated until discharged. The air, the fabric of all sexuality and sexual expression was stained with a ridiculous character, an animalistic stupidity to provoke laughter. The quality that a perversion has when presented to the mind is nothing like that of the best of sexuality. At its worst it is grotesque, at its best it is incomplete and comical.

A postulation about one purpose of motor and hallucinatory symptoms: My retrieval of this memory was coming along, but much too slowly! The obsessive looking into the memory was hard to resist, but I relaxed past it and finally I was hearing things which might be close. As I walked, a clear piece of new language, *real* language from the memory emerged, and I offered no resistance to the intense feelings of sexuality which repel and attract with equal measure, and again, the words are bait as I open the mind. I hear the words, again, the words...it is near...and then—the tactile memory begins! But as the very first tiny sensation is felt, an enormous shame and guilt, a blush like I have never felt, and a visual field hallucination lasting about two seconds, where all the visual field flexed and buckled along multiple points as if viewed through, and part of, a piece of flexing Plexiglas. Then an actual external hallucination: visible light along the many seams in the flexure, a flash of light in a particular pattern which in a rudimentary form and symbolically transfigured symbolized the repressed memory. Through this series of events, the door to the repressed was slammed shut again. Let us pause to examine this process and distinguish its purpose and mode of operation, and see if any parallels with other types of symptoms and their purpose come to mind.

Before I finish this example I will first analyze what has been discussed. This is clearly an ego defense. Its mechanism is that of repression by reaction formation and substitution. As the memory emerged into consciousness and the tactile component made its content clear, the ego threat produced anxiety brought on by unbearable reactive feelings of guilt and shame, which were accompanied by a simultaneous symptomatic expression in the visual field hallucination. Perhaps I may even be bold enough to suggest a bit of unnecessary poeticism and say my world, the ego's world was warped to think of it, and threatened to break. You need not go so far with me to continue. The sudden interruption in libidinal decathexis, the sudden interruption of the memory's emergence into consciousness called for expression of its own, so energetic was it at the time of its re-repression by the anxiety. A replacement pathway for the energies had to be offered. The undoubtedly high energetic barrier offered as a resistance to hallucination presented itself, and the enormous quantitative libidinal overflow powered a symbolic surrogate for the repressed memory, hallucination offering another channel for the energies, an interruption and a replacement which in symbol retained the original fixated libidinal signature.⁶⁰ Here we see a process where repression is instituted by aid of anxiety and a replacement symptom as interrupters.

That evening as I analyzed the unfortunate events of the day I was struck by how similar parts of this psychical defense were to the Tourette's Syndrome I displayed, although thankfully in moderation, during the worst of my OCD. This motor symptom also works through interruption by way of replacement. The analogous anxiety is visible in the mounting need to display a change in body posture or vocalize. In my case, the purpose of the symptom was to serve as an interrupter for, and representative of, a repressed guilty wish. As the contrary idea came to emerge, repression was maintained by replacing the unbearable thought with a muscular or vocal substitute, thereby interrupting its emergence into consciousness while maintaining its guilty signature with a grotesque symptom, a built-in masochism of sorts, a punishment and surrogate which interrupts and maintains repression. The thought is suppressed, interrupted and replaced with a substitute which uses the interrupted energy in the symptom display, while maintaining the guilty character, the signature of the repressed contradictory thought. The symptom in the case of Tourette's of this origin also serves to cripple the life of the afflicted, and thereby shame in a secondary masochistic expression to quench guilt, an expression of symptomatology which both answers guilt for the repressed with humiliation and keeps aggressive impulses in check by paralyzing active life.⁶¹ I do not begrudge the likely possibility that the symptoms of Tourette's can also be created by other constellations of personality or non-psychogenic causes of neurological imbalance.

I trust that I have not overtaxed your patience by digressing from the main theme down these important side avenues. If so, I will right the situation presently and finish the example. After the near emergence of the repressed memory was abruptly terminated by severe guilt, shame and anxiety which led to a visual field hallucination and then an external hallucination so as to satisfy the energetic conditions of a violent repression, the situation had drastically altered. My playful hunt for the memory was a thing of the past. Every defense that my ego could offer was soon mobilized. The shock of the experience left me dazed, and a day elapsed where I was stunned, but still believed I could continue the pursuit as before. However, I was mistaken. The next day the new situation was clear. As I opened the mind to begin the process, one defense after another destroyed the libidinal flow and collapsed the Open Emotional Posture. The reaction formations were super-intense. All manner of symptoms, one after the other from illnesses to which I was not ontologically predisposed, each showed up for a while, and then collapsed under analysis or of their own accord to pass the job of maintaining repression off to the next, giving me hands-on experience with each. Although this makes for interesting psychology, it was very painful.⁶² When I would repress the memory, and now I could do nothing else, symptoms resulted. The memory got further away day by day, and I became more neurotic and less perverse as the distance increased. As my facility for repression had been reduced to ineffectiveness by SSRI withdrawal, all other types of illness and defense came to reinstitute, reinforce, or replace the missing repressive process with different symptomatic manifestations. None of my knowledge was to any avail. Up until this time, the Open Emotional Posture brought an antidote to neurosis, now its very activation brought every reaction formation and unknown illness to destroy me.

I soon realized an answer **must** be forthcoming. Necessity always increases IQ. So now sicker but smarter, I created a construction. It was clear what it had to be. I had understood the meaning of the nearly recovered tactile memory and its attendant hallucinations, knew the particular circumstances of the incident in question and acknowledged the limitations imposed by my incapacitated state, and hence, finally understood the reversal of activity and passivity previously mentioned as the key to unconscious content shielded by the distortions in the presentation of the screen fantasy. I will also soon discuss the surprising additional constituent of an infantile component from the repressed which gave form, and additional cathexes to the fantasy—an additional attachment. I had gotten a few glimpses into the real memory, short bright flashes characteristic of actual memory, and I knew the locations. Now, I understood the screen fantasy had been condensed, and I separated its determinants. Having thusly found the likely succession and description of events which took place, the only ones which fit the reversals, sensations and necessities of the particular situation, I am satisfied. I had laid a featherbed for the memory, I welcomed it, and had been for months. Now I knew its name and description and I placed the construction in my mind—then relinquished my attention. This should draw the memory up, back into the preconscious so it will decay, but whatever you think of this theoretical presupposition⁶³ you can be sure another soft layer, a down quilt, a featherbed of acceptance has been prepared, and even the very

particulars of the unpleasant situation are known to the ego which now understands in its state of sickness, that they are its, they are *my* salvation. Acceptance=Wellness. So I welcome the memory, I do not judge it. The symptoms begin to ease and in a few days I am not moaning and groaning, doubled over sick with pain and angst. The Open Emotional Posture is working again! My happiness and the beauty of a libidinally cathected perceptual experience return. Now I am walking and the picture comes to my mind's eye, the fantasies which have evolved, each distortion useful, then repudiated, and then the next again modified. Each fantasy collapses back into the former, and at the end of the chain is the memory (there were two) as constructed, seen from the third person.⁶⁴ The whole memory, due to circumstances, was irretrievable but many dissociated flashes and audio impressions follow—chunks comprising about two-thirds of the experiences, and I am well and weeping.

The magnitude of the reclaimed libido, liquid and ready for sublimation or sexual experience with no trace of perverse indignity, the amount, the quantity of precious energy to be spent as the ego wishes, the volume of the recovered undifferentiated energy is enormous! Part saved from the repressive drain, and part always cathected in a fixation are now both available as undifferentiated libido—the stuff happiness, ascension and thought are powered by.

The role of infantile determinants in the creation of screen fantasies for later repressed traumata

As I analyzed the various individual processes involved in creating the screen fantasies for the repressed memory, I came across an unexpected additional infantile determinant which presupposed along with some additional distortions, a primary role for the infantile, in determining the *form* of the basic distortion used in creating the screen fantasy. Why did I choose one distorted form of the repressed over another? Any substitution of active for passive would do. The answer: Because this form allowed the attachment of an infantile wish, or to be clear, this form was chosen because it was a distortion which *also* expressed an infantile wish.⁶⁵ In the passive/active substitution, the fantasy had shielded the event from recognition and achieved the additional energetic cathexis of an infantile component in choosing this form of distortion. In the screen fantasy the voice orders me to do various acts, but the accompanying bodily sensations are felt in my body.⁶⁶ The early childhood masturbatory wish of being able to orally satisfy one's own needs, an eventuality prevented in human males no doubt only by the inflexibility of the back—it is this wish, an infantile instance of which I have recovered (a visual memory in the first person), which was spliced into the screen fantasy and gave it its distorted form. The infantile wish was cut in two, in a certain way a both *passive* and *active* auto-erotic wish fit to be a transition point between the hidden and the distorted, now itself distorted, represented in two people. The infantile wish is active, a thing one wants **to do**, but the wish is unfulfilled, the passive sensation, the part **done to** is missing, leaving the repressed wish unsatisfied and waiting for just such a situation to arise where it might find expression decathexis and satisfaction in symbol. As the screen fantasy has it—an act here produces a sensation there, so: Screen fantasies shielding later traumata adopt their form of distortion from an additional energetic infantile determinant.⁶⁷

The proximity of ego identification and the factor of resistance

I believe the ego shut the door on the recovered memory with anxiety and hallucination for two reasons. I mentioned that a "featherbed" was prepared in the mind to welcome the memory. That is true but misstated. It is the ego, not the memory which needs the featherbed, bit by bit, softly, slowly to acclimate itself to the idea of the repressed. I sped forward with no concern for my personality's reaction to the dystonic memory and so, when it was presented, it was still highly ego dystonic and produced moral conflict and pain sufficient to institute the measures necessary for repression. So I proceeded too quickly, that's the first reason. But that begs another question: Why did I not need to proceed slowly all those other times subsequent and previous, and there are many! Why was this instance different, why was this situation in need of a more gradual approach?

The answer is to be found in a previous statement in this text. I remarked how little the ego seemed to concern itself with the recovered *infantile* memories, although they were so well defended. The ego feels itself separate from these memories, it does not take its current sense of conscious identity from them, and indeed, if we forget that fact, and fail to pair the recovered memory with the understanding that we are separate from it, it causes no end of grief! So since this traumatic memory was only a handful of decades separate from the ego, and not from the infantile period, a sense of identification with the event in question, a current ego identification was present. It was this factor which caused such injury to the current ego from the emerging memory of the past trauma.

A note about reaction formation, the anal sadistic, and an effect of hate in general defense

The ego defense of reaction formation is extremely simple, but has complex manifestations. Unlike the complex definitions I have found outside of the original Freud texts, in truth reaction formation is a simple thing. I say with conviction from both my reading and personal observation that the anal sadistic period contributes much of the highest value and worth to the construction of healthy personality: The will, persistence and perseverance, our mastery of the world and even a love of the intellectual power gained in the accumulation of knowledge—a host of fine attributes come of this phase of development if it remains unfixated, and even in less favorable cases its sublimation yields much! (I will make this statement specific in the section on creative psychology.) Naturally, a pathological imbalance, absence or accentuation of these traits is undesirable. So what is the role of anal sadistic fantasy? What is it, and what is it there for?

A child is powerless, dependent, weak and a helpless, subject to the forces around him, prone to the unchecked stimulation which comes flooding in from the world, and dependent on that world to satisfy his needs. The child is mastered by the world. In the anal sadistic phase he learns to master it. This is itself a psychological process, the process of reaction formation. The feeling, "I am weak," is replaced with the reactive feeling, "I am strong."⁶⁸ This is the formation of a secondary reactive feeling, an answer, to the active primary painful feeling. We feel weak, and fantasize we are strong. The entire anal sadistic fantasy component is in and of itself nothing but a reaction formation. In so much as it achieves for the child, and in turn for the adult, a will which does indeed turn its pain and frustration into strength and master the world, sexual and otherwise, the end result of this reaction formation may be the usual replacement of a painful truth with a pleasurable lie, but also the turning of what starts out as a reactive falsehood to soothe the ego, into a real truth. This is the hopeful outcome of development.

When one is "fishing," opening the mind to recover a memory, often a reaction formation will impede progress. The early examples of Native Psychoanalysis mentioned in this text went *quickly*, a matter of hours or days. The last took nearly three months! Resistance is the devil! So let us look at this devil. As you will attempt to recover a memory, the mind will resist via reaction formation. Here is how it fools you:

1. Enough hate applied to any topic, makes all topics recede from consciousness—huge fits of hate on any topic drive all other things under. The hate crowds out all else from the mind and presses all topics which do not directly concern it out of the conscious mind. To repress a thing, one need not obsess about that thing, only fill the mind with enough hate on any unrelated issue. Although very costly in the amount of energy consumed, one can easily conceal the true topic brought under repression.

2. A trivial identification can form a hidden attachment to the true object under repression. If the object you seek finds any trivial attachment or representation on another object, and that secondary object is subjected to reaction formation, both objects will be repressed. If you want to get back a memory about your mom, and you hate something else totally unrelated in every way, but add to that unrelated object a tiny detail from the primary object, let's say your mother's shoelace or any other minuscule representative of the primary object, the unrelated secondary object once imbued with the trivial addition from the primary object now symbolizes *both*, and *both* objects will go under repression.

3. Most repressions by reaction formation conceal the opposite feeling, a hurt to which we react with fantasies of strength, an ego dystonic drive or wish we pair with a reactive feeling of disgust or moral repudiation, or perhaps *a wish* which has become painful. If we hate a figure it is often because we have been injured to love it, and hence, the love wish is concealed beneath the reaction as a primary ego position. When one analyzes the fantasies associated with the genesis of ambivalence toward love objects in the family dynamic, that is to say the reversal of positive for negative cathexes in the family dynamic, the underlying "fouled" love wish is never missing. The injury causes the reactive emotion to emerge to strengthen the ego, but the original positive wish that was disappointed still remains. Reaction formations are by their nature expressions of ambivalence. To weep for the pain rather than rage against

it or cover your true angry hurt emotions with false exaggerated love is the antidote, the cure for our "strength."

4. These same principles apply to all reaction formations which can have their energetic expenditure and the energies bound in the repressed reclaimed once the pairing with a reactive emotional ideation is broken, be it disgust, hate, love or any other. One need only own up to the truth of the situation in the original causative instance.

Language and its relationship to the level of determination as a predictor of unconscious content with regard to constructions

I have examined many recovered memories and have formulated a judgment in comparison with my constructions, as well as in other cases of people I have helped. Due to factors of privacy, I will convey this information without examples. The techniques of working the language are ordinary, elliptical additions and symbolic double meanings as one often sees in the case of dreams and obsessive symptoms. Even though the specifics are concealed in this case to protect the privacy of others, I can assure you, the information and the protocols are accurate and honest to a fault.

Language and the hierarchy of primary, secondary and tertiary determinants: As one collects language from the various diverse symptomatic presentations throughout the whole of life, the language can be used in several ways. One can conduct Native Psychoanalysis with it and bait the hook as I have described. One can also formulate a construction which postulates the particulars of unconscious content. Collect your language from all periods of life, each time there was an outbreak of severe proportion, energetic symptoms of every different sort. The language should be of two types: language that comes from the symptom itself, outbursts, hysterical, eruptive or obsessive phrases associated with an event or symptom and other actual specific manifestations of language which proceed directly from the symptom itself. The other source is a description of the feeling of the symptom. Describe the feeling state, be as exact as possible. Describe the physical state. Sometimes the form of the symptom, its look and physical presentation is the language, the language of the body. Be sure to describe the physical sensations of experiencing the symptom if there are any. Now collect all the years of language and distill it into the examples which are the most highly charged, the most severe examples from each period. It may be that certain commonalities in language allow you to group multiple symptoms under the same language. Give this precedence as well. Now we have many years covered in a few very highly energized examples. These are examples of Native Transference with strong upward drive and close association to the repressed.

As the repetition compulsion is highly active in these samples we can begin. Here is a theoretical model of the process: As you work the language through and attempt to remove the distortions with likely substitutions, omissions, puns, etc., and interpret other common means of concealment you will find trends, all of which may be valid, but one of which is more valuable. The language will yield levels of meaning where some interpretation of the likely unconscious content will hold good for all or nearly all of it. This is a primary determinant. A primary determinant is a fundamental shaper of personality—a huge factor which influences everything. "No filthy mistakes" from example one is language reflecting a primary determinant of personality. It fit all symptoms with little interpretation. Here we build a construction and *infer* the unconscious event from primary language, rather than use the language to *find* the primary event. Its energies are so potent that in the process of overdetermination it leaves its signature on almost all manifestations of illness. It powers all symptoms in one capacity or another. I will make this distillation of the idea of valid unconscious inference and primary determinance: "The interpretation that fits the most language is the most accurate." As you shuffle each case there will be an ugly pun or a single substitution or a symbol, perhaps hidden in the form of presentation or meaning so that one interpretation will fit all the language: That interpretation carries a high degree of probable accuracy. Use typical psychoanalytical thinking—substitutions, puns and elliptical additions along unconscious lines. Other additional trends in pun and interpretation will fit well for some points but not many. These are secondary determinants. These good fits for part of the language are contributors to those symptoms to which they donate their share of pathogenic cathexis. Although important for some aspects of personality and symptom formation, they are of less or no importance for others, and so, are less energetic contributors to the overall illness. Lastly, you will observe symptoms which fit some of the language well, but, these symptoms and the language also bear the mark and exhibit the characteristic shape of the primary (or a secondary) determinant. These are tertiary determinants. So use the language and locate the primary determinants. Let those be the basis for the first construction. These are the surest

to be right, the most accurate predictors of unconscious content are the primary representations in the language. After going after those, then if positive results are demonstrated, additional less primary elements may be interpreted and constructed as the interrelationships become clear, and the suppositions as to what is concealed therefore more certain.

One brief example of Native Psychoanalysis where form is meaning

Example 4. I want to offer an additional quick note on the idea that the form of an idea can be the bearer of its symbolic meaning. We are apt to look for meaning in the symbolic content of words, but often fail to observe an even more basic method of symbolism at work. A symptom presented itself, a typical moral obsessive symptom with anxiety regarding two words as they are used in a piece of text. I debate the non-issue with the characteristic signature of a Native Transference and upon noticing, begin the analysis. Short work indeed! The apparent meaning and doubting moral pretext of the debate are only distortion and defense. In my mind I picture the text. I mentally inscribe an outline around the words in question and open the mind, *the image, the shape of the words themselves, the image* I have inscribed, is indeed the hook, and the fantasy which they represent that I have been repressing surfaces. The meaning of the words played no part, their image was the meaning. However, the ego dystonic fantasy is still going on and on inviting me to look after having been retrieved so I use it as a hook, and then let it go. The result is swift and I recover the expected infantile memory and the symptoms vanish. Unlike the disturbing fantasy, the infantile component means little by way of discord to the ego, which recovers the memory and is unperturbed.

Two more examples of Native Psychoanalysis

I will offer two more examples of the method of Native Psychoanalysis. The first is included for its unusual content in my unconscious. Few such components exist as my fixation was all but entirely formed around the sadistic element of the fixated period, not the erotic. But where there is an active component in predominance, a passive one must be found as well although in far lesser quantities. Here we have a small but clear example of how perversions related to the anal erotic are created, as well as the malleable nature of fantasy and its interpretation. The second example is a rare instance of a true repressed memory which was not hideous and disturbing. So far, the only one. After that I will survey the most typical contents of my unconscious and discuss issues of criminal psychopathology and then offer an unproven hypothesis on female sexual and moral development.

Example 5. I am writing a novel titled *Time Saw a Fly* with a dreadful character who has abused his son. I am at a loss to find the fantasy for the job. My novel's main character can see the unconscious activities of other people and so far with a few exceptions I have been able to make use of my own polymorphous perverse unconscious for getting real specimens of the appropriate sort. I have very few of certain "creatures" and plenty of others. The sadism is easy. The others I had a few examples, but I don't have anything like this. For once, even the worst life had to offer me left me shy here. Then it occurs to me as I think of the character and release attention to open the mind, it comes rushing into the mind's eye. Oh my! My open mind is "rewarded" with a very charged presentation the likes of which are new to me. I will write it into the book later after I analyze where the hell this came from: A large ugly balding man with a crooked nose is staring at a small boy with no face who is naked, buttocks exposed, draped over the edge of a bed. The ugly man who is also nude applies some lubricant, petroleum jelly, and proceeds to anally rape the unconscious faceless boy. The fantasy is accompanied by my nurse saying, "Are you sure you want to put that in that little boy's rectum? He doesn't seem to like it." I note two things upon seeing the scene: 1. I am not initially repelled. That makes no sense. This is not my sort of thing. 2. The fantasy calls to me so as to identify my ego with the ugly man. The child is of no value. That is the feeling.

Here is the analysis: I knew at once that such things should repel me so this scene could not represent the real meaning, the manifest content was not repellent because it represented another event. *That* was the repellent, repressed event, this was a screen. As I have seen, if I **did** become aware of accepting this unacceptable scene as it presented itself, it would have been repressed and replaced with another, a process not unlike a high-speed version of the fantasy substitutions demonstrated in Freud's "A Child is Being Beaten" paper. I also understood from past experience that a passive active substitution as distortion must be at work. Surely the faceless child was the real object of the excitement stemming from the experience, or the opposite would not seem to be inviting. The repellent unconscious thought must be centered around the faceless boy.

I open the mind to the fantasy and use the words from my nurse as the hook—I could tell those were *real words* and must be the strongest undistorted associative element. I open the mind using the Open Emotional Posture and the memory returns almost as soon as I render the words. Those words were likely spoken to my mother to request a different thermometer, and indeed the memory is unmistakable: the cold sensation of a rectal thermometer, a tactile memory, preserved in every detail. That was the thing to which the language referred, and the event shielded by the distorted active fantasy. So we see how an early passive excitation of anal erotic components once repressed leads later to fantasy of the precise sort one would expect. Note also the obvious symbolism of sadism tuned against self.⁶⁹ I have never been so glad to be sadistically fixated! One fantasy like this is enough, thank you.

Example 6. Here is the exception, an unconscious memory from around first grade, a memory which was recovered to good effect, a real unconscious repressed memory which is not simply dreadful! Read carefully, you may never see another: I am writing a very poetic section in a new novel. My wife is

behind me out of view. I ask if she wants to hear the section. She assents. It is raining and our yurt is echoing with the rain. I read her the section. My wife responds but I do not hear. I ask if she had heard me and understood what I had read her but I can not make out her reply and am unsure of her answer. I am gripped by neurotic feelings, insecurity and anxiety, and can't stop asking what she thought. The feeling was a slight panic, a low grade panic and insecurity set in as I failed to get her initial response. I could tell I was being neurotic. It made no sense. Why was I so insecure? Why did it start when I couldn't hear her? That is what triggered it. I could tell this was Native Transference. I open the mind and it comes at a single try. The scene is a white blur. I have had my eye hurt by a child who has poked it with a drinking straw. I had been to the eye doctor who had put drops in my eye and everything was blurry. I was drawing small doodles in a book. I couldn't see, and after I finished each doodle I would hold it up to my mother and ask, "What do you think?" or "How's that?" and although I couldn't see her, I heard her loud and clear after each offering: "That's nice, honey." Ha! That is why I panicked when my wife's voice did not respond—where was she? The new scene was a surrogate for this old scene and carried its transferred energies. Just as in the present scene I could not see the face of my audience, and relied on the voice to assure my exhibitionistic impulse that I had been accepted. My reaction was appropriate for a child of six who needs to hear approval from his mom. An appropriate affect, just displaced onto an inappropriate situation. My insecurity vanished amidst laughter. My wife is still laughing at me. Psychology that does not end in laughter is poorly practiced.

The development of reactive unconscious structures

I will take a moment to comment on how the direct observation of unconscious processes has influenced my understanding of the various psychological paradigms. Although a lifelong student of psychology, my education was limited to an undergraduate level and took second place to my interest in philosophy. As a result I knew much "of" Freud, but had read few of the actual texts. I had amassed books *about* Freud, after a time even reference books on psychoanalysis in particular at the graduate school level, but I owned few books actually *by* Freud. As I wrote my first accounts of the emergence of unconscious material in "The Engine of Creation" chapter in *This New Day*, I knew he had captured some of the picture, more than most, but really, nothing like the hideous spectacle I saw, so I began to write of it myself. As my interest in Freud's work increased I began to read the original texts and was shocked to see how dreadfully they had been misrepresented, distorted and *sanitized*. Here, in the original texts, was a very accurate description already drawn out, of the sights I was seeing and about which I was now writing. Finally, some language to fit the matter! The right language! So with this in mind, I am very reluctant to find in Freud's work, a contrary conclusion to the observable unconscious facts as I plainly know them. I will soon offer up a few such contrary speculations to the Freudian view, supplemental ideas really, many speculative, some plainly seen, but first I will need to fill in some details which will lead down a few other roads before arriving at this new questionable destination.

As I examine the once repressed contents of the myriad of fantasies, the replacement gratifications that were not available to consciousness during my upbringing, a clear trend in the development of the reactive structures is evident. After the hyper-punitive conscience developed⁷⁰ the sadistic elements of personality were repressed. The full lifelong sum total of these reactive psychical formations was available to see en masse, all simultaneously energized and visible in introversion hallucination during the worst of the withdrawal. Likewise, I can now access many of these memories at will. They exhibit progressive and linear modes of development in their construction and design as expressed over time. To be more plain, if one looks at, let's say, 300 unconscious replacement gratifications from a typical year period, they will follow certain themes which will be expressed over and over. A certain wish, a need, will be addressed and answered again and again. This element, this single common thread which gives the motive force for all 300 separate various incarnations is the primary determinant. A primary determinant from the family dynamic unites all fantasies from any period. This unmet need or injury from development will find hundreds of separate means of actualizing a single expression in meaning. The means of expression in sadistic reactive fantasies, and in other conglomerations also, in fact I will go so far as to say I am certain that in almost all unconscious presentations (excepting painful traumatic and specific mnemonic impressions) all present as super-sexualized ideations. Here is the definition of that term from *Mind Map*: "...super-sexualized fantasies—fantasies which contain the sexualizing of other activities, and sexual expression of hidden wishes, some sexual some not..."⁷¹ Now the initial incarnations of these fantasies at times but not always bore the mark of sexual sadism, slow voluptuous torture, but that was not always the case and lasted only through the very earliest years. These early fantasies were conscious. I gave vent to them freely in thought. Most were power displays as were all the later ones in ever-escalating fashion, but some of these very early fantasies were different, of a clearly sexual and sadistic nature in the usual sense. After that and forever outward their quality and more so their intensity changed, and they were repressed. These later fantasies were not of a voluptuous or sexually sadistic nature, never slow torture, only an exhibition of sheer power insisting that the primary demand be met. The frustration these fantasies responded to was severe, and the presentation of the images is explosive and super-violent. A demand to answer the primary injurious determinant is issued, and after it is refused, a super-explosive retaliation ensues.⁷² That is the basic form of 295 of our group of 300 repressed fantasies. But you may have noticed that this no longer seems "super-sexualized." That is because the sexual tension characteristic of libidinally charged sadistic fantasy has vanished. The fantasies, and there are thousands along this line, all demand the primary demand be met, and as soon as it is not the violence begins, always a super-rapid annihilating display of power, **never** a voluptuous sexual pattern of small advances and retreats, only super-explosive violence—but this violence is

inevitably and invariably directed towards the genitals. Clearly this is the ultimate penalty and the ultimate threat. Symbolism does occur *within* the sphere of the unconscious, but it is utterly obvious and not used to repress or conceal as in dream formation which is an ego/id compromise formation. Unconscious symbolism proper, the language of the id is obvious and often enough its purpose is not to conceal but the reverse, id symbolism serves the very opposite purpose: to intensify and multiply intensity and increase clarity, **to emphasize**. An act will be supplemented with redundant symbols of the same act so as to increase its intensity. As a chain of fantasies goes on, an explosive super-violent genital mutilation will be paired with its symbolic equivalent, so the next fantasy also removes/mutilates the eyes. The next may do all that and also remove and/or break the fingers. The next will do all that but remove the hands as well and then the toes, then the feet, etc. The id need not hide from itself, it uses symbol to make obvious condensations and transfigurations which can not possibly be missed, and uses symbol primarily to increase its cathexis, increase the energetic power of the fantasy through symbolic multiplication. These escalations in turn correspond to escalations in personal frustration.

Here it would be helpful to make a distinction in some familiar terminology. Castration. Although castration is big in psychology, it seems absurd to the ordinary healthy person. I never thought about it. A non-topic. Perhaps once a decade there would be talk of gelding a bull and the word would come up. No one ever spends even a single moment concerned with the idea. It seems nothing short of asinine to make so much of it as they do in psychology. Castration? Nonsense!

Imagine my surprise to be presented with the contents of my unconscious and to observe thousands and thousands of scenes, so many scenes from every period of my life, and what do I see?—acres and acres of unbelievable super-energetic fantasies about or involving only one thing: Castration! This is the super- sexualized element. Although the fantasies are of power or explosive acts of violence in retaliation or commands of mastery, the penalty is always the same. But I have spoken falsely and this distinction is indeed my point—a mistake in wording has blinded us. In all but two cases out of *thousands*—castration *alone* never takes place, something much different which includes embedded within it the act of castration does: **genital mutilation**. Male and female subjects in fantasy are treated identically. This threat is universal in its horror, not gender specific. It is always genital mutilation which is threatened: the mutilation, or as is far more common *the removal of the entire genital apparatus of either sex*.

The progression of these reactive fantasies over time has something else to teach us. In every case, a theme is established. This will be in response to an external frustration of a primary constituent, an unresolved tension in the family dynamic. Then through childhood and adolescence as the family dynamic continues over and over again to inflict the same injury, the fantasies increase their energetic presentation. A cascade which escalates the complexity and increases the energy of presentation follows. The result is a string of more and more energetic fantasies on a given theme. A new particular injury to the ego is likely to establish a new theme, but in many cases due to the consistency of the family dynamic, the particular circumstance, although different, will typically still express the same old unresolved pattern of consistent family conflicts which are never addressed, and so always assert themselves to create the same old injuries in new ways.

So numerous instances which each in and of themselves might amount to little, are compounded one upon the next to increase frustration. Each of these injuries, these irritants to the ego, may be small, something a bit of rage and/or better yet tears and time might fix, but compounded together the cumulative unresolved frustration can become enormous. The locus of the coalescence of the injuries to the ego will be around the primary familial determinant, a frustration or injury from the family dynamic which is repeated over and over. The cumulative level of frustration is key.

As the fantasies express the increasing cathexis of energy in the tension which the family dynamic leaves unresolved and re-inflicts over and over, the fantasies carry more and more energy and the frustration and this increasing energetic cathexis is symbolized in an escalating increase in the violence of expression. The end of one of these chains of escalating fantasies will display the very most clear

example of energetic over-cathexis of energy as super-severe "overkill." This term borrowed from the language of criminal psychopathology is most appropriate. Indeed, I will assert that anyone who has had occasion to observe the contents of their own unconscious directly, will scarcely be able to proclaim criminal psychopathology a mystery. In fact, psychopathic criminals are an open book, that is to say, they are directly representing unconscious acts, sometimes distorted in the transference, but to a great degree not! To see the unconscious is to see criminal psychopathology. One may look to the unconscious of one individual to see a preponderance of one sort of aberrance or perversion, and to another for a various preponderance of constituents, but I assert all are available in any unconscious, although in vastly different intensities of presentation and proportion. I offer this hypothesis for the unblushing among you. A teasing test of honesty. Can you accept this possibility? Are you that honest?⁷³

1. Paranoid neurosis: a contrary analysis as a transference neurosis. 2. A contrary speculation about the genesis of moral development in female personality

Now I have two dubious and questionable conclusions to propose which flow from the above observations, in the latter case directly from the previous line of thought, and in the former, also in part from the consequences of having directly observed unconscious content as I have specified. Although through my life I have never been predisposed to paranoia, and can count the instances of its emergence easily on one hand, I have had every illness and its symptomatic manifestations rally to aid my inhibited repressive facility after SSRI withdrawal, and paranoia was no exception. This has given me an opportunity to examine and analyze paranoid neurosis firsthand, and in this case, I have in *some* instances, found a result which differs from the analysis presented in Freudian theory. There are implications for the validity of my assumptions based on the atypical genesis of the symptoms which I will discuss later. However, my observations may well be universally applicable, as I do indeed believe they are.

In the usual view, paranoia serves to block an overly strong homosexual current. This is a sexual current in the libidinal sense, that is to say it concerns a same sex object in the broadest sense, perhaps an overly strong feeling for one's father or mother or a sibling is at the root of the transference.⁷⁴ The case of Doctor Schreber is a good example. Often a dangerous diffusion of the homosexual current into some of its component threatening and competitive elements is involved. I have in fact found the primacy of the homosexual current, one of its currently overly cathected derivatives and conflicts to be central in some of the instances of paranoid neurosis in my case, **but not all**. The standard analysis is viable and often quite correct, but sometimes only partially, in some cases not at all, and therefore I must conclude: *the standard analysis is not universally applicable*. In fact, there were instances where the heterosexual current was the formative and single energizing factor. Furthermore, the presence of both currents was often demonstrable. I have established my honesty and ability as a self-analyst and will not give the specific examples. I will spare myself this. My examples always spare the mother, and so you can naturally infer it is those issues which carry the true keys to my soul, and so shall remain hidden. In the language of ontological calculus:

T=(-I). I will simply state the results of my composite analysis of many instances after a few theoretical propositions, some of which I have observed, some inferred.

In Freud's analysis of "A Case of Paranoia Running Counter to Psychoanalytical Theory of the Disease," an example is given where it seems that although the homosexual current is involved as a figure representing the mother is located, predominantly the patient's heterosexual relationship is successfully attacked and indeed is the one destroyed by the paranoia, and the eventual relationship of the paranoia to the homosexual current in the example is that the fixated homosexual attachment is *defended*— Not destroyed by the paranoia but defended. In the case of the early psychotic symptoms of Doctor Schreber we see an example of a very common type of structure I have found in paranoid neurosis where the homosexual current is *attacked* by the paranoia, and *defended against*. Likewise I have found a number of such relationships to **both currents**.

A quick outline of the stages and components in a typical paranoid neurotic symptomatic structure are in order. I have noted two types, the most common type being a composite structure. First there is the simple persecution delusion. The subject is being persecuted by a substitute for the loved object, or the once loved object itself. Feelings of being persecuted comprise the first type.⁷⁵ This structure also forms the nuclear component of the second type. In most cases, the symptom takes on a second reactive adaptation where the feelings of persecution are answered by aggressive feelings of the most energetic type. These are dangerous feelings.

While the usual view works well for those many cases which it fits, and is included in the theory as I see it, another more inclusive explanation is in order if all the examples I have seen are to be addressed. I propose to substitute the idea of father/mother for the homosexual current. In this way I have chosen a particular likely nexus around which the dynamism of the homosexual and heterosexual components might both be addressed (although each case may require individual adjustments). Also, two relations to each of the two components are active in some cases simultaneously. In the case of neurotic paranoia the presentation of the reactive symptoms is identical in all cases where they are present, but the genesis of the *nuclear* conflict is various. In the case of the *male* paranoid neurotic, if the *mother* is the active constituent two attitudes of conflict are possible. Cases of all sorts, "not protecting," "not listening," "ignoring," "not caring," "not doing her job," can all be reduced to two formulations of one concept: ***The Loss of Love/The Loss of Fidelity***. This can create psychical dissonance and use the reactive symptoms toward the mother in two ways, either the fixated libidinal current is defended or attacked by the reactive symptoms. Likewise the father can be the more active constituent and then the situation is the same. In one case an attachment to part of the mother/father dyad will be preserved by the illness, and in another destroyed. It depends which element is psychically dystonic as to which the reactive symptoms will predominantly attach. Dr. Schraber's early symptoms were to *destroy* and block his libidinal current for his father, a symptomatic relation which I believe could have overtaken *either* current; whereas in "A Case of Paranoia Running Counter to Psychoanalytical Theory of the Disease," the symptomatic relation was to successfully *defend* the fixated libidinal attachment to the mother, which by my view is also a relation which *could* have proceeded from either current. If the father is the subject of the transference and fixated unconscious love for him is defended, the reactive elements fall predominantly upon the other current; if on the other hand he is ego/id dystonic they fall upon him, as in the early psychotic symptoms of Dr. Schraber.⁷⁶ The situation is analogous with the mother, the symptoms defending or penalizing accordingly as to whether she is sought or to be repudiated. Of course these dynamics are often transfigured onto a new current situation. In many cases *simultaneous admixtures of all these ideas are assured*. Also, I hypothesize that: ***any highly quantitatively affected libidinal stream which is psychically dystonic may invoke paranoid neurosis to interrupt it***. That is the simplest way to put it.

So either or both libidinal streams can power paranoia, and its character will suit the psychical perception of the active element or elements. Need of the father's love, or fear that love or of him, need of the mother's love and fear of the loss of her love, fear of and rage against her infidelity, these are the active elements which drive paranoia. Male and female cases should fit this model each with proper respect to the active elements as perceived in that case. I have personally seen paranoia proceed from the heterosexual current alone, the homosexual current alone, and a combination of the two. All should be seriously considered in analyzing this disorder. The reactive symptoms almost all of which in my observation are reducible to reactions against fear of, fear of losing love or infidelity of, or feared love of, the object, comprise death wishes and acts of violence which often symbolize or directly represent genital mutilation, or in some cases may present simply as angry persistent protests against the persecution delusion.

It is possible that my examples of paranoid neurosis are biased, skewed by the fact that they are artificial secondary products of the struggle to reinstitute repression in the case of SSRI withdrawal, and lacking a paranoid predisposition, both currents were needed to achieve sufficient energetic cathexis to power the symptom. Perhaps. But I believe not. It seems simplistic and overly hopeful to believe that all the manifestations of such a complex illness are to be found in a single etiology. I have seen too many examples of instances where the homosexual current was not active, or only an ancillary contributor to the tensions which comprise the illness.

I believe paranoid neurosis should be included amongst the transference neuroses. It blocks consciousness and prevents the conscious recognition of the repressed like any obsession which will not leave the mind, and it exhibits transference, although of a decidedly negative character, its symptoms are ambivalent manifestations—a case of reaction formation to be sure. Although more intransigent and dangerous it should be categorized as a transference neurosis. I have eliminated its symptomatic

manifestations with Native Psychoanalysis too often to doubt the proposition, but due to the peculiarities of my circumstances empirical testing of the hypothesis is required to establish its validity.

There is one last factor which has come to the fore in *many* instances of reactive paranoid symptomatology which I have analyzed. In the section on the construction and presentation of reactive unconscious structures I watched the progression of a string of structures to a state of highly cathected overkill, this escalation proceeding as frustration from many small instances which could not be answered accumulated to form a total cathexis of energy far in excess of any one of its constituent contributing injuries. A circumstance is created where an intolerable frustration is built up, a huge energetic component which can not be released. On no one occasion is there sufficient reason to decathect such an enormous sum of accumulated frustration and hostility. In the case of paranoia with a reactive component there is a strong etiological factor here in the unfulfilled wish to release this accumulated aggression. In the delusion of persecution we have the answer to the problem, which the ego and superego create. Once the persecution delusion is formed then the ego and the superego are free to engage the id's designs! Now in the delusion of persecution all moral restriction is lifted and a "good reason" is found to release those pent up hostile energies. The ego position with regards to violence is finally "okay"! And now, as is often the case with obsessional states where two contradictory currents are at a near equal balance, once the situation is solved one way or the other and one current finally chosen, a feeling of compulsion attaches itself to the choice. The feeling that the persecution delusion is true and the reactive need to avenge one's self right, both have this compulsive quality attached to their inner presentation. In this way the symptoms of paranoia offer up a solution to the ongoing conflict generated by repressing these long accumulated hostile wishes. In this elemental aspect which in part constitutes the motive force of paranoid neurotic symptom formation we see the conflict between ego and id which we have come to recognize as being characteristic of the transference neuroses.⁷⁷

A postulation about the moral development of female personality: I detest the politically correct. This last idea in the series is the least sure, the most speculative, and has the scent of the politically correct about it, so I will begin by cleansing the air with an offensive truth. The Freudian picture of female development leaves a fundamental constituent of conscience, the punitive aspect, the active castration threat out of the female picture of development and so paints the picture of the female moral structure as being less developed, more malleable and plastic than that of the male. Now I will freely admit that there is no shortage of modern day examples of women with no moral center, indeed, they are everywhere, and the type is not only available to see, they are in my view, totally apparent. However, I see no shortage of morally underdeveloped men, in fact, I am certain that in my little world, there are perhaps even more morally "flexible" men than women. Furthermore I will say, I know numerous examples of women, who are more highly developed morally than men! I know this is starting to sound politically correct and I apologize, but really I shouldn't have to apologize for the truth, even if it does seem a bit too sweet.

So how am I to take stock of the true state of affairs? How did these women become superior here? If we accept the Freudian view of the formation of conscience and morality, and my self-analysis supports it, we are left with a problem.⁷⁸ How did these women become so honest? From where comes the castration threat, the introjection of the punitive aspects of the male parental introject? It seems clear from examination of my own unconscious contents, that the idea of genital mutilation is the right one, not castration alone, but the mutilation or removal of the entire genital apparatus of either sex. As the Freudian view has it, in many cases the little girl is unlike the boy, she in some cases quickly believes the castration threat or something analogous to genital mutilation is real—she sees the result! She knows better than to doubt the possibility. Now another shadow, I surmise in **many** cases a predominant one can be added to the familiar picture of female development: the certain knowledge of the reality of genital mutilation. Her knowledge of the difference between herself and the male members of her family or schoolmates, etc. makes this knowledge certain. This poses a positive active punitive shadow akin to the one which is formative in the development of morality and conscience in males. She *knows* it can happen, the threat is far from over! Perhaps here the reason for her obliging feminine traits,⁷⁹ her highly developed conscience and well centered morality can be found. The cases where the confluence of forces

in the family dynamic support this outcome are those which are then active in the formation of female conscience as in the case of males, the others run the usual course. I postulate that the threatening aspects of the father or perhaps in another case the mother, might in its intensity coincide with the strength of the additional shadow of genital mutilation gaining predominance over the moral outcome of the female Oedipal conflict.^{[80](#)}

The role of confluent libidinal cathexes in introversion hallucination, the perversions, neurosis and mental health, and some theoretical implications regarding a role of libido in the aggressive drives

After the last tenuous step onto the thin ice of speculation about female moral development I am glad to again have firm ground under my feet as I present my conclusions, both theoretical and practical, about what we have learned. Unfortunately I do find myself at an impasse, not for want of direct evidence, but for the right language to make it available to understand. The theoretical matters are, in this case, the most tangible in that they lend themselves to precise description as they are descriptions and concepts necessarily born of the linguistic facility itself, but the practical matter is more difficult, and I find my language searching after solid shadows. So let us begin with the conceptual.

This conceptual model is born of direct observation, so I will use a thought experiment which I have carried out countless times to demonstrate it. We will prove a Freudian axiom and gain access into the core of mental functioning, from which point we can draw many conclusions.

With the facility of repression greatly diminished I am by matter of necessity in a position to have often carried out the following thought experiment. *"The neurosis is, so to say, the negative of the perversion."*⁸¹ Another way to say it is: A perversion is the active symptom producing element hidden in the unconscious of the neurotic, or I will say: the unconscious positive of the neurosis. This strange idea to which I indirectly referred so often is altogether true. I have not only found this "unconscious positive," a perversion, to be present as an active unconscious replacement gratification when neurotic symptoms are displayed, but have also observed an additional component other than perversion which can produce symptoms when kept unconscious. I am using the term perversions in the specific medical sense. The unconscious of the neurotic is in the ideational content of the active fantasies occurring there, the same, as the overt practices and consciously expressed desires of perverts. That's the notion. Ugly idea, isn't it? True, too. Here's the experiment, but do be assured, for those willing to look, the result is most beautiful indeed!

Now that repression is diminished in my case, any small unconscious replacement gratification requires lots of energy to repress and remove from consciousness. Symptom presentation is uniform and immediate regardless of unconscious content: anxiety and back pain. Likewise, my ability to pierce the repression is close at hand. I call the effect my "hole in the floor" in an exaggerated reference to the topographical model of the unconscious and mental construction. First I will get the symptom, the anxiety and pain in the back which is the actuation of the shame signature. Then I become conscious of the fact and remember the new habit I have forgotten: the Open Emotional Posture. At this, the image presents itself to my mind's eye. As I do not judge, but look at the fantasy, I will see that it is almost always a perversion. Sadism is the most likely, but in other cases another perversion, something overtly sexual or any other, like a masochistic addition to a sadistic fantasy will be found, it doesn't matter at all—the symptom will be the same.⁸² You can't tell the unconscious content from the display of anxiety, which is the ego's universal tool to institute all such repressions. The fantasy in being examined has now become a focal point of two libidinal cathexes, one from the id which is charged with libido and runs this world of unconscious subterranean gratification, what I euphemistically call "the meat puppet theatre," where if one is neurotic, hidden fantasies will always run their perverse course and seek to attract the conscious ego's attention in an attempt to emerge into consciousness, but are blocked by the ego with anxiety. Now with the Open Emotional Posture engaged the ego looks and also contributes its cathexis to the fantasy which further solicits energies as it sometimes mutates and tries to invite the ego further in, further in to investing energy into the increasing display. This state, if properly energized becomes the state of introversion hallucination which is characterized by *a confluent id/ego libidinal cathexis* of consciously observed, in the case of neurosis, once unconscious content of the id. So, in neurosis the id and ego have disparate expressions of their cathexes, one, the ego, is conscious, and the other, the id, is unconscious. The tension from and division of precious libidinal energies forms neurosis, and its

attendant symptoms indicate the imbalance as repression is maintained. The state of introversion hallucination which is an experience by way of submersion into fantasy and the intensity of its presentation, is a hyper-energetic extension of introverted daydreams. Daydreams also demonstrate the combined cathexes of ego and id onto a fantasy which in the case of introverted daydreams in a normal person is often a low energy dream-like compromise formation with some fraction of direct unconscious content, but in our case of introversion hallucination is highly energized and in its entire, was formerly unconscious. In the case of introversion hallucination a hyper- cathexis of once unconscious fantasy is achieved as the ego adds its libidinal constituent to that of the id to achieve the hallucinatory introversion. *Here, in introversion hallucination, a confluence of libidinal cathexes is introverted.* There is no mystery as to where the reservoir of liquid libido is located, both have a share, both ego and id.

Now that the ego and id are in agreement as to the nature of their satisfaction, the ego is relieved of the need to produce anxiety and a complimentary pleasure and anesthesia from the fixated libidinal component find free expression in thought. The anxiety and back pain are gone as I look and participate in the fantasy. I am now a pervert. My sexuality is an expression of unrepressed, now conscious and fixated elements. So if I choose to dispense with the Open Emotional Posture, the repression returns, I am gripped with anxiety and back pain, and the fantasy is gone. I am a neurotic—moaning with anxiety. Open the mind and happily engage the fantasy and now there is no more anxiety, and again—I am a pervert. So what to do?

The answer is that one first looks for the triggering cause, what brought it on, and then analyzes the perversion and the cause with Native Psychoanalysis. In my case there is very likely language and pictures and all can be used to bait the hook. Often the triggering cause will make it plain, and in most cases, a long familiar ghost, your complex, your old picture has been aggravated and its familiar wounds reopened or perhaps an old memory awaits. Here is the thing with noisy perversions like sadism: they are a fake, a reaction. In almost every case there is a wound, an impotent feeling or a helpless feeling which calls up the rage. That's the key—tears for that. Rage blocks pain, pain flows through tears—let them wash into the sea. The overtly sexual perversions are tougher. They refer to earlier events and wishes which may have been repeated via transference and displaced onto other objects. I am going over familiar ground, so...one simply baits the hook with some language or part of the scene and locates the source. Resisting an impulse and denying it expression in thought is rarely the answer. Resisting an impulse in deed is imperative. So do not be afraid of your thoughts and let them be welcomed easily into the mind so you may open up and happily forget. The rest is by now familiar.

So now you have located the source and are open to your pain, open to the *reason* you need the fantasy. It is usually not too hard to spot, we are rubbed raw by life and the old wounds that are opened are long familiar. Many symptoms are dispensed with at this level,⁸³ once the elements of one's complex have become familiar, although a deeper look is needed if they return. As the tears or the blush fill you and are spent, you are free of it and look outward, now open and unresisting, approving and accepting, the appearance of the world is full and thick with beauty, you have the effortless exuberance and energy of one who no longer resists themselves, and no longer need look away from the sight to know.

I am sorry, I told you that language had failed me here and it is true. I had to resort to poetry to show you by the feeling of the experience how to find it. Theoretically the events described are clear enough: A confluence of unfixated libidinal components from both the ego and the id now invest perceptual experience and thought with their fuel for sublimation. This is a confluence of liquid libidinal components from id and ego which are no longer in conflict or represent fixation, they are directed into the sublimation of perception and thought at the behest of the ego.⁸⁴ This eventuality which I have termed, "the extroversion and liquifaction of a fixation into consciousness," can be thought of as an ideal, on a micro level this is the ideal of mental health represented in the ideal goal of psychoanalysis, "All repressions are to be undone." Here the id invests its unfixated liquid libido along with the ego in an extroversion producing an end to fixation through the reintegration of repressed libidinal components into conscious personality.

I can describe the experience no better.⁸⁵ Once the source is found, the pain released and the painful wish or event recovered and conscious, the Open Emotional Posture does the rest, no conscious effort is needed. Once conscious and removed from guilt and shame, the reintegration is instantaneous and needs no additional effort or conscious direction. I have only poetry to describe the feeling of extroversion, of "pouring out" into the world. I am afraid in this vital regard I am at the limits of my expression.

At this time I want to share a conclusion which presents itself. If the replacement gratification or repressed fantasy in question is one perversion or another does not matter, the result is the same. As one recovers the liquid component, the fuel for the variety of the various symptom creating fantasies, even the sadistic where an all but complete diffusion away from the erotic is the case, it is libido which is freed—liquid libido in all cases. So we must draw a conclusion: it is libido which powers violent fantasy. ***Libido powers aggression.*** It is as if the aggressive fantasy is an appliance, a machine which the libidinal energy operates. As the machine is dispensed with, the power source becomes available for other uses.

An unconscious constituent other than perversion which is an active symptom producer in neurosis: Few are these cases by relative standards, but numerous enough to mention. In some instances it is a screen memory representing a series of painful experiences, or one painful experience rendered in the clear colors of a repressed memory, or a long known but seldom thought of painful event, known but repressed—in short: a pain. A simple pain held from view. I can not explain it other than to say it is painful and requires repression and so neurosis results in the usual way. What gives such a memory or pain the upward drive to return to consciousness I do not know, but I can theorize. As you are aware, I am of the opinion that tears, the expression of which answer pain, are a form of libido. Pain itself is also an expression of libido. Think of the way a melancholic's symptoms are like an open wound, an anticathexis which attracts libido to itself.⁸⁶ Libido heals, so our wounds are hungry for it. Pain is an anticathexis. Tears answer pain once mobilized. Tears are libido. The bodily manifestations of crying, the contractions and the healing, the rebinding together of personality bear the signature of Eros. A painful memory is fixed, fixated in the unconscious. Lastly it is clear from its bodily presentation as a sensationally charged contraction that pain itself, be it emotional or physical, is a form of libido—an anticathexis, a holder, a receiver and expression of libido, and hence, itself a libidinal manifestation.⁸⁷ If my hypothesis is correct, this explains the healing properties tears have on emotional injuries, and the upward drive toward consciousness of repressed nonsexual painful memories.

Creative psychology: Creativity as therapeutic substitute symptom formation and the assembly of a literary lucid dream—the intentional direction of unconscious processes

There is a train of thought from social psychology which runs: Frustration leads to aggression, and if that aggression remains unexpressed, to depression. Freudian psychology also rightly makes much of frustration as a factor in the etiology of neurosis.⁸⁸ So what of those situations in life where an active approach to release our frustration and aggression is barred, and surely there are many! The list of frustrations libidinal and otherwise from the unreachable past, to the current list of unapproachable authority figures and our cruel and indifferent fate in the present and all that connects the two which may be understood but may not be answered, oh yes, the list is long indeed! So what is one to do with the hurt which remains after and even during the work of Native Psychoanalysis?

There is an active solution to the problem. One need not suck up the kick in the teeth, or the pain which can not be expressed. A road, the highest road is available to some few of us—sublimation. And so I have this hopeful proposition to offer: "He who suffers most deeply, is strongest." Strongest in a particular way as we shall see. First I have a psychological proof to offer:

1. Freud idea: Symptoms of neurosis appear as the repressed returns to consciousness. Symptom formation is a product of the return of the repressed.
2. Freud idea: A dream is to be analyzed in the same way as a neurotic symptom.
3. My idea:⁸⁹ Increased proximity to the repressed fosters creativity. Creativity is an expression of the wish to be reunified with the repressed.
4. My idea: An artwork can be a "lucid dream" used to heal and unearth repressed material.⁹⁰
5. My observation and by my judgment clearly implied if not stated exactly as such in the Freud: Many symptoms serve to maintain repressions by symbolizing the unconscious content and keeping it repressed as only the symbol is given conscious attention. Put briefly: Neurosis keeps personality static by using symptoms to maintain repressions.
6. As is evident in propositions one and three, creative endeavor and symptom formation are both fostered by the return of the repressed, ergo: ***An art work is a substitute symptom.*** The advantage of our substitute symptom over the neurotic alternative is that when properly constructed, it can heal neurosis by encouraging the reintegration of repressed symptom producing unconscious elements, rather than aiding in their repression and continuing the disease as the original neurotic symptom would have.

When properly constructed an artwork can use the energies of the repressed, use and thereby diminish the energies of our pain, while bringing these unpleasant ideas into consciousness, and removing the repressions. The energy of the repressed is used to form a new symptom, unlike an ordinary neurotic symptom the purpose of which is to keep things hidden and keep personality static, the artwork is specifically designed to use the energies of the repressed while revealing it. The energy of the repressed is used to form the artwork, a new substitute symptom which leads to its own undoing, while giving self-esteem back to the artist.

Now that the basic idea is laid out we can discuss exactly how to create an artwork as a "lucid dream," a dream where we know we are dreaming, and also know why—and may then, best choose how.

The mechanics of sublimation— Attachment of the lucid dream onto unconscious processes

I will say at the outset after having made such a broad claim for the role of consciousness in the current model of creativity, that nothing could be more incorrect than attributing creativity to being a function of consciousness. The writing of any even passable, and every excellent piece of authentic literature is undoubtedly a function of the primary processes, a function of unconscious processes. But here we have added a captain to the steamship, and consciousness guides the process, although at a respectful distance. I would better say that consciousness prepares the way and the automatic unconscious processes do the work.⁹¹ One never thinks while one writes, one thinks, then forgets, then the piece "writes itself," or more accurately, one collects the idea in hand, deposits it in the unconscious, then allows the ideas free expression as they emerge from the unconscious with no doubt or censorship. All those things have already been done. One simply releases.

So, the repressed, our pain, is to be thought of as a coil *spring*. We use the pain as an energy source to which the story, the allegory or otherwise distorted or symbolized expression, will be attached. An allegory is a dream designed to be interpreted, much as a dream is an allegory which is constructed to remain hidden. Anyone who wishes to discover what complexes and influences I have hidden by omitting them from this work, need only analyze my novels, which I have reverse engineered to create this method, that was for me, a natural process. Not surprisingly, the rules of unconscious primary processes in dream and symptom formation outlined in Freud's *The Interpretation of Dreams*, are the key. As I analyzed my novels to write this section, I was amazed to see how well the ideas fit! So... We will use our awareness of unconscious thinking processes to clear the way for the unconscious processes proper to finish our creative piece of dream work.

There is a reason to approach the problem this way. When we have been injured we want to complain and express ourselves. A rant, or even worse a dreadful sopping up of sentiment into the story line is the result if one writes one's life story as fiction without first subjecting it to some creative transfigurations. These modifications make it possible for someone reading the book to read it, without choking on it. The reader in this instance can be thought of like the ego while dreaming, if the real unconscious thoughts, or in this case, the real petty truth which is repressed and too close to the skin, is directly expressed, the reader will choke, or analogously, the dreamer will wake and the dream has failed in its primary purpose which is to maintain sleep. The "dream censor" (censorship) is always active in dreams, and the *dream work* that changes the real unconscious dream thoughts which would be disturbing into the dream we see which maintains sleep, is done by way of certain processes that distort the actual content.

Perhaps your real story is so dramatic and engrossing as to be interesting as it is, but unless you have had one hell of a blessed but not too sweet, or utterly wretched but charming existence, it may be better not to be too narcissistic and to add some creative distortions. However, the closer to the real pain, your complex, the spring, the more emotive force will be available as you write, so in the interests of writing as authentic a work as possible, one as true to your feelings and uninfluenced by the perceptions of others, we must use as few distortions as possible. The authentic creative intellectual conscience which keeps the best work moving against the zeitgeist of the times is never an ascetic act of artistic puritanical will, it is a matter of necessity. The force of the feelings demand no less!

Here is an example: If I wrote a novel which said, "I hate this world! You people do not read, or listen to even one note of good music. You are imbeciles, so I have no job, no place in America, so I went crazy and took pills. You people are stupid, and drove me to drugs to stand you." You would think I was bitter and throwing a temper tantrum. You may even be right in that evaluation but that rant is, however, a lot of the pain that wrote my novel, *Time Saw a Fly*.⁹² I saw I could use the pain if I added a distortion. I put the world on the pills which explains and excuses the unbelievable behavior and stupidity the world displays. So, "You are so dumb you drove me crazy and I ended up on drugs," becomes distorted in the book so it appears as, "I am sane and everyone else is a moron because *they* are on drugs." Now the

reader can understand why the world as seen in the book is as it is, yet it still seems like America as we know it, so the reader wonders at the meaning and is sure to get it, without themselves feeling accused. Just how the world acts is made deceptively clear by the distortion, "they are on drugs," so the reader can say, "That's not me," just like the ego is insulated from the true meaning by the distortions added in the dream work.

Another distortion which is most satisfying and effective as both a disguise and a way to keep the repressed energies hooked to the substitute symptom is distortion by displacement of personality attributes onto the physical. If a character in reality is thin and beautiful but vile of soul, one makes their representative in the story *look* as their *personality is*. Such a person if they are greedy, may become fat and grotesque with vile folds of greasy flesh cascading from their body. If cruel they become old, drawn and pinched, unwashed, yellowed, cringing and aged with a narrow hard face or whatever image comes easily to mind to represent their soul in bodily form. Characters can be split in two so you can distribute their characteristics amongst many characters, or extend them to become traits of an imaginary group of people. If one's family is typical of the shortcomings of a society, one need merely transfer and distort the tensions and attributes in your own highly energized and painful family complex to create social criticism of the highest order. The trick is to use displacement of objects, condensation of many painful events onto a few highly energetic symbolic representatives or over-determination of each symbol and all the other rules of distortion, construction and representation common to the unconscious processes which govern dream and symptom formation to attach the novel just like a symptom, attach it to your complex, to your pain.⁹³ You needn't use all distortions all at once, only enough to depersonalize your pain and make valuable art, while remaining close enough to the real "spring" as possible. The force of the unexpressed pain, need, love, resentment, sexuality and suffering will give the work a passion, a force, depth and authentic quality which only comes from work that the author needed to write, and never from work created by conscious design so as to please an audience. Necessity never thinks twice, and so, may be trusted. She needs too deeply to lie. Perhaps now you can see what I meant when I said "He who suffers most deeply, is strongest." Necessity knows it is often suffering which is the first spring of our ascension. That is the paradox of creativity.

So let us turn our attention to allegory. In allegory the form of the story itself is symbolic of the point. In *Ever Deeper Never Better*, I have two tracks in the allegory, one is the ontological development of the character and the other is the allegory of the nation with the individual mind, and in both cases the presence of a constellation of particular character traits which are most American. The micro/macro aspect of the allegory demonstrates how the "nation's unconscious" is shown in war,⁹⁴ just as the individual's is in mental illness. I wanted to write a story about a character who was exposed to his unconscious directly. I could have written a story about a man who went insane. Instead, I used allegory. I exposed him to his unconscious by way of an allegorical experience—he went to war. In this way the character of the nation and the individual can be addressed without raising the defenses of the reader as one would if the same ideas were expressed as a rant. In building the American character type in James Holdsworth (the protagonist in the novel), I needed to include one of our most American attributes: homophobia. I would have made a poor choice to create a homophobic character with a real rape scene, the effect would have been ruinous, desirable in a literary context where a shame was to be added to ruin the character, but not if we were to feel anything but pity for him. So a distortion was added, a symbolic process of transfiguration where the events were represented in both symbol and double meaning, just as in a dream. The scene is most effective, although most who have commented on it do not know why.

So now we have the problem, the tension of your complex, the pain so deep it must be hidden which is now attached to a new artistic form, that although different, is similar enough to your complex, similar enough to the pain you wish to express so that your feelings connect to it allowing you to vent your feelings into the construction. Your dad is now a blustering boss, your boss a king or the police chief, a flea infestation, a rat or God, your mom becomes a sect of blasphemous nuns, or perhaps the society in general is now a single man or woman, or an individual becomes a society, etc. You must find the form which is still close enough to arouse the feelings, but perhaps puts them to better use now applied to larger themes which are appropriate, for we all have experienced many particular inequities, kindnesses

and cruelties which although particular in their example, are general in their application. This is the problem, the severe tension which the book will create, build and let ease until guided as if by a skilled lover the story is brought to an unbearable breaking point and then is either solved, or destroyed, and becomes a positive wish fulfilled or an example of tragedy. Either is fine.

Remember, the anger you feel is a reaction against a pain, and often a love wish is concealed as the deepest determinant to a bitter hate. So let us end the story by unearthing this love wish which was so sorely disappointed, and let us make it real. A book built upon the creation of much bitter tension resolves best into the love wish you will find at its very foundation, a sad, quiet, tender wish you may now find whispering softly under the bluster of your angry pain. That should be the end. This is a lucid dream which understands itself and spends the energies, tears and aggression born of its pain to heal. So ask yourself, what is the wish, the most basic formative wish which my pain is answering and know the ending for your book, know what you have repressed.

Every good novel needs a dreadful tension and an ending to resolve it, or to leave the choking weight of the truth around the reader's neck. That is tragedy. Tragedy is sublimated sadism. Tragedy is of the greatest value. In tragedy, as in social criticism, there is another kind of wish fulfillment that is satisfied, the sadistic wish to have the audience suffer to empathize with the character. In social criticism, think of Orwell's *1984*, the "spring" is the same. The reader suffers to see the wretched state of society just as the writer does. "Look upon this wretched thing! You will suffer to see it just as I do!" In tragedy we pity the wretched tragic character in the same way. One who intentionally inflicts pity on another to manipulate them is a sadist. Those who manipulate with pity know: pity is assault by empathy. We feel great pity, suffering and identification with the tragic hero.⁹⁵ Few would be fool enough to argue the value of the ancient Greek tragedies or the social critics like Orwell who so skillfully manipulated our emotions to their sadistic ends. Indeed, once sublimated sadism has led to some of the most profound, beautiful, true and worthy artistic and intellectual works throughout history. The unconscious houses nothing but pain, Freud wished only to expose the unconscious of his patients. Once sublimated, sadism is quite valuable indeed! I will let you guess how much worth it has added to this work alone! Every authentic artist throughout history who moved against the zeitgeist of his or her time was like Socrates, a biting fly on the back of a dumb beast, a sadist upon the mottled flesh of their age, and we should all be glad of it.

So whether you choose to fulfill one wish or another to end your work matters little, so long as you understand the injuries and wishes which power it. As you work the novel through you will be working the painful themes of your life as well, and even if they are tragically denied in the work, the full depth and measure of your complex *and its fundamental wishes* will be available for you to become even more familiar with, and so, even less likely to pull your strings, less likely to inspire Native Transference without your knowing. Find the wish at the very lowest level, that is the end of the book, the repression to be denied or fulfilled, but either way, let it be known! In this way your lucid dream will fulfill its function and release pent up energy in a replacement symptom that creates good work while removing the repressions which once contained the energy, energy now freed and used up in the act of artistic creation.

Once the idea for the distorted form is complete, and the ending decided upon, one makes an outline, either written or mental, but a very specific and complete skeleton of the plot,⁹⁶ where all the scenes along the route are in the main sketched out. The steps along the way must be absolutely sure and specific—an utterly definite and certain framework, a precise skeleton of the action and mental events in order, front to back. Then depending upon the size of the work and your abilities, each scene in turn and in order, or the entire thing is surrendered to the unconscious, not thought of, but allowed to stew in the mind. When a scene is finished it will likely present itself in the mind as fantasy in the third person. I let the scenes play and write down a description and record the dialogue as it is spoken. I write only when the scene plays smoothly in the mind. It will have an irresistible energy pressing you to begin and when you do finally write it, surrender to the experience without question or self-consciousness. No self-observation is permitted. None. Censor and examine only later, nothing at the time of creation. Doubt nothing. Direct nothing. Allow the unconscious to "pour out:" add, embellish, symbolize, overdetermine

and enrich from your unconscious symbolism without question or self-observation. The scene will fill itself out, take its own twists and turns and emerge at the destination you have chosen complete, *with all but no need for any changes in wording or detail*. The result of letting the unconscious do the work after first laying out the route is astonishing! Never question as you create! That was already done beforehand. Neurotic doubt ruins the soup! Release completely or be a hack! Only the unconscious produces perfect artistic work, each conscious fingerprint is a weak spot. Do all work beforehand, never censor as you create! When you go to proofread later, you will be amazed how little need be done. Think—Forget—Wait—Create.

Ego Defense and Ontological Calculus

I would like to make some specific observations about ego defense which will lead to a general conclusion. The topic of ego defense is huge, and here I will unearth but one small underlying component of this most diverse and vital topic. Now that my own ego defenses have been so severely curtailed, the ego defense of others has become a glaring obscenity which can not be missed. I used to believe that I was always repeating myself to give instructions to clients or employees over the phone and in person. Now that I am isolated and have no phone and only email to communicate, I imagined that things would get better as written instructions are impossible to misunderstand, misremember and ignore. I am a very effective verbal communicator and did not realize how good the response rate was to instructions given verbally compared to the all but worthless written word. The spoken word, so superior, charged with affect so as to be a supreme motivating tool, so clearly energized with emotion as compared to the written word, which is so easily ignored and misread. An instruction is twice as effective, twice as likely to be followed accurately if it is given *verbally*, as one which is more precise and more clear but written. When people read they defend by adjusting the implied affect of the instruction to suit their taste. That which is without affect, is without effect. People seem to read books only with an eye to the familiar and will plow through any contrary ideas to minimize threat to the ego. All convictions to agree or disagree assert themselves with no heed to the text. People with PhD's in the sciences, in most every but not all cases, seem to remove **ALL** affect and emotion from the written word, and also defend by reading all texts out of order. The PhD has learned from the unreasonable demands his studies placed on his reading that he can survive only to read badly. Higher education leads to lower comprehension, as only the ideas which are familiar are perceived, while reading at a clip which strips all nuance and subtlety, and therefore all real meaning from a text. It is only in the details that depth is available, so to read poorly is to have safe preconceptions. No new idea is ever seen for what it is. In examining thousands of written correspondences I have noticed a pattern. If ten questions are asked, eight are often avoided, sometimes a response will avoid all ten! In writing to aid with or discuss some personal topic or another, several responses are usual:

1. Aggression!

2. Acceptance of a point to mask rejection of a more important point.
3. Topic change with no reason.
4. A shift to a closely related topic so as to appear that the subject is ongoing when it has actually been avoided.
5. The rejection of an avenue of exploration which may be true, because it is not pleasant. Avoidance of reality not in conformity with current ego.
6. Acceptance of ideas, but failure to connect them.
7. Interruption of topic by way of symptomatic presentation, such as an anxiety attack.
8. Topic change by way of redefining the meaning of a key concept or comment.
9. The rejection of a single fundamental key point while appearing to accept the rest.
10. Avoiding a single key point to miss the overall meaning.
11. Delaying looking at information so as to remove the emotional momentum needed for change.

12. Defense by complication. Unrelated events or a plume of unrelated events and ideas which complicate a simple issue are offered up to misdirect, often these are either completely unrelated or mistake cause for effect, and are themselves explained by the thing against which they appear to defend, misdirect or deny.

The list goes on. All my friends, every single one of them, demonstrate these traits. Some favor aggressive defense, others always look where they know they will not find so as to remain comfortable. This is not an accusation or a proclamation of hopelessness, it is an observation of a healthy aspect of personality, healthy inasmuch as it preserves ego integrity without breaching the reality principle too badly. However, it is clear in any attempt to uncover the painful and the hidden, that ego defense is the enemy. Everyone I meet is loaded with it...everyone.⁹⁷

I will offer up an experiment to make my point doubly clear, then draw my conclusions. I had been observing ego defense in this context for some time and wanted to test a new proposition. I devised an experiment, an experiment in poor taste. That which is unconscious is necessarily that which is unpleasant to see. I would try to reveal an unconscious idea and watch for the reaction which would prove my theory. As I soon discovered this is in very bad taste, and I have never had want or reason to repeat the experiment, which confirmed my conclusions. Good science is often in bad taste.

My friend was the ideal test subject. He was loaded with healthy normal ego defense, something which now seemed as alien to me as a firm belief in religion. He is an intelligent man with a highly developed ethical, empathetic and moral sense. The perfect subject! Rather than expose an unconscious idea from his hidden mind, which is a sort of cruelty I could not abide as it might spoil my friendship, I decided to use what should be to all observers, a highly ego dystonic idea from *my* unconscious. With my friend's well-developed sense of empathy and morality the effect should be the same without the cruelty. He should feel for my breach of face as my ego should be threatened by the idea, and he by way of empathy should display the expected defensive response. Oh boy! An experiment!

As we walked the steep ascending trail, I began. First I approached the once repressed ego dystonic idea cautiously. I could not even get near it! As I tried to steer the topic toward the uncomfortable admission it was never permitted, a topic change of some subtlety was always forthcoming. Next I tried to speed up my approach so as to permit fewer opportunities for interruption, but again, a cough, a cleared throat and a new topic every time! Now I was involved in my unacknowledged game and would not be denied. I was going to say this thing! So I "ran" at the idea, speaking so rapidly and with such force of personality that no interruption to block the insulting admission could be effected. I was the only one talking at this point, rattling away like a machine gun pointed at the forbidden. Suddenly my kind compatriot turns around 180 degrees on the trail *and starts walking the wrong direction!* I pursue him. He says even though it is *I* who will not stop talking, *he* says, "I talk too much," referring to himself, and sits down as if to signal the need for silence so he can enjoy the natural scene before him. In truth, he had not spoken a word! The experiment was a success! In poor taste to be sure, but a success!

So as we examine the various examples it becomes clear that a common element can be distilled: the avoidance of a topic. Once this idea had presented itself plainly over and over as I examined the defensive responses of all those who I had dealt with, it wasn't difficult to extract the following proposition: "We choose the topics we discuss and think about almost entirely as a function of those unacknowledged topics we wish to avoid." Observation has borne this idea out. It often appears that we choose a topic because of a *positive* interest, but that interest is usually a function of what it is *not*—that is to say—we choose to be interested here, because it avoids thoughts over there. Think of a smooth tabletop with topographical rises, hills which rise gently enough not to be noticed. The ego engaged in thought or concentration is like a marble rolled across the table. It is unable to perceive the gentle hills, from the perspective of the marble it seems as if it is rolling nearly straight toward its destination, but, it is actually drawn by gravity away from the top of any of the hills. It adjusts its course as each slope is encountered and rolls away from the forbidden heights. The hilltop is like a repressed idea, the gravity drawing the marble away is as the ego defense which chooses what topic to move toward, on the basis of

what hilltop it is drawn downward to avoid. It is defense, a negative, which directs many of our apparently positive choices. This was one of the first psychological observation which I formulated as a symbolic axiom. The result was a tantalizing mental curiosity I called "Ontological Calculus," which seemed to offer a stripped- down symbolic equivalent to the paradoxes and principles of mental functioning, so that they could be examined logically and in some cases a rough rudimentary guess at unconscious content could be derived thereby from manifest conscious thought. Any such reduction of human complexity to symbolic simplicity should, of course, be treated with caution. I shudder to think what one more mathematically adept than myself might do with these ideas, as I am simultaneously intrigued to wonder the same.⁹⁸ I have found the following formulas useful in unriddling my own language of resistance⁹⁹ and suspect that although any reduction of our complexity to a symbolic simplicity is ripe for reductionistic abuse, it may also encompass a core of truth. With the admonition not to believe the intangible may be so neatly formulated, I present these few simple but often paradoxical formulas and equations for your consideration:

Ontological Calculus: The descriptive and relational calculus of individual human meta-psychology

1. The unconscious is all that we hold away from our conscious self-identification, all which is not our ego, not our conscious "I." Therefore the symbol for conscious personality is: "I" and the symbol for the unconscious is: "-I"

2. The goal of the process of psychoanalysis is: "All repressions are to be undone," so the equation which represents the goal of psychoanalysis is: $-I=I$

3. $-I=I$ is only one symbol distant from the equation for hallucinatory psychosis/neurosis. In hallucinatory psychosis/neurosis¹⁰⁰ the perceptual flow of the sensory process is reversed, it flows "regressively" from the memory and unconscious outward to create sensory impressions and hallucinatory states (or in the case of introversion hallucination the element of regression is found in the regressive direction of ego perception itself¹⁰¹). So if Rg =regression, the equation for hallucinatory psychosis/neurosis is:

$$Rg(-I=I)$$

4. Where R =return to consciousness, and S =self and ∞ = the full length of normal mental life:

$-I \cdot \infty + I = S$ This is the equation for a successful repression.

5. $-I \cdot R + I = S$ This is the equation for neurosis.

6. $-I = \infty$ This is the equation for time in the unconscious which preserves its contents irrespective of the passage of time. "What is unconscious becomes eternal."

7. Unconscious processes are active contributors to life events, and although most visible as symptom creators in neurosis, unconscious content effects in some measure all mental functioning. We are therefore all, to some degree, effected by:

$I = (-I \cdot \infty)$ This is the paradox of the unconscious, "That which we deny (keep unconscious) defines us eternally."

8. Here is the concept from a few pages ago about ego defense, the unconscious and its relationship to the topics we choose in discussion and thought. This simple equation describes the negative defensive factor which in some large part determines many of the topics we choose:

Where T = a topic for conscious attention:

$$T = -(-I)$$

9. Here is the equation for the unconscious conditions in neurotic symptom formation, or, the return of the repressed. Where R = return to consciousness and Sy = a symptom:

$$-I \cdot R = Sy$$

10. This is an equation describing the conscious and unconscious relations in symptom formation in neurosis. Where Δ = change.

$$-I \cdot R = \Delta I$$

11. This is an equation describing the meta-psychological proposition that artistic sublimation is a substitute symptom formation. Where A = art and Su = sublimation:

$$-I \cdot R \cdot Su = A$$

12. So where N = neurosis we may conclude that either:

$(-I \cdot R = Su) = A$ or $(-I \cdot R = Sy) = N$ Which is to mean that the return of the repressed makes either art or neurosis.

13. Where $(\Delta?)$ = instability of personality and L = libido

$-I \cdot R = (+\Delta L) = +(\Delta?)$ This equation indicates that return of the repressed increases the quantitative factor of libido and hence increases instability of personality.

14. $-I \cdot R = (+\Delta L) = (+\Delta N)$ or $-I \cdot R = (+\Delta L) = (+\Delta Su)$ This pair of equations means: Return of the repressed increases the likelihood of neurosis or the effectiveness of sublimation by increasing the available quantity of libido.

15. $(-I \cdot R = I) = (+\Delta su) + (-(\Delta ?))$ This equation means when the repressed returns and is integrated into the conscious ego, all sublimation, such as creativity, is increased as well as stability of personality. This is the equation for mental health via our substitute symptom, the equation for "creative psychology."

Of angels and pins— Theory, Masochism, the Death Instinct and the future

As psychoanalysis progressed, Freud used several models to explain the emerging data he found. The last model presented some "troubling" theoretical propositions, and although a useful, I will even say an indispensable model, it must do what theoretical models do and guess at the unknown. Such unprovable assumptions are best left to philosophers, and as one who is educated in that most dubious discipline, I have another take on several of the invisible elements in Freudian meta-psychology, a view which might be of use to quell, or perhaps irritate uneasy minds. Let us speculate as philosophers—let's play "make believe" and theorize. A few small adjustments to the imaginary picture help it to fit better with what I have directly observed. Such things may well matter little in how one goes about treating an illness, but the closer the model to the truth the better, so...

First I would like to introduce a term which fits nicely between Freud's earlier and later models. In the case of the obsessive neurotic who remembers an event but keeps its associated affect unconscious, or in the case of ego defenses which belong to the conscious ego but are themselves unconscious, I would like to use what as far as I am aware is a new term to describe this splitting of aspects of personality between the conscious and the unconscious. Let us call this anomaly: "A Dissociative Repression." That bit of language will allow discussion of the anomalous ideas in the framework of the earlier model, and increase its usefulness.

I am on philosophical ground to discuss the unprovable and ineffable, the age old question we can't *know* but might *guess*, is always a philosophical question. As I look at the dichotomy of Eros and Thanatos (the death instinct), I am philosophically pleased. A nice clean dualism! How symmetrical! As a psychologist I know that reaction is a sure clue I have mistaken beauty for truth. I also wonder how to use the idea in so much as the two energies, Eros and Thanatos are different,¹⁰² how can I explain the fact that the reintegration of a sadistic element yields liquid libido? After experiencing *thousands* of such instances where liquid libido results from the reintegration of a sadistic element, there is no doubt. So here is the notion: The dichotomy of Eros vs. Thanatos is the representation of an erotic continuum, the end of which is characterized by a "*release*" of the accumulated tensions. Release. That is Thanatos, death, the end of the continuum. The sexual act is the analogy par excellence. The erotic wishes to sustain and lengthen pleasure and eventually the tensions are brought to an intolerable intensity and profusion, and are then released in orgasm. The French call an orgasm a "little death." Right! The releasing of the reins, the surrender of the tension—that is Thanatos—the urge to death is the urge to release, to be released from an intolerable insurmountable tension, to release organization—to surrender to chaos, to release and be free of an intolerable tension.

Now we are free from the equation which has aggressive and sadistic impulses equal to the death instinct.¹⁰³ As the child develops he has no external way to stop unwanted stimulus but to push it away and to cry out. This is not truly aggressive, only defensive. At this point, all Thanatos can do to terminate and release the intolerable tensions brought from the outside world is defense. As the anal sadistic phase of development is begun, a new model, the sadistic model proper which forms the will, the real model of "mastery" takes hold. Mastery, what I will define as: *the intentional act of dominating an object*, a new strategy deserving of the name sadistic, not just feeding, innate incorporation with the eventual emergence of new baby teeth.¹⁰⁴ Now the picture of aggression is at last clear. Mastery, not just defense, but defense by mastery, by true aggression. This development, the sadistic aggressive strategy of behavior is a new type of thinking. As frustration mounts and needs are not met a new type of fantasy, sadistic in nature, emerges. This fantasy is powered by the pent-up frustrated libido which seeks to end the intolerable tension by investing itself in a new tool: the sadistic fantasy of mastery. Some of the raw libido is always present and in its quantity gives a sexual character of a more or less diffused nature to the fantasies, but no matter how highly diffused the alloy presented in the fantasy, it is libido which powers the mechanism.¹⁰⁵ Think of libido as the pressurized hydraulic fluid which runs the "jaws of life," the hydraulic sheers used by a rescue worker to cut someone from an auto wreck. In our analogy,

the wrecked car to be cut away is the intolerable tension, the "jaws of life" are the sadistic aggressive will toward mastery used to remove the tension by Thanatos which in our analogy is the rescue worker, and libido is then represented by the pressurized hydraulic fluid which runs the mechanism used to free our trapped victim. In this way we can clearly see that aggression and sadistic elements are engaged in the service *of* Thanatos which aims to end an intolerable tension. Aggression *serves* Thanatos, it is not Thanatos. Aggression seeks to release us from an intolerable tension *in the service of* Thanatos. Let us not mistake the worker for the tool he uses to accomplish his work!

Now it is clear why a surge of liquid libido always follows the reintegration of a repressed sadistic element into consciousness—the libidinal energy powering the element is no longer fixated, no longer used in the service of a sadistic aim, it is now free for intellectual or experiential sublimation of any kind.¹⁰⁶

Masochism is a molecular constituent of personality. It is not elemental or fundamental. It is composed of two elements: sadism and guilt. I have been able to watch firsthand, observe in my SSRI withdrawal mind, watch as the terrible fact became clear. Just like most all of the other mentally aberrant conditions I have experienced in the last three years, this was a new and horrifying experience. Emotions I would have easily repressed, now boil unchecked. A powerful sadistic current of thought was the start. Then a piece of guilty news, news that made me feel quite bad about having those aggressive feelings was added. An "accident" where an index finger was almost severed followed. Another example occurred along the same lines about a week later, and I went after the thumb. Just as before. Blood. A very bad demon: masochism. The worst.¹⁰⁷ I can assure you, this is the formula: Sadism + Guilt=Masochism. As I read the "A Child is Being Beaten" paper I saw the same.¹⁰⁸ Here Freud was correct. There is however, and I am quite entirely as sure as a philosopher can be, *no innate masochism*. The lifelong masochist must have his personality formed by the addition of guilt probably after or during the anal sadistic period of development, likely an addition from toilet training or later Oedipal guilt. Without the necessary atomic precursor, sadism, which is not present in the newborn, this dread molecule can not be formed so, there is no native erotogenic masochism. The death instinct, Thanatos, is still intact, but masochism will have to wait until the elemental components for its synthesis are available, and that comes only later in development, not as an innate constituent. Thanatos is not aggression, real aggression, aimed at self or the world, is a latecomer who serves Thanatos!¹⁰⁹

So that is my bit of theorizing. Do you "like" it? It's sheer and utter speculation that may be entirely untrue, but since such things are not directly observable, who is to say? I think the theory fits the facts. If it is the same as another theory, I plead true ignorance. I am not able to say that I really *believe* the theory, and that is closer to my point. Only an open mind is in a position to consider the possible. I myself remain unconvinced and uncommitted. What is unknown may be guessed at but still remains an open question. Psychoanalysis theorizes, philosophizes and entertains the possible, guesses at the ether when it must but is guided by the empirical. There is some about which psychoanalysis must theorize and guess, but so much, so very much about which it is sure, even if these known facts may not be agreeable in an aesthetic sense, they have helped and cured many and have demonstrated their worth countless times. So, unappealing and ugly as the facts are, psychoanalysis sees fit to embrace them as true facts. Reality often gives little heed to aesthetics and the dissonant, may well be the truth.

Much to its credit, psychoanalysis has always enjoyed a bad reputation. That is the fate of all those who make truth a public, as well as a private principle. Our times are not so different in this regard than the Victorian era of the late 19th century. Today we are assaulted with every sort of subjective vulgarity which postures as fact. An honest thinker is but a shabby beggar at the table of truth, and seldom gets to choose. Today, sentiments like, "That's my truth," or "I want to see if I like that fact before I buy it," are everywhere. Intellectual integrity is not subjective. It is objective. Facts just are, they are rarely just. Having spent the last three years staring at unconscious processes and unconscious content directly, I am sure of the facts. These structures and these contents fit this illness. I look at the myriad of "feel good" psychological paradigms and I am appalled. This is false. If you are really ill, this will *not* help. Only one picture other than the one I drew myself fit. There were no gods in the unconscious, no morality, no

time, no coping strategies, no higher values. Those are conscious creations. It is put together a certain way and it contains our ugliness. We do not get to choose these things, they are facts, and we beggars are lucky to find them, even if at first they appear distasteful. So after nearly 100 years why is no one talking about these things? I look upon the truth and the intellectual integrity of man and I shudder. I read an article, an accurate article (let us not shoot the messenger) about the "new psychoanalysis" where there is no talk of the Oedipal complex, no unpleasant effort spent on free association and no unpleasant sexual talk. Today, what is pleasant, is what is true.¹¹⁰

With the current infantile attitude where it seems "If we pretend hard enough, our problems will disappear," and "Nothing is true unless it is pleasant," it is clear why pills have replaced insight as the preferred form of treatment. It is also true that few, regardless of education, have any real insight to offer. The pills however, do work, and do be sure that is a good thing, a real improvement in the situation, an immense pharmacological advance, but with limits and severe side-effects, the very cause of both the "real" and the psychoneuroses among them. SSRI drugs have side-effects which *produce* some of the conditions to create neurosis, like impotence or anorgasmia, which functions like coitus interruptus to actually create neurosis. Although the drug may be powerful enough to contain the neurosis to which its side-effects contribute, the neurosis will be very greatly exacerbated by these highly debilitating additional contributing factors during withdrawal. What was a bad condition becomes nearly insurmountable. If you are on high doses of SSRI drugs, do not stop unless you are willing to endure illness, and if you are not on them, do not start unless you want a lifelong habit. You never come all the way back, repression never returns to the way it was. As impressive as the SSRI advance is, it has grave limits and consequences.

Psychoanalysis whether of my new native design or of the original type can *cure* neurosis, and there is never need for another dose increase or new drug to be added to supplement the effect. It *cures* what is treated as a *chronic* affliction today—things like OCD. It has been curing obsessive neurosis and hysteria for nearly 100 years. That, like the nature of the unconscious is an old, long proven fact. So now that we know what we know, what's next?

As I read the texts on various new lines of approach to the problem, I am struck by the petty mutual exclusivity of the various hypotheses. I will see clear implications for unconscious theory while reading a paper on learning models using devices with feedback loops, but the author denies the same by virtue of the same data! Again and again, a victory for the physical medical approach is a loss for the analysts, the "black box" people who have healed so many for so many years.

A cooperative approach is in order! The relationship between active unconscious replacement gratification fantasies and the formation of neurotic symptoms is a fact. I have seen it thousands of times, over and over seen it proven directly. There is no debate. So why don't we all get together? Some scientist with a PET scan machine and a CAT scan machine needs to adopt an analyst and ask him, "What do I look for?" The physical approach yields the pieces, the analyst knows what they are and how they fit together. If we could find the physical evidence, the PET scan image of the unconscious unseen thoughts in the neurotic, these thoughts that have to be there, then we would know. If someone is repressing a replacement gratification, we could see. If they are repressing sadism or masochism, a certain distinct pattern would emerge. The analyst knows what to look for and what it means, the physical specialist knows how to look. Once we begin to cooperate, then Freud's original vision, one of a physically, somatically and neurologically grounded psychology could be realized, then we would know how many angels are on the head of that pin— "Look here! The signature! There is an erotogenic masochistic signature in the newborn mind! Look! This drug doesn't stop neurosis, it only suppresses it, we can see the replacement gratification still operative in the unconscious!" Today we guess, but if we cooperate, tomorrow might be different. Maybe we will all grow a little taller, a little braver and less subjective. Maybe then, we'll be big enough to *know*.

The Rational Obsession (excerpt from *Mind Map* by Rich Norman)

Man's greatest achievements including the behemoth, science, come from man's inhumanity to himself by way of his ability to overcome his instincts, to become objective, slow and necessary in his conclusions, rather than magical and mythical in his explanations and his analysis of causes. Praying to a deity may or may not work to bring rain or victory, but science gets results, an atomic weapon may do the trick! So far we are most reliable when it comes to incinerating things rather than making rain but who knows... I need such thoughts. Why? Because there is something amiss here, something has become detached from itself, man has become inhumane by way of his inhumanity to himself. He has forgotten himself in his worthy self- overcoming, much like his father he has become a disconnected promise. To begin to discuss psychology we will need a victim, and victim is the right word because when practiced with the gloves off psychology is blood sport. So for all to see I will first sacrifice a philosopher, the father of science (who else but a philosopher would dream up such a thing?) our father: Socrates.¹¹¹ Of course he is but one of many candidates, and there are many rational men, but none so perfect as he, a symbol ripe to perfection, and arguably, properly in my view altogether worthy of such an auspicious title as "the father of science" because he has demonstrated it, he has done what was required to tame the beast, distill that which is mythologized emotive farce from "the truth," which is the name of the god in our new monastic order under the title of Science. How do you know, really know something? All he knew is that he didn't. Socrates knew he did not know. That was enough. That is why science is clean, science is sanitary because its foundations are in doubt. This is the test which all things must undergo, science must know—it will not believe. It may be trusted. Instinct has been overcome. Squashed—obliterated in cold light. Rationalism has saved us from our humanity. Whew!

Socrates was himself demonstration of the basic psychological principle which makes this possible. When viewed by a physiognomist who from observing Socrates' distorted ugly face proclaimed him a festering den of monstrous appetites, Socrates proclaimed, "You know me, sir!"¹¹² The diagnosis was a trophy on his wall. Each profane contradiction of instinct within him was more glorious a trophy for its ugliness, because he had overcome them all. Nothing ruled Socrates but his rational mind. He demonstrated the reality of it, he became the possibility before the world, a deed to behold in his magnificent unassailable completion. He ceaselessly engaged in discourse. Continual conversation, debate and introspective thought consumed him, and he fed and was nourished by it; always roaming the streets talking to all and asking questions, never satisfied, like a biting fly on the neck of a stupid animal biting in an effort to keep the beast awake and moving, wondering, asking, pressing, "Are you sure—how do you know?" All his appetites yielded to his crushing intellect which delighted in besting all

comers, the more learned or aristocratic and well-bred the better. He was a star of the intellectual contest...of course, he was Greek: the contest being the ancient Greek way of expression. Their plays were presented in contests and so were their lives on the street and in the better homes in debate with Socrates. He had made his mind, his rationality into something observable in performance, the rational mind as public sport, and so it has been preserved for us today in the writings of Plato and others.

This is our legacy and the curse our father has beset us with, and I mean nothing short of the blackest curse, the curse of his fear, his shame, his need for intellectual cleanliness which was but a lid, a shaming and shadowing in the Jungian sense of all his appetites. This is the presupposition, the abandoning and cursing, the devaluation, shaming and contempt of our feelings and appetites, the hiding and making dormant of instinctual thoughts and feelings—the self-cruelty which makes us trustworthy, makes us valid scientific observers who can distinguish the myth from the actual, this scientific cruelty of man to himself from which our father has seen science born contains both the germ of our genius, and our most tragic error in a single breath! At what cost is our magnificence, our fantastic hyper-developed, hyper-tropic, trustworthy, untrusting, divided, atom-splitting, atom-fusing superiority? Who have we banished in shadow and at what cost? To what psychology have we abandoned ourselves—to whose? What poison is this perfect medicine—this hemlock?

Walking the streets, unkempt, always focused on the subject, on the debate, on the truth or the mental gymnastics, ceaselessly debating and asking, living entirely within the rational struggle, always with his attention here in the moment, in the atom of his rationality rather than his instincts, his cure is a focusing to exclusion, a never looking anywhere but here, remaining as a tight beam of sterile sun so when all the threatening chaotic instincts and appetites call us we can resist, we must never lose focus but remain rational, irrationally rational, obsessively focused, so threatened by ourselves that we become obsessively rational! Here is the "cure," a *religious* cure, a *godly* cure as you will soon see in Chapter 3: *Obsession*, a cure which mistakes beauty for truth, an irrational mistake to be sure—as if ignoring our desires, emotions and feelings has made them disappear and we are now *cured of ourselves* simply to pretend we do not exist! How beautiful a world where all troublesome things would disappear if we simply refused to look! Shame can be beautiful, if misguided.

So let us examine the cure, this obsessive scientific cure with its roots in the cleanliness of unyielding unquenchable doubt, always something to think about, to disprove in doubt and debate, doubt which knows it does not believe, "All I know is that I do not know"—the maxim of this obsession, our obsession: The Rational Obsession. We block our emotions with an obsession, a rational obsession, a continuous doubt, always doubting, being scientific and rational, ALWAYS TRYING TO DISPROVE—the very scientific method itself born as a personal ethos, an obsession, an obsessive doubt! Nothing else could be trusted! Perversity of instinct itself! Neuroticism as a personal credo—obsession! Our

father and we, his children, have inherited both his genius and drunk his hemlock, a questionable brew with many side effects: the rational obsession!

So what of it? Let us doubt it. What "price" comes of this but the heights of knowledge? As age finds us but a brittle twig, so do we know the cost of time's heel as the weight upon our days. For most, life is as I found it before my new understanding, life and time wring us dry, an emptiness results, a dryness and aridity of feeling which is manifested in exhaustion and weariness. Life becomes an impersonation of itself, we act happy, act interested, we impersonate our happiness and do what is required but at an actor's distance, detached and now but an impression of what was once a full genuine event. We are absent, but remember ourselves and imitate. We think, "Perhaps it is better not to have all those messy emotions and the exclusion is for the best." When we murder ourselves, we imagine we see virtue in cowardice! To have no more feelings, no more questions but live without most of ourselves and avoid ourselves is suicide of a sort, the cloud is withheld when it alone can bring relief and rain to the desert. We say we are above it. We mean we are like Socrates, we call our emotions "primitive," we can only stand them as hidden—repressed—unconscious—for a reason: they are disturbing! They do not become us, so we do not become them. Virtue says we reject them! Make no mistake you rationalists, philosophy formed our grotesque, beautiful, rational father and in science he formed us in his image, and so we have inherited his errors and strengths alike. So let us shed the error, the error which had surely led such a man as Socrates who abandoned his feelings as shameful and beneath him to weariness and a welcoming suicide in hemlock. He was too smart not to have known that his countrymen were not to be pushed too far, and so he pushed and they obliged him as he must have known they would. He who was so knowledgeable, so knowing of every intimacy of their thoughts from his endless discussions with them got what he wanted, and they prepared some hemlock for him to end his weariness, his weariness of life from having abandoned his feelings. As death approached a god came to him in a dream and asked Socrates to do something alien to his rational lifestyle and "practice music," which he did—a token of the emotion he had refused, a last chance at some measure of wholeness before the end. Socrates, this snake charmer who made his passions vanish and mesmerized the best and smartest youths of Greece with his ideas lived as he died, so brilliant and insightful as he rationalized his emotions into contempt, that we hardly remember he was slain in the act. His emotions are him, and one who is without appetite for himself, is soon without appetite for life. So the time for ending is ripe and Socrates hears immortality call, summon him to push, and his countrymen oblige and grant him the forum for his immortal apology, and his legend and our inherited "gift" are forever intertwined as he relents and surrenders, summons the hemlock—the hangman is called by he who is too wise and too weary to do otherwise. He drinks the antidote and is relieved of his desert, again and at last, he has deserted himself. And so, Science and Philosophy are both graced with this most beautiful act of martyrdom.¹¹³

So the penalty for living a life separated from ourselves, as if instinct, appetite and feeling were beneath contempt is clear: life becomes empty and dry, arid and inhumane. Socrates was right in saying the unexamined life is not worth living, but ultimately, the un-lived life is not worth examining. So did Socrates himself find it, and I believe him. That having been said I must confess I am grateful for his gift, the rational gift of our hyper-developed scientific intellect. Some develop their mind by way of schooling alone and learn much, mostly about passing tests. I am good at that, but have only a BA in Philosophy. I read on my own. This modest scholarly effort such as it is, is a secondary effect. I am a psychologist and a scientist by way of necessity. Much as a physician is *said* to be unable to heal themselves, I would rather then insist a psychologist is no physician! The model of Freud comes to mind. He solved *his own* neurosis first and had a mole's eye view on the matter. His hands were dirty and so he could be trusted. He knew the neighborhood and took notes. Many had an education like his, a superb education, but none were his equal as psychologists. Why was he "deep"? It's not the degree, Freud was insightful, he was deep, because first he overcame his own pitfalls!—because he spent time in, and could climb out of holes! That is what makes for a knowledge of the depths. Such things are not "certifiable." An education is yet another improvement, but a secondary effect, not the cause by which a psychologist is created. Necessity was Freud's best and first teacher, and she does not give certificates. Her gift is life, or to put it better—she spares only her best students. I am not Freud's equal, but in terms of necessary introspectively observable firsthand inference, time in and out of holes, I am equally credible, for my success is my proof. Repeatable results! It must work so I must be dreadfully scientific, merciless and unsparing before all ugly selves. I can not afford any blind spots, or I may die for the mistake. I withstand the doubt, resist degenerating into neurosis and obsession each day and like Socrates, I am my own proof—I am alive and creative beyond all measure, where I was sick and broken beyond all pity! I use these ideas daily and demonstrate by my very love of life that they are a provable result! I will plainly state that I would be quite dead without them. Now that I wonder no longer, may I put the key into prose and then, might you follow? If I am scientific, and place in these words only what has withstood my worst cleansing doubt, will it work for you too? The scientist is curious and more than a bit proud.

Thanks to my intellect and an unforgiving teacher, I have come to enjoy solving my riddles, analyzing the symbols and being full in this game of creation and psychology which hunts itself! Blood sport! So now with our intellect, our Scientific inheritance and unwillingness to believe, knowing fact from myth, can we now afford it, can we reunite with our emotions, our repressed feelings without mistaking myth and magic for fact, to discover that emotion powers intellect, and we have withheld the fuel, the vital ingredient and wonder, having imagined the gas tank not to be part of the car why we are neurotic, sputtering in doubt with a few bursts and starts, lurching forward half sick and starved? We have no fuel and are perplexed, "Why is the car so unwell?" We must fire the mechanic!

Of course the cost is enormous to reunite with such things, once they are withheld and accumulate they become a huge drowning tide which makes us weak to withhold its force, always shedding and spending energy clenching, clenching against knowing, but must continue to withhold or it will burst and drown us so: look here and not there, just march—the way to the desert seems inevitable, after all, look at the cost! Next a reprint from *This New Day* showing why our abusive father resisted himself and feared himself enough to shame such things and prescribe a stiff obsessive blow to the head as a remedy. The price I paid to defy him and know, was to have my personality atomized, as a puddle smacked from above, swatted into mist before the sun so I could see the prism plainly yield its colors and observe what was released, and what the parts did as I put them together again. Such a cloud as this is required if the desert is to bloom, where shame has squandered us.

Phylogenetic Note

This interesting observation finds its way into an appendix listing rather than the main text, because although demonstrable, and from an earlier formative period in human history, the phylogenetic component is not a necessary part of the cure. Symptoms can be relieved and their energies reclaimed to healthy result without this information, which likewise, has no effect on symptom formation once known. Chronologically primary in human development, the phylogenetic component is active as the contributor of the primary point of tension in the symptom, in that the trend which opposes it in conjunction creates the symptom proper. Phylogenetic analysis: As the back pain which so often had become part of my post SSRI withdrawal symptomatology became more and more intense, I would be forced to stop whatever activity I was doing, slow my walking and stoop in pain until eventually forced into a squatting position. This has many counterparts, there are many such examples of this frequent occurrence. This squat which the pain forced me into, is undoubtedly the position of defecation from earlier times, the answer to the fixation spelled out in example one, the phylogenetic command to release, to defecate. The fixation says, "Hold the bowels at all costs," the phylogenetic resource forces me into the defecation position as if to say, "Stop whatever you are doing and defecate." That is the phylogenetic command. I was forced to obey the command by way of the symptom. The neurosis and the phylogenetic are in tension.

Overall there were many instances of this symptom, this back pain with this signature and generally, psychoanalytically, the same is now used in allegory and analogy, now thoughts are withheld instead of feces and to that end the ego invokes the primary anxiety of the first impressions of shame, the first manifestations of this tension. The guilty shame and anxiety is used to keep the returning thoughts unconscious. This is all in response to the lack of normal repression from withdrawal—repression is supplemented and replaced by symptoms.

Note how the same two conflicting impulses present in the phylogenetic analysis (the wish to defecate and the punitive fixated wish to withhold) can both be observed in the hysterical innervation itself and how this fits the classical psychoanalytical interpretation of just such an hysterical innervation which is typical of conversion hysteria. The wishful impulse to defecate is clearly evidenced in the soiled underwear, which has now also become the symbol of the opposite punitive impulse par excellence: the primary symbolic representative of guilty shame. The symptom is thusly a tension supported at both ends, and so, relies only half as much on repression (the punitive) and is therefore presupposed from an economic perspective, as the repressive facility has been so drastically curtailed.

Now that you have read the "Engine of Creation" and know of it, I will sharpen this picture, so mythically drawn and let you into, inside of my ordeal, my trial by endurance which permitted this transformation whereby I am now more creative, having both endured it and recorded it all, taken notes, careful notes, and understood it. As I would lose the ability to repress I would go through a cycle. Sometimes five or more times a day, other times I would cycle only every few days remaining "in the engine" the whole time, when things were at their worst. The approach of the emergence of repressed material was *often* accompanied by a terrible smell I alone could smell, the foulest odor of feces and decay like a dead animal, a dog discovered in the summer. The odor of feces was predominant, an olfactory hallucination—the stench of shame. *Every time* the cycle included unbearable anxiety before the repressed material was released, an anxiety which caused me to vocalize and suffer deeply. The feeling was intolerable, the thoughts the anxiety raised are a repelling, a warning and a fear of heightened proportion which insist: "Look away! Do not think this! No! No! This hurts too much! Too much pain!—Do not allow this! Stop this!" This anxiety was the last ego defense against releasing unconscious ego destructive repressed material, the ego's last stand, anxiety is the "lid on the engine," it works like a static electric, or electromagnetic charge, a barrier and defense all but impenetrable in its force and repellent gravity. Anxiety is the ego's defense against ego dystonic repressed material. Anxiety is the lid on hell. Once the barrier was breached, I would "drop into the engine," into the world of my repressed thoughts as described in the "Engine of Creation" chapter. At once one is compelled to empathize with a myriad of unbelievable fantasies. The ego is still alive in me and now must see! I will discuss the nature of these fantasies, their purpose, genesis and relationships to each other next, but first we must see how I survived it to become what I am, and how I could "take notes" during the process.

Is the ego destroyed here? Does a core of coherency, what I will call "the self," remain? How? Everything the ego can not be, everything which opposes it now consumes it. I dissociate myself into an "it" even to speak of it! I see myself cringe at my happiness even now, and so I laugh at me to unmask the defense! I have become a psychologist! How? From this filth? From these hideous things? Yes! Freud was wise when he noticed that in neurosis of which we all have our share, our "conscience"—the values we have learned—the superego—does not distinguish between a wish and an act. We are our own thought police and feel nearly as guilty from a thought about an act, a wish, as we would if we had actually committed the act and really *done* a terrible thing. To *think* it is equally forbidden! This is the basis for much of our morality and we pay dearly for this obscene error, and it is this, the teeth of conscience which are obscene, not our thoughts. The act of judgment produces obscenity where there is none! When we judge a thought we place the chains of a terrible guilt upon a ghost, a nonentity, a thought! To embrace the ugly sights in the engine is to become a criminal, a psychopath and a sociopath. To do these things is to become immoral. Morality and immorality are identical but repellent for

different reasons, as are a photograph and its negative. Perhaps immorality is the worse evil but morality is a lie nonetheless. Can we undo this imaginary deed? Is there a-moral here? Yes there is, and oh how in our morality we have ob-seen ourselves, where we were only thoughts!

Upon taking an amoral stance, a non-judgmental stance and approach to the sights and thoughts which would have my attention no matter what resistance I tried to offer, I was able to see it all and understand it—understand why I was this way and *needed* to be. I had been an idealist of sorts, a moral idealist (is there another kind?) and now I had been forced to understand the truth of it, made to look and so had no choice but to become able. Engine material, repressed unconscious material, is ego dystonic, ego destructive only if it is dissonant, if it contradicts the ego. What if the idea of a contradictory analysis itself was an error? Might the cognitive dissonance be removed? Anxiety defends us from the sight and knowledge of dissonant things, guilt being chief among them. Even if we understand why, we feel guilty when we hate what we also love, a contradictory thought when we feel what we should not. A contradictory thought? How absurd! A wish, a thought is of no real consequence and so is very distinct from an act, which should bear the full guilty weight and crippling measure of conscience, as an act has a real consequence. Here we would do well to imitate the early Greek system of justice where consequence and deed alone were considered as basis for judgment, intention and thought were a guiltless matter.¹²³ So if I have these thoughts, why should I be troubled, why should they be dissonant to me, they are of no guilty consequence, and so, why do they produce guilt? The result of this non-contradictory analysis, this amoral insight, was immediate and profound. I could stand it, stand to see the repressed fantasies, thoughts and hurts, and stopped judging. I started wondering, why did I see what I saw, these "guiltless" thoughts must exist for a reason.

.....Another unforeseen result, a tragic wonder both dubious and bright is responsible for the creation of this book. This "seeing of the engine" was a rape of sorts, a spiritual, psychological, magical rape where I could not resist my tormentor, and so found I loved him, and was him. But this is no Stockholm Syndrome, this is the strange precious poison which has taught me the lesson. Can you learn it without the violence, the poisoning and withdrawal I suffered to accomplish my new happiness? Can you have the benefit without the side effects of my understanding?

When in "the cycle" I learned the amoral lesson. Here is how that lesson might be pictured. The way I learned it is ugly but the result is beautiful. I was taught by necessity. I had no choice. Like a rape victim my responses adapted, changing forever. Imagine being assaulted by a rapist who was too powerful to refuse. If you close up and resist the abuse, the damage to your body will be severe at best, you will be torn to pieces and die very badly indeed. If you open up and submit, the damage to your body will be less—it will be survivable. The tree snaps in the wind, but the reed bends. Likewise I learned if I were to avoid going mad I would have to do the same: open up to all thoughts and look, do not shame, resist or close the mind with judgment, only look and open up before all thoughts or be destroyed and driven insane. The open amoral mind is necessarily free from presuppositions and ideals. It only considers, never judges and so survives by not resisting. The loss of our ideals and an open unrepressed mind benefit us with greater intelligence and mental flexibility, along with an enormous increase in vitality, creativity and an indescribable improvement in the qualitative experience of the present. The rape victim is grateful! I have learned a new "emotional posture" we will consider later, as well as how it can be obtained and maintained to turn "the neurotic" into "the creative." Perhaps you might share in my happiness? But the question must be fleshed out before the answer, so more psychological topography by way of magical rite is in store first, and that is very questionable indeed! Only the brave are foolish enough to question themselves and look at the answer. It is no coincidence the brave often blush, but may then honestly count themselves among the lucky.

In like fashion I have seen the soul withdrawn, the wellspring of beauty destroyed, stopped and sickened. Sexual shame changes the very appearance of the world. When we are ashamed we withhold the magic—once shamed we do not trust ourselves. Nothing looks right, everything is an ugly two dimensional imitation. Now cut off from all of life's bounty, the world looks threatening, ugly, empty, false, flat, dry, cruel and covered in sores and rotten hollows, the earth smells bad and it is as if small fish bones are lodged deep in the substance of all things. The world I create can not be trusted, because I do not trust myself. This is what happens when we stem the tide and poison ourselves with morality—shame.

What can be learned from this misadventure I was so fortunate to have, laying the source of beauty bare before me in all its "ugliness," but already you can tell that ugliness is in the eye of the beholder as is her sister beauty, which both reside here in this same truth. So who decides what is what? Let us speak of hope and ask it clearly. If we are omnisexual, then everything is possible. So, our hopeful question follows: "If everything is possible, who decides what is desirable?"

Understand that this is not an endorsement of the polymorphous perverse. What we have seen is the mechanism by which the world becomes beautiful. *We* make what is beautiful, beautiful, what of our goals is attractive, what of our surroundings, our friends, our selves, our lovers, our sunsets, our cityscapes, our ambitions and all the rest alike are beautified with this same internal alchemy, this sexual magic by virtue of which we pour our sexuality into our perception of the world and it becomes beautiful. All of beauty incorporates such a transformation, and man is a super-sexual tide harnessed, released and withheld under the reins of personality. Personality alone is the supreme arbiter of sexuality as it is manifested in deeds, the rest is an undercurrent which bestows all of beauty and substance, seduction and allure into the world, or if shamed and withheld as undesirable by personality, makes it dry, hideous and stinking, putrid, threatening, mean and unrewarding. To alter one's relationship to sexuality changes the entire character of the world. In an act of "rational magic" I have watched the amoral understanding remove the guilty contradictions, lift my shame, and allow a refused, repressed, shamed desire to now be known easily in consciousness without conflict, and suddenly behold the world become full, colorful and beautiful in the very instant of self-acceptance! Personality is the glad master of all sexual possibility, and we must look here, to personality, to solve almost all conflicts within ourselves, our sexuality, as well as in our relationship with, and perception of the world.

Now that we know everything is possible, we have the innate ability to endow any goal, any love, any possibility with allure and vitality, self-seduction of the highest order or self-annihilation and world-demonizing shame are personalities alone to wield as we see fit, we are in a hopeful position indeed! Personality may be crowned regent, both rightful arbiter of all physically expressed sexuality, and then

also able to withhold or endow the remaining portion of sexuality into the world—and so it is! All is possible, and *we* decide what is desirable, ergo: we have reason for all and every hope!

Example of a basic analysis of the upper structures of personality (excerpt from *Mind Map* by Rich Norman)

Here is an example I assembled for someone of the sort where the upper layers of the personality conflicts are clearly stated. This becomes doubly necessary to place the repressed material in a firm context to make health out of the recovered material, rather than more misery: First consider the case of a boy with a selfish, disapproving, conditional father. The boy craves the acceptance of the father. Erikson has noted how a need which is unmet in childhood can often find its completion if it is met in another way in adulthood. With this in mind you can see a neutral possibility emerge as the boy becomes a homosexual as an adult, in an attempt to meet this need for acceptance. Everything is possible. It is the presence or absence of fixation and its grotesque signature which invalidate or validate our decisions. Unfortunately in this case the father is highly possessive of the mother and displays great jealousy toward the closeness of the mother-son bond. This family dynamic creates a doubly strong punitive Oedipal taboo which makes the mother off-limits and places a huge overwhelming guilt upon the boy's Oedipal wishes which become deeply repressed. The result is a dissonance which presupposes homosexuality because it offers the craved intimacy with the father that is lacking and resolves the hyper-dissonant Oedipal taboo. The repressed Oedipal wishes and the associated guilt raise the feeling that the punitive father is both desired as an object of affection and approval, as well as desired as a punisher to answer and purge repressed Oedipal guilt feelings. Add to this the additional guilt from our society's homosexual taboo along with guilt resulting from hostile repressed feelings about the father and the qualitative part of the recipe for neurosis spelled out in psychoanalysis is sure: ego and libido are in conflict.

So the years pass and no stable relationship ensues. His basic need remains unfulfilled and comes to express itself as a desire to be with men who disapprove of him, then finds after a slow build-up of events that he is only satisfied to have sex with a sadist, one who shames to love, a gross caricature of the father's initial rejection, a sadist—one who finds him irresistible although he hates him. Now the father's traits as rejector *and* giver of acceptance are exaggerated and mixed together as the receiving of punishment, and acceptance as irresistibility, become satisfaction. This becomes the supreme object of desire, to be irresistible to one who hates him, here satisfaction has found its object in the grotesque caricature of a fixated desire to gain a disapproving father's love. Now only one thing will do: to be irresistible to one who hates him—to be loved by a punisher. The signature of fixation is obvious.

.....So the last thing you need to know is this: Our illnesses are trying to help us. They contain a desire which is satisfied, or a wish which is fulfilled, or a shielding of our tender heart and however sick symptoms of mental illness make us, they are the mind's misguided instinctual attempt to strengthen and defend. To solve the riddle, we must see what the sickness does *for* us. Why do we *need* it? Once the puzzle is solved, the symptoms disappear instantly! Only the right answer works so we can prove the scientific integrity of the analysis by its clearly demonstrable instrumental value. I am my own proof. If these ideas did not work, I would be dead.

Can you solve this? This first instance is typical of the sort of eruption which plagued the recovery period from the engine ordeal. Once the ability to repress was removed my mind mobilized other primitive destructive defenses to supplant and supplement the severely weakened ability to repress. This instance of a paranoid obsessive neurosis resulted: I have finished authoring a string of aphorisms to go in my new book. I am suddenly gripped by a horrifying thought which feels as if it has been thrown straight down into my mind, a solid terror, a certain shame and knowledge overtakes me all at once, like a bucket of hot lead dropped into my soul I am suddenly sure, I am Lao Tsu, the ancient Tao master whose works are legendary as the best and purest of eastern thought. I have never read or owned any of his work, and know but one aphorism of his but he is in me, he is me and so, I am a fake! I have not written my aphorisms, he has, I am a fraud and Lao Tsu has possessed me! I am an atheist but can not refuse this knowledge and am tortured to know it— I am a fraud, Lao Tsu! I must check—the internet—the library—I must know at once! The obsession insists and it must be known, I must find out if my work is stolen and false—a theft from the unknown pages of Lao Tsu! It must be! I must know at once!! I am a crystal goblet before Ella Fitzgerald and the feedback loop, the out of control obsessive thoughts loop faster and faster and I must understand this symbol or perish! I moan aloud in pain and begin to lose the last of my ego integrity. Very, very painful! The train accelerates to breakneck speed rattling itself to pieces and approaches the last sharp curve. Can you solve it? Why do I think this? Please put the book down and try. Hey, don't cheat! Put it down!

This incident is closely related to many which follow a similar pattern, and contain the same basic wish. I am insecure about my writing and present symptoms of introjection as if I am possessed by the ghost of a known genius, and question if I am a fake. Actually, I reassure myself to imagine my works are composed by such a genius, this sure spirit of genius, Lao Tsu, and give myself a bit of healing praise to imagine it. If they can be mistaken for the works of Lao Tsu, surely my aphorisms are worthy! In an inversion, "I am a fake," becomes praise as the obsession is followed through and the authenticity of my work is checked and then confirmed. In this way the compulsion to check adds validity, further validation to my work as none of the aphorisms are revealed to be Lao Tsu's, so the obsession offers this

way to be relieved and reinforced as I discover my works are good enough for me to question if they were written by the spirit of an ancient master, but are proven original, and hence of the highest value. The doubt of authentic authorship becomes an inversion which offers praise for the authenticity it appears to doubt. I am served and assured by the compulsion to research each phrase and discover, "prove" by this obsessive ritual non-logic that I am original and worthy as each work is cleared as being my own. The obsession answers my insecurity about my work. This is the wish fulfilled, the ego strengthening provided by the paranoid obsessive neurotic ideation.²⁰ The fantasy provides me with this, although the cost it extracts is greater than the good it does. Upon seeing how I was just soothing myself, soothing my insecurity about my writing I blushed to know what I had been pulling on myself, began to laugh and cry simultaneously and was well to feel the pain of my real insecurity, a slight pain, the pain which the fantasy protected me from and answered, replace the destructive paranoid defense.

Here is another along the same lines which will be easier: I have entered a prestigious literary competition and awake in the night with a cramp in my gut to know, with certainty, I am absolutely sure that someone who detests my book, one of the professors who judges the competition has moved the corrective stickers used to remove typographical errors in my book so as to alter and desecrate the text, assuring that the next judge to read it will fail it out of the competition! I can not win! I have been stolen from! The cascade becomes obsessive and escalates to a fury and I cry out in horror and my wife wakes up. I must walk in the night! I am going mad to know it! I can do nothing to stop the injustice, I feel him looking at the text and finding a really strong section and making it into nonsense by moving the stickers! I am helpless! I am being cheated!.....

.....The interpretation is similar in one respect: that I give myself praise to imagine I am being looked at as a worthy author, good enough to threaten and offend a professor and judge who takes me seriously enough to sabotage my work. But I also give myself an excuse to ease the pain when I lose the competition. I can tell myself, "He moved the stickers and ruined the text. I lost because I was sabotaged, not because I was undeserving of the win." To be cheated is to reserve the possibility that you deserve victory. So the paranoid contains a wish. *Paranoia is part fear and part flattery*. As I walked around in the dark, gripped by the sickness and then to see it, to understand I was too tender to lose, I needed to know they were considering me seriously and that it was not my fault if I lost. I was insecure, not privy to the true thoughts in some judge's head. Again embarrassment, a blush and tears accompanied the instantaneous collapse of the panic attack once the obsessive symbol was unriddled and its purpose, the thoughts and feelings it creates which I *need*, and those it *blocks*, were plainly uncovered. Once the meaning of the obsession is understood the symptoms vanish instantaneously! Repeatable lifesaving results.

I will surrender one more example which will be solvable most easily for those who have read *This New Day*, although enough information has been presented here to solve the puzzle for more astute readers. Look carefully at this strange inverse way of thinking, this unnatural skill which is so essential to maintaining our ascending course. Remember: this is a way of thinking, a method of looking through to the motivation which must be applied to all aspects of life and living—*our deeds are but symbols of our motivations*.

I am having a fine day until I discover that a bag of groceries has been carelessly laid aside and allowed to get wet, left unattended, never put away and forgotten, its contents have been exposed overnight. I am hysterical out of all proportion, I can not believe that these beautiful vegetables and fruits, so swollen and perfect in their season of highest bounty and health, so tenderly nurtured with such effort, love and caring have been left to rot like a piece of garbage! All which life has offered in them, so healthful and perfect, so tender and precious has been abandoned, disregarded and left as if it were just shit! Filth!! To rot, to stink and molder, to be scraped into a stinking pile to decay! This is nothing but a criminal act! I can not bear the thought! The crime is enormous! Unforgivable! The waste of all which is most hard won and precious! All that is good, nourishing and wholesome born at the very highest cost and brought to perfect flower and fruit, now shamelessly wasted as filth! I am enraged and wounded to see such a thing! Unbearable! I am going mad and believe I will burst to feel it further! Tick tock tick... What does it mean?

Once again the whole painful irrational obsession collapses into nothing as I understand it. This time no blush, just simple anguish as I weep to feel the full weight of the feelings blocked by the obsessive symbol. The obsession is again a symbol of the feelings it protects against. The groceries symbolize my failed career. From age six to forty-two I had one desire and drive deeply reinforced numerous times in many successful performances: I wished only to play and perform music above all other things. I single-mindedly sacrificed all of myself to the obsession, the god of music and the crowd, the fixation which led to three nervous collapses—and then seeing the engine!—before I had detached to begin reclaiming music for myself apart from the breakdowns and "the other." I wept bitter anguished tears to know what of my bounty, my health, mind and self I had burned upon this alter, never to know again but in sorrow and loss. How dearly I had paid to give sacrifice to this false fixated god—The Crowd. My music is represented by the groceries, so beautiful and nurtured at such enormous cost, so perfect and unappreciated, and I wept to know the pain directly, the pain which the obsession had defended me from. Compared to the pain and obsessive agony of the defense, the real anguish, my real pain, was a sweet nectar. The most gracious of all tears which can be shed are those from your highest pain. These are the tears which once born become the river of our happiness. Only our highest pain could hide such a thing. Once we are no longer hostage to our pain, paying out our ransom, our energy and efforts spent to withhold it, might we discover that pain is another fullness, and with it passing through us will we then

know that we are the contractions, the agony and suffering we have refused? Might we know ourselves again and discover, that all of beauty sleeps, neglected and hidden, beneath a banished tear?

Here is an interesting question, which as I understand it is no longer a question but a certainty, as I have personally observed it, but every scientist knows that even the most empirically inclined witness gives a well-informed guess from his perceptions, and all eyewitness testimony is suspect. Perhaps a test of neurochemistry and glandular responses in various mental states is in order should the means exist. First I will ask the question, then explain the answer, the evolutionary layer which has reinforced and had an unseen hand in shaping the shape and relation, the topography of the mind's construction.

Question: Is there a biological, a biochemical underpinning, a physical reason why repressed unconscious material is expressed as what I call "super-sexualized fantasies"—fantasies which contain the sexualizing of other activities, and sexual expression of hidden wishes, some sexual some not, and large among these our super-sexualized *defensive fantasies*?—furthermore— Is there a biological reflection, a physical component to the previously mentioned beautification of the world as we unconsciously release our sexuality into experience, and a similar biological component to the above noted instance of “rational magic” where the whole of experience is instantly beautified by way of the conscious sublimation of the sexual energy that was bound in previously repressed wishes which are now freed from guilt through amoral non-contradictory analysis? Is it coincidence that we are defended by, *and* beautified by, sexuality? Is it a coincidence that beauty gives us pleasure? Is there a biophysical reason?

The brain is part of an electrochemical system. Thought is just chemistry and chemistry is thought. However the means, we see neurons re-polarize and release chemicals and glands activate in response, whether by changing our thought processes or taking a pill, when neurochemistry changes our world changes alongside it. When it comes to neurochemistry and thought, one is the other, and the other is one. Of course once the pill is removed or tolerance develops the effect is gone and we need more, or we can change how we think for a more permanent fix. If we think differently we feel differently and this is reflected in brain chemistry. A chemical reflection of the soul of man.

Man represses his pain. His fantasies defend him. They are sexualized. Why? Man feels pleasure from sexuality by way of his most basic wiring. When we are threatened by a thought we need to respond to the pain and we call upon the ancient chemistry of the brain stem to help us. The fantasy may be the answer to the hurt we repress underneath, and its sexuality may be a component of a wish coming from the hurt *or not*, but sexuality does in either case serve a more basic purpose: it adjusts brain chemistry with endorphins and dopamine etc. generated by the automatic sexual responses embedded in the brain stem. We answer our pain with an anesthetic adjustment in brain chemistry. This is why all painful

things which are repressed are defended by fantasies which are sexualized—it's so we can handle them! If we must see or be threatened, let us be anesthetized. We adjust brain chemistry with sexuality to help handle this threatening painful stimulus. This is one of many more psychological layers, but a sure one, or so I have seen. Likewise I theorize that a masochist is served, his behavior and the shape of his guilty repressed personality reinforced by his pain and the endorphins it generates alongside his sexuality which does the same. Addiction? His relief is real even if temporary, and its cause both physical and psychological in origin. Do not make this principle a dogma, or a reductionism, many such components exist and this is but one, if a primary one. A sadist is also served to release his frustration and helped to bear up to his repressed feelings of impotence in his sadistic psychological inversion of powerlessness for power, and is also served and his behavior and personality reinforced in its shape by the sexual component of his fantasies which change his brain chemistry with the release of chemicals from his sexual hardwiring. This is the pharmacologically effective part of how he responds to his painful feelings of inadequacy and frustration with his aberrant fixated response. Many sick ways of thinking may also be anesthetically effective, biochemically active and reinforced by this response.

So it follows that this biochemical reflection also accompanies our ontological immersion of all unrealized but unrepressed sexuality into the world instead of into specific wishes and acts. This sexualizing of the world also works to change brain chemistry with a sexual component, a natural antidepressant effect, a pleasurable effect from the innate sexualizing of experience once the primal energies are unrepressed and available to be sublimated. Beauty has a biochemical component—sexuality. Every modern day psychiatrist with a prescription pad knows: With our brain chemistry properly adjusted our world is an invitation to health, and the intellect sings! Even those who do not know it themselves, have heard the legend.

So now we stand before the next question. How do we create him, this Socrates who embraces himself and releases, he who is filled and energized by every emotion which all emerge for him in mass as he becomes amoral and free from the need to withhold his thoughts, and so liberates and uses the energy he used to spend clenching against what he already knows, to harvest his primal energies and power his happiness and his mind, now fueled and alive, together at last, wired together properly at last, now able to use all he refused? May our emotive rationalist see that the world is beautiful and perfect as he can imagine it, an inviting puzzle laden with every energy he does not become, his life invites him to interest and is graced with the fullness of his inner world as well as its outer reflections—his worlds become him and he becomes his worlds. The world is only a thought, a perception which may be made beautiful, as is our inner world just a thought, a perception which is subject to this same "rational magic," and now the intellect too is energized and fueled to capacity no longer starved of its fuel: emotion and every other sexual and primal energy. The mind and heart are full like a windsock in an airborne current of emotion, and the motion of feeling and the thought it powers are our happiness, so over-full, burgeoning and flush

with the burden of such happiness that it must create, must spill over and become itself outside of itself, to see and become again and laugh in the moment of creation, a cackle to tease all weary things which have fled in this moment so cherished and double sweet, stolen from beneath the pouting lips of time herself. So does each moment present itself as a perfect prize, ripe and hued beyond description as a prism of our happiness. So should thought, the world of ideas and all ascending things call to every man.

If not every man, then perhaps for us? Let us see, how may we turn the neurotic into the creative, incarnate the super-energized passions and all thoughts under our winter understanding, our Socratic evolutionary legacy. What might happen if in Winter, we found Spring?²¹

I have had a task in reverse engineering writing this book, so I wonder, can I guess more? I do not know and will admit that here. I am guessing and must confess I need a physician, not to treat me because I have already found what every physician lacks according to the old saying, I have healed myself! All humor aside, a caring tender hand, one most unlike mine will be required, one who heals is needed to try out these next ideas and further my efforts. Another path to the end, one not fraught with the sickness and pitfalls is needed. Perhaps you are the physician best suited to attend your own case, so I will present some questionable guesses in a moment, a few thought experiments which may work to achieve some measure of the cure without the poisonous effects. First a bit more need be said before I put the weapon in your tender charge.

These exercises seek to reconnect you with your "primitive," "spiritual," and creative instincts and your primal repressed energies which fuel thought and free us, *if* we are free from fixated patterns which result from mishandling those energies. The idea that these forces, which are just thoughts, are forbidden, primitive or at worst even "spiritual," is an insult of the highest order to a rationalist! Spiritual! Yes! Spirituality is the language, the mode of most common presentation of the "soul," of our inner world. It is in mistaking the symbol, the word in this language for reality, that the error is born. The language, spiritual ideation, is but a symbol of our inner reality, as languages are, and is not to be an object of derision but should be embraced, as it is part of our human language of feeling. It is how we first know things we are not yet ready to see in plain daylight: we symbolize. A necessary defense for our frail rationality, our ego, an introduction at a distance. How useful! A puzzle we need! How irrational to reject any puzzle which holds such a secret! Let us celebrate the unraveling and knowing instead!

All our energies might be held before the conscious mind easily and without contradiction or discord by way of our non-contradictory analysis and the open emotional posture which I will discuss. If successful this will reduce repression. Without the contradiction, the guilt from thoughts, why repress?—the defense is no longer needed. The open emotional posture will pierce the veil and reduce it, free repressed material and energies to be reincorporated into self. A secondary result of this reduction in the repressive

facility will be a lessening in the active repressive effect the unconscious has on daily experience which I mentioned in the *Obsession* chapter reprinted here from *This New Day*. I will call this attribute "The Active Unconscious"—an attribute of the unconscious, of repression, whereby the intensity of life experience is increased and all things then felt with greater intensity as repression is decreased. This is a defensive aspect of the unconscious repressive ability to mute experience *as we experience it* so we perceive only the tip of the iceberg, a protective real-time defensive dulling—a repressing of the intensity of experience and our reactions to it, as an unconscious feature apart from the unconscious being a simple passive storehouse of repressed memories and feelings, but also a real-time filtering and limiting of the intensity of experience which is not passive but an *active* real-time facility: "*The Active Unconscious*." This muting of experience is reduced as our mind opens up. If you need, want and desire an intensifying of experience, a returning to sensitivity more akin to youth with its bruised happiness and over rich colors of feeling, then this is an asset. I would also caution that to whom turning up the volume on life's intensity knob, those to whom becoming re-sensitized and more emotive as in youth would be a furthering of an oversensitivity and instability—a push in the wrong direction: do not do this!

So if life has left your heart empty and your world dusted and dull and you decide you need you again, I wonder...? But first a quick look at the poor fellow we are trying to help, and believe me we need not pity him, because he is but a few wires plugged backward distant from his emotive rational creative counterpart. The two are really all but identical. The neurotic travels in circles in his head, and he is terribly industrious in his worry and attempts to solve his problems through the voodoo of neurosis, where we try in symbol to remedy a problem in the world, as Freud rightly noticed.²² Round and round he goes as he blocks his other feelings and sublimates them to supplement his endless angst as he looks only at the symbol. He puts in a lot of miles, but all in a circle. If the loop were laid end to end in a straight line, an ascending line where like his neurotic brother he would question all his assumptions, ideals and convictions with his active mind, but question all things creatively and become happy to know his errors and change them rather than hide them and block, to his delight and fullness would he climb the ladder of his questioning thoughts, not in repetition but in ascension, and find his happiness in discovering the truths which before he wished only to hide? You see? The neurotic's heart is in the right place but his efforts are poorly targeted.

The instinct which has gone astray as the neurotic tries to preserve himself is what I call "the clench." Freud may say anal retentive, and the analogy fits, we clench to withhold. The object of our withholding, the withholding of pain, sexuality and emotions, may or may not have its origins here in this sacred place, the sacred potty chamber of Freudian folklore, but the model fits. If not a cause, holding your bowels is an aspect or symbol of the same behavior, if not a defining moment. When we experience a painful event we try never to think of it. We clench. When we want to cry we have learned in our American culture never to show it or even worse to do it—to weep! Never do it—clench! Clench in rage

which shames itself and so will not shame itself by being seen—refuse yourself, refuse your pain at all costs—clench and survive by withholding at all times—refuse yourself and clench! A reflex toward stupidity!

Withholding tears is unnatural and just plain bad for you. One heals from emotional wounds very slowly if at all when tears are withheld. For me, two years of grief became twenty or more. A bad evolutionary move on account of rejecting emotional release and a healthy facility of healing, and in rejecting our energies we reject that which give all tenderness to the world we suffer! Pain is another fullness! Reinvent pain and allow it to flow ceaselessly through you and be cleansed! Once the tide has reclaimed the shore, it is washed silent, the pain has spoken, passed, and nothing was withheld, now every grain of sand listens and only the wind asks a shore white as milk flecked in pale brass sun a perfect question: ... "What is next?"

So—since pain and tears are what we repress, and our defensive fantasies act like a fish scale, a protective shingle composed of rage and defensive empowerment which serve to answer, supplement, defend and protect the wound, can we lift the fish scale, the shingle, and access the painful memory, release it, feel the wound completely and know it plainly to welcome it free from our judgment and gladly own it, reclaim this banished bit of ourselves so the need for the defensive fantasies and their obsessive blockade of feeling would vanish as would the banished pain which summoned them? If we stopped summoning the monster perhaps it would not come? If we understood and felt the pain and no longer needed it defended, the defense, the fantasies should collapse like any other defensive obsession, should they not?

Furthermore, since such painful repressed moments are often the events around which a kink in personality, a fixation, is formed, may we free ourselves and our steps from the hidden gravity of fixation and the past which fixes our steps stitched fast to our misery, now free, no longer entranced, no longer predestined to be walking forever in a circle, and expecting hope around the corner?

Lastly I have noticed how the creative emotional posture may be obtained, this new habit I learned from my "magical rape" which has caused such a rise in creative endeavor and the fullness of life, my "orchid which blooms to winter's field." The creative emotional posture is the holding one's self open to the repressed, an open mental permission, an inviting and holding one's self open rather than clenching, not a neutral response as it will soon become but now, for a year or two an active reversal of the clenching habit. Since we repress our pain that means an open mind, not obsessive searching and picking, but an inviting, easy, wishful, hoping mind, *toward our pain!* You need not see it all—you can't—it's too well defended! Whew!

Experiment #1— Choose a moment you often refuse and always look away from. We repress our pain so let us feel what the open emotional posture feels like, not to repress, let us invite our pain and allow it

through. Open up before your hurt and let it become your thoughts and feelings—resist nothing and open the porthole, invite, never judge or seek, just accept and let it through you, feel it, inhale the air, see the images and taste the scent of your sad salt tears which will fill you with their loss and hurt, and know you are the contractions, the self so deeply refused, too wounded to know, too bloody. Now taste your pain, feel the contractions fill you with the you you refused to know, too injured to love and accept until now. Welcome yourself into yourself again and know how it hurts, how you hurt. Open yourself and allow the tide of your sadness and your weeping to pour through and become a fullness, an energy, a cleansing tide from above and below as you welcome yourself into and through your dry world where all pain is a cloud to burst, to storm in its contractions, the black cloud of your highest pain contains the forbidden sweetness of your happiness, if only you would let it burst! Once you have allowed yourself to feel the pain again, and it has bled its storm's tender violence through you, *keep what you have learned, and never close yourself to yourself again!* Behold! Now unresisting and open, the creative emotional posture which allows sadness its due voice and so invites happiness and beauty as well! Once drained of tears might we be forever open and at peace with our hundred selves, full and too alive, complete and overflowing to at last know the secret?

Experiment #2— In this experiment we will own the right to our feelings and redefine our relationship to a past painful experience, and in so doing become strong enough to release our pain and free ourselves from a fixation by reclaiming a lost self, a banished pain. Pick a moment where your feelings were hurt, one which wants to run away, far away, one which has hurt you and left a kink, but be open, love it and let it near you. Listen tenderly and it will happen, you can imagine it at first, hear it whisper to you, a terrible thing, too terrible and then you do the impossible and relax into it and surrender, open and forget yourself and then you are there—in the thing, the day itself, the terrible night! It is real and happening now! No drama, it is real, *really* happening again and you are that person as you have always been! Did you know that? You have been trapped here! So now you have another chance, the thing is here in your hands so speak to it, speak to him or it or her—answer the monster, strangle it, tell it aloud, show it, revenge yourself upon it to your full measure of satisfaction! Shout, howl, punish and destroy the hurt with action against it, tell the thing, do to the thing, say to it whatever or whoever it is, state yourself aloud in tears shed and rage now formed solid and right as you were once incomplete, you deserve to be heard, deserve to set this right and strike out at it in rage, and then to *weep for the pain it has left within you!* In tears and a black oath may you be formed! As you were once incomplete be now complete, be this lost you, defend and earn this you now inside you, now never again banished, grow to own all the irrational forces and love the selves you have splintered into shame, falsely felt as ugly and disgraced, fearfully banished no more, now re-loved, now re-won and earned forever and again, in a battle won and fought in blood and sorrow, may you be free!

I believe this whitest of spells, this bit of rational magic to be a fine starting point for those few rare alchemists of the soul who may wish to join me in my quest for "the psychologist's philosopher's stone," whereby we might turn the neurotic into the creative, invite the healthy torrent and put reins upon some of the forbidden horses, our repressed forbidden thoughts and feelings, and discover that what is forbidden to one less developed and less complete, someone like you were before, when your chariot of lead seemed too heavy, is now a bow string taut with every feeling, and you are a perfect note, an arrow of wind. What was conjured to earth is now too irresistible, too restless to resist, it must climb and become itself. Are we not exalted before ourselves only to exceed ourselves? Even such a question as this becomes possible to answer for one brave enough to *know* what is wild without shaming it, one able to harness and befriend their lost, forbidden happiness.

If you invite and do not resist a painful emotional injury, not focus on it but be open to it, never seek and persist, no obsessive picking, only being open to a memory you know hurts, no judgment just release and allowing all pain and tears through, you have found the open creative emotional posture. Let the pain come and then remain open—that is it! This is how it feels not to repress, but to invite our pain instead. Once the pain is drained, KEEP OPEN! Beauty, joy, desire, the Devil and whatever God he is fool enough to worship are in your harness! You can finally have the keys, you who deserve this car, a muscle car with abundant fuel and enormous horsepower, you can be trusted, you are in possession of a supercharged emotional continuum—your life! You are an emotive rationalist!

Here I will offer a single view of many possible configurations for using your new creative rational mind, an exercise which I have used countless times to fine result! Many a parable has been written using this method, and I am sure you will find the result well worth the effort. Much of the secret of creativity is in the order of assembly. Like a lucid dream where we are dreaming but aware and in control, we have both rational and irrational components working together. In the process of creation we can achieve a positive liberation of our unconscious potentially neurotic energies and use the symbolic language and creative ability of our directed unconscious to perfect our "unprepared" but complete lucid dream, and bring to light what was formerly only available as a veiled symbol in dream, or a neurosis. Can we make art which helps us as would a dream, an internal compass and communication which directs us as we have chosen it to—toward an ascending course: an artwork as a healing lucid dream?

First you need the fundamental idea you wish to communicate—the meaning. A really close look is required here, no fishing. Exactly what do you wish to communicate in this allegory? The precise pattern and principle are required. The entire skeleton from beginning to end must be sure, clear and certain. Let no work be begun before it is finished! Now we think on the subject and find *pictures*, physical symbols, sounds, ideas, scenes, phrases and particulars to capture the meaning in many refractions and we "toss them in the well," surrender them to the open mind and let them be *swallowed and forgotten* unless something bubbles up to tempt. After a few days, hours, weeks or more, but probably much less, a feeling of uncomfortable fullness, the skin too taut to endure, it stretches you inside and you have heard the story, the poem, the piece of music a thousand times and never "heard it," but now it is too perfect and too much, too much information to hold in your mind at once, too much feeling—too many ideas to contain so you write or perform or record *then*, and only *then*. Later and the fruit is sad or over mellow—rotten, a brown dull sweet. Too soon and well...stillborn and incomplete. Miscarriage. Only when you can not resist, and then it comes as a storm, a flood which escapes almost too rapidly to contain and record, too fast and even violent—as a river's violence all but resists containment, the unconscious has had it and polished it and it emerges all but perfect and complete, almost entirely finished from the point it is written or played—no experimentation or muddling about after the fact—we are sure if "unknowing" before we begin! The engine, the unconscious is the right hand of the very best of all artisans. Those who believe Athena leapt out of Zeus's head complete are nearly correct. There is however a bit of a headache first, and an open mind is required.

A Questionable OEP Experiment— Hope, Comparison and Degeneration (excerpt from *Mind Map* by Rich Norman)

Here is a questionable experiment from *Mind Map* and a bit of hope, too simple and too sweet, another indulgence and perhaps a truth with which I can step away, and leave the picture as I found it, a blessing in mist, veiled in hope and unspoken truth, warm enough to believe...

Experiment #3— So that is how the rationalist creates, his rational insight born of demystifying and never degrading all of life which is magical, until it is no longer so shy as to hide in magical, spiritual, shameful, misunderstood shadows. I offer you another dangerous thought experiment, another questionable idea from the mind of one "spiritual atheist." As I have explored the topic of meditation as a matter of general interest—I am not a practitioner—I noticed that the result should one devote a lifetime to the practice, the "mirror still mind of the sage," so empty, calm and placid—the height of maturity and dignity, is the result of a visible psychological process. As is common among many traditions one meditates and opens one's mind up to the full tumult of thought and emotion, releasing the bound up flow and its tide of thoughts and feelings, like a freight train this thundering river of feeling and thought is opened up to and invited, but *not touched*, not looked at, not fastened on to. It is looked away from and allowed to pass, allowed to come, and then eventually after years of practice at ignoring it, the river comes no more! Why would it? How rude! Sorry. Okay, what have we here but a model of repression! In his paper on repression written in 1915 Freud wrote that "*the essence of repression lies simply in turning something away, and keeping it at a distance, from the conscious*" [his italics].²³ This ability to look away from pain is repression, this is the hallmark of maturity, to be calm and take all in stride, the active unconscious is working at the height of its potential and all is quiet—mature—repressed.²⁴ The point is that meditation works, it works to increase the repressive facility, which we seek to pierce! These are ancient practices and they exist for good reason, the dignity and resilience of the sage in the face of our living and dying man's lot is admirable—an eastern stoicism or better. Noble, indeed. However I wish to do something very unwise and corrupt this ancient wisdom to my own contrary ends. I wish to pierce the repressive veil and free the emotive, not obsess or cling, but free it! Here in meditation we see the unconscious, our engine, the stream of unrestricted feeling which is encouraged and invited to emerge, although no specific aspect is obsessively sought or invoked, only an open mind. Surely this is the open creative posture! So... If we were wise enough to trample upon this ancient wisdom we would not look away when the freight train came, we would meditate as usual but let the thundering river churn through and fill you. If the image helps imagine letting it pass through you from the floor up through your chest and out your face and eyes, or the top of your head. Let it fill you—not emptiness as a goal, but fullness! Like a windsock let every thought and its motion complete you and buffet you as it will, do not cling but invite by letting through...permit everything and open up before yourself and through yourself and refuse all emptiness, take life's current as your own and let every ripple and eddy on the never still pond which

is your soul caress and paint your days with all color of life's fullness, and find each bruised tender happiness is but a perfect golden world, a motion, a lost moment's tender passing.

Is it wise to corrupt such ancient wisdom and look at, or even become what you should not? Is it alluring? It is sensible if you are a reverse engineer. I saw a part: the open mind, part of the creative emotional posture where we always remain open before all thought and feeling, never refusing but welcoming instead. How else is our mind to fill its sails and find its engine? So with emotion, feeling, fuel, and the engine turning in the gale at his back, our emotive rationalist is free from the poison wind of shame, by way of his non-contradictory analysis he easily holds all thoughts, potentials and feelings before and within himself at all times as various tools which are each useful *for* their differences and do not contradict, each finding its place as a key for a particular lock, a particular answer to a need in him, or a new perspective to unlock his world, and so all are needed and appreciated. Who would blame the screwdriver because it is different than the hammer? Only a fool thinks his tools contradict, and so it is with ourselves as well! So knows one who sees all of himself without shame, allowing all of himself that he does not personally manifest to become his world, and serve him by way of the omnisexual seduction and allure we call beauty. He does the rational thing and does not deny his irrational nature, he acknowledges it, and further still he is glad to have it for he needs it, needs himself because now, he can use it all! He thinks of all things amorally without precondition or preconception and situations suggest ten answers where they used to suggest but one or two, as one might expect of an inflexible clenching mind which refuses itself and calls its ignorance "strength" and "safety." Now we have our open-minded emotive rationalist who is so embracing of life and himself, tempted and affirmed to do his work, he who has discovered the trick and become his own perfect imagining, glad of his lot where he was so sad, empty and sick before, so neurotic. He has loved each forbidden wish and knows what it did for him as a tool which served him, not a contradiction, so he openly loves the wish rather than repress it, and so frees it from its fixated denied shadow form, this misunderstood forbidden pitcher of light yields its energies now no longer a part of a fixation shamefully bound up in a denied wish, now accepted, understood, un-shamed, fixed no longer in a hidden shadow, the wish, the fixation pours itself into the world, melts, disappears and releases its sexuality and energy into his mind and his universe. What were once troubling thoughts to avoid have become raw horsepower and beauty. So it is when we understand and love ourselves.

These two aspects of man, the Creative and the Neurotic, are but a hairsbreadth apart. Let us take further stock of these two brothers, for they are so alike in their work ethic, it is only the cause they choose and a single habit which separates them, and so let us see, perhaps someone may recognize their prison and decide to stop spinning around in themselves, doubting to misery and unwind their loop instead, to doubt themselves and happily ascend, to find better!

Here is a checklist which will give a clear snapshot to show how these "brothers," the Creative and the Neurotic differ. As you hold the mind open and engage life, a tendency to return to old habits will be easy to spot as you use this list to analyze your behavior. Together with an exhaustive understanding of the past and symbolic analysis we may fill our sails and quickly right the vessel when old winds blow us over, and leave us adrift. Observe yourself closely until every hot wind you once refused welcomes you to ascend, and fires your mind to unknown undreamed of shores—the question only you could ask, the secret unborn happiness only your life, your sun and wind, your lucid dream could answer.

1. The neurotic clenches—the creative releases.
2. The neurotic is dry. He refuses and blocks feeling by going over the same loop. The creative feels all things pass through him and is full.
3. The neurotic is weary, frustrated and anxious, refusing his tears. The creative is alive, weeping, laughing and moving.
4. The neurotic moves away from his pain. The creative knows not to refuse himself and is full to suffer, then suffers no more, healing quickly and becoming present to the moment.
5. The neurotic's mind is barren or looping. The creative is like a windsock who in the motion of his feelings is full to know himself, unclenched he remains open, weeps easily and refuses no feeling, but knows happiness is a place, a moving destination found beneath tears, and in truth both tears and happiness fill his heart, and turn the moments to his design. He knows tears un-summon our defensive demons and defenders, and so in tears may we need them no more and reclaim their energies.
6. The neurotic fears contradiction, the creative is open-minded enough not to fear new "multiplicity," which is not contradiction or division, but the hallmark of growth and ascension—the motion toward wholeness itself.

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[1](#) The wolf image was inspired by Nietzsche.

[2](#) Unfortunately, for some readers this language will be troublesome. In the main I have chosen terminology from the common vernacular associated with psychoanalysis, which should make this text available to the intended audience. The language is essential due to the personal nature of the material under discussion. "Gloves are required!" in the language of my previous work, *Mind Map*.

[3](#) James Strachey, Freud's editor and translator, notes: [The words 'cathexis' and 'to cathect' are used as renderings of the German '*Besetzung*' and '*besetzen*'. They are the terms with which Freud expresses the idea of psychical energy being lodged in or attaching itself to mental structures or processes, somewhat on the analogy of an electric charge.] Sigmund Freud, *Totem and Taboo*, p. 89.

[4](#) See Appendix "**Psychological Topography**," page 157.

[5](#) This is a distinct character lent to thought and fantasy which I will discuss in detail later, the origin for which is found in the second phase of pre-genital development: the anal sadistic phase.

[6](#) See Appendix "**Engine of Creation**," page 130.

[7](#) See Appendix **“The Possible and the Desirable,”** page 163.

[8](#) See Appendix **“The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic,”** page 173.

[9](#) Some two-thirds of this book might well be included under this heading, of which this chapter undertakes but the most general outline.

[10](#) I also hypothesize having observed so many cases of schizophrenia wandering the city streets that no small part must be played in the etiology of the disease and even more certainly in its presentation, than a state of introversion hallucination which is clearly of an anal sadistic character. The anal sadistic must be seriously considered as a chief factor in the etiology of some types of schizophrenia, or at least, surely as a main contributor in its symptomatic presentation. The general character of the bodily postures, affective and expressive presentations are as I observed in the case of hallucinatory neurosis.

[11](#) See Appendix **“Psychological Topography,”** page 157.

[12](#) See Appendices **“Obsession,”** pages 148-150 and **“The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic,”** pages 178-179.

[13](#) The emergence of paranoid symptomatology will be discussed in detail later.

[14](#) Sigmund Freud, *Therapy and Technique*, p. 59.

[15](#) See Appendix **“The OEP Discovery,”** page 161.

[16](#) See Appendices **“Obsession,”** pages 144-145 and **“The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic,”** page 174-175.

[17](#) Throughout this text I will use the term “decathect” to refer to the release of an accumulated cathexis of libidinal/mental energy.

[18](#) "It is possible to discover the repressed impulses which really occasion the sense of guilt. The super-ego is thus proved to have known more than the ego about the unconscious id." Sigmund Freud, “The Ego and the Id,” in Freud, *A General Selection from the Works of Sigmund Freud*, p. 229.

[19](#) "These incidents all converge towards a situation in which eventually all the conflicts must be fought out on the field of transference." Sigmund Freud, "Dynamics of the Transference," in Freud, *Therapy and Technique*, p. 111.

[20](#) "....all organic instincts are conservative, historically acquired, and are directed towards regression, towards reinstatement of something earlier..." Sigmund Freud, “Beyond the Pleasure Principle,” in Freud, *A General Selection from the Works of Sigmund Freud*, p. 159.

[21](#) "He is obliged rather to *repeat* as a current experience what is repressed, instead of, as the physician would prefer to see him do, *recollecting* it as a fragment of the past." *ibid.*, p. 149.

[22](#) "We must aim at bringing about two changes in him: an increase in the attention he pays to his own psychical perceptions and the elimination of the criticism by which he normally sifts the thoughts that occur to him." Sigmund Freud, *The Interpretation of Dreams*, p. 133.

- [23](#) See Appendix **“Example of a Basic Analysis of the Upper Structures of Personality,”** page 165. Here you can see the sort of analysis which becomes even more necessary with this method.
- [24](#) See Appendix **“The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic,”** page 173.
- [25](#) Here follows the Freud passage from “The Ego and the Id” which best captures the idea. I saw that no thoughts come through, only the libidinal component ripe for any use. I believe that the idea used to institute repression, the anxiety coming from guilty *thought*, is not the same as the repressed, the *feeling*. I came upon this passage from “The Ego and the Id” which substantiates this explanation of how the Open Emotional Posture gets healthy liquid libido from a fixated source. For ease of reading I will note Ucs=unconscious and Cs=conscious.“...with Ucs *ideas* connecting links must be forged before they can be brought into the Cs, with *feelings*, which are themselves transmitted directly, there is no necessity for this...” Sigmund Freud, “The Ego and the Id,” in *A General Selection from the Works of Sigmund Freud*, p. 214.
- [26](#) See Appendices **“The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic,”** pages 182-185 and **“A Questionable OEP Experiment,”** page 188.
- [27](#) See Appendix **“The OEP Discovery,”** page 161.
- [28](#) See Appendices **“Obsession,”** pages 148-150 and **“The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic,”** pages 178-179.
- [29](#) These ideas from *The Interpretation of Dreams* give some theoretical support to the idea. Please note that Pcs.=preconscious. “...the Pcs. system needed to have qualities of its own which could attract consciousness; and it seems highly probable that it obtained them by linking the preconscious processes with the mnemonic system of linguistic symbols, a system which was not without quality. By means of the qualities of that system, consciousness, which had hitherto been a sense organ of perceptions alone, also became a sense organ for a portion of our thought processes.” Sigmund Freud, *The Interpretation of Dreams*, p. 613. And this: “Words, since they are the nodal points of numerous ideas, may be regarded as predestined to ambiguity; and the neuroses (e.g. in framing obsessions and phobias), no less than dreams, make unashamed use of the advantages thus offered by words for purposes of condensation and disguise.” *ibid.*, p. 376.
- [30](#) I have found eruptive language to be a reliable example of the unconscious breaking directly through to consciousness. Here Freud notes this breaking through with reference to obsessional neurosis: “...in obsessional neurosis the unconscious mental processes occasionally break through into consciousness in their pure undistorted form, that such incursions may take place at every possible stage of the unconscious process of thought, and that at the moment of the incursion the obsessional ideas can, for the most part, be recognized as formations of very long standing.” Sigmund Freud, “Notes Upon a Case of Obsessional Neurosis,” in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (vol.10), p. 228.
- [31](#) See Appendix **“Obsession,”** page 143.
- [32](#) See Appendix **“Engine of Creation,”** page 130.
- [33](#) It should be noted that the literary agent can be categorized in proper taxonomic nomenclature as: *Nequam ego-maximus spurcus contagio vermis*. Sorry, someone had to say it.
- [34](#) For reasons soon to be obvious this entire period of my life has been known as “the great apology,” improving substantially after this recovered memory. I had much to apologize for until then!

- 35 Although it has positive manifestations too, all Native Transference of the sort with which we are concerned demonstrates overreaction, often of a defensive, angry and punitive sort, but other times of a self-reproaching, shameful or moral character as vacillating, insecure and guilty. In the case of angry, punitive and shameful obsessions the cause for predisposition *may* be as I discovered and will soon make clear, in the other case, as we will see, in addition to a pair of contrary currents in thought, *an auto-erotic event* will likely be retrieved from under repression. There are other types as well. The significance and source of protective rituals, in one instance, will also be discussed.
- 36 Please go back later *after* completing this section including the information about the fixation and read the interesting “**Phylogenetic Note**” on this point, in the appendix.
- 37 Of course, one must not become complacent and all such things must be reviewed from time to time and kept conscious. A real revelation is never over!
- 38 The original language: “*No filthy mistakes! No more filthy mistakes!* Don't you know there are penalties for that?”
- 39 It should be noted that death is a *very* familiar idea to any young child brought up with television as I was. How many images of death are seen each day! This is not a value judgment as death is part of human life, only an observation about its familiarity to the young.
- 40 In my case a slovenliness in my personnel environment was another way I exerted control. “Here I may make any mistake I wish.”
- 41 More on the idea of castration, and perhaps a more inclusive formulation later. (See the chapters “The development of reactive unconscious structures” and “A contrary speculation about the genesis of moral development in female personality.”) Here, the threat of getting my head shot off is an obvious symbol of castration. The symbol means: Mistake=death=castration.
- 42 Before Socrates goes into the banquet in Plato's symposium, he appears to carry out an obsessive protective ritual where he must finish a train of thought without being interrupted. He was also well known for his resistance to intoxicants. See Appendix “**The Rational Obsession,**” page 120.
- 43 I would expect each individual case of the initial formative infantile fixation will express itself differently to some degree, but in every case, the general character of the body postures will be discernible, as the exact particulars of that individual's fixation assert themselves in introversion.
- 44 Although both are libidinally powered (see the last section of this book), obsession is like life in general which comes in two flavors: sadistic and erotic. In any one person, components of both will be found, one dominant. The sadistic strengthens, braces one like cheap speed and enrages the ego to strength. The erotic, when not a source of confusion, has a soothing anesthetic effect, like heroin. William Burroughs was a junkie and lived long. His son was addicted to speed and died young. Health always sees Eros in ascension.
- 45 A *positive* result of this hyper-development of conscience was my excessively honest nature, to which you may attribute the existence and reliability of this text.
- 46 See the end of “**The Phylogenetic Note,**” in the appendix for more on this aphoristic idea.
- 47 Here libido defeats repression by making the agency of repression itself, the guilty anxiety itself, symbol and expresser of the repressed libidinal constituent.
- 48 Although I have not observed the exact effect myself, I have seen enough and know enough of other cases to *postulate* that the same sort of symptom presentation, moral debate, may well accompany

other types of shamed masturbatory behavior from periods of pre-genital development, specifically, masturbations relating to the passive anal erotic impulse.

[49](#) Page 6 and see Appendix “**Psychological Topography**,” page 157.

[50](#) Naturally, free association is another option, but not relevant here, as it is an artificial operation aimed at defeating exactly that aspect of mental construction to which I refer.

[51](#) See the Ontological Calculus section for a similar paradox of the unconscious where what we deny defines us forever. The unconscious makes paradox! What we seek will not be found, and what we hide becomes eternal!

[52](#) Even in consideration of the fact that we are both describing the same mental processes, note how similar this line of reasoning is to Freud's paper on negation. Although thought of some time ago, an idea conjured fresh in the vacuum of my "original ignorance," the more I read, the more it seems that: “Although new ideas are never discovered in old books, they are often found there.”

[53](#) The subjects of the relationship between the neuroses, repression and the perversions, and the perversions proper are taken up in greater detail later. See “The role of confluent libidinal cathexes” and “Native Psychoanalysis example number 3.”

[54](#) See footnote 106 in the final chapter.

[55](#) See Appendix “**The possible and the desirable**,” page 163.

[56](#) When we see a screen memory/fantasy which can not be real but presents emotionally as if it is real, the inference is that there **is a very real event** or events to which the screen memory/fantasy does refer by way of symbol. The very unreality of the image can be seen as the expression of a wish by the ego. But more than this wish goes into the construction of such things, as we will see.

[57](#) A "hole in the tub" is a crude analogy where water in a leaking tub is meant to represent the decreasing amount of repression still available to combat the return of energetic unconscious libidinal cathexes.

[58](#) Obsessions institute repression, and decathect a fraction of the repressed energy.

[59](#) If we simply move this structure backward in ontological development, and remember the familiar picture of perverse personality development, a fixation caused by a lingering too long at and/or an early awakening of a developmental sexual component functioning as a primary determinant of personality, the mechanism of perversion proper becomes clear. The relationship between the neuroses, repression and the perversions will be taken up later.

[60](#) One can not help but notice how similar to the process of dream formation this is. Here, as in dreams, we have a displacement onto a symbolic hallucinatory surrogate used as ego defense— An instance of unconscious processes flowing regressively into perception, but while waking. The external hallucination is a piece of dream work, a symbol put in place of an idea to be censored. This gives weight to the idea that dreams are prototypes for psychopathological structures.

[61](#) The level of frustration is astronomical, beyond the ego's control and the symptoms in Tourette's are a last ditch stop gap effort to maintain repression. Although aggressive urges were repressed by the symptoms in my case, it seems reasonable to postulate that erotic urges of an ego dystonic character might be controlled with the same symptomatic mechanism.

- [62](#) Notes on the properties of reaction formation, the anal sadistic component in general, paranoid neurosis: an analysis and its relationship to obsession and the transference neuroses will follow.
- [63](#) In psychoanalysis that which is preconscious is no longer "eternal" in the unconscious, and will fade.
- [64](#) An additional component, another memory condensed into the screen fantasy was later recovered, by a similar process.
- [65](#) Remember, the fantasy is to shield, but also to invite the ego to participate, to repress but also to release the repressed energies. The infantile attachment participates at every level.
- [66](#) The language of the voice that was recovered later in the preceding process which was of a different character, was in fact a real part of the repressed memory, and is not what is being referred to in the above text.
- [67](#) It should be noted that a third memory was later recovered which was both *itself* a clear contributor to the form of the screen fantasy into which it was condensed, and also just as before, *intimately connected to the same infantile component*. The infantile component is the *associative nexus* around which the entire distorted screen fantasy was built.
- [68](#) The types of fantasy stemming from the anal sadistic prototype include success fantasies, where the will is dominant and the sadism is sublimated into other forms of mastery like victory fantasies such as the touchdown fantasy or winning a race, as well as plenty of outright sadism which is found in abundance to answer life's frustrations.
- [69](#) The idea in psychoanalytic theory is that a fixation in this period will be centered around the sadistic or erotic component. The sadistic is active, the anal erotic passive and presupposes the emergence of masochistic and homosexual trends. Any preponderant fixation of one component has a small concurrent representation of the other. There is a small sub-current of masochism in a preponderant sadism and vice versa. See the last section for more on the significance of the redirected sadistic current in masochism.
- [70](#) My personality presented as intellectual and overly sensitive, hyper-moral and quite empathetic unless my feelings were hurt, in which case I became overly enraged and aggressive.
- [71](#) Rich Norman, *Mind Map*, p. 72.
- [72](#) Some very few fantasies have the primary demand met under extreme threat.
- [73](#) Freud writes: "Everyday experience has shown that most of these transgressions, at least the milder ones, are seldom wanting as components in the sexual life of normals who look upon them as other intimacies. Wherever the conditions are favorable such a perversion may for a long time be substituted by a normal person for the normal sexual aim or it may be placed near it. In no normal person does the normal sexual aim lack some designable perverse element, and this universality suffices in itself to prove the inexpediency of an approbrious application of the name perversion." Sigmund Freud, *Three Contributions to the Theory of Sex*, p. 24, and "By demonstrating the perverted feelings as symptom formations in psychoneurotics, we have enormously increased the number of persons who can be added to the perverts. This is not only because neurotics represent a very large proportion of humanity; we must consider also that the neurosis in all their gradations run in an uninterrupted series to the normal state. Moebius was quite justified in saying that we are all somewhat hysterical. Hence, the very wide dissemination of perversions urged us to assume that the predisposition to perversions is no rare peculiarity but must form a part of the normally accepted constitution..... Now we are forced to the conclusion that there is indeed something congenital at the

basis of perversions, but it is something *which is congenital in all persons*, which as a predisposition may fluctuate in intensity and is brought into prominence by influences of life." *ibid.*, p. 33-34.

- [74](#) A broad spectrum of possibility is indicated when referring to the homosexual current in psychoanalytical terms: A friend in a bar, or a teacher with no sexual attachment in the usual sense all the way to a homosexual sexual attachment outright, from a warm friendship, or fatherly reverence with all sexual aims inhibited to a real affair of a homosexual character. The homo and heterosexual currents are sublimated into friendships of both sorts, and many other good ends.
- [75](#) A separate note on a type of non-reactive persecution delusion which may or may not have some general implications: In *some* instances (I have seen this in two cases with no reactive component) I have noted that the persecution delusion was formed by a displacement of affect from a specific guilty repressed act or wish. The superego reaction to the specific longstanding wish or act is identical in every detail to the feelings of shame and persecution in these cases which simply project the moral guilt from a specific repressed wish or act onto a persecutor. These cases also had a repressed infantile prototype at the core of the repressed wish or act which was displaced to form the delusion of persecution. Perhaps the feeling of guilt is strong enough that a wish is fulfilled in the persecution, and hence, no reactive element is added.
- [76](#) Here are a few of the myriad of examples of the principle from this fascinating study: "...the "voices" which the patient heard never treated his transformation into a woman as anything but a sexual disgrace, which gave them an excuse for jeering at him. "Rays of God not infrequently thought themselves entitled to mock at me by calling me 'Miss Schreber,' in allusion to the emasculation which, it was alleged, I was about to undergo." Or they would say: "this person who lets himself be f—d!" Or again: "Don't you feel ashamed in front of your wife?" Sigmund Freud, *Three Case Histories*, p. 116, and "I should like to draw attention to the subject of the *sun*, which, through its "rays," came to have so much importance.... Schreber has a quite peculiar relation to the sun... We learn from a medical report that at one time he "used to shout threats and abuse at it and positively bellow at it"..... "The sun is a whore," he used to exclaim.....The sun therefore, is nothing but another sublimated symbol for the father..." *ibid.*, p. 153-154.
- [77](#) "Transference neuroses correspond to a conflict between the ego and the id." Sigmund Freud, "Neurosis and Psychosis" in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (vol. 19), p. 152.
- [78](#) As I analyze how I react to threats which symbolize conscience and authority, threats which symbolize the father like police, etc. and look at the instant replacement gratifications which these subjects reactively produce, I see the source in the reactions...castration, or genital mutilation to be more exact. This is the threat which reinforces and creates much of conscience. "...we can tell what lies hidden behind the ego's dread of the super-ego, its fear of conscience. The higher being which later becomes the ego-ideal once threatened the ego with castration, and this dread of castration is probably the kernel round which the subsequent fear of conscience has gathered; it is this dread that persists as the fear of conscience." Sigmund Freud, "The Ego and the Id" in *A General Selection From The Works of Sigmund Freud*, p. 233.
- [79](#) "...the castration complex always operates in the sense implied in its subject-matter: it inhibits and limits masculinity and encourages femininity." Sigmund Freud, "Some Psychological Consequences of the Anatomical Distinction Between the Sexes," in *The Standard Edition of the Complete Works of Sigmund Freud* (vol. 19), p. 256.
- [80](#) Although the idea of genital mutilation is mentioned in the Freud texts, it is not invested with what in my opinion may be its full and proper importance in female development, or its full representation amongst unconscious contents.

[81](#) Sigmund Freud, *Three Contributions to the Theory of Sex*, p. 29.

[82](#) In some *few* cases a non-perverse, highly charged heterosexual ideation which for one reason or another has been repressed may also be recovered underneath the symptom presentation. Any highly charged repressed libidinal or aggressive component may produce symptoms.

[83](#) See Appendix “**Symbolic Analysis**,” page 167.

[84](#) Referring to the ego, Freud says: “It withdraws libido from the id and transforms the object-cathexes of the id into ego-structures.” Sigmund Freud, “The Ego and the Id,” in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (vol. 19), p. 55.

[85](#) Read how I describe the ideal in more poetic language. That which is not repressed is free to do the work of happiness and sublimation. See Appendix “**The Emotive Rationalist, The Creative Emotional Posture and The Physiology of Rational Magic**,” page 173.

[86](#) “The complex of melancholia behaves like an open wound, drawing to itself cathectic energy from all sides (which we have called in the transference-neuroses “anti-cathexes”)...” Sigmund Freud, “Mourning and Melancholia,” in *A General Selection from the Works of Sigmund Freud*, p. 134. Describing trauma from physical pain and its effects Freud says: “And how shall we expect the mind to react to this invasion? Cathectic energy is summoned from all sides to provide sufficiently high cathexes of energy in the environs of the breach. An ‘anticathexis’ on a grand scale is set up, for whose benefit all the other psychical systems are impoverished...” Sigmund Freud, *Beyond the Pleasure Principle*, p. 24. I contend that pain itself be it mental or physical if of sufficient intensity, *pain itself is an anticathexis*, drawing huge amounts of libidinal/psychical energy from all other systems. *Pain becomes the ultimate focus of our entire attention*. My views differ from the Freudian picture regarding the psychodynamics of traumatic neurosis and the dreams and other mnemonic repetitions of the traumatic occurrence. I will state here that these conclusions are drawn from direct observation of my own case. I burst my foot and shattered the bones via hydrostatic shock in a motorcycle wreck. The incident repeated endlessly in dreams which interrupted sleep, and in intrusive daytime replays of the trauma. These intrusive replays of the memory lasted many months and were very disturbing. As no preparatory anxiety was added in the replays which often began with the shock of the burst foot and were themselves always shocking, I disagree with the following Freudian conclusion about the disturbing dreams which I found faithfully repeated the event. “These dreams are endeavoring to master the stimulus retrospectively, by developing the anxiety whose omission was the cause of the traumatic neurosis.” *ibid.*, p. 26. An anticathexis born of the pain from immense unprepared for psychical shock and unmitigated physical pain, the resultant memory is simply too highly cathected to repress. Here we see a foundational element in the mechanism of the repetition compulsion as it applies to traumatic neurosis. No preparatory anxiety is present in the replay of the trauma. The overall energetic cathexis of the memory is reduced in each conscious repetition until the memory is sufficiently decathected to be repressed. In this way the painful memory is eventually removed from consciousness.

[87](#) Children often confuse the sexual act if witnessed or only heard, with an act of violence. If one listens from the next room it is often difficult to tell if the vowels one hears, “Oooooohhh, Aaaaa, Uuuuhhh” are expressions of pain from a broken limb, or neurotic anxiety which has become painful enough to cause vocalization, or if perhaps they reflect a pleasurable sexual sensation. In this connection it is impossible not to notice how the opposite expression of personality from pain, is so similar being as it is also a libidinal expression by way of contractions: Laughter! Laughter and tears, two healing virtues of personality which both bear the same sign: the sign of Eros.

[88](#) “The most immediate, most easily discerned, and most comprehensible exciting cause of the onset of neurotic illness lies in the external factor which may be generally described as *frustration*.” Sigmund Freud, “Types of Neurotic Nosogenesis,” in *Sexuality and the Psychology of Love*, p. 41.

[89](#) See Appendix “**Engine of Creation,**” page 138-140.

[90](#) See Appendix “**A Creative Exercise,**” page 186.

[91](#) The process is the same with performing music only it is practice which one does then forgets to reap the benefits of a perfect habit. For my method in *writing* music, please see the essay included in my *Time Travel and other illusions* cd.

[92](#) This in turn both poetic and then real novel comes highly recommended for the psychologically minded. Existential questions answered. The unconscious is seen directly. American values are evaluated.

[93](#) Another way to attach one's pain to the work is as a wish. To find the wish ask: "What do I need, what is this pain from?" The inverse can be created from any hurt. Beauty created directly from pain! This can however become too sweet quickly if it is of an overly personal nature, and a few distortions are often in order. I favor transfigurations into natural symbols.

[94](#) This was accomplished by way of exposing in acts of war, the specific sort of unconscious fantasies which on an individual level underly the predominant traits of our national character. In war many formally unconscious structures are brought to the fore once the moral restrictions which kept them repressed are lifted.

[95](#) Here is another way to see it: In pity we react against our own aggressive and prideful urges and identify with what we may scorn, and so, turn our aggression on ourselves by identification. Those who use this effect to manipulate, are sadistic. Much good may come of this. Hubris answers to pity, so do the Greek tragedies teach us!

[96](#) See Appendix “**A Creative Exercise,**” page 186.

[97](#) I have noted that in my case, ego defense and intelligence are inversely proportional. The more I must avoid, the less I see.

[98](#) I am both horrified and fascinated by the logical consequences of these ideas, such as a computer which could then be programed with particular personality characteristics and the axioms of mental functioning which along with situational specifics would yield predictions as to the hidden unconscious thoughts and real behavior of an individual in a given circumstance.

[99](#) See chapter on “The cycle of libidinal energy and the formation of wishes.”

[100](#) “My explanation of hallucinations in hysteria and paranoia and of visions in mentally normal subjects is that they are in fact regressions—that is, thoughts transformed into images—but that the only thoughts that undergo this transformation are those which are intimately linked with memories that have been suppressed or have remained unconscious.” Sigmund Freud, *The Interpretation of Dreams*, p. 583. “The position is less harmless when what brings about the displacement of forces is not the nightly relaxation in the critical censorship's output of force, but a pathological reduction in that force or a pathological intensification of the unconscious excitations while the preconscious is still cathected and the gateway to the power of movement stands open. When this is so, the watchman is overpowered, the unconscious excitations overwhelm the *Pcs.*, and thence obtain control over our speech and actions; or they forcibly bring about hallucinatory regression and direct the course of the apparatus (which was not designed for their use) by virtue of the attraction exercised by perceptions on the distribution of our psychical energy. To this state of things we give the name of psychosis.” *ibid.*, p. 607.

[101](#) In the case of introversion hallucination the *regression* is found in the direction of the experiential and perceptive processes of the ego, which turns *inward*, introverts, its attention flows *regressively* to observe the world of the id, rather than flow *progressively* outward to the external world. The case as described in the above text and footnote correspond to external hallucination proper.

[102](#) See footnote 44.

[103](#) On the death instinct Freud states: "The second class of instincts was not so easy to point to; in the end we came to recognize sadism as its representative....we put forward the hypothesis of a death instinct..." Sigmund Freud, "The Ego and the Id," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (vol.19), p. 40.

[104](#) Someone who is "oral sadistic" may be sarcastic, but does not participate in sadism and destructive sadistic behavior proper. The sadistic aggressive domination in fantasy or in some instances in real behavior found originating in the anal sadistic phase is missing. So I contend that the word "mastery" is forced in that context. Mastery, true aggression which dominates belongs to sadism proper, the province of a later stage, the anal sadistic phase.

[105](#) It is my view that even in its undifferentiated liquid form, libido is never entirely desexualized, and always maintains some trace of the erotic as is plainly manifest in the libidinal sublimation of beauty, or the pleasure gained in mental endeavor.

[106](#) Note how closely this view approximates the Freud which seems almost on the cusp of demonstrating the aggressive as a function of the erotic as I postulate: "We have reckoned as though there existed in the mind—whether in the ego or in the id—a displaceable energy, which, neutral in itself, can be added to a qualitatively differentiated erotic or destructive impulse, and augment its total cathexis. Without assuming the existence of a displaceable energy of this kind we can make no headway." Sigmund Freud, "The Ego and the Id," in *The Standard Edition of the Complete Psychological Works of Sigmund Freud* (vol.19), p. 44. And this notion on the next page supports my idea that liquid libido also powers thought: "If this displaceable energy is desexualized libido, it may also be described as *sublimated* energy.... If thought-processes in the wider sense are to be included among these displacements, then the activity of thinking is also supplied from the sublimation of erotic motive forces." *ibid.*, p. 45.

[107](#) I would like to make note of one other small incident which can rightly be classified as a masochism. A paranoid symptom emerged which I rightly analyzed but the paranoia persisted for three more days. It seems that the symptom which I had rightly understood was in and of itself not the problem, it was a punishment for *a specific guilt* about an aggressive wish which I had not recognized. To understand the nature of the whip is not to solve the problem of why it is being used. Once the guilt was understood the symptom disappeared. If your analysis is correct but the result is poor, find the guilt!

[108](#) "...there seems to be a confirmation of the view that masochism is not the manifestation of a primary instinct, but originates from sadism which has been turned round and directed upon the self....The transformation of sadism into masochism appears to be due to the influence of the sense of guilt concerned in the act of repression." Sigmund Freud, "A Child is Being Beaten," in *Sexuality and the Psychology of Love*, p. 122.

[109](#) Some stray thoughts: I can *imagine* a case where frustration alone if extreme might cause masochism. Sadism and guilt is a sure formula firsthand experience has made plain. A postulation: (leaving the obvious factor of molestation aside) A child's *frustrated need* for attention in general, or perhaps in one case also a *frustrated need* for stimulation of a passive anal erotic character previously gained in toilet training clean-up, may inspire "guilty acts" so as to to receive wanted attention, stimulation and punishment, is a scenario which fits my view well as a possible initial genesis for

masochistic personality. A mixture of aggression, guilt and punishment as a wish result. Over time, many factors will reinforce a single unhealthy result in the formation of any serious neurosis.

[110](#) “...psychoanalysis today is not all about sex. And you can be quite certain you don't have an Oedipal complex or penis envy. Nor is your shrink likely to light up a cigar and wait expectantly as you lie on a stiff couch and struggle for something to say.” Molly Knight Raskin, “The Idea That Wouldn't Die” in *Psychology Today* (vol. 44, no. 3), p. 83.

[111](#) In writing this section I owe an obvious fundamental debt to Nietzsche's excellent analysis of the life and character of Socrates.

[112](#) Frederick Nietzsche, *Twilight of the Idols, The Portable Nietzsche* (Kingsport: Kingsport Press, 1981), 475.

[113](#) Even more conservative minds than mine have considered this possible. In his notes proceeding his translation of Plato's *The Apology*, Benjamin Jowett writes: "As he (Socrates) expected, and probably intended, he is convicted." [Julian Hawthorne, ed., “Dialogues of Plato” *The World's Great Classics* (New York: The Colonial Press, 1900), 6.] After inviting conviction Socrates makes only the most farcical attempt to avoid the death penalty.

[114](#) 5-HT is short for 5-Hydroxytryptamine or serotonin. Rather than delve into the specifics of the pharmacology involved with the reuptake of serotonin in the brain, etc. I refer you to the latest Goodman and Gilman's *Pharmacological Basis of Therapeutics* for a full discussion of how SSRI drugs effect the brain.

[115](#) Although able to function again after three months, the process of rebalancing brain chemistry is excruciatingly slow and still ongoing.

[116](#) A synopsis of the Greek myth of Orpheus: Orpheus, a musician, used his musical talent to charm Hades, the god of the underworld, so as to allow his dead wife to return with him if he did not look back at her as they journeyed back to earth. He yielded to temptation and looked and she was lost to him forever.

[117](#) Do not mistake this for a repudiation of the appropriate, top quality medical care I sought and was grateful to receive. I do not know what breakdown these potent pharmacological agents prevented and what that collapse may have wrought, and for that I am grateful. However, a point of diminishing returns is reached and these tools have limits and consequences. In the end pharmacology proves a poor replacement for good thinking.

[118](#) I am an atheist of Jewish descent.

[119](#) Please see *This New Day* for a full description of the idea of something getting between “you and yourself.” In brief, think of it as having something occupy your attention so as to avoid yourself and your true feelings and thoughts. Extended solitude without distraction or obsession is the antidote.

[120](#) See “The Engine of Creation.”

[121](#) Please recall the previous discussion of myth and model.

[122](#) The Percussion Institute of Technology (PIT) is a division of the Musician's Institute of Technology (MIT).

[123](#) “...for early Greek justice cared nothing for intent—it was the act that mattered.” E.R. Dodds, *The Greeks and The Irrational* (Berkeley: University of California Press, 1973), 3.

[20](#) Notice how I fall back on such terms to handle the subject. Gloves!

[21](#) Here is a poem from my book *The Black Mirror* about the reemergence of youth in later life:

When time cracks us open,

And what age has tempered, snaps as a brittle twig underfoot,

The sound of youth wells up amidst a white frost.

Once again the orchid blooms, but to winter's field.

[22](#) Think of Lady Macbeth, the classic example of obsessive neurotic "undoing" as she tries to rid herself of the guilt from a murder by washing her hands over and over as if her voodoo, her magical neurotic thinking and behavior where she washes away the imaginary blood as a symbol of undoing the deed, might reverse the real deed in the world and lift her guilt. I have found most neuroticism involves doing and undoing where a thought or behavior is done and undone in doubt and answer over and over forming what I call a "loop." In this way the loop symbolizes, answers and blocks feelings by occupying consciousness.

[23](#) B. Wolman, ed., *The Encyclopedia of Psychiatry, Psychology, and Psychoanalysis* (New York: Henry Holt and Company, 1996), 151.

[24](#) Please read Nietzsche regarding the nihilistic result of such practices and how the various traditions, particularly Buddhism, cope with it. Our lesson is the reverse!

This New Day

Self-Creation: The Wisdom of an Idiot

by Rich Norman

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This is for my good friend Ellen Wickham, who in refusing my advice irritated me deeply enough to accept it myself, and begin this book—Ellen, thanks for the sand!

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Introduction

Someone who has created themselves is present to experience. They own their past and are no longer prey to its call. They have seen, were repelled by, then devoured their weakness and made strength of it, so their undivided attention is available and free to focus the mind's full resources on any object of interest or desire. The ideas in this book may seem ethereal or strange, but their effect is practical. If you are in a position to hear them, you may benefit from better reflexes and attention, and an overall improvement in the quality of experience. With a present mind even your breakfast will taste better. You may find confidence where doubt used to squawk and chatter. These ideas are of thought but are not intangible. Far from it, they are the everyday well lived, fresh in purpose, soaked wet in work, joy, sorrow, blood and earth. These ideas have proven my survival, and will end the plague of inner deadness and emptiness which I see everywhere I go. This text will ultimately benefit a spare few. It is of a rare type indeed: a useful philosophy book! Yes, useful philosophy. Do I mean psychology? Perhaps, but this book is too close to the matter at hand, too interesting to be a clinically useful psychology book. For that it will have to be dried out and made into something more practical and less living, so I will leave it in philosophy's lap and hope not to make too bad a mess of her dress for the contribution. It contains the principles whereby your pain might become your masterpiece, and your emptiness your creation. I will tell you what I have seen, done, known, failed, learned and hated: how I have won my own creation. Perhaps I write for you. Does your anguish beg for release? We will uncover it, hear its voice and harness your pain so it might be the engine of its own undoing. I often refer to pain in this book and I want to be clear at the outset, that with few noted exceptions I mean mental and emotional pain, rather than physical. I will take a new look at this pain, whether it is undeniable and blatant, or an insidious hidden pain, the pain which hurts too much to confront and so lies well defended, never addressed and undisturbed, free to exert its invisible gravity so we march in unerring lockstep to orders given by a demon we ignore. Let us look instead!

Such things take courage, and creation requires the unblinking gaze which never looks away. These lessons are for one who seeks and delights in vision which sees through, gladly scalding the flesh to reveal what lies beneath rather than suffer the itching of their ignorance. Self-creation is like all birth, a painful and rewarding process which tests courage. Can you bear to know your unimportance and fill this disappointed and most empty cup, now drained of all undeserved self-importance, with a pure scathing laughter so pitiless and hopeful? Nothing is more frightening than the sound of the laughter you deserve. This book has small morsels for many, but ultimately creation takes effort and is the province of the few, and it is those few who might be most strengthened and affirmed to hear another voice, however distant. This is the reader for whom I write, since this is the reader who is most likely to accept the challenge and author themselves.

Self-creation

What is meant by a strange idea like self-creation? How unnecessary. We are obviously here each day independent of any particular effort to "create ourselves." Yes, existence is the gift of each day, but it is only through the effort of self-creation that existence has meaning beyond waking and swallowing the dull compromises that sustain us, and suffocate life. In self-creation existence is transformed from the true to the possible, and so becomes appetizing. Each day calls out alluringly and tempts us to try, and why not? It is our own recipe, and promises to be our favorite. This is no easy task, but a desperate struggle to birth one's keen understanding each day before the emptiness and the exhalation of life, and then taste fear knowing it is you who must sing even in your exhaustion, or it will all come crashing down. Compromise your voice, remain still, and existence becomes a merciless unfulfilling empty facade, which imitates living beneath a heavy gray pall, a uniformity and sameness which keeps "safe." It is impossible to breathe when under the stifling cloud of this "safety," which exudes the odor of fear, the smell of your potential as you let it rot.

Hope and pain live together. They are trying to escape as fear guards their cage. Fear says, "Only through redundant sameness, looking away and compromise, can pain remain caged, only then are the past, risk, chance and danger removed," but fear does not mention that Hope lies gagged and bound, prisoner there as well. Self-creation is a birth. In its contractions we open up the cage and with our courage free our pain to hear its awful words, but now, we also hear Hope's whisper and know that we can bear them. How? We create ourselves. We know the pain that is loss. We can not hide from it, so we use it, spend it and de-energize it to create the self and its works. We know failure and look closely, we create eyes that see its complexities to behold the riddle. Why have I failed? Have I failed the world's standard, the standard of truth, or my own and why? Then we analyze and see how to succeed, or perhaps not to care. We feel the pain that is our smallness, and hear a new need answer it; the need to create ourselves outside of ourselves, so we may demonstrate self by manifesting it in a tangible form. How do we take what is small and low, and create what is of the heights? Where do we find our best, and of what is it composed? A good work is a rage sublime. A rage sublimated is a good work. To rage to the air, "I am not small! I am creation eternal and absolute! I am fire that consumes all stillness, I am creator of all things, and far, far greater than you!" is to say to the smallness that is you, "You win. I am impotent rage. I am small." To feel all this and write a symphony instead, is self-creation. That which feels, hears the wound and drives itself with that agony until the answer is found, and the wound answered, is self-creation. Sublime is the agony of self-creation which openly feels both hope and pain, so we may carefully find our way back and emerge from the darkest forest our arms laden with every precious treasure. Each day one must be refreshed, reborn to experience with the joy and humor of a chill morning. Contain nothing, withhold nothing. Your sighing heart must now be born to lightness if this most difficult task is to be met.

The burden of lightness is a terrible, impossible standard indeed! How to evoke eternal laughter in the midst of one's choking human despair? Pain is loosed from its cage and although hope is free, the cost of honesty is high. My anger will wrestle itself and bluster endlessly to cover my sadness so I might rage rather than plummet. I refuse and in an act of ultimate courage I release my heart filled with lead and iron, like a sinker it falls faster than I can see to light it in my mind's eye. Sick and dizzy I fall into myself unable to breathe, too hopeless to resist, I inhale and the blackness fills me. At last it stops, and with dismal certainty I know I am against the bottom. For a moment I am paralyzed to know it all. I feel the truth take my breath again, and let the knowledge of my pointless existence fill me completely.

Nothing any man does, least of all me, can ever really matter, can it? So much struggle to find time will devour you and likely not even belch. You, I, and all of humanity don't rate enough to account for an upset stomach. Time has an iron constitution and once consumed, we are gone. Pointless. The truth crushes my spirit and I begin to collapse into my despair and know myself rightly, for I am nothing. I disappear. In disappearing I know the essence of despair, I am dead and am my worth, I am nothing. There is silence. Now relieved of the pretense and falsehood of denial, now in touch with my emptiness and the pointlessness of my life, I am filled by an idea. I feel an irrepressible giddy bubble rise within me, and I am amazed. What of hope have I tickled with the feather of my despair? I am a blank page, a promise from no one to no one perhaps, but if I have no meaning, I am free to create my own! In pointlessness I have found every possibility. Nothing matters, and so everything is possible. A new question buoys my heart and I no longer seek a reason. Now free from endlessly seeking purpose that does not exist I have found my light heart. I know there is no reason, so I no longer ask, "Why?" I ask: "Why not?" I have found a place where the chill air and sun are themselves alive, wonderful, and mocking. They have shown me a brook which laughs at my seriousness and how I care so much for my little self. It teases lovingly, scorns me and says, "Why do you cry for nothing?" Indeed it is true, and I must laugh. The truth of my despair is the truth of my hope in self-creation; the blank slate I fill with my will and purpose. It is the silence in which my symphony will be played.

Here I must confess a lie has been told, a lie of omission but a lie nonetheless. You must forgive me, for it was told to trick my heart so it might forget its weariness for a moment. Please remember the Greek myth of Sisyphus where man's condition was symbolized by a poor fellow pushing a rock eternally up hill. The existential take on the fate of man in regards to his pointless existence of toil which the myth of Sisyphus embodies, is summed up by Camus who said, "One must imagine Sisyphus happy." {Footnote: *The Myth of Sisyphus & Other Essays* by Albert Camus, Random House, Inc. New York, 1955, p. 91} This corresponds with my previous thoughts, but omits the many days where I can scarcely work but for force of my own will. I must acknowledge that a deep reserve of strength is often required to finish a task, even a joyous one, before the work repays us with its wisdom and we may celebrate knowing ourselves better for it. A good work repays its creator with more than he spends, more self-esteem, more depth, more reason to believe in himself, but it requires much be spent before any profit will be forthcoming. Even self-creation which creates no visible external work to see, the self-creation which lightens all life by knowing self, requires ample payment as we gaze headlong at the truth. This is often a painful initial cost the ego is unwilling to pay. The rock is heavy and Sisyphus moans under the strain, but this is the work of self-creation, our work. We have plotted this strange path through these empty places, and so I would say that rather than happy we might see Sisyphus smile and note he seems a little smug. We must imagine Sisyphus busy, and perhaps exhausted at the end of the day, but he sleeps well, even if it is only while he walks back down hill to retrieve his rock. He sleeps well because he knows that however meaningless his labors, at least he works for the right boss: himself.

The main purpose of self-creation and its greatest work, is the mind which is present to experience. Such a mind is awakened to all feeling, hearing and sight and is the ultimate instrument of sensuality, since its attentions are undivided. The past does not beckon such a mind, and each moment may be devoured and tasted completely without inner distraction. Presentness to experience is the ultimate reward of self-creation. This presentness to experience is dependent upon seeing and understanding all that is past, in complete detail. Only by fully exploring and understanding our past, on both an emotional and intellectual level, can we detoxify the past and de-energize it. Only then, when its siren song is silenced, can we perceive experience undistracted. Our mind becomes quiet and listens; open, still, now ready to hear.

So we invite the barrage! Open the doors and let our past scream, seduce, sing and speak until its full pain and pleasure are satisfied a hundred times again. Hear it, see into it and through it all, each insecurity will be given voice, no wound may remain unheard. The past is an angry, frightened, neglected dog; if left too long unattended it will never stop barking. We must let it out and exercise it till it is exhausted. Only by hearing it can its jabbering tongue be silenced, so we may be in the present to perceive life's nuanced subtle beauty. To silence the beast you must know its every intimacy, know your every intimacy, until no fact remains too uncomfortable to discuss. Instead let it become too familiar. Let it bore you. By allowing the past, the beast, our pain, our fear, free reign to flow through us, we feel everything and as we contract and heave with the sorrow and joy, the energy and weight, we clearly see its form, its cause, its depth. Its true power over us is absolute and its energy overwhelming. The past and pain once bottled and then released is a tide of hyper-energized emotion. Allow each instance through and let it wail till it exhausts itself. Hear it until it is hoarse. First we must indulge the past and wear out our mistakes from listening. Exhaust your suit of old pain and skin until it falls away in tatters, leaving you naked and complete in your understanding.

Many days when the work of life was heavy and my will had to bear the strain, could have been eased had I known my beast more thoroughly. An unresolved past is a thief and a beast. If left unattended, it will whisper in your ear until there is little left of you undistracted to experience the present. This is how the past splits you in two and steals your hard won treasure: your life. To look unflinchingly at your past, to know and understand its influence and exhaust its energies until it lays mute before you, is to have resolved your past. To be near that which is irresolvable in you is to be near the engine of creation, a subject I will discuss later.

Who would put meaning where there can be none but me? I am my own idiot. I revel in the freedom of my own meaninglessness. I am my own lie which in the telling and doing becomes true. I am something come of nothing, which knows better than to believe too well and so knows how to laugh at its own creation. In seeing the folly of my self-importance I ripen my own fruit and then knock it from the tree to deprive my ego of its meal, and remember the moment I have stolen from meaninglessness even as it dissolves. If the truth did not swallow my creation why would I begin the next? And so I must begin again each moment in this game of self-creation, annihilation and rebirth, knowing myself and its meaning as I playfully toss each moment back to the sea. If one builds a sand castle and the tide takes it away, it was the ego's home and I am well done with it if the truth is what I seek. If the tide recedes and the castle remains, you can be sure this is where truth resides.

This truth of your creation is like a moment, which exists through time. Such a truth endures the assault of your doubt and withstands your most unsparing self-scrutiny. To discover one is to find something precious, and I have noticed that unearthing such a truth is often accompanied by the blush of self-recognition, and then laughter. It seems as if to know yourself is to gaze upon a divine silliness. The humor of ideas is often the highest expression of understanding, since to laugh from knowing self, one needs both understanding and perspective. One's own egoistic self-sustaining lies and ridiculous contortions become obvious, and may be understood by the honest mind, much to our delight. To laugh at oneself is to free oneself from acting within your own self-important play, and replace a grave duty with a joke. Perspective comes once the joke is understood and the ego unmasked. There is a nervous aspect to this laughter which has seen through a comfortable lie, and now we are a bit insecure, a little nervous and so feel the need to make our lie true, to self-create, become even more pressing. Refreshed in laughter our hero has found his path again, but now he knows he is acting and he seems much relieved for the realization. He has and will always put up a good fight, but now you can also hear him laugh. I am my own idiot and my own joke. The creation which sees through itself is a truth and a true hilarity.

In this lies the effervescence of the self-aware hero, his is the buoyant knowing soul to which we might all aspire.

Once accustomed to its sting we might revel and play in this seeming divine narcissism of self-creation, but there is a difference between our tale and the tale of Narcissus. {Footnote: The Greek myth of Narcissus is a cautionary tale about vanity and self-seduction where a beautiful youth, Narcissus, is cursed by a spurned lover. The gods have him gaze upon his own reflection in a pond. He falls in love with the sight of his reflection and drowns trying to touch it.} Our tale is of self-creation not as a shallow reflection of vanity, but as the bruised child of honest reflection, who is too injured to be seduced by pride. She clings only to what floats, what is real, and her incredulous humor is a sieve through which one's self-importance might be strained. She is a destroyer who affirms the value of what remains. And so it continues, moment to moment as we feel, think and then destroy, so that in what remains we might know. These precious truths that the ego reluctantly surrenders, as if coughing up its own teeth and spitting out our prize, the knowledge of self which is self-creation, are rare, sharp and hard won as gems. First we pay with a moment of embarrassment as ego retreats, and then laughter as self takes its place. In this act of self-creation we have a skeptical unbelieving narcissism, where Narcissus himself looks upon his indulgent creation and casts a stone into the pond to destroy the illusion of beauty the waters reflect. This Narcissus is awash in self-disgust for his own lies and his unsearching self-love, so he dares the truth to reveal itself, casts the stone and destroys his image, so he might see beneath the surface. He loves only the act of distinguishing reflection from depth. In this lies his hope and his integrity, his will to see and change. Here he begins to love himself, rather than his reflection. This Narcissus is a creator and an annihilator who casts stones at his beauty, to see his own depths and motives. The self-creator is a Narcissus who relentlessly pursues his own ugliness, and in its understanding loves that which he creates.

These enduring stones of knowledge are hard mined, and it is in finding them that many hours are well spent. The process of fishing truth from the muck as the ego thrashes against being revealed is an art, just as self-deception is often the ego's art. As you will see the ego's art of lying will prove very useful indeed, and we may be thankful for it even as we seek to overcome it! We seek to understand the ego more thoroughly than it would like so we may better use it, rather than be used by it. We seek to understand ego not to disparage it, but to preserve it and use it to create ourselves.

Ego is the confidence bearer upon which the self rides. The horse is blind but to see its own ends, and is often wounded in being spurred to its enlightenment. As the ego suffers its unveiling, its pride wounded at each spur, self delights in its new freedom and is more sure master over its steed. Self needs ego which is confidence, just as ego needs self, save it gallop off to its own destruction on a false point of pride, or shallow understanding of its own wounds. Without a rider ego sleepwalks, entirely seduced by its own truths and lies. There is no one more dangerous than someone who fully believes his own lies. He will inflict all manner of suffering on those close to him to preserve his drunken illusion of perfection. Those around him will always be putting a blanket over his lies to himself as he is inevitably revealed in constant contradiction. To expose such an ass is to risk his self-righteous anger which will try to cover his misdeeds with fury. To remain ignorant and uninjured is his only wish, and he will tolerate only sycophants in a debate. Know his face lest it be your own blind furious ignorance you defend. Everyone has this thin-skinned rage within them, and it is the self which sees through with terrible scathing laughter that puts reins upon it. In so much as self-creation is unsparing and ego serves self, no truer worker than ego can be found. Ego's efforts to get the impossible right know no despair at reaching any height! Ego will not hesitate or despair as ego is confidence, which is hope made absolute and free from doubt. Here self would do well to listen closely to its laborer and its lies, and end its sighing. Self

which believes in itself laughs at the road ahead with a child's breath. The ego's lies of confidence may often become real in the telling, as a confident man has greater odds of success than one who is divided by doubt. Ego knows no limit, awash in the hope which ends despair and leads to the doing, should her rider guide the spirit of his servant with knowing eyes. Eyes that see more than just the seductive beauty and power of his confidence, his magnificent horse, but also knows that underneath the skin all horses are alike, in that even the most glorious example is but a pile of muscle stuffed with manure.

How does one find the reins of his horse, those sharp splinters of precious stone the ego is so loathe to part with? With these hidden shards of truth we might become riders and masters of the animal, rather than be the one ridden. The key to finding this hidden treasure lies in its shape and how it cuts, how it stings. The ego gives up its ugliness only after a painful struggle, and it is by recognizing its discomfort, your discomfort, that it may be spotted. Here you must know your goal and move against your instincts. You must move toward your pain. Your truth is buried beneath a pitiful wailing pride with opposites in place of truth. If your anger raises up too quickly and you proclaim your worthiness, you feel you have not tried enough. If you despair that no one loves you, you have not loved yourself enough. If you feel sick at a suggestion you may be expressing self's true feeling, but if once its been addressed to your satisfaction you think of nothing else and rail on and on denouncing it, you fear it is true. Any reaction which is greatly out of proportion can be seen to imply the fear of, or the truth of, the offending statement. Someone more eloquent once said, "The lady doth protest too much, methinks." {Footnote: *Hamlet* by William Shakespeare, Act III, Scene 2} Look harder when your anger and shame insist you look away and soon the telltale spasms of pain that occur when ego is uncovered will become familiar. After a while fishing against your own tide will be a natural sport, and you will feel the familiar cringe of ego faced with its own nakedness. Look closely and even sniff to learn the smell of the blush before your anger and it will lead you to ego's lie, and your truth. Knowledge of self is both a horror and an ecstasy. It is a horror to find yourself broken open upon your own truth, and an ecstasy to have overcome what you see. These sharp little splinters prick your finger so you may be nourished on the blood. As you scrape the muddy bottom of your thoughts you will feel truth's familiar bite. Quickly close your fist and behold something most precious and useful which has come of your sacrifice.

3

On public disappearance, compromise, consideration and "kindness"

To get along we compromise by way of disappearing. On the bus everyone disappears to stand the smothering nearness of each other. We disappear by following a host of particular rules. We make no eye contact. We refrain from speech. We suppress cough and respond to a passenger with a twitch by looking away. Only the presence of our body betrays our existence. We exist and disappear. That's why someone talking on their cell phone is so annoying. They have broken the rule and choose to act as if they are alone and converse as if they exist. While you are courteous enough to disappear, they extend no such courtesy, follow no such rule and exist while ignoring you! Now that's rude! But now there is confusion about where the bus begins and ends. In our world it has become normal to choose a paralyzed bloodless anemic contentment, cut to pieces by a thousand small compromises and courtesies till you disappear. To this modern disappearing man just imagine how rude you must seem delighted and alive

as your own creation! But you are not rude and life does not take place on a bus, unless you are actually on one. Only a true moron chooses to choke off his own air and die out of courtesy or fear. Living takes courage and the willingness to face embarrassment. I make it a point never to be more cheerful than in front of zombies.

A bus concentrates humanity and exaggerates this willful self-denying and disappearing that we call consideration. To see someone who is there but tries to disappear, is to see someone attempting the impossible. The bus passenger shows in stark example humanity's willingness to endure this self-mutilation, this denial of its very being, in order to facilitate coexistence. Although an essential social lubricant in small quantities, this consideration of others has grown to hideous and abnormal proportion. It hangs heavier than air, a poison cloud that closes the eyes and shames the light heart and free mind, which are left sick of its contagion. No longer a sensible adaptation which furthers life, this consideration limits thought and potential, extinguishes the higher for the sake of the lowest common denominator, lids, suffocates and reduces spontaneity and self-creation. {Footnote: Please see the "inner deadness" section for more details about the consequences of disappearing, kindness and consideration.}

Self-creation requires clean air and there can be none better than the company of a good friend: an empowering and unapologetically inconsiderate wind which blows open every false coddling lie. Surround yourself with those strengthened by your best possibility, your unflinching honest spirit which never flatters will attract others who are worthy, others who also wish to better know themselves, feed themselves, slowly grinding the grist of their own lies to nourish their understanding. Truth is ruthless and inconsiderate. It just is, and it never apologizes. Whatever beverage your morning starts off with, the self-creationist is in search of a strong cup of coffee, bitter and invigorating. The company he keeps must thrive in the naked prickly environment of self-understanding and his companions must be caring, truthful and ruthless, sparing no point of pride or unpleasant possibility. If the matter is important and complex a good friend is apt to answer slowly. He often says, "I don't know," and is more interested in seeing clearly rather than scoring points. A strong thoughtful mate insists on your strength and comforts less than they offer real, hard solutions. A good friend can be invaluable as we deal with our past. As your feelings and pain flow through you unfettered and unrestrained, you gaze upon the pitiful river and understand. However no friend can help one who finds it easier to wallow in his despair and seeks sympathy for his misery, but refuses his strength, unwilling to leave the comfort of his unhappiness for a new unforgiving and unknown understanding. A good friend aids this understanding, he first gives a measure of sympathy and lets the river flow, and then if needed offers to light the way up the river bank and out, but he is unlikely to make you comfortable as you drown.

Kindness as it is practiced and known by the action of quiet sacrifice for the good of another has become a malignancy, a murderer and a thief. A lie of omission which steals the breath of creation and truth in one stroke. In this hard to explain, often inexplicable world, one may hold one's tongue or substitute a weaker meaning for life's brutality and its clear lessons. In shielding one appears to protect, but this protection is cowardice alone. One need not explain the hard truth of life's cruelty, and is it not kindest that they don't know, that you might not dwell too long and be soiled by an unkind truth? These are the lies of a lazy kindness which leaves well enough alone and is never too agitated. The kindness that stifles is an even tempered pall which descends to smooth the sharp crags of splintered rock and bone that are truth's naked unadorned landscape. There is no ear too young or heart too tender to hear it plainly. A fact found in pain may be understood and quickly learned with strength then increased, whereas a fact slowly diluted may appear an endless burden, a slight weight which never leaves. These kindnesses are the lies of a deadly contentment which civilization has farcically called caring! He who cares feels eased by his cowardly gift which avoids conflict leaving him comfortably mute before his

fear, stifling his expression, and he who receives it is left weak and vulnerable, unprepared for reality, showing that this is no kindness at all but a lazy thief instead. Far better to endure a small painful inoculation now than be left unprepared to suffer the full unexpected fury of the disease. This easy answer is a comfort for the protector and a parasite for the one protected.

I am fortunate to have been raised in an environment where it was normal practice to take a direct and open approach to many topics often thought shameful. Throughout my life I have benefited immeasurably from this true kindness, and I have seen similar results with my friends' offspring where a more radical version was employed, which seems to withhold nothing at all! I have concluded that the majority of the shielding from the truth and the world a parent inflicts on their children is for the ease and benefit of the parent. Although the parent claims that it is the child who benefits from being shielded, it is actually the parent who wishes to be shielded from the discomfort of confronting their own shame, disgrace and incomplete self-understanding. It shields the parent from an uncomfortable encounter with themselves. This discomfort with themselves takes on the name of the child's, partner's or the wife's good and is made legitimate. If you are uncomfortable with your own nature it becomes difficult to discuss physicality, sex, death, drugs and soon silence begins to lie and proclaim itself virtue saying, "It is for their good that I refrain, shield and choose silence." But we all know that a lie is seldom virtuous.

It is always easiest to deny the truth voice. Never stop thinking and speaking until you blush, for only then have you said anything of worth. Be silent only those times when words would clutter the truth, so plain has it been made by life's terrible lesson. No, it must be said, "Kindness must die!" With it cruelty will perish, for what is more cruel than to leave someone for whom one cares weak from lack of truth's overcoming, unprepared for reality, having been nursed at the teat of a lie? What cruelty it is to oneself to live such a lie, and suffocate on one's own kindness. Is it kind to deny oneself the motion and freedom of every thought and its expression, and to become still, weak and disappearing rather than strong? Your strength and its unceasing tumult of thought are the tide which nourish and nurture. Let your mind never be silent through restraint, and know true caring never shields, for that is the putrid kindness of cowardice. Release your strength and all that is worthy around you will also be strengthened and improved.

4

Inner deadness

In the larger scheme of the universe we are ants and one must decide to become energized in doing what an ant can do. We become sick when we do not accept life's unflattering challenge and decide to do nothing instead. The seduction of our ease, consideration, obedience, shame or fear of acceptance may lead us to sit on our hands until they are numb. They fill with blood, as we create they prick and tingle. It itches and hurts, the ego stings and we want to sit on them again until we no longer feel them. Seek your pain instead! Your instinct leaves you empty and speaks of safety as if you could have your barren heart quenched with fear rather than water. Look into your discomfort and let all and any feeling fill you, rejoice in your burning hands as your tears awake to fill every empty place with rain, and even more: I wish you floods! You must have every permission to grow. Fill yourself with the motion of creation and accept the challenge, the work, your work. Be idiot enough to accept and you may yet laugh at your own joke and make yourself real, moving, awash in a warm tide of sadness and hope with every current and

shadow flowing through your over-full heart.

In resisting your pain you have stopped the flood but no one is spared, no one is safe, no one can live, without water nothing grows. Rain is life and it is a fool whose fear has banished it for being inconsiderate. Much inner deadness is due to the effects of a type of consideration. A social kindness which is no longer a productive lubricant to help us cooperate, this consideration has blossomed out of all proportion and threatens to extinguish us for lack of sun! We must manage to get along, so our mate or coworker may ask that we refrain from expressing ourselves in one way because this behavior bothers them, and then in turn we might choose to prune away one of their behaviors that we find offensive. After a few years of this game the relationship has stripped the kind participant of his humanity and replaced it with a considerate shame. Who is your excuse? For whose "benefit" are you not living? To whom are you "kind?" Conflict is healthy. Secure people require little compromise, and are more apt to reward strength rather than resort to shame to achieve results. Each thing we compromise and sacrifice to this emasculating consideration which masquerades as maturity is another assault on our ability to breathe. We feel at first heavy then also dead inside. The tears which move through sadness have stopped and only weight remains. We imagine ourselves content in this stillness of the dead and lie deeply. We refuse ourselves breath and prove this is no hero, this poor defeated man who envies a corpse and dies of his own will holding his breath. Who turns away from life and will not swallow, will not move their lips, as they die of thirst for what they reject? Is it you who have suffered and refuse yourself, now too afraid to live, you who has taken their breath from themselves, made wretched and barren through the slow suffocation of a mature sense of consideration? Have I found you? A frog content in the ever hotter stew pot of good intentions? Each compromise which smothers is small and seems unimportant, but your kindness has brought you a slow creeping paralysis, each shade of brown and gray so dim it passes unseen, this consideration seems innocuous but the cumulative effects are deadly. A kind paralysis of degrees leaves the frog content as the water slowly boils joy, life and hope away. This consideration is a cannibal who promises a warm bath and a nap are best before dinner. Do not believe him.

The answer is clear: you must change every habit you have learned and begin to feel at any cost. Rage if you must, even if it is a lie. Shout another, so I may see the truth in between them and bring you to tears for your pitiful lies and choices, your decision to surrender to the safety promised by your fear as it spins a net of hatred against life and risk, holding you forever closer, forever closed, forever drier and sicker, always heavier under its constant gravity. Slap the child now and let it cry, let it breathe the coldest air, cast your scathing laughing eye upon yourself and be filled with the sight of a sickness that stirs even hope to laughter, and so she hopes to shame you into laughing at yourself, for then perhaps you will be forced to breathe, relinquish your unhappiness to tears and grant yourself breath! Let us celebrate and welcome your pain, your fullness and salvation in the motion of your feelings. Their motion is light and rain, so weep and awake all instinct before the flood, give every indulgence and opening to fill and feel. Endure the drought no longer. Move against the habit which shames and stills. For once you may have the ultimate permission to heal, now you are the one who must give *yourself* every consideration and kindness. Open up completely and receive the terrible bounty, your beautiful healing storm.

Another person can help this process if instead of shame they provide an environment which feeds off of, permits, nurtures and enjoys your uncensored expression. No undue consideration will be afforded your weakness, and all effort will support your strength. Respect yields healing, reverence yields decay. A brave soul needs another brave soul in which to test itself. No greater strength can be had then when two such people share their ideas with mutual empowerment as the goal. Cruelty is to be

avoided, but only half as much as consideration, which is but pity concealed. Cruel honesty makes for short sentences which are sure to be understood. Truth is the only consideration which is honestly helpful.

If you must lie to the company you keep you spend the truth and your integrity to accrue an ugly debt. You must lower your emotional debt and seek different company. Can you believe yourself now for having passed this rigged test? Why would you feel better to be accepted only when you posture as someone else? The cost in doubt is exceeded only by the interest, the momentum which builds, so in your increasing indebtedness to the lie, your guilt, the bill grows and you have no choice but to keep the lie going, save face and make your minimum payments. To have an appetite for life, to be ripe for it, one needs emotional currency, cash, not debt but coin of the soul, strength of doubt and will. Good work requires sacrifice. Skill is bought with sacrifice and sacrifice costs dearly. The present mind, all feeling and every other tool serves this end. The writer writes, discards and writes again, the musician practices and listens dissatisfied on golden sunny days, the athlete runs a hundred times and runs his best only once. In its appetite for sacrifice, excellence demands but one thing.... flesh! Fatten your knowing and its tender riches until they must spill out overflowing, and find enough and more, too much, an overabundance of feeling cries for release, purpose and expression in the tears of sacrifice. Work lives on the strength it spends, the joy it consumes, and the energy it feeds upon are the price paid for the birth of self outside of self. If we are successful in achieving this externalizing of self we are repaid our sacrifice a thousandfold by a grateful self. A finished work! In this strongest of hope's libations, self drinks the impossible ecstasy of proof, with each draught we feel pain spun into light and air, and so self forgets its worries, its truth about time, death and meaning. In this physical proof self is affirmed and for a moment it believes, no longer neurotic. Here the thinker finds an island of perhaps even happiness, if but a brief reprieve for a restless soul, always moving and full.

In this way we sacrifice strength, time and ease to turn our restless longing into the jubilant knowledge that is self's first joy and aim: a completed work. We create the higher from the lower. From our pain with unforgiving eyes might the discipline of our will distill a spirit so potent, that we may be drunk in our own purpose. Now that strength is refreshed, there is ample currency for sacrifice and more work, and so the cycle is renewed again. For the creative thinker it is in this dynamic cycle where his fulfillment lies. For us it is the ascending motion of this cycle which replaces the mistaken idea of a fixed, unmoving contentment.

Each work makes its demands known and some will not be denied, but be sure never to lose perspective and make any one truth like this one bigger than it is, or it becomes a dogmatism, a neurosis which saps life rather than serves it. After a long labor I take as many days, weeks or months as I am able to stand, until I am aware of a wondrous excess, a sublime reversal of inner deadness which is making me most uncomfortable and exuberant. I have waited too long and now overfull the idea is ripe and stretches me, as if to burst the skin, now so restless with the new vision that I WANT to begin again. Every good vacation ends itself. The self-creator does not seek a static contentment. He knows his joy is buried beneath a mountainous portion of sacrifice. Once the digging is over he looks skinny but he will eat twice what he has shed, nourished by knowing himself more completely, he is soon full to bursting and again wishes only to stretch his legs, work off his dinner and consider the next. He works and feels good about himself, so he has the emotional currency for the sacrifice, the investment capitol work requires. Then he does the natural thing and spends it. He works more. We might say, "Work makes worth, and worth makes work," or to put it more bluntly, "To feel good about himself every idiot needs something to do."

5

Generation Y: man as plant. Cultivated deadness with a striking tragic blossom

At first I assumed it to be an aberration of modern times, but in light of human nature's persistent and ineducable core I have come to believe every age throughout history probably had among its masses a certain questionable type of man. He exists in multitudes today and from whatever age of history he might be, he is from generation "Y." Why try? Why bother it's too hard? Why risk failure? He exists to reject life, and so denies himself at every turn. There is connection only in the still and tragic. This deeply tragic resonance is his allure. In his understanding of the tragic futile element of life he is like us, in this way he is available to us. Humanity, life has denied him elsewhere. To him inactivity and the sadness of defeat are primary. To him there is no primacy of the will, this does not affirm. His is a primacy of the won't. He is static and so lives on pity and compassion as he refuses to do for himself. This stillness may create the reflection, the appearance of dignity. The still repose of life imitating death is a dignified rigor reserved for the aged, but here the pallor of this sickness now clings to the young. It is not an exhaustion from old age, but a purposeful paring away of all the healthy drives has been indicated, enforced by his particular experiences. Why does each member of this generation ask, "Why accept life's challenge? Why play the game? Why not love me, I am tragic like you?" Why he refuses life is an individual question but the remedy is the same. First do be sure a remedy is needed! This is inner deadness of the highest order. It has been cultivated as if it is a prize and must be unmasked, scorned and another path taken where feeling is nurtured and risk embraced along with every potential. Begin with the sadness you love and ask why? Why are you full only when you are sad? Why have you cut away all your branches? Why are you safe only when still or weeping?

Hear your sadness and know why it has come. It is the mourner at your funeral. Why does she wail? What have you sacrificed now lost and buried, so young and so old? See the face of your dead and know what must be done! In nourishing tears grow; become spring, radiant new reclaiming and bold! Too sad you listen, too guilty and sullen but to listen and creep toward her sobbing words. Your sobbing pain, how might you soothe her? She used to nourish you so you ignored her and kept her sad. Now you want more than to hear her and be sad, you want more than to become her, now she must be well and know you will go further. You will answer her! Might she reward your daring if you came close enough to touch her, to bend low, so quiet each word as before a tender flame undisturbed, to whisper by her ear how she has been missed, would she know you forgive her for hurting, for feeling the failure, the loss? Could she forgive herself? Before you can speak she looks up beaming with every happiness! You have heard her then pledged an answer, and this is what she wants most of all! Now loved and heard we cry out and embrace weeping in open relief, so welcome to know each other again! Make your first sacrifice to spend your daring and reclaim your familiar pain. Be unburdened and find a light heart, a heart thirsty for life, for risk. May you fill yourself with what you have banished and be whole.

Generation Y members rarely pull their own weight in conversation and often reward an earnest outstretched hand with silence. They feel victory in rewarding effort with failure. They revel as dialogue decays into silence from their inattention. They have succeeded in springing their dismal trap on you and have shown you that effort is best left unspent in an uncaring universe. This truth they have learned well, but they have yet to grasp its significance. They possess the question and have stopped short. Why do they not seek the answer, the overcoming of their terrible truth? They lay impaled upon it as if they have

won. How juvenile, how sad, how shallow, but now you refuse and stop short of your joy, holding your breath in an aching uncomfortable stillness that hurts, made still as it craves life above all else! How dark is this agony, this deprivation and empty pain you perpetrate upon yourself? Frozen by the tonic of your despair, you most of all must learn to laugh and find liberation in your meaninglessness. You must be proven a failure and an idiot, and it is this idiotic laughing, knowing, winning unrepentant failure who you must become. The hysteria of creation laughs and weeps as it looks down at your pitiful hiding behind atrophy and indifference, as if they were affirming virtues rather than the tired cross necessity leaves for the aged exhausted and dying. With this act youth insults life and suicides. The young pose in repose as the used up: the spent. I do hope you will find your idiot or you will remain forever sick, sad and lonely. Wretched is anyone who lives without their idiot because they have no one to laugh at them. Anyone who is too serious over nothing is always sad. Tell your own joke instead.

I will permit myself a small detour by way of advocating self-creation, my personal bias over or in addition to having children, the normal way of creating self outside of self. This will allow me to clarify some benevolent but personal motives. Procreation, having children, is the obvious and natural way one can create a sense of continuance and purpose, but I pause at this call of nature and wonder if it is still appropriate. There are so many dull, unimproved people choking the Earth, that I think it most selfish to add another to the mass. Only have children if you intend to do it well, and then follow it through or please do not have any! The world is sick with our multitudes. Both mankind and the Earth would benefit more from one good idea brought to fruition than by yet another problem, another incomplete person. By creating yourself outside of yourself in this oldest way one risks frequent disappointment. A child is "the other," another distinct person, so there may be little connection when the parenting is over. Cling too tightly, help too much and you are rebelled against and rejected as the smotherer, not appreciated as the nurturer but hated instead. Remain too detached, and you will be hated as uncaring and hurtful. It is unsure if they will even decide they like you unless this and many other balances are rightly struck, and this elusive complex chemistry of love and need between self and other will be fruitful, and even more unsure if the fruit will be bitter or ripe. Much care and sacrifice must answer this uncertainty, and those who have endured its protracted labor may hear in these ideas a way to renew themselves after such a noble expenditure of emotional capital. A book may be rewritten until it suits your intentions, but a child grows only once and may prove more difficult to rewrite. I think writing a book the more prudent and rewarding course, but as you may have guessed I am biased in the extreme, being an author with no children.

6

On confidence: the warrior and the snail

I have mentioned how the past will steal if left unaddressed. It steals with its ceaseless chatter which divides our attention. As a drummer I have often had occasion to observe this principle at work. If the music is difficult and I play well, I might think to myself, "Nice one!" In having complimented myself on a good job, I have also momentarily divided my attention between the music and my words. A mistake will soon follow. If I think a bad thought about my playing, or a random thought about dinner or the laundry, the result is always the same. It does not matter what the intrusive thought is about, it need only divide one's attention partly away from the task and if the task is difficult, a mistake results. One

who has resolved their past can create a quiet, uninterrupted mindset whereby his attention is fully at his disposal. He will notice he performs better at almost every job. In this way self-creation enhances ability. Having all of one's undistracted mind at your disposal actually makes you smarter, in the same way your computer works faster with one program running than if it also had three additional applications running in the background.

Confidence is a paradox. It creates truth through believing lies. I have written about the sharp truths born in uncovering the ego's lies. Why does the ego lie to begin with? Why is it self-grandiose, absolute in its hope and courageous in its measure of all obstacles? Is it mad? No! These are the lies which create their own truth! To see through them is self-understanding, but to see through it in the other sense, as if it were a lens or a pair of glasses; to see through it by believing it, can bring winning results where understanding alone would fail. Someone who has spent the years necessary and plumbed the depths of their beast to leave their past exhausted and impotent, is now present to experience and their abilities are heightened. They are the perfect warrior. Each endeavor pits subtle present mind against obstacle, against foe. Understanding alone may solve many problems, but some obstacles the warrior faces require more than understanding by itself can provide. Due to its nature understanding needs help. Even if undistracted by the past, understanding sees all problems and pitfalls before it realistically. If in our realistic estimation we believe the chance of success is not high, we become apprehensive and worried. Our apprehension acts as the past or a stray intrusive thought which will divide our attention. If you must jump a great distance and succeed or die, truthful observation and the apprehension that comes from it are a divider of attention. They weaken performance. If one chooses to suspend their understanding and believe the ego they think, "I have trained hard and I can not fail!" Confident and unafraid, suckling on a lie about his certain success his mind is undivided by worry. With his full attention now available he sees only victory, and thinks only of the right line to jump. I am certain our imaginary jumper has landed safely because with his sure confidence his steps are right, and he will deliver his very best effort whatever the reality. Confidence is that certainty which pushes aside all fear and distraction, to leave the mind free to experience and wholly in the doing. In confidence all thought is still and only the doing, the action remains. An aspect of ego, confidence is a speeding snail. It only looks upward and travels on the lubrication of its lies so that it might reach the truth. Confidence is of enormous benefit if self is smart enough to believe it, and use it wisely. To be seduced by your own confident lies leads to the self-immolation of the self-grandiose. If however one's confidence is the tool of understanding, large may be made small, the impossible becomes achievable, and fear becomes motivation. Self knows all along how hard one must work to make the impossible expectations of the ego into fact. No one works harder for self than ego, and since self has requested ego's assistance, self is tireless in arranging the particulars so ego succeeds. We have what we need to master ego and ride its lies to our highest truth, even if we understand they are lies all the while. A person's highest success and self-creation is not a matter of self-understanding alone, but also a matter of daring, doing, believing, succeeding and failing as we apply our present mind to existence and see exactly what can be accomplished with it. A warrior is a doer both capable and active. His is the war against his own weakness, stillness and sameness. He itches and chafes against stagnancy and is liberated as his will becomes manifest. He is the instrument of presentness put to a specific end, a goal of his own choosing. In this way he eventually understands his own limits and limitlessness, as self and steed, truth and confidence leapfrog over each other to see how far they can go.

The aims of the warrior are the uncovering of personal self-understanding, and to then have knowing, courage and confidence combine to take on the large works that fulfill his final goal and bid for completeness and continuation. The point of the warrior's struggle: the creation of self outside of self,

self-affirmation by means of a perfect work, a perfect communication. In this we find use for every illusion and truth of performance. Perhaps this is the great life vitally jubilantly lived, or a perfect work which heartens, entreats and challenges those who follow. Only an idiot would put meaning where there can be none, and so the warrior proclaims, "I am my own idiot" as he strikes out against his mortality and meaninglessness with his work. It may be too much to hope for a sort of immortality for having completed any work no matter how "perfect," but it may be that in a hundred years another like soul will hear his own better higher voice in yours, and feel heartened, ennobled. He or she might find one so alike, a friend near enough to the fire of their most personal thoughts that as the flames crackle, you can smell him cook. I stand in the flames and hope to know you. We watch as all those around us degenerate into laziness and so see what we are not. The self-creator is alive in his truthful writhing, always ascending, he would rather ascend as smoke having been consumed in flame, rather perish than decline. His will is thus even if his life must follow a natural course. The self-creationist holds this connection, this continuance of strength to strength through time as his most delicate hope. I am a warrior who conceals a human. In the loneliness of unknown triumph I seek brothers-in-arms, even if they are found a century after my demise. Look here at this sad, red-cheeked mourner sopping over with love for you. Might he make us nauseous? Let us laugh at him and his serious pity! It is laughter alone which extinguishes and chastises my pity so lucky am I to be able to place anything I wish where there is nothing! The day is naked and I will clothe it with my will, fill it with my work and hear my sadness until it knows it is home, knows it is welcome, and rings with the laughter of creation! I am the warrior and I have won!

The greatest warrior is the one who gives his ego every chance to succeed. He is the artist who has practiced the mechanics of his craft, until they become the tools of art instead. The athlete trains, the musician practices, the author thinks and writes. The body from which mind springs becomes the servant of mind, as the musician or athlete no longer thinks of doing, all practice is forgotten, now habit it serves a self fully absorbed in the act of doing. Here, ego in doing, in acting at its highest level creates self at its highest level as well. By shedding its desire to divide its attention and praise itself or look away from its task for any reason, ego has served and elevated all. The musician has a recording, the author a book, the athlete a victory and the self has its proof, and so self is pleased. At last the visible proof that it exists, self outside of self. You see self is honest and thinking about death and meaninglessness has made it a bit neurotic. Self is afraid it does not and will not exist. The truth frightens it and in so much as we create our meaningless truth, self is eased and its fear abates. This is one reason why self-creation feels good! We create and know ourselves by taking up the challenge against fear, by willing, seeing and doing, our warrior's aims are met and Self glows in a sun beam, the day won and celebrated as Time looks upon the whole scene and shakes her head, bemused and puzzled, she whispers one word, "Farce."

7

On human addiction

Much of my knowledge of confidence comes from my well over twenty years as a performer and musician. This is the same forum in which I understand the nature of human addiction. In this first instance I mean something particular when I say "human addiction." I am referring to that need to experience our own reality, existence and substance as it is reflected in the responses of others. The

performer is potentially the other people addict taken to its extreme. He reflects in his honest heart should he squint and bear to look at it, "Others are moved to applause so I must exist, I must be good." He is full and alive when his addiction is fed, his self made complete, he becomes self-approving and believing now worthy of acknowledgment and real upon the wave of an audience's delirium. Efforts become valuable in their reflection in the crowd. Each review brings substance or wounds irreparably. All manner of work and sacrifice are justified and come alive to demand their own exceeding. Here a terrible injustice and self-cruelty begins. Self mistakes itself for ego, and instead of creating itself and laughing, it becomes hollow and self-grandiose. Paralyzed and seduced by its false reflection self stops, no longer looks for truth, choosing to nurse from the teat of the other instead. Satisfaction fades as the drug wears off and still unbelieving, the bottom looms large and panic drives more sacrifice from a soul never replenished. Thirst is not long quenched by even the most convincing mirage. Soon self is never full, and panic becomes a work ethic which bleeds dry and impoverishes to satisfy its craving for the mirror. Desperation becomes ethos, a dread master who gets his money's worth by working his slave to death. Self that is created through others feels real and so one who is addicted refuses to see that nothing is created, only appearance is reflected in the other, for by its nature the other is separate and can not know you, only your appearance. The intoxication of such a reflection is profound! Anyone who has had a crowd, seduced a crowd until it is stomping its feet and you feel the building actually shake as they chant, shout, violent and insatiable demanding you return to offer an encore appearance, knows its potency. Drunk on the illusion of your own power I assure you the incentive is high to do anything, deny anything to get another fix. Performance and its intoxicating potentially addicting reflection in the response of others is by far my very favorite, as well as the most dangerous drug. One who performs and is rewarded with the ecstatic riot of devouring and approval that is the crowd's kiss, will tell you the high is unequalled. Of course it is a lie, a lovely drug like heroin. After a few days the empty weight returns and the burden becomes too large, untenable. Only another show, another lover, another thing outside of yourself, another lie will heal. This is where the addict is laid bare, he needs something outside his own possibility to be well. If self-creation feels good you know it is not the glow of an addictive lie which looks outside of itself to end its suffering. Self-creation feels good because it replenishes self, it moves us toward strength and health. Self-knowledge is the self-creationist's laughter and happiness. He seeks at the bottom of everything to know self deeply so he may see in detail and understand, only then can he be honest when he smiles with damp wide eyes and says that he truly knows, truly loves himself.

Self-creation is the filler of inner emptiness which remains filled. We create each day and are complete in our solitude. A truth is once understood, but the question is forever answered. Self created in human addiction vanishes quickly, leaving you broken as it found you. Like a drug, it shows you a glimpse of your potential then takes it away again. Only with the continuous effort of self-understanding will you find the fullness of the creative self resurrected each day over coffee. After suffering terrible sickness of the mind and body spending myself chasing the self created in others, I can attest to its devastating effects. I have learned, and now live in the middle of 95 acres of wilderness, and know that a beautiful song is no less beautiful if no one buys it or hears it. I now see that I am a success if it meets my highest most elusive satisfaction, played with a passion free of compromise. I will never again denounce beauty or devalue truth because it can not be sold or strutted before a crowd. I am forever whole and complete, fertile, restless and reaching towards creation. In giving creation life, music and words I am my rejoicing and become complete. If you should hear it or read it so much the better, but I will never again require you, require an audience, to know I am alive. I have swallowed you whole and no longer need you! So I say to you that you have not understood this book so long as you need me! Consume my words and be audience to your own creation! Thought and understanding are the healthiest addictions. Self-creation is

the addiction that makes a habit of strength. Unlike a drug it replenishes you, rather than demanding that you replenish it.

As I have said performing is my favorite drug and if I am fit and able should the opportunity arise my enjoyment of the drug is undiminished and I will gladly take the pill. I now know it's a drug and take it freely, holding no illusions of truth in its vanishing reflection. I know better than to spend myself on the lie chasing performances to live. You can call me if you need me, and since I own no phone, you will have to need me most sincerely! All messages may be ignored. I am in my blessed solitude alive in the doing, no longer seeking to drown out my emptiness with the heady deceit of applause. In exchanging this illusion of power for the daily work song of self-creation I have made permanent what was fleeting. I am full and real in the doing, the playing, the writing, the living itself. The audience has lost its meaning as I have gained my own! One who appreciates himself no longer hungers as deeply for the appreciation of others. Happy is the idiot who is both author and reader of his own tale, for he is complete. A complete idiot needs no audience.

In the casual conveyance of this last truth I am guilty of hiding. I have passed too quickly to the end to have conveyed the depth and length of the struggle, the full measure of the adversary. When I was in the grip of the drug, the momentum of the lie was imperative, so I had to discover and rediscover the truth about performing. I had to be left empty and ill often enough and long enough to look and remember, rather than return to the diseased arms of my seducer for remedy. The 25 years I spent practicing not for myself or the love of music but for the show, spent everything I had, and left me too weak but for rage. The world was too important and never failed to disappoint my standard: need. Need can not afford the bill if you fail and I saw the world in constant failure to live up to its own word, its promise always made and then broken. Can you imagine anyone fool enough to expect the world to meet the standard of truth? Can you imagine anyone serious enough, needy enough to care? Expecting the truth from a world I needed to hear me, yielded a stark, unrelenting, infernal disappointment. I was the only one who could not afford a lie. Every kind and lazy lie attacked me. The moronic club owners and sleeping musicians all conspired with my impossible addiction to the crowd to press me past the point of breaking, as the shows ran out leaving only my faithful empty despair, more work and a glass of rage to help it all go down.

I will endeavor to help you understand me and sympathize, so I will introduce you to my addiction. Fame is a filthy high dollar whore.* She is the best. She is Eternity's practical sister, the ultimate seductress who is so alluring, she promises each exactly what they want. She fills every insecurity and leaves every john wanting more, wishing it was true. She is so good she demands an equally obscene premium. She won't even bother to show up for a date without a diamond ring up-front. No matter how good, how entertaining, how reliably received a performer is, if he is unknown in America only money, a diamond ring, TV time, an ad will fill the room. Only after I was too broken to use it, could I have afforded even a tiny speck of that, and to me fame in America was an empty room. One who finds a club full of people in Europe finds an empty room in America unless he is "already famous." Fame refuses all who have not paid cash up-front. She is a whore who cares only for money, but I must confess I still hear her whispering lies and truths in my ear until I am confused and believe every flattery. In the end I am too honest and far too poor for her. She has already bankrupted me and is laden with every disease of which my spirit was then afflicted. I know her too well to find her beautiful, but she is the best at the filthy wonderful things she does, so in every way she feels entitled to ask the highest price. For once in my life perhaps I am lucky to be poor. {*Footnote: Please go to www.richnorman.com and judge for yourself if I was worthy of her attentions. The addict is proud.}

Every excellent performance given to an empty room, every song well written but not sold, all effort

spent at succeeding left me poorer and more crippled as I doggedly pursued the lie. A success unwitnessed was a torture, a true failure in the eyes of my delirium. With few exceptions the work was good but my emptiness and fatigue increased. Living through others is a tapeworm which steals the sustenance you need to survive as quickly as you labor to produce it. For many years I destroyed myself by refusing to listen to my despair, and sought to avoid it with drugs, an act of apostasy which ignores self and so destroys self to keep on marching. This addict appears the resolute hero but is ultimately a coward. See him scurry away from his pain like a bug who declares his hatred of light a strength, his looking away an act of discipline.

As I said, no truth should loom too large, unduly above the rest and so the tide washes the verbose away and one must also see that if it delays a breakdown during a critical time, or lets us bear an unbearable stress, a drug may be a good and truly necessary thing indeed! Who would begrudge Kennedy his "treatments" of amphetamine which allowed him strength and sight to hold fast in the face of older narrower minds, and spare us the nuclear apocalypse that would have resulted from a hot-headed mishandling of the Cuban missile crisis? But this logic too has its end where benefit has long been outweighed by side effects and diminishing returns come from the cure, which becomes only a sick refusal to see. The consequences of my living through others as a performer were grave and the resultant mental illness was severe. There, now I feel you have more properly met my menace. More on this later! {*Footnote: Do not mistake this for a personal endorsement of methamphetamine which I avoid assiduously after it gave me pneumonia, a runny nose and a runnier brain almost 30 years ago.}

At this juncture I will briefly step out from behind the broken glass and again assure you that now things are different. Although badly shattered, I have repaired the windshield and having done so once, I now know how. I have cut myself from the belly of a host of addictions and other ludicrous errors of thinking with the simple penknife I present to you here. I tell you this not to brag or shame myself. You should know it to understand that when I speak of addiction, sickness and creation, I speak with the depth that comes from having been both prey and predator. I have felt the yoke of my addiction to unreality and I have shed it. I am no doctor who prescribes a remedy without having tested it himself. I am Jekyll, Hyde then Jekyll who remembers. I know the taste of my poison well, as well as the fact that it works. That of addiction which I still cherish I keep gladly of my own will, and that which I have I shed has been removed by the same, as it no longer suits me.

I would like to take note of another human addiction I often observe where by the mistaken opinion of another is sought and eagerly substituted for the truth. This works well with single individuals but even better with a group! A plausible but untrue version of events is espoused and although the teller knows it is a lie, he feels vindicated and validated as those who are misled believe his story. The fact that the liar knows he is lying matters little, as long as the story takes hold and gains them sympathy, or better yet some self-righteous indignance and rage. The liar feels entitled to these emotions which comfort and strengthen them as their falsehood is accepted. Perhaps they feel they have avoided punishment or their own scrutiny as they seek redemption from the truth, which becomes weak and unimportant in the face of their drug; their addiction to their lies reflected in this "consensus of the misinformed." Disallowing the obvious case of a professional thief or con man, I look into the mind of one who finds this behavior attractive and speculate. I ask you outright to consider this about your relationship to those you misinform. Perhaps the thought that, "they don't know," is enough to give you permission to forget? Or maybe you want to believe your lie and think, "If you believe it, it must be true," and seek comfort in the seductive words of understanding uttered by this intentionally misinformed other, this travesty against honesty of your design which is other-addiction and self-deception of the lowest sort. Having achieved this false approval one has bought oneself out of the truth, and feels entitled to act as if it did not exist. A

person who substitutes the consensus of the misinformed for the truth is a self-deceiver who wants to be reborn, reinvented without doing any of the work which makes such things possible. "Better an easy lie than a hard truth" is their motto, and they imagine they can avoid the stink, work and pain of owning their past. One who tries to escape their own shadow by rubbing themselves in the salve of others should be careful to go out only with a broad brimmed hat at mid-day, or better still at night. You see, these pretenders are a fragile breed whose shadow emerges and skin blisters, should the sun find it unprotected by a film of lies.

It is immensely stupid to define yourself by your weakest moment. When you look at the face of your stupidity and exclaim in horror, "I am a drug addict!" or "I am an alcoholic!" look at your dread ugly truth long and hard. Be repelled! Never forget and begin to redefine yourself at once! See your weakness exactly and remember so that it might always repel you should you need to remember why you will never repeat it. Self-creation may offer you harbor and sea should you wish it, but beware any harbor which can never be left! If you must say, "I am my weakness and can not exceed it," by proclaiming: "I am a drug addict" or "I am an alcoholic" before a group, run! Take your sobriety into your own hands with unforgiving dread earnest solemnity and never be tempted again. Be well in your creation which makes your truth of the day, and uses the past as it listens. Self-creation respects itself, it hears itself.

A bit of scorn to go with those tender words: any drug addict who denies themselves drugs or drink is a misery. Better to drink, indulge and die, than suffer the living death of sobriety for the "alcoholic." The answer is clear, pronounce yourself cured of your stupidity and live! You who have chosen not to drink are no longer an alcoholic. You have chosen freedom. You who no longer poisons themselves with drugs is no longer a drug addict. You are free! You were never diseased, only stupid and mistaken. For this you are forgiven and have earned real congratulations for having seen! Be well. You are mistaken no longer. Anyone who takes a drug should do so because it improves them. They have no excuse to redeem bad behavior, rather they are on drugs and should display greater self-control and acumen while being in the highest of spirits. If taking a drug yields your undoing instead, take quick and careful note to avoid it and choose another, or none at all. A drug addict or alcoholic is entirely responsible for all their behavior at all times. They are not diseased only too stupid to choose the right drug. Stupidity excuses nothing. Look in horror at your weakest moment and be repelled by your stupidity! Let it remain fresh in your mind, a sulking, brooding, hideous ghost so that the price of this betrayal will never be paid again. Own it and you have found a sure unyielding compass which will make the way clear to create your strength.

To remain a drug addict and be abstinent is to be a ship with all new masts and trim, your sails full, snapping back at the wind daring it to test them, while the anchor remains always clinging to the bottom, the ship straining but always moored tight in this "safe" harbor. How you must yearn for motion and life. How the wind brings the blood to your ears until you can not ignore the hammer of your pulse. You have been well trained and know better than to yield to hope so the roar becomes a shameful blush and you have become accustomed to this, the weakest moment is normalized and so you parrot out your weakness and say, "I am an alcoholic." Your fear is the crippling disease which exchanges fixation for freedom, and so in the name of safety you are slain! To hang the past around your neck and never to be done with it no matter how deeply it is understood, to trade freedom for fixation and place your deepest shame on yourself as a millstone with the stink of a dead animal, the smell of shame becomes familiar to your nostrils but offends all who are still able to breathe freely. Do not learn to live with your shame, learn to live without it! I will say plainly fear is your only disease, your only excuse! Your inner deadness will grow, your restlessness will settle and become brown, tired and sullen. You sit on your hands and they atrophy. How could it be otherwise when fixation squelches potential? When things

never move you can smell a characteristic unhealthy odor. This is the smell of potential as it rots.

These cults of addiction substitute the foulest actual addiction of all for a real, invented or imagined addiction to a substance. They bottle and sell my personal enemy and treat it as truth and salvation! They are cults of addiction where one is encouraged to foster a deep dependence on, an addiction to, other people! This most foul enslavement, this worst insecurity I uprooted at such heinous cost is the sickness they substitute for life! The inner deadness that comes from never moving from your weakest moment is offset and the victim sustained with the false buoyancy created in a continuous schedule of meetings, often supplemented with phone contact with staff or other participants, which ingrain the message of weakness and fill the victim with the approval of others. Each actor confesses before the group, accepts their millstone and is rewarded with the group's approval for taking on their agenda, so he will forever be an "alcoholic," and his pain forever held fast to keep him sick enough to need the group. This is the way the cult holds its members. The free thought of solitude is the cult's supreme enemy. In solitude it will become easier to think rather than easier not to think. The group, the cult, makes your life "easier" by relieving you of the burden of thinking for yourself. This is no burden but a right and privilege you must reclaim in solitude. When free thought returns, the cult's mechanism of control is thwarted. Let the remedy be cured! The normalizing and ennobling of weakness, and then filling the resulting void with a dependency on the approval of others, is a remedy which promises life only at the expense of living. Beware of any harbor without exit!

You must seek your solitude and learn to live alone, surrounded only by your own thoughts and feelings without any entertainment, conversation or interruption. The pain of loneliness is the beginning, the gateway to filling that loneliness with your creation. Let it swallow you and your self-grandiose pity so you may see true folly and laugh! Feel your emptiness most sharply and it will soon beg to be filled. Seek your pain rather than flee it, hear your voice and welcome yourself home. It is in the looking that we are first called to fill ourselves and become the answer to, the object of, our own craving. Seek no group. Instead be alone and listen. The pain you hear is your strength begging for form as your creation.

Nothing is as oversimplified as slogans or platitudes, which are at best half-truths. But even among platitudes some are more wrongheaded than others. Here are some silly slogans I thought up to replace the platitudes learned in "group:"

Always dare / Dare to live / Follow no one /
Create yourself / Kill the ostrich /
See for yourself / Question everything /
Believe nothing / Live from strength /
Fear weakness / Strength listens--hear yourself /
Truth over safety / Live safe and die /
Dare or die / Always dare to grow /
Safety is fear--Live dangerously /
Think till you blush / Author truth daily /
Live relentlessly / Truth over kind lies /
Enjoy your strength / Never settle /
Accept no excuse / Strength makes new /
Strength makes whole / Reborn through strength /
Earn love through strength / Grow or die /
Safety suffocates / Fear only weakness /
Weakness is fear / Groups teach impotence /
Become strong / Challenge assumptions /

Limit nothing / Feel everything /
Hear and overcome / Strength redefines /
Groups smother truth / Truth abhors pity /
Group-think is sickness / Support yourself /
Meetings stop thinking / Meeting is not thinking /
Cults teach impotence / Platitudes lie /
Exercise your disbelief / Avoid all little lies /

At this point you are free of the group and abandoned to the anxiety, the question mark of your hungry solitude. Now something basic must be fixed, a bad habit uprooted, if you are to succeed and reclaim yourself from the void. Something foundational is missing and in replacing it you will have good footing for a ladder to climb up out of your habit of self-deception, your tradition of failure. You must earn the right to believe yourself by keeping the most important fundamental promise. You are too bright and should have known better and so I compliment you and begin with some malice. Only those held to a higher standard are deserving of malice.

Every weak and honest thing which sees itself and is repulsed grows. How vulgar the sight of such sloth and sickness! The drive is unavoidable; this wretched creature must die! Something stronger must take its place. What lies at the root of this addiction which is not disease, but is an illness inflicted with our own hand? What wound does this creature crave to create its miserable state? This first most primary addiction is to the fundamental lie, not a lie told to others but one which is foundational and destroys the liar: the lie told to self. We must address this cause if we are to be free of the resultant sickness, and this pitiful self made sick by self is to live.

The most important, sacred, basic and enduring promise you make is the one you make to yourself. If you tell one lie about quitting to find your sleep, and another to coax your fearful despair into leaving so you can start the day with drink drugs and a broken promise, you are in need of help. Self help! You are a liar and will never trust yourself. Begin a new habit and never lie to yourself again. Never claim you will quit to ease your conscience. Make a promise you can keep instead. Promise to be abstinent for an hour or choose another goal you will actually meet, a promise you will keep. Move in small steps and achieve every goal. Please hear me when I say you must never lie to yourself again. Your word here must be absolute TO THE POINT OF DEATH. Here you are a child and all nuance is forbidden, you must always do this right. You never lie to yourself. You can not afford an addiction to your own lies. This sounds melodramatic, but it is not, since drowning in drink or drugs is a short road to death for some few. You who rightly stand before the group and rightly proclaim that you are alcoholics and drug addicts are those few, and your word to yourself must be your one unshakable thing. In this you will go far, and find unspeakable discipline and true kindness are inseparable. This act of discipline is a true act of kindness to self, which will never worry worm and fret in inconsolable anxiety again. Now you have reason to believe yourself and find peace and sureness knowing your word once given, is absolute unto death. Know yourself, you are no longer a liar, now worthy of respect you may begin to nurture yourself, love yourself and heal.* In this way death and discipline might conspire to bestow the true kindness of a peaceful mind upon you. Self-integrity is the highest of gifts purchased by discarding a few poisonous lies which leave one too sick and shallow to be trusted. Keep each small, easy promise you make to yourself and slowly promise more and build your new habit, a habit which will never allow you to disappoint yourself again. Once you have mastered this and achieved sobriety congratulations are in order. You are no longer diseased, your word is your strength and you are free.

{*Footnote: Please see the "Re-creation/New creation" section and the discussion of the slap and the embrace. The perspective shift is appropriate here.}

8

The engine of creation

Most people complain they feel sad. The self-creationist writes or rants, cries and then feels better by lunch. Instead of withholding, develop the habit of releasing. Pain writes, sadness sings and despair dances till it can try again. All things move ceaselessly in the creative mind. There is no empty resting when one feels freely. Self-creation transforms our eternal unrest from a misery into an engine, the turning of which fills our emptiness as it brings us to a higher possibility. When you hear your sadness do not be content in your gloom, answer it. All pain is a question to which creation is an answer.

So what pain is it which drives man to create? What is this engine of restlessness which we might harness? Where is the question kept? Where does this pain dwell, and how might we find it? You may boldly and foolishly insist, "Show me this engine of creation so I might most directly know it myself." I have had the lid removed from the engine and watched its ceaseless turning but as you will see that is to dare madness, and is ill-advised.

Freud called it the unconscious; the Greeks and the Romans knew it as the underworld. Where do we place those truths which are too painful, too ugly, those which must remain hidden as the dead? Where are the fantasies we think, but can not bear to know we think? Where are the thoughts we can not escape, and can not hear? All that which you are but can not know, can not own, resides there. It is ego's tool, keeping the air free of what is unhealthy for ego to breathe. Unless ego needs to be sexual and embrace the sexual role, sexuality can be a disturbing intrusion into daily life. To serve the smooth functioning of personality great forces are repressed and held in the engine out of view. The great bulk of the undeniable, continuous, super-sexual tide which lies at the base of man, his greatest fuel, his supreme energy which is used and sublimated or consumes him in fire, serves man or spoils him, becomes beauty or obsessive lust, is hidden here unless ego summons it. The unconscious is ego's servant and will contain even this amount of energy unless ego summons it as an asset and not a disturbance. If we could not repress the great bulk of our primal sexuality, so it is but a dull roar in the teenager's ear he would be wholly possessed by it, his attention unavailable to develop the higher social functions. If unable to submerge much of our sexuality we would never develop the mental and social skills which along with biology, make us attractive sexual partners, good risks, winners in society who are chosen to reproduce. All of us that would make chaos for the ego is buried here. The murderer in the civilized man and the lust of the chaste reside here. All of self which the ego calls sickness, perversity, violence, sadism and hatred are tenants of this jail. The constant contractions of wishes never known and hurts too deep to know reside here. It houses the ego's undoing, and the ego proclaims it: "Sickness!" The horror in man parades grotesque and unrepentant, a raging triumphant prisoner whose voice is your own. It is a cauldron of steaming ceaseless dissatisfaction in eternal lament. All that can not be solved or expressed contorts and grimaces, and its motion is a turbulence, a wind which brings the divine as its putrid breath fills our sails. Might we take its sultry festering and spin slender glistening threads of gold to cast aloft, toward the sun, as spiders of the earth and air, as spinners of tender golden sails may we ascend in these hot winds and be energized from this turbulence? What of hope and creation lies in a curse like this engine? I shall tell you of it here and then discuss its operation as the source of the creative instinct, the "engine of creation."

After a fifteen year stint on as much as half again over the "maximum" 80 mg. dose of Prozac I was ready to quit and did. I can assure you consciousness is entirely dependent on a delicate specific balance in the physical world. If I hit you with an iron bar you will pass out since the balance is disturbed. Drugs make this principle evident as we put a pill in our body and get results in our mind. My mind suffered the lack of a chemical 5-HT from Prozac withdrawal. {Footnote: 5-HT is short for 5-Hydroxytryptamine or serotonin. Rather than delve into the specifics of the pharmacology involved with the re-uptake of serotonin in the brain, etc. I refer you to the latest Goodman and Gilman's *Pharmacological Basis of Therapeutics* for a full discussion of how SSRI drugs effect the brain.} After a manageable one hundred day latency period, a critical level was reached and everything changed. The change was first manifested in a hyper-immaturity. Tantrums abounded. I eventually had the lid entirely removed from my unconscious and watched in relentless horror as the subterranean dynamism of my mind emerged. All that is irresolvable and unresolved tormented and afflicted me at all hours. Like living in a Bosch painting I myself had painted, the grotesque super-sexualized, hyper-violent world of Oedipal agony and torment I beheld was ceaseless and wholly putrid. An Oedipal horror is any truth which to gaze upon it knowing you have authored it yourself, would then make you want to tear out your own eyes. Primal ugliness that drives the hand and heart of man in both abomination and sublimation, were mine to observe for three endless months until my body righted itself. {Footnote: Although able to function again after three months, the process of rebalancing brainchemistry is excruciatingly slow and still ongoing.}

My mind rewarded these three months by the "great sulfur lake" as I call it, with the refreshment of both my pain and insight. A flower is a beautiful thing but every gardener knows the most healthy and spectacular example has its roots in a pile of shit. Having seen the engine of creation my eyes were cleansed from my weeping. The tears of a writhing nausea have afforded me a new day.

To know the fetid horror which drives man, Beauty, Truth and Pain are again my companions, sitting around a fire in my mind eating sardines together. It is warm to have them back, but to know them is to know their breath stinks.

After taking a drug for fifteen years to avoid collapse under the weight of my ever increasing pain and ugly resentment, and then to eventually be swallowed by that ugliness and unheard pain, I suggest a better course. Best to hear your pain and acknowledge your resentment before it reaches such crushing hideous proportions. You are your pain. You are your resentment. They are parts of you. To hear them and know yourself may at first appear prohibitively painful and inconvenient, but the eventual whole scale collapse you avoid will be your own. This course is prudent and best. Rather than keep on marching it may be better to stop and listen. We might both renew creativity and avoid collapse. So I believe I have realized the moral to my ordeal by the great sulfur lake: be relentless in pursuit of your ugliness, and you will find that beauty is the sure result. Better this agony of your own design, than to wait and have your ugliness relentlessly perusing you.

It is too late for me. I cry out in the perverse hubris of self-grandiose humiliation, "I know everything!" Everything I should not! I have bitten the apple, and it has bitten back. I can not forget and I will not forget, so you see my boast is also my curse. I have seen the engine and I remember. The pride of a madman who refuses both madness and forgetting. I know everything! Every thought that no one should have thought, but I alone had conjured, revealed the wish still uglier which conceived it. I could ask this wish, "Why?" Do you know what is seductive, attractive and healing in your nightmares; why you wish to dream them? To have seen the engine, the sulfur lake and its hideous monsters each with my head atop its neck, and to have refused to forget, was my infinite moment of self-knowing. Orpheus looks back and **remembers, to claim his prize**, not to lose it. {Footnote: A synopsis of the Greek myth

of Orpheus: Orpheus, a musician, used his musical talent to charm Hades, the god of the underworld, so as to allow his dead wife to return with him if he did not look back at her as they journeyed back to earth. He yielded to temptation and looked and she was lost to him forever.}

I plainly know each fetid desire and the need which called it forth, all that I have cast and those secrets better kept dark now beckon me, dare me to rediscover them, invite me to look again. I can no longer hide. I know all that which I rightly refused to see. I have seen and it is too late. I am doomed to know why I rage, love, chafe, react and feel as I do. I know everything! I am the physician who correctly diagnoses his sick condition and have gained insight, but I am not yet well. I am only honest. I know myself through many ordeals, all remembered by my stubborn unblinking nature and now honesty is not a choice for me. I am no longer a symbol to be unwound, I have become a smell with which I am most familiar. I know too much. Here I have become perversely proud so I unmask myself before you and say, the price of an honest, complete and unsparing knowledge of self is that it never relents. It never turns off and can make a hell of our lies both great and small. Improvement through creation is my salvation and with each wisdom and work I can not help but love my honesty more. She is after all my bride. My ego protests this sentiment and exclaims, "She is painfully ugly, and only an idiot would marry her!" Perhaps he is right.

This is no LSD trip, no afternoon or evening of self sport, alluring and light with promise of a glimpse which bends the eye up and over the wall to cheat the maze, where a hint of danger and darkness adds spice to sport as we chance a peak under truth's skirt. Instead here Truth has stripped and I have been laid bare before her ceaseless gaze. There is nothing alluring about the engine of creation. Super-sexualized, violent, infantile, grotesque, unrelenting and hideous are the monsters of our hurt, desire, failure, lust, rejection, impotence, rage, unmet need and frustration; so disturbing that they have been banished beyond our sight to reside forever unseen here in the engine. Everything there is there because it offends the light of day. Once the plain brown wrapper has been removed, one sees the forces which shape, direct and energize us, which remain necessarily hidden. Daddy keeps the drawer with the dirty magazines closed *because* this is the pornography of the mind.

Do not be misled by appearances. I say Oedipal horror and invoke the two traditional violations we find in the myth of Oedipus Rex: the accidental bedding of the unidentified mother and another unintentionally revealed wish in the accidental killing of the unidentified father. If his mother or father's identity were known to Oedipus he would surely not have bed or killed the respective parent. We can forgive him in this even if he can not forgive himself. This story and these crimes against nature are now an old familiar tale which has lost its sting. It has the feeling of the everyday about it, as if history has worn it out. My hidden truths are unworn by time and appear as they should, as true visceral horrors of the utmost repellent force. How could it be otherwise as they are by definition what is most unbearable for me, which is why they reside hidden here? These are living truths, not a dusty remnant, like this Oedipus whose accidents are a soothing tonic, a weak tepid tea which calms the nerves due to its lack of effect. Only you can imagine what is more terrible still! Think of it. What do you see? What? Tell me. I can not tell and will never know... In this I tease you playfully. You have been tricked! I made sure that I have shown too little of my own monster, and in your imagining on this Rorschach blot you can be sure it was you who was the painter, the author of the meaning. Perhaps here before you is a photograph, a projection however indistinct and ugly, a shrouded hint of your own live monster; your Oedipal horror.

This stark parade of ugliness was a great teacher, but not the only one. Each day in our dreams and undirected uncensored fantasies we have a window where we may see the unconscious, the engine revealed as it works. Look here to solve the riddle. Our imagery conceals a wish. Why do we fantasize the fantasies we do? Why do we dream these dreams? Why do we need these thoughts? What do they

provide? How do they serve us? Answer these questions and understand yourself, your riddle. What wound begs for this fever, this pornography so it might rest? The answer is you.

I make this strange but true statement because the unconscious contains these repressed energizers which are the unheard pipers of the invisible song to which we all dance. To see them and know their tune is to know why you feel compelled to be what you are. This all sounds well and good so you might still insist that you want to see for yourself. There is nothing wrong with the occasional peek under truth's skirt. She doesn't seem to mind and it is we who often blush to know her. But be warned: do not follow me and poison yourself to pursue her.* She is merciless and has no pity in her eyes for a fool. Once she has raped you sanity may become unbearable, and madness a relief. Do not go here! Ask why as I have asked, but ask your dreams, fantasies and curious choices, do not seek the engine directly. As I stared at the workings, the putrid, lurid, violent, unending convulsions of unresolved want, hurt and need, I began to find myself enormously taxed, overwhelmed by the effort to remain detached: to remain sane. I felt an ever-increasing gravity, an irresistible and profound magnetism exerted its force to pull me into the sights and struggles before me. The effort to remain detached was omnipresent. Month after month the engine wore into me with no peaceful moment granted, no breath spared its siren song, its call to madness. I was compelled not only to watch but to become the madness. The more tightly I held on the more exhausted I became, and the more sweet, hopeful and seductive the invitation to release. Surrender called out to me with loving tenderness, inviting me to let go, to forgo my grip on suffering, to be free from trying, free; a leaf in hell's storm. So I say to you most sincerely, *do not go here, where sanity becomes unbearable and madness a relief.*

I will admit one thing I have bought through knowing the engine and owning my humiliation. The engine may not stop turning but in seeing the filthy hand on the crank I now have a choice. I have earned a spoonful of dignity in that I may now choose to resist it, as well as use its turning. When I found and knew the creatures inhabiting the lake, I saw my reasons. Why I am drawn to honesty, why I am angry and react to what I do. *Why I am* is in great part a reflection of those monsters and their unending convulsions. I am their opposite and reflect them in mirror negative, or perhaps we embrace and I become them. Now that I know them I can choose to define myself as I wish, and may at last be without relation to them and choose another course. Now that I am no longer within the engine and subject to its gravity can I understand myself well enough to use my irresolvable nature, my eternal restlessness without surrendering to it, and create the higher from the lower? Can I know myself and then create something new, more than just self-understanding--true self-creation? To let the dirty hand turn the engine to further this aim is my highest ambition. This is the dignity, hope and conceit permitted the idiot with courage enough to know himself and remember.

The unconscious, this hidden engine of creation, is a storehouse for those parts of self which are too disturbing and disruptive to be with us in our daily lives. Creatures of the ego's discord, these parts of self have been splintered off and banished to the unconscious. They are repressed so they don't disrupt our daily personality with their presence. These parts of self are so toxic to the ego that they are submerged here, in this underworld, as if they did not exist, as if they were dead.

Their mere presence is enough to bring the ego to its knees, so we who are in the light need this illusion of unknowing: the self we can not see. This act of self-preservation has left us a mystery, an imbalance. It is in the withholding, the hiding of self that the imbalance is created which drives creativity, drives the engine. We seek to know the unknowable, to reclaim ourselves and in this urge to know ourselves again, we seek what is hidden, what is forbidden: completion and wholeness. Imbalance seeks equilibrium. Imbalances in pressure drive many engines. Pressures are released and energy is harvested as equilibrium is restored. This is the underlying principle behind the engine in your car and

likewise this engine, the engine of creation, will always seek equilibrium as well; to know what is hidden, to release what is trapped, reclaim its energy and complete ourselves. This is the motion which drives the engine of creation.

Let us seek a shadow, a spark, an outline and capture a slice compelled, infused with a pinprick of knowing. May we create and gaze upon what was lost and welcome it back into ourselves again. This is as it should be. In seeing the engine directly I have exceeded these bounds. There is little wonder I, a musician, began this book after having seen it. I was overlaid with new energy and had a thousand gifts dripping from my tongue, a thousand new understandings of every strange wholeness. How could I resist now so whole, too whole, bruised by every truth piled too high, too fast. This copious overflowing of the creative comes at a cost to self and ego. These things are hidden for a reason, and I see why it may be an insult to know. To see yourself and the world stripped naked of mystery may be an insult to the viewer. Am I still a philosopher if I say, "Enough!" or even, "Too much!"? But it is too late now. I am worn and bruised, and will say that in the case of this engine I have reservations about the truth, about wanting it, all of it. Am I still a philosopher if I say, "It is a personal violence, an assault to know oneself too deeply, too suddenly"?

The creative urge is born in our incompleteness. Psychologically it has become necessary to remove part of self from view and in this act of survival we are made separate from, and ignorant of, part of self which we will always seek to know, to rediscover, reinvent or reinterpret, and with which we will always long to reunite. The creative urge is the expression of this longing in the act of creation, its works and sacrifice. As one creates he becomes further energized as he discovers himself, and then full with life and longing, he seeks to fill his cup again. He is refreshed and revitalized to know himself in his creativity, which finds its engine in his necessarily incomplete nature.

Creativity is the province of this unconscious engine which holds what we seek away from our eyes. We who create wish to express self and make it visible, and however incomplete or transfigured the outcome, we seek to unearth the engine, express and see what is submerged and become whole. In this fragmented illusory reflection we see evidence of the hidden self, and so we know more. We can not bear to look upon the engine directly but it offers us these chipped uneven shards of iridescent opal and we might glance upon ourselves in the hidden places through our works and creation. We can not only bear to see them, but might marvel to know them, every wonderful thing bathed in filth and light. We create and know a little more... yes we can bear that, a hope we may seek to nurture and love. We stare at the diamond face of our creation knowing it is a splinter of our other face, a face buried deep within the engine we may hope never to clearly see.

I have seen the creatures which inhabit my engine and will reveal none of their particulars to you! It is bad enough that I should know me. In seeing, remembering then understanding all of it, I have noticed the engine remains wholly unaffected by my insights. It is entirely uncalmed. My creativity and knowledge grew as never before, but not even a single monster blinked. To see my feelings is not to solve them, so my task will always be woefully incomplete. Such is the nature of the irresolvable. At this I chuckle, uncomfortable and nervous to know that whatever of my hidden self I reclaim, I will be forever incomplete. There will always be more to know. I catch myself holding too tightly to my truth, and find that I must remember to exhale. I relax and for a moment I believe it, and am glad that the mystery will never be solved since then it will remain compelling, and I will always be full in creation, the engine forever turning.

Before I close this section, an important note on myth and model:

Let us stop and be sure we do not confuse truth for poetry, or myth and model for reality. In talking about the underworld, the engine, the unconscious or any other mythical unreal place or thing, I have undoubtedly led some of you short of the real truth--the fact. Let us consider that since these places and things do not actually exist, they are but a mythology, a model, a way to explain how these events and particulars feel to experience and how they interrelate which is useful in mythology and model. We can hold memory and feeling away from consciousness, we can repress, and this separation of self from self is the real kernel in the models and myths under discussion here. A model is a story, a myth which is useful because its parts work. It shows us their relationships, and gives us a working handle on our experience and how to understand it. Even if it is not a precise representative truth, a good model is both a useful instruction manual and accessible describer of experience, which however abstract in the story it tells, is useful because it has the fundamental relationships right. Let us not mistake perception for reality. When the mind's ability to repress is removed we feel as if we are in a different place, an underworld of strange ugly torment, and a myth is created. As I believe Freud would agree since he never achieved a satisfactory neural mapping of personality, a model like his is useful because it speaks of our experiences and how to understand them, not as a physical road map to a place or a thing: a box marked "unconscious," an "underworld," or an "engine." Much of what lies at the bottom of these ideas is not a place or a thing, but our ability to separate ourselves from ourselves; the mind's ability to repress. It is here that the imbalance begins which will always seek its own undoing, to reclaim what must be hidden, achieve equilibrium and complete the puzzle. It is in our need to repress that the creative mystery and its "engine" are born.

{*Footnote: Do not mistake this for a repudiation of the appropriate, top quality medical care I sought and was grateful to receive. I do not know what breakdown these potent pharmacological agents prevented and what that collapse may have wrought, and for that I am grateful. However, a point of diminishing returns is reached and these tools have limits and consequences. In the end pharmacology proves a poor replacement for good thinking.}

9

On the returning of "gifts"

I am a big believer in the returning of gifts. Many gifts can be returned in part or in full, and the receiver may be relieved of their injustice. I am using a pun here and teasing you, since I write in English but the definition of the word "gift" I take from German. In German "gift" means "poison." The Nazis killed millions in gas chambers using "giftgas," no fine gift to be sure! Throughout life other people bestow a multitude of such emotional gifts, and leave one quite nauseous in the wake of their generosity. Hundreds of these gifts might be returned over the course of a lifetime. Bosses, teachers, friends and others who posed as one thing, but gave the gift of a lie or worse instead, may all have their portrait painted and their kindness returned in a letter. The method involves two fundamentals. First the gift must be understood both in how it worked to inflict its injury, and why it was given; i.e. the gift of a parent's neglect hurts for the absence of caring, and may have been inflicted because the parent was emotionally incomplete and unavailable, or perhaps just selfish and self-absorbed. Rather than carry your albatross and make its bed so it rests with you as the giver intended, place it in a letter and return it to them. It will be happiest sucking from the teat which gave it life, and its sharp little teeth may be removed from your

breast and placed tenderly around the one who deserves them most. After having received the returned gift the original giver will feel a squirming within them as they lie to cover up and maneuver within their own thoughts to avoid the topic. Once they see their true face your gift will nest with them and you may be relieved of its effects. No one who returns a gift is helpless, they have helped themselves. Now the gift's toxic effects fade and another topic, the present, may be at hand, once resentment has been duly returned.

The second principle to which any good gift return should adhere is one of clinical accuracy. Never exaggerate. Your understanding must be thorough or you will compose a rant, a barrage of ugly unsubstantiated accusations. A gift properly returned should be highly emotive, but at its base is a litany of facts and effects which are wholly true, and will never fail to hit their mark. Anyone who is a pathological liar and can hear a fact one minute and deny it the next may appear to dodge the bullet, but will squirm in their dreams and as a result is likely to sleep little. Once the gift is returned and your letter of facts is read, you may chuckle knowing the thing now lives where it was born, so you have done a good deed in returning it. Remember: a good deed done for yourself is still a good deed. After returning your gift you may begin to live without it and no longer be its victim. The very best gift to return is your own self-pity.

10

On looking away, re-creation and new creation

I will tell you of a road to deadness which is often falsely marked. It may be adorned with a sign proclaiming it is the road to salvation, but it is not. It is the road of the fearful. It may be marked "Maturity," but it is the lazy road to starvation. This is not the road to ease and answer, but a lie that would have you soil yourself and protest the odor offends you, rather than change your pants. This is the road marked "Looking Away," and it is no cure. It is the face of disease. To tolerate the unacceptable one must look away. While this is a good idea in times of physical duress, as we look away from a broken limb before it is set, it is a bad idea in most all other aspects of living. We look away from our emotional pain and ignore it. What of it? If you look away at a traffic light the other cars do not disappear, so you have an auto wreck. The same applies to one's internal life. When you feel discomfort at a thought you want to look away, when in fact your pain is your guide. If you feel worthless you must answer your pain, hear and understand its source, and do something to be worthy. If you are empty, you must find the spring of your emotion and dig until soaked in your tears you are full, moving and satisfied. If you know you have been uncaring, your guilt gnaws at you until you are encouraged to listen, and do something to demonstrate your feelings. Your pain holds the knowledge of its own undoing. See, hear and understand it clearly, and you will know how to quiet it. A thoughtful person finds that his pain is a road map telling him how to stop hurting. Hear your heart most as it aches. Never look away. To do so starves healing and knowing with a single lie. To look away is to itch forever. It is an insult to the truth, and like a rash she will itch to be heard and plague all your moments rather than grant you peace. You will be comfortable only in your inner deadness as it covers her itching at the price of your right to feel. As appealing as the idea is, in truth we never forget. So it is good practice never to look away. It is always best to know all the house guests in your mind, so you are not surprised to find one of them choking the life out of you for having been ignored.

The most particular and needy of these house guests is the past. To look away from the past is to always be under its sway. Its ceaseless embrace will guide your steps and you will repeat its lies and dance as it instructs. Your misery will cycle with its familiar seasons, and you will know it in place of yourself. You will disgrace yourself and cry out as if victimized, although it is you who rape yourself. Know your past completely! Know it to the point of boredom! I say to exhaust it as I have before, and also tell you of circumstances where you may project your will backward and correct a mistake. I called this "recreation." This is no happy task, but a rare occurrence where the will can engage in a most exhausting exercise, whereby it projects itself backwards to correct a previous error. Every idiot knows many mistakes small and large, which are all easily forgiven. We give ourselves every permission to try and fail, since this is the cost of success and growth. We look carefully at failure and remember, but all is forgiven as we prove ourselves worthy and try again. Honesty sees failure and may have to stare, but in the end smiles even if it never blinks. I had suffered greatly at the hands of my foolish pursuit of self through the crowd and wore my considerable strength away into abject collapse three times over, and that spares mention much. After such a collapse I found a new and dreadful consequence: errors in my work. I opened up this old work, this music that was so deserving and so flawed. My ego was gasping in the foul air of its failure and I doubled over to feel all of each second crawl slowly past as I persisted over many tortured months, impossibly nursing beauty to health out of this sad, diseased wreckage. The price of projecting my will backwards and lifting the stain of my own imperfection proved doubly high and makes the strongest argument for doing it right to begin with. I soon had to admit that I would only consider re-creation for those mistakes so severe that not even an idiot could be forgiven for making them.

The strain was soon beyond my capacity to contain it. My ego was rotting away beneath me, putrid and necrotic, now always drinking from the cesspool of shame and failure. Each day was worse than the last and the work stretched to fill every horizon. What was wrong? I could hear no other refrain, and collapse loomed ever nearer.

When we are born the doctor knows we are timid lazy creatures, so he slaps us on the bottom to shock us out of our complacency and get things going. Although this is wholly appropriate and necessary to start respiration and the like, it is a bad idea to use a slap on the bottom to solve all of life's subsequent problems. I realized this explained my debilitating run-in with re-creation.

I was ashamed at my error. I slapped myself to initiate action, and shame served to deliver the blow. It was a punitive lesson, a violent and appropriate slap soundly delivered. It worked. I had begun the work and responded to the slap with all manner of sacrifice and effort, which should have earned my support, love and forgiveness with this most sincere demonstration. Instead I gave myself another slap! More self-loathing to reward my best efforts. I was beating myself mercilessly in the name of healing, and failed to see why this led to collapse! The habit of self-hatred is a poison, even as the honest self-loathing you feel at recognizing your weakness is a necessary and empowering slap. It is important to be viscerally repulsed at the sight of your weakest moment and it is equally important to shift perspectives and nurture yourself, love yourself once you have responded to the slap and earned your way back into your own good graces. To withhold this from yourself in favor of another slap is tantamount to suicide. Once this became clear to me I wept and was sorry for heaping scorn on myself, and keeping myself sick as I earnestly spent to the last, only to be beaten and kept from healing. I scorned and degraded myself even to call this noble task re-creation. This was new creation and the very highest form--healing! The music was new, the performance new and so I understood: this was not recreation but new creation, a new chance, an unknown I granted myself which offered up every hope and new promise cradled here for me in outstretched arms. Now the music and the musician flourished, and my burden was light as an

exercise in humiliation was replaced by an exercise in healing. Both the slap and self-love are necessary. Neither negates the other, but each is instead appropriate at the right time. The changing specifics of every situation demand that perspective be adjusted accordingly. Knowing when to recoil and when to love oneself is to embrace the idiot who tries and strike the fool who does not. Nothing could be more appropriate.

You must permit me a breach of form as I wish to return and augment my views on a previous subject which appeared to have been resolved. I do hate looking away and must admit that I have gone too far, surrendered to my disgust and creased the truth. While this is a book about looking toward one's pain for healing, direction and creativity, and the preceding thoughts on looking away are sensible in this context, I must make provision not to be too careless and general in an attempt to make my thoughts look tidy. In my excessive exuberance I have made a fundamental error. I have seen it used so badly that I have begun to hate a tool, rather than remember it is the carpenter to blame if it is poorly employed. Looking away does have its place, not only as I have already alluded in the avoidance of physical pain, as in looking away when a bone is set, but in other contexts too. Confidence, the lie which seeks to become truth, is a looking only toward the goal, and hence looks away from defeat to improve its odds. When it is clear an acquaintance is self-serving and will harm you for their ends, or when they are untruthful in an attempt to nourish themselves on your pain, they may safely be put beneath contempt so only the sight of them will bring them to mind and then, you may rightly laugh. Many people are chronically insecure and see any disadvantage they can inflict on another as their personal advantage. The world is filled with incomplete people who bite and imagine themselves real as you flinch to offer them substance. There are so many different varieties that to describe them all here within the confines of this work would be impossible. When you know another to seldom be truthful but to instead serve their own agenda at your expense, they are safe to be put beneath contempt and looked away from. Poison is not worth drinking or even thinking about drinking. Such a person is not worth a moment's attention and is best forgotten. I must confess that there is a place for looking away; it may dull physical pain, serve confidence or repel parasites. But the carpenter is afraid and in his fear he misuses his tools, so there is a habit we have learned, we build poorly and now there is a rat on the ship. He snuck aboard long ago so we take his presence for granted and no longer notice him. This rat carries plague and he promises us ease if we ignore him, but be warned we will be sick for never knowing, and incomplete always holding a door closed, spending our energy to keep looking away. Looking away is a thief which steals our inner thoughts, leaves our pain mute and abandons us to bring a false, empty, tired peace. This fearful hiding and denying, this rat is a vector for inner deadness. Sickness impersonates peace. Instead it is the warrior who will risk hearing himself, who savages his ego and draws his own blood who will thrive *because* he hears himself, his pain most clearly! My ego is brimming over with nausea and has had about enough of this. He says, "Shut up! Only an idiot would expect to heal rather than hurt himself by listening to his pain!" Having been recognized, I am flattered and I must admit that although he doesn't intend to be, in this case he is my best supporter and a fine judge of character.

11

Solitude

There is a place in your mind between "you and yourself," between the you who is here reading, and

the you who is. The you who is, knows no one time, and feels everything always exactly as you do. When you are still, open and quiet you can hear yourself. The you in the present can hear its other self, know itself in full, and become complete and untroubled, but such large ears take time to grow and the luxury of a life which lets one listen. Often enough survival demands all our attention be in the here and now, so the door is closed and we no longer listen, lest we become distracted and lose the most important game of all. Many things other than survival can occupy us, fill this space between you and yourself and provoke inner deafness. In fact that is why many of those things are sought. We seek to avoid ourselves and call it "diversion," "entertainment" or perhaps even "study." Like a student who has not studied and skips class to become more behind, and skip again, we no longer wish to hear ourselves. We don't want to hear what we have to say to our absent student: that we no longer trust him to listen.

There is a place in your mind between "you and yourself," and many things fit there. A host of products and pursuits fit there which can serve our addiction to inner fear and deafness. Every book, every video game, neurosis, duty, obsession, TV show, argument, meeting, phone call, friend, worry, piece of art or music can fill this space and remove us from ourselves. The thing which fits the space best is our attention. We pay attention to something in the most literal sense. Attention costs. When we dig in and focus our mind on an object or idea we exclude all else and pay a terrible price. We contribute a sacrifice of great value to accomplish this deed. We can no longer hear ourselves, we sacrifice ourselves so we can attend our attention!

Solitude is the answer, the antidote to this condition which has befallen or addicted us. We busy people have become poor students in our industry, we are often playing hooky, skipping class, the only class taught by a teacher whose opinion and grade matters, the only teacher who is always worth listening to: you! It is time to get caught up and grant ourselves the greatest and most necessary self-indulgence which might clarify direction, point and purpose. Solitude is selfish because it does not lie. It hears and so indulges self. It sees each wretched sacrifice which betrayed self, made self inaudible. Now the swimmer releases to the undertow and is carried to a horizonless sea, gray and black, the blue has sunken too far to recognize, this deaf sea from your ugly weather gathers black clouds which would not hear until now; you call the rain and find it withheld. No longer afraid of a cloud or gentle black rain, I see the clouds have held me out to the sea to swallow, and a whirlpool spins empty and furious, raging scorned and ignored, the sea twists angrily emptying the air of every reason, until I hear the voice of the sea. No brown undertow is this, but a whirlpool which must be funneled through your depths until you know what you have spent in your sacrifice. Then you may hear, and be grateful to the sea for what cost it had to bear, silent in sacrifice to attention. I surrender to the whirlpool and listen silently, gladly, for I am grateful to the sea for not having abandoned me, and I know why she is angry, so I beg she forgive my absence and show her I wish only to repay her, soothe her, and listen to her angry scolding. How could I not be angry with myself? It is after all my sea I have spurned, sacrificed, forced to live silent and submerged. The sea has heard my prayer and the hungry whirlpool collapses, expanding inside out, now a fountain, and I am tossed into a welcoming cloudless tropical sky, and received warmly by a new, kind sea. In solitude we hear the cost of creation and gladly listen to pay the bill. The sea holds no grudge and wants only for you to know and love her again, listen again. Solitude is our gift to her as our attention was hers to us. Not to indulge her selfish nature is to be condemned to carry your unmended heart slung clumsily over your shoulder, and feel life as a weight and a burden. How sad and tired is a man who has not found his undertow and followed it, to discover it is the sure current of his happiness.

What creates such an undertow? What makes a mysterious sea of fear and delight of what we ourselves have done? Why should such a thing be a mystery? Man has learned to hide in plain sight. To hide, of all people, from himself! Each compromise, each lie to oneself to ease rather than change, each

ordinary work-a-day swallowing of a speck of poison seems well within our ability to survive, even enjoy, but here we hide. A small pain is easily forgotten and can be withstood for a time, and then some more, but eventually it will display a cumulative effect which will decrease the "spiritual buoyancy" of the person who bears it. By the time this strange brown weight has taken hold years later, the habit of destruction has become invisible, unnoticed, counted on and familiar. It is now well-hidden in broad daylight, accepted and beyond reproach. This is how we become a mystery to ourselves; we learn to tolerate the origins of our misery, we make them ordinary.

Once this trap is set we soon have reason to avoid ourselves as the poison accumulates and work, obsession, recreation, drugs, duty or more sacrifice, which now furthers both emotional debt and denial, fill the space between "you and yourself" and the mystery deepens, along with its attendant sickness. Sickness, weight and the stifling despair of inner deadness and ill-defined anxiety, accompany any long period where we live without hearing ourselves. However slowly, pain will emerge in an attempt to sharpen our hearing.

Solitude is an environment which is conducive to ending this, and a thousand other ways and reasons we have found to ignore ourselves. Fear unravels its mechanism, injuries and mistakes begin to speak, reveal themselves, with our mind unresisting and judgment openly silent we are embraced by our unrelenting solitude. Every demon and its god crawl crawl quietly, stealthily up beside your ear to confess. Soon you will cry their tears, since they feel as but one too pitiful to accept until now. A welcome silence which does not judge, but listens, is characteristic of the most perfect solitude. No forgiveness, which is only judgment concealed, is needed, only listening. See why, change and never return unless sacrifice demands and pays double in her gratitude! Hear and be well! This is the promise solitude bestows upon those who serve her. We are eager for her gifts, and treat her with reverence and silence which does not judge. So can we best attend her.

One who is distant from themselves will find solitude, true solitude without fantasy or diversion, to be an unbearable bed of anxiety, and each moment in solitude will seem a cruel laceration. This is as it should be and it is the anxiety which our inattention to self has made for us, which serves to carry us out to sea so we may learn why. In less poetic language it is the anxiety which comes of being truly, uninterruptedly in touch with ourselves that is our compass, our directional indicator. Ask why you are anxious about this thing your mind continues to present, and follow the trail. You will soon see what inattention to your needs has brought the irritation about, and seek to remedy it. Once again pain shows us what changes are in order to better follow ourselves and remove its source.

Solitude aids self-improvement, which often begins with seeing what must be improved, a topic we are apt to ignore. Solitude is a state of mind and a fragile thing, which holds our hope and promise. Solitude is hearing yourself. Being alone helps but is not required. Be naked before yourself, still and listening. Nothing brings your feelings closer or as brightly before your pained eyes. Nothing is as uncluttered by other people's truths and duties. Nothing makes your own voice stronger, or your emptiness, your goal and answer clearer, and so in creation there is no better ally than our sweet solitude.

12

Hate

Everything must be tapped. Everything passionate and energetic must be used, spent and exhausted,

or it will accumulate, fester and consume us. Mankind has no more abundant resource than his hatred and resentment, so I ask you: what has hate done for *you* lately? Yes, it's true! Hate can provide much, and will be greatly diminished in its toxic effects should you choose to use it to further your own elevation. This abundant straw might become gold, and we may all celebrate ourselves as illustrious decedents of the mythical Rumpelstiltskin. The difference being that at the end of our experiment, we will endeavor not to be so mean-spirited.

Anger is a fuel. Resentment is its refinery. Even if we are not currently living with circumstances and behaviors which foster the growth of resentment within us, we are still resource rich. This is a fossil fuel, a fuel formed by our past as it languishes, never gone but stewing, unable to be attended, removed from reach by time. Let us burn it and make our air cleaner for its absence, and our purpose furthered as well. Like any tool hate is value neutral until it is applied and serves our purposes, be they good or ill. Hate can be used to further or squelch any cause, from achievement to apostasy. Do we use our gallon of gas to commit a heinous arson or go for a drive? Although value neutral, hate requires special handling. Hatred and resentment are highly toxic emotional constituents to be avoided if possible, and are best used and addressed quickly so as to be de-energized, lest they poison the carrier.

You have heard the statement, "Living well is the best revenge." I submit the following: "Being well is the best revenge." What better way to make asses of those who belittled you, ignored you and infuriated you, than to surpass them in health, worth, intellect and every other measure of strength and value? Resentment can provide direction and show steps to meaning just like any other type of pain. One who resents being raised poorly might seek to be an excellent parent. One who was beaten and resents this mania most, might in his disgust and hate become his own most severe master in every matter of self-restraint and control. One who was raped might examine their wounds and seek dignity by knowing themselves and their injuries best, and turn their resentment and hatred of ignorance into a relentless self-understanding, most healed instead of most broken. The ultimate psychologist is often resentment's thoughtful child. An abducted child's parent may become the supreme pro-active, media savvy whirlwind of revenge against the criminal, as with John Walsh and *America's Most Wanted*. These are the noble fruits of revenge! Resentment hurts, and like all pain it can be a keen motivator.

Revenge is the mobilization of hate to restore equilibrium for an unjust event, and it is often referred to as getting even. This usually finds expression as the disadvantaged seeks to revenge themselves by humiliating the offender. One can also choose to restore this balance by elevating oneself, rather than injure the offender in kind. This is the true nobility of revenge, where hate serves a higher purpose, rather than shrink the disadvantaged morally to match the act of the offender. Strength is not a boast, it is real. Nothing clears the palate of the vile taste of resentment better than being above it.

When I feel my resolve flag and I am tempted to quit my chosen task, I often think of those lazy ones who refuse to try, invoke every excuse to look away and love nothing more than their own ease. Nothing stiffens my spine and sharpens my resolve more quickly than a whiff of the resentment I feel for the self-indulgent, lazy people I have known. Many a paragraph has been written, many a song recorded and even a few buildings built with the aid of this device. The variety of task is irrelevant. My lazy acquaintances in the tepid, yellowing sea of man's waning courage have shown me myself. I am not you! Oh no, I am not he who has urinated in his bath water and thinks it easiest not to move, content in the stink of his excuses. So I struggle on and finish my task just to know it! I hate and I persist! Rage may find persistence enough for the creation of strength and beauty alike. So I ask you: What has hate done for *you* lately?

13

The noble lie

I write of what I have learned and it seems as if each truth were a pebble, a dirty jewel spotted in the sand by sharp eyes, but that is hubris. The lessons I have learned are distilled through continuous thought, but the object I study is often my failure. Understanding is a glad thing which makes a success of our failure by hanging its head on our wall as a symbol of its powerlessness. To easily discuss one's failure having once known its crippling sting, to have stripped away our stupidity to leave knowledge in its place, is the thinker's trophy and his freedom. There is no excuse, we must see exactly how we failed. Failure is a potent force which subdues ego. As ego retreats we are shivering and naked so are in a very receptive state for learning, each pain and lesson may speak fully without ego's rationalizing defensive shield to squelch the message and protect us. I offer up what I have known at such excessive cost so you may see and be spared the tragic disappointment which comes from expecting the impossible. Your laughter might be more easily won than mine but for a lie which keeps you looking down amidst the sun shower, a loving wretched lie which falsely ennoble, so always disappoints. Your lips are dark and cracked, but precious light and water are everywhere. Creation is our happiness, we purchase nothing with it other than the reason to wake and work, but you are stained black. How are you, so gladly blessed, now stained in black disappointment? How can you create and know the full glad heart which quenches sigh and sadness, thirstily drinking from a cup of silver light? You are the cup, the drinker, and the light, and it is you alone who knows how your parched lips and tongue bear witness to your black disappointment, your thirst for liquid and light.

The failure which has led to such disappointment and sadness is both a kindness and a conviction. It is a failure in reasoning, in thinking. How poor, pitiful and grievous are the results of its belief! How many corrosive tears hungrily etched their disappointment on my soul? How much bitterness and weight were shed to know finally that it is an illusion and a LIE!?

We exist as ourselves, and the rest of humanity as "the other." The world is filled with "the other," these other people are not privy to our personal experience, so we expect they will treat us with characteristic indifference. Why would they do otherwise? We are seldom disappointed with these rational expectations. There are some of these others who we know purely by circumstance or accident, that we hold to a different standard. We suppose that our parents who we know only by an accident of genetics, and our old friends who we know only by accident of mutual proximity, are different. We come to feel a conviction that these people are exceptions, even though they are the other we expect they will care about, appreciate and even know us. This insanity is the sopping up of sentiment into the tissue of a lie. In this noble sentiment, this beautiful lie, is the seed of our misery, our disappointment. Parents and friends are the other, and are under no obligation to care about or know you! To expect caring from the other is to disappoint yourself. To expect the impossible is to create a self that can not be filled, and will always sigh. It is a false nobility which says, "I will give them the benefit of the doubt." I would rather doubt if they are of benefit! You offer them no kindness to expect more of them than they will deliver. Stop hanging them and disappointing yourself with unreal noble expectations. Free yourself! Say it with me! Your parents are not thinking of you, will not help and do not care! Your friends feel their joy, twist in their own agony and forget you! They do not know you! Whether they do not remember you, or if you are an uncomfortable reminder, the ghost of the path not taken stirs, illuminates how they refuse themselves, matters not. The answer is the same. Expect nothing of these others and be done with this

sighing and sadness. Know the light of your creation and let your laughter ring out into completeness! Do not look outward for comfort but know instead that you are alive within each moment pouring upon the next, and you will never again hear a promise you need to believe, which will not be kept.

By understanding what a bad bet it is to expect anything at all from parents, friends or other people in general, we have freed ourselves and them as well. With such enormously low expectations any effort on their part, no matter how minute, will seem noteworthy. By expecting nothing of someone, it is much easier not to waste too much time hating them for having disappointed you. The other is always an empty promise. Expect nothing and you will be more pleased with what you get.

{Footnote: Here you must forgive me. No two splashes on time's white sheet are the same and to surely make my point I have chosen the two most common objects of the noble lie, parents and friends. Perhaps I guess wrongly and the object is your child, spouse or god. I do not know if I have offended you and named or misnamed your personal demon, but I trust the point will be clear even if the specific is not. However I must caution you. Look closely and examine your responses as you read. Do you cling too tightly to this exception, do you welcome this too greedily or balk at the idea of this noble lie and abjectly refuse it without a full hearing? If so you have been caught, and in your excessive resistance or by insulating yourself with this exception you may be certain you should look again, and you will surely find that you refuse to surrender your noble lie. I could reduce this section to an aphorism: "The thinker becomes happy when he learns to expect the least from those who disappoint the most." This is the kernel of the idea but lacks the teeth of the reality, which involves much more if we must slash our expectations for those hallowed few we need or love, and so expect too much from. This is too ugly, too messy a matter to be effectively handled at a distance if its meaning is to be properly understood. If I have offended you please be big enough to see the underlying truth I offer. If I have offended you too greatly, please look within yourself for redress.}

14

The exception

Truth often revels in chaos and contradiction. This can be most troubling. In beauty's symmetry we feel comforted as if assured of some reason, as we see her we wonder if the world has purpose. We want beauty to lie as if there is purpose at work in the world, but it is we who paint her face and declare, "She is beautiful!" Without our intervention truth heeds no aesthetic. For this reason it is a wonderful accident indeed when truth and beauty conjoin, so rare and precious is the exception where our needful eyes and our wisdom may both be sated! It is this exceptional joy, this profound exception which I exalt! This last illusion stands the waves and is washed true. Hope has given me another blanket of promises and light, another glimpse of what could be, which strengthens my grasp even if eluding it, but something is different, this quilt has warmth and now it has changed again and the cloth is real! I have seen hope transformed, light hardened into truth and I exclaim, "Hope no longer lies!"

Here I have found instance of the other not as the empty promise, but the promise fulfilled. This impossible shelter which does not trap, blossoms gladly warmed in my light, where others wither. A bloom which does not sicken and deaden the bee, but has a sting of its own so becoming welcoming and unafraid. Marriage has been slandered and violated with every possible stupid expectation. Vows are not necessary. When two liars vow anything together they inevitably slander marriage.

When words alone bind two together they raise a chafing pain which wears one away, and soft skin

gives itself over to the rock; too upright to stop rubbing, no matter how false the words, if they are uttered by an honest man they must be kept! This is not an honest man's curse, or a liar's liquor which leaves him drunk, imagining he is complete. When words stain the ear with these incomplete drunken lies you will hear the most nauseating platitudes! He says, "You make me whole. I am nothing without you." She says, "I live for and through you, I will never displease you or make you suffer my company to disagree." Neither of you is real, and you are both love drunk and lying! Two complete people are fit companions who will not exhaust each other with their needy "virtues." One does not create the other in a symbiosis of need, they are both complete people who choose the environment of each other's company. "Tell me you love me" are words which often drip from the virtuous lips of every insecure incomplete romantic. Be done with it and know yourself! Know you can truly trust your mate or be done with them!

My relationship of 28 years has been held fast with three simple stitches. Obligation has no province. I want to be the way that I am and the marriage supports that. It is obligated to me and not the reverse. My wife finds the environment it creates for her equally productive and freeing. That is why the marriage has lasted over 20 years, not because we stuck to our bad decision, but because the decision was good so it stuck. Completeness in oneself precedes a successful marriage. This is the first of the three principles. A good marriage thrives on an abundance of time spent "alone together" as well as the time spent interacting as a couple. This is the closeness which breathes. Each must create themselves today and every day and air, a great clean merciful expanse filled with pure air, is required. When marriage is the sharing of experience by two complete whole people, its longevity and quality are assured. A whole person grasps their own motivations and can share the truth with their partner, rather than make their partner the victim of their truth. Two incomplete people will share their needs and lies and nurture them as if they are true. The partner who says, "I am nothing without you," is tragically and deeply sick. Marriage creates no one. Nothing is easy, but a complete partner, a whole partner who owns their past can hear a truth which would be unavailable to an incomplete person, one too small, too wounded to listen and hear the truth if their ego's needs were not met, or even denied. A complete person loves to solve the puzzle: to unriddle their own self-deceptions, and revels with their partner in this game! A good marriage makes sport and fun of growth. Complacency steals our vitality to leave us flat as a stale drink. Marriage has humor with which to combat this complacency and never tires of poking complacency with this and every other sharp refreshing stick. A good marriage keeps one alive, curious and restless, and I am sure only a whole person could stand it! Self-deception is never more humorous than when it's seen by the unforgiving sarcastic eyes of one who knows you well. A lucky man has his sad complacency answered by the humor of another who knows to expect better of him. Weakness has no quarter here, it's too funny. Who could take it seriously? Who could see and still behave this way?

Completeness and humor are the first two stitches which have sustained my marriage and so only the third remains. By far the most important of the three, the word which best captures the idea is "resolution." The supreme enemy of all long-term relationships is the resentment which builds up and develops from an ever-increasing unaddressed emotional toll, accrued in countless painful, unresolved conflicts. Misguided maxims like, "Don't sweat the little stuff," are the doom of a long-term relationship. After living with someone for nearly 30 years now I can assure you that any and every time someone's feelings are nicked, the circumstances and their implications are fully analyzed and exhaustively discussed, and solutions derived, along with whatever apologies are in order. No detail is spared, and resolution must be complete with no emotional residue remaining to accumulate and form the fatal shift in attitude whereby you can no longer stand the way they chew, or clear their throat and brush their teeth. At the earliest possible time every issue must be drained of all bitterness, a solution arrived at to avoid its

reoccurrence and full restoration of all respect then attended. These small injuries are a cumulative slow poison which may even destroy a relationship that may be able to stand firm and weather the big storms, only to surrender to inattention, and rot from within. "I can't stand the little things about him anymore. I get sick when I hear the sound of his car in the driveway. I wish he would drive back out again." "Her mannerisms all annoy me. I hate the way she taps her spoon." These are the voices of contempt and derision you will hear emerge to soothe the hurt of feelings which have been repeatedly injured without redress. Both parties must be willing to ferret these troubles out, and see them to their completion. There is no little stuff. If left unresolved it all adds up to an underlying feeling of disgust, which is the death of the relationship. This can be avoided by being emotionally responsible in all matters that bruise feelings, which are never avoided or plumbed short of full resolution, so no residual bitterness remains.

Many marriages last the years and test time to torture their participants. Duty, virtue, fear, pain and guilt may conspire to encourage great endurance to bear the suffering of your bad marriage. Misery can be unending, so it is not endurance that proves a good marriage, but lightness and the tears that come from a heart which still cares too much. Although we are all truly alone and can not know the being of another, it is the luckiest idiot who finds another worthy, rich enough in life, with whom he might share his own.

I am afraid the wave comes and I must confess a lie as I stand before you and trumpet my exception. It is a lie of omission which I hope you can forgive, since I will surrender the missing information here. I have mentioned that clean air, distance to be alone, is necessary for independent self-creation and here is where the clue lies. We may be together as islands in a sea wrapped in cloud. Together upon a mountain top, it is tempting to imagine the clouds and sea are illusions and we might step from one sun-drenched peak to the next but the clouds do not hold us and we fall through into a swollen sea, always and again alone. This is why we need air and must be sure the work of self-creation is well and thoroughly done! The exception is notable because it is unusual, precious, because it is rare. Often are the times when the sea alone acknowledges my hurt feelings when I am not heard, in the awkward silence, the fight when we agree but still fight, or the aloneness which laps up familiar, cold and indignant saying, "As if you could imagine otherwise, of course you are alone." So I am chastised by the sea which is indignant in reclaiming me, jealous I have left her. For a moment I had escaped, and I remember the mountain top with its royal carpet of clouds, inviting me to dare the next, and so I am able to reach my cold hand from the sea to try again, and find sun and shower are both sweet from atop a mountain, when compared to the sea which jealously separates us, leaving us sure only in our own creation. When the sea's grasp is thwarted, and her clouds pierced by mountains which know the sun and how it makes every cloud into a carpet, the sun looks and is heartened, warmed for the sight and remarks, "It is an exceptional thing." Like dignity these moments can be elusive. If such things were simple, self-creation and the solitude which foster it would be unnecessary and living through others would be a good idea. Of course living through others will fail, and self-creation is the foundation any relationship needs first before such a rare moment together with sun and sky. The sea is everywhere, undrinkable and thirsty for my company. I become desperate for fresh water, pure and divine, its beads rolls off my tongue and then gone, alone if complete I reach skyward, even though I now find myself at ease on these familiar waters, no longer afraid to be bobbing, drifting hopefully in my jealous salt sea. There is then a need for completeness before this journey begins, a love of the sea which is needed to sustain one through the tumult. If both can not swim they will both drown. Only two accomplished athletes can achieve the exceptional, and swim close enough to be heard, even if only for a moment, over the lashing sea which separates us all, each from the other.

Now from the crest of a rising swell, I see a shadow floating far away over the arched back of the sea,

and I know it is you. Let us make another mountain top, swimming ever faster toward each other. Do I hear your laughter? Can we swim fast enough to pile the water between us higher and higher, as we move ever closer, to pinch up the sea into a mountain top where I hear your every whisper, and we might warm the sun to happiness and gaze below, to see the still golden curve of eagles wings outstretched, circling, gliding silently above the clouds?

15

Use of the passions and first order existence

A good marriage is a healthful thing because it makes both sexual and intellectual use of the passions. The degree that something allows outlet to one's desires and lets them sing without shame is the degree to which it will be of benefit. That which denies sexuality is self-hatred. That which loves it is self, health and strength. To impose it on another is criminal but to channel it into endless energy for will and work is hope itself. To express one's passions through creation is to make use of an abundant fuel in pursuit of an end in itself. Creation justifies itself in what reward it gives the creator. It makes sense to do it because we feel better for it.

Considering that our circumstances either enhance or detract from our well-being in so much as they allow the passions their healthy expression, we may consider the unhealthy implications of a modern lifestyle where a sense of disconnectedness is the norm. We all want to be secure in the face of danger. We want water in the heat, heat in the winter, food, and the larder we gather also includes a secure feeling, a self-sufficient glow, the feeling of real accomplishment. To secure these things for ourselves makes sense in a first order way. "I am thirsty so I get water. I am cold so I get wood for my fire and am warm," etc. Our body craves a life which makes sense, a first order life.

Today things have become disconnected and removed from point and purpose, to the point of being third order or worse. We tolerate traffic and a job we hate. We are unhappy each day but endure it, to get a slip of paper at the week's end. We wait in a line and put the paper into a bank, and remove more paper from a machine. We trade that paper for food and the other first order things we need, which are also available only through this strange trading, this nonsense. It is clear this dissociation of events can come to no good end, as we exchange our potential for a dull ache and another slip of paper. This most depressing effect of civilization must itself be traded in! Let us exchange this ache and this slip of paper for something first order: a life! You will never be satisfied or strong by exchanging your precious minutes for slips of paper. Each act in the day must have purpose or you will rightly feel ill. There is no independent distinction between mind and body. Consciousness is an emergent aspect of the body. This book is about our experience of consciousness, and although it seems as if our mind is a world unto itself, this illusion is quickly unmasked if we imagine the thinker on a hill who is suddenly shot in the head, to think no more. All our mental life is dependent on the body. Consciousness emerges only under certain specific conditions in the body, and the body is served by becoming conscious. Those who have a working body, but lack the specific balance necessary for consciousness could not survive on their own. To live we need consciousness, this special particular emergent facility of the body. Our body is our mind, feelings, passions and our instincts, which like consciousness serve us as a whole. The body rages against this passionless disconnected unnatural civilized existence. Your body is speaking to you and you are sick. Each act in the day must make sense, whether an act of self-preservation or an end in itself.

Creation is an end in itself and so it is satisfying. Do not make this truth too large and find another dogmatism in these words but do understand the imperative: the need for first order living. If you can get your own water and wood you will know a simple pleasure and reward which will ease your anxiety, and make sense not only to, but make sense of your body. That's why you have it you know, not to go to a gym. Even if this is far-fetched, you may endeavor to see the day when you love your work, and fill the hours with its song. Here is a first order idea: if you do not love your work, and you do it all day, you will be miserable. A first order existence is an end in itself, a song finished, full and complete. Anyone who expects to find satisfaction doing something they hate every day is so stupid they are a bad joke. I love to laugh at them, since even an idiot is smart enough to get a bad joke.

16

The eternal loser

I will tell you of a failure which broke me on the rocks of my own shore, but first I want to speak about failure itself. I am honest and say it outright: "Failure." If you are alive in the doing and create, you take risks. The warrior loves risk, and so he is adorned with failure. Knowledge and success are earned by daring the mark of this scarlet "F," and we who have tried are tattooed with what we have done in order to succeed. Only one with the courage to fail and see it plainly will grow. Much growth is needed to do anything worthwhile, and failure is the dirty hand which grasps our own, so we might be pulled from the mud and stand. All you who have tried great things have failed. How could you not? You who have failed and raged to persist over your own weight as failure saw it double, you are my brother, my sister-in-arms, and I love you for it. You and I are of a rare type.

Failure has seen me crush myself, and you may know of it here and step away. One who creates has certain virtues, and discipline is large among them. If you write, you do so every day and the time is a sacrifice to creation, just as the musician practices, trains and makes sacrifice toward his betterment. One works each day, the work is completed and so we wonder, isn't it natural to wonder, if the work is good and born at such cost, where is our reward? We have done well, and now expect our good work will solicit a reward from the world, an external reward, a payment or some appreciation of our sacrifice. The thinker wants those around him to appreciate his self-control and insight. He is kind and empowering, and wants to be appreciated for it. He is a fool. The artist, author or musician practices or writes ceaselessly, working to exhaustion and in his discipline forges a creation, a book or symphony, and transcends his misery successfully, only to expect the ludicrous. He expects external reward for his success. He thinks, "I have worked for decades and wonder, where is my reward? Where is my money and recognition?" This poor fellow is a fool who I know well. I was this laughable fool, and divorced his moping melancholy in a fit of laughter one day as I saw his sad reflection in my shaving mirror. What a pitiful sight is this fool who has won, but deprives himself of victory. Surrounded by food he starves and complains. I say to him: "If your work is a passion and structure well and properly done you are a triumph! In so much as you find, see, know and create yourself, you are now beyond old limits and have earned the clear laughter that comes from winning new height. You have your reward plainly before you. You have won, so let your belly be full and eat hearty from this banquet festively prepared with your own hand!" This is what my idiot says as he laughs at that rich old fool. Every idiot has earned the right

to laugh at the fool he used to be.

17

Religion

Now you know me well enough to know I do not spare myself. I have too much respect for myself than to reserve my scorn, for I should make it a habit to see better. I expect more of myself and so deserve this derision most of all. I should know better. How then can I spare you? How could I reserve what is sharpest, what teases and chides a little too deeply, and so deeply enough to start the flow of blood, fluid and thought? It is painful to have one of your convictions lanced. I admit many such errors and correct them. You should know that I have much worse for myself to offer up, but before I do I ask you not to be too hard on yourself as you read, because after all I am speaking of an error in thinking, no more or less, and nothing could be more human. Can you hear me? Are you rich enough in spirit, whole enough, wealthy of soul and strength enough to ask? Can you afford the doubt?

Man is a pitiful thing. This becomes clear when we examine how he faces his limits. History shows us that he would rather deceive himself with a comforting lie than admit his impotent reality. Nothing is more puerile than someone who lies to themselves. Man sees many things he can not explain, so rather than admit his ignorance, he supposes a God to account for what he does not understand. He sees injustice and imagines a God whose final judgment will right the wrongs. He sees his pointless mortality and fantasizes an afterlife. Death's true face is dulled and transfigured into one of false hope instead of annihilation! This is a monstrous lie with many consequences. We suffer keenly in this life so we imagine another, an afterlife which will seduce us to turn away from our real life and listen to hope tell deadly lies. There is sickness and pain in life, and we feel self-loathing from many sources so we ask, "Might we not deserve this pain?" Every weary man knows the self-hatred growing from missed opportunity and self-disappointment which can not be reclaimed, and feels how this adds immeasurable weight to life. Joy becomes a sacrifice for which we are too weak and undeserving. This self-loathing needs an object, justification and release, even if self must be lied sick in the doing. Original sin is an idea which appeals to the self-loathing in man, and it has many followers. Some of the Native Americans proved their nobility, vigor and health by refusing conversion. They refused to see themselves as wretched sick souls in need of redemption. One must first be sick to be saved.

All of this bizarre unreason springs from the fetid well of the lies we tell to obscure the facts. We are meaningless mortal beings, entrapped in the myriad of delights and miseries of an unfair uncaring physical universe. Our life and death worry us terribly, as they have no intrinsic value or meaning. Death makes us anxious and this is good! We should use the compass of our worry, and see what is important to us. What matters on your deathbed is what matters to you, and is your road map for fruitful living. It seems easier to believe the lie, but this is to misdirect yourself. You are nothing, and to know it is to find the blank page upon which your worth and purpose are to be authored.

The error of the religious mind in this instance is the same as the error in the thinking of a paranoid schizophrenic, who believes there is a satellite orbiting over his head reading his thoughts. It is obvious he is in error thinking this. Even if it were possible, why would a nobody like our schizophrenic warrant a multi-million dollar satellite to read his disconnected thoughts? So we see the reason for his fantasy. It is a daydream about his own importance. He is the center of attention and has annihilated his

meaninglessness with his fantasy. That is the wish fulfilled in his sick mind. Man is a pitiful thing. No God would spend each moment concerned with matters of his sins and repentance. He is not that interesting. Man dreams of God to be the center of this God's attention, and uses this fantasy to soothe the hurt he feels from knowing he does not matter. This instinct is entirely mistaken and I have another to offer in its place. In seeing his limits man has perversely found his conceit. The idea of original sin requires a God whose attention we hold. We suppose we must be valuable to receive this attention, and are comforted by the lie. In place of the notion of original sin, let us have another which also makes use of our abundant self-loathing, but uses it to overcome rather than lie. Let all men of all and no faith know the true teaching! Man is born in Original Worthlessness! He is of no value, intrinsic or otherwise. In fact he is a parasite, a festering den of appetites, needs and dissatisfaction. His cleverness is exceeded only by his blindness. He is a taker of resources and a user of all things. He, by weight of his sheer numbers, has fouled the water, stripped the earth, extinguished countless species and poisoned the air for all life. He talks, and is so in love with himself, he thinks he hears God! Man is a pitiful thing. Know your true face and see the mouthparts of a tick! Know you are a parasite and repent! Earn your birthright and your place! Improve yourself or be a blight on this Earth. Overcome your natural filthy, worthless state and create! Take up the burden and work for decades until you are the best at what you choose, and be worthy! Let us be improved and work, so we might adorn this earth rather than defile it. Let us reduce our quantity and increase our personal quality without relent. Never look away from the anxiety that comes of your incompleteness, and you will be compelled to answer it. Hear your pain. It does not come from any God, it is from you who knows there is none, and hence knows themselves. Listen to this anguished voice of your empty promise to yourself and begin! You who are smart and lucky will hear your voice as it calls from your deathbed. It implores you to live now, since it knows there will soon be no more. Hear it and know your work so you may grow beyond yourself, creating the highest value where there was none, and then return again to this earth to leave us all the richer.

Let's eat God

It should not seem strange that some people speak to God personally. People invented him. God is the parent who watches when the child on his bike releases the handle bars and says, "Mom, look at me, no hands!" Maybe he will catch us if we fall? He makes us important and safe, why wouldn't we invent him? We are his creator and utmost authority, so naturally we talk to him. Is it not us who gave him life and voice? Perhaps we should not posit our higher self in an imaginary God. Perhaps we should eat Him, and put our higher self back where it belongs. We will then be responsible for our own affairs, and become God incarnate. Yes, we should eat God and then become Him. Surely if man felt himself responsible to his own higher standards, the higher standards of a God, he would begin to honestly reflect on his actions lest he soil the name of God. Man himself would become holy and honest, instead of putting his better traits in another, he may come to own them himself and behave the better for it. It seems that after the meal, one who has eaten God no longer has a taste for excuses.

18

Obsession

Among the most dread enemies of life and solitude, is an adaptation that first developed out of the instinct to remain safe. If something grave threatens us, we can not help but worry about it continually,

we obsess, we change behavior and make doubly sure we do everything possible to avoid the danger. In a narrow sense, obsession can be used as another value neutral tool, but it can easily become unmanageable and super-destructive. I have found some rare utility in this extreme and unpredictable mental adaptation, and when confronted with some few highly disagreeable aspects of my personality, I have changed my behavior with the aid of an obsessive self-hypnosis. I have a violent temper and although my "nature" is unchanged, I have learned my anger's signs, smells and sounds, understood the feeling of its approaching heat, and by virtue of this recognition have identified it. I repeated key phrases in my mind in response to each instance of recognition, an obsessive repetition which may have totaled 2,000,000 cycles or more. A monstrous guess, but over time not at all beyond possibility. This has put a sound and utterly reliable stop to my temper, which has been successfully halted short of violence, even under the sway of the most severe anger. I should note my violent nature had been curbed before I struck any person, although there were many years when the walls of my home and other objects were often savaged by my pregnant temper. Obsession is rooted in our need to remain safe. To answer fear and danger we obsess, and it works. You can use it to change behavior. My marriage means a lot to me and here obsession did its job. I used it to change behavior and save my marriage. It is exhausting and deeply painful. This utility in obsession is the rare exception. Obsession is usually tantamount to catastrophe. The most clear example being Hitler's megalomaniacal obsession with power which ruined the world for his immense tragic personal insecurity, although he was an expression of the most desperate and impoverished social circumstances, ultimately a devil well summoned.

Obsession is invoked by the insecure mind to take some measure of control over a dangerous situation, even if this control is only imaginary. After rigorous self-observation I believe brain chemicals which soothe are produced to answer obsessive states, and make the person feel safer. A hypnotic neurochemical reward? An empirical scientific experiment to prove or disprove this idea would be very interesting. I believe rosary beads obsessively handled, prayers obsessively rendered, chants obsessively chanted, obsessive motions carried out in devout ritual and prayer, offer the religious obsessive some relief with this same mechanism. Is this hope or condemnation? Be careful not to judge too quickly. Who do you judge? More on this open question later. {Footnote: I am an atheist of Jewish descent.}

When one wishes to avoid something in themselves they may become obsessive in order to fill the space in their mind between "you and yourself" with the obsession. {Footnote: See "Solitude" for explanation of the term "between you and yourself."} One who is alone but picks at themselves with obsession is alone, but they have eluded solitude. Obsession keeps them safe. This is obsession's promise and its lie to self. Obsession loops, repeats, ritualizes a topic. The real danger comes when obsession rages out of control. To be consumed by obsession is an immensely painful illness. As the agony of another round of obsessive thoughts ends, as the ritual which makes safe is completed again, there is a still moment of relief, of pleasure as the new brain chemicals secreted in response to the obsessive state can be felt, or even enjoyed. This is the safety, the relief embedded in obsession. This moment earned at the end of each obsessive cycle of worry is the pleasure, the carrot which obsession promises, how it addicts and seduces as well as changes behavior. This is its bit of cheese for the rat in the experiment. A physiological basis for an addiction? In this pause between obsessive cycles the new brain chemicals can be felt and the rat rewarded. All obsession demands in return is everything--your continuous undivided attention! Too high a price for any lie! As you might expect addiction expresses itself in obsession, an obsessive need for the drug or stimulus one is addicted to. The obsessive is addicted to this cycle of deprivation and reward, he is addicted to obsession itself. The reduced brief insane emotionally desolate world of the obsessive cycle and its promise of relief, which quickly surrenders to overwhelming worry, and the anxiety which call the whole cycle to repeat again and experience the pleasure of its cessation...

ad infinitum, comprise the obsessive's world. This run-on sentence is appropriate to express the essence of obsession, which is the ultimate run-on sentence, a loop. Obsession precludes the present and the past, it stultifies and rapes to call the momentary respite from its insecure ritual dance "heaven," which it only is by twisted virtue of comparison. To believe in yourself is to see truth and risk knowing it, believing it, no matter how dangerous. The greatest danger lies in refusing to believe and obsessively, endlessly turning back on yourself, stuttering, degenerating and hobbled by disbelief in the only pure soul, the only hope that has a hand to offer.

This is the danger which lies at the base of an overactive conscience. Conscience is a subspecies of the worm of obsession. If properly cultivated this worm is of the greatest benefit. It champions honesty, empathy and a host of admirable necessities for our coexistence. We all fear its obsessive, crippling, debilitating introspective effects, which sap us of our vitality and consume our energies in punitive rounds of obsessive thoughts about the ill deed we have committed to arouse our conscience from its usual slumber. It penalizes, controls, makes right and enforces by way of a powerful punishment for any breach: the agony of obsession. Guilt which consumes is a terrible fire. When the conscience is underactive the danger is obvious. One who lacks its effects is untrustworthy, and deceives himself and others with equal ease. He is labeled pathological or criminal. When one is afflicted with the opposite condition, an overactive conscience, we may truly pity him. Unlike his criminal counterpart, he lives in an insecure hell, a pall of guilt and guilty doubt are an unshakable handicap which always preclude confidence. Such a soul will never achieve flight, they may at best hope to triple check their work and their words, shudder, swallow hard and labor to appear they believe they are right, but underneath it all they never believe it, never risking enough to give themselves credit. One who is prostrate before his obsessive unquenchable guilt, will never feel secure or deserving enough to give themselves the right to really know, trust or enjoy anything. They have taken away their own car keys, grounded themselves and allowed fear to persuade them to turn their backs on life. There are many careful people who could enjoy living if only... if only they were allowed to, if they could suspend their disbelief in themselves they might enjoy life, but they withhold this trust. They could enjoy, and relax, if only they could give themselves one thing: permission.

A person who is obsessed, truly broken by obsession, has a disorder so basic and penetrating its origins become visible only if one stretches far back in time. The thing which is broken can first be seen to appear in childhood, early in the development of personality. It seems as if object permanence were never achieved, or perhaps the obsessive has learned better than to trust the world, and feels it may disappear when he blinks or looks away. He feels as if he has played peekaboo with the universe and lost. His solution is never to blink again. He knows better than to believe what is true will remain true, unless he obsesses. He can not *believe* it is so. He believes it is his will alone which holds the truth together, never that he may trust himself because something is true. He must obsess or he is in error, danger. Like Chicken Little who believes the sky is falling and is beset with fear, he has his umbrella of obsession to protect him. Unfortunately he is mistaken. It is his obsession which endangers his world and removes him from it, with its endless appetite for his attention. It is not the sky which is falling, it is the umbrella under which he seeks shelter which will be his end, his endless self-mutilation which makes "safe" only if he never believes in himself, which will swallow him up in doubt from below. Chicken Little didn't have to worry about the sky after all.

So we must then ask the next question to plumb this to its end. What is broken here? Why does Chicken Little have her obsessive fear of the sky? The obsessive is a curious contradictory puzzle, who even as he sees himself obsess may retain his logic and know his error, but this recognition of his obsessive irrationality is to no avail. This seems strange to him. He sees, and is aware of the irrationality

of his obsession, but knowing that it does not make sense to obsess, does not help to stop his behavior! He sees this and remains compelled to obsess. He won't give himself permission to believe in himself, he destroys himself and abandons himself to the obsessive lie out of guilt or insecurity, in short he *refuses to repress* his fear. This serves a function. In one case the obsessive may hobble himself with obsession because he does not trust himself, or he may even loathe himself. Whether it is his confidence or his sexuality which he fears endanger him is less important than what obsession does for him, how it keeps him safe. So long as he obsesses he remains weak. So long as he obsesses he remains safe from himself; always halting and insecure, never able to release and cause harm. Another case obsesses, *refuses to repress* his obsession so its continuous loop will block a greatly feared thought, feeling, or truth. He sees his irrationality but is compelled not to release his obsession so that it will continue to block his thoughts and keep him safe. Many such variations on this theme exist. The last type of obsessive condition is caused when the ability to repress is undeveloped, damaged or not functioning, as in the case of the imbalance caused by certain types of drug withdrawal {Footnote: See "The engine of creation."}, brain trauma or perhaps genetic preconditions or abnormalities. In all of these cases Chicken Little can not escape her fear of the sky even though she sees it is irrational, because she can not, or will not, repress her fear. She hasn't the stomach for peekaboo and lacks object permanence because seeing is not enough to provoke believing, which requires she trust, blink, and that she will not do. She can not repress whether she knows or not. In the case of obsession, whether behaviorally or physiologically caused, it is the ability to repress which is not functioning. Knowing this, each case can be analyzed and addressed at the fundamental causal level, with new thinking or pharmacological adjustment of brain chemistry as the case may dictate. Be warned, adjusting brain chemistry with drugs when thinking is what must be changed will fail. Remove the drugs and the atrophied mind will be doubly sick, before and if it is ever better. Choose this course with short term cautious goals and low expectations.

Having had an extended opportunity to observe my mind functioning with this vital facility, the ability to repress, totally disabled, I have noticed another function of repression and the "unconscious." {Footnote: Please recall the previous discussion of myth and model.} This is not a passive function, as a repository of old unresolved memories, wants, traumas and other things too shocking or erosive for us to accept, but also as an active storehouse of painful feelings, as these feelings occur in our ordinary daily lives. To be without the ability to repress, without the unconscious ability to hide ourselves from ourselves, one becomes hyper-immature. As an adult we feel just as deeply and are wounded just as terribly as a young child, who would cry at the small teasing offense, where the adult would chuckle. The intensity of feeling is potentially the same in both adult and child, it is the ability to repress which the adult had developed, and the child has not. Each small insult, each smack we feel and laugh off, is like an iceberg almost all of which is submerged. The tip of the iceberg is unimposing. It doesn't look like much so we laugh and make a joke of our own, but if unable to repress, the unconscious has no "lid," and we feel the crushing weight of every ton of cruel ice and are penetrated to the bone, right to tears as is a child. Only rage and tantrum can stop the debilitating torrent of hurt, and so the child is revealed complete with tears and tantrum, naked and unchanged in every man, once the ability to repress the full force of our present feelings is removed. A thoughtful person rarely reduces things to one simple value judgment. The ability to repress is the same ability I seek to pierce, the looking away I aim to thwart, to release and liberate feeling and end inner deadness. As with all things, what is useful often lies between the urge to embrace or reject. Repression is a vital mental facility which can not be overindulged, or done without. Too much and life is a disconnected sham, dry and tasteless. Too little and self is pulled apart, a child in the rapids, each limb tugged and torn by a different current, all too powerful to resist.

Now that I have followed my usual direct, bludgeoning course, I risk the penalty assessed those who have been too direct, too honest, and likely have offended most all of the free world, Jews, Catholics, Buddhists and Muslims alike, if they are not careful readers. If you will recall I said these insights were available to me through careful rigorous self-examination. I shall offer up another self-dissection to demonstrate that this truth about obsession is not meant to discriminate or insult, and I am no different than you or another when it comes to the mechanism of obsession, or its form, cost and purpose. You will see the obsessive connection amongst religions is a new unknown *modus operandi*, an underlying principle which holds every interesting question before us and deserves the ultimate respect: a value neutral open mind. My truths hold no prejudice, they embarrass, reveal, heal and destroy equally.

So I ask you to grow with me here and to be bigger than usual, less of a reflex response is needed, a response free from convictions and assumptions, free from direction and caution; a value neutral consideration. It is the leap to judgment which offends. If there is an underlying principle here in this idea of obsession connecting all religion, perhaps some respect is in order. Religion has been working for thousands of years, and we should see. Perhaps we have met God. Isn't He worth an honest appraisal that starts with, "I don't know?" Shouldn't we be big enough to get to know Him and He us, before we judge Him? He may be very useful. Here lies wrapped in divine obsessive hypnosis, the super-human endurance and strength of will of the undefeatable zealot, an inextinguishable light who can endure any suffering in his faith, and also the pure empty chanting bliss of the Buddhist alike! Are religious ecstasy, the miraculous will and recuperative abilities of the devout a sublime automism, confidence in the ascetics clothing, the hypnotism of belief which is made solid, manifest and radiant in the knowledge of God--obsession? All atheists are said to quickly remember a familiar prayer or begin one of their own once in a foxhole. What comforts them? God? What comforts in the shuffling of rosary beads and familiar prayer? Let us see with an open respectful mind. If what underlies all religion is not God, the concept of God being various inconsistent or nonexistent from religion to religion, from Buddhism to Islam and the Israelites, perhaps it is religious practice which is the common element, the repetition of prayers which make safe, as the monk chants and blocks the intrusive world and his thoughts with obsession used to transcend, or the ancient Greek or Roman who worshiped giving ritual obeisance to his pantheon, repeating a familiar prayer for aid in his victory and safe return from battle. Do we know God through holy obsession, whether the Muslim who beset with the strict divine certitude of a sure ritual prayer schedule always followed, always the same, now kneeling, now prostrate toward a fixed compass point, away from evil, safe and accepted by Allah, his holy law insists he must be exact, each nuance of motion and meaning spelled out so he may pray most perfectly; to the devout Jew who comes to his sacred place before the Western Wall to find the divine, praying, chanting his most familiar and cherished prayer, his beautiful obsession complete and available to see, as he rocks back and forth, over and over again? It is religious practice, it is the ritual, the ritual which makes safe: obsession which connects. This works. Let us look here, slowly, eagerly with an open mind and I am sure much can be learned, many wonderful forbidden secrets attract. Is divine strength of will available to all, now finally plainly revealed as it is: an obsessive hypnosis toward health? Have we at last found an active tangible God, a real God, a reliable God worthy of veneration? Is what is safe, strong and beautiful in religion created here? Do we see all which is medicinal, active and worthy in religion, the strength of the divine--obsession?

If wisdom were politically correct, if he even said the words, he would choke on his nausea and cease to be wise. Wisdom requires courage and rarely hides behind platitudes about discretion, used alike by cowards and those once wise who have become sick and mute, too nauseous to speak. No, this wisdom still knows courage, he can only be honest and hope this sacrifice, this pound of flesh is sufficient to

appease whatever God in you remains undigested and has been offended. Please accept this brief study of an instance where I solicited the aid of obsession in keeping me safe by changing behavior. Many other encounters with this mechanism have afforded me a unique opportunity to study it, while in the process of creating myself apart from the trap.

First there was a wound severe enough to send my ego reeling. Doubled over inside of myself my pride did the unthinkable. It admitted abject defeat and abandoned itself to fear. I called out and invoked the aid of obsession, a potential which can be brought out in anyone. I was 22 in drum school at PIT in Los Angeles. {Footnote: The Percussion Institute of Technology (PIT) is a division of the Musician's Institute of Technology (MIT).} I could avail myself of a rare and terrifying opportunity to play with a full-size big band. As one who calls and organizes, but rarely receives calls, even then I believed that I could probably never afford the huge cash payment required to hire a real big band, with 20 or more personnel on salary. All these players were pretty good, and it was a rare and scary sight to behold the assemblage of brass, music stands, and chatter. I practiced hard for my chance and the sight was intimidating, but I loved Buddy Rich, my mean hero who led a big band by sheer perfection in violence, and no way was I going to fail, I worked too hard. I was ready. I was not going to blow this!

The most educational thing about my experience at PIT was not the wealth of useful information, it was the pressure. All variety of intimidating situations and emotional tensions would face me in my future as a performer, but with the exception of the contest mentioned in "self apostasy" and one other out of hundreds of performances, none would faze me, or even register a real solid blink, after learning how to handle and even use the unreal pressure from my many performances in the program at PIT. Every drummer in the huge wave of students in my group who chose this class was there, and there were a great many of them. Each broiled away and waited their turn, all equally unnerved and looking at you with their wounded lack of self-respect, wanting only one thing--for you to fail. How else could they have a chance? They all needed their little hatred. We shared this fearful desire to lower the bar, and each in turn felt the same. The hatred, the pressure screamed from the watching agonized gallery of eyes and ugly hopes, all sliced into me and the scream fell within, to make every fault resonate, vibrate with fear! Choke! Choke! Choke! Jeff Berlin, world's best electric bass player may be watching. I am watching. The result of this doubtful train of inner dialogue was to distract my attention from the task at hand, and the inevitable ghastly musical train wreck complete with brass, bass and the rest, was quick and deadly as it was ugly. A sonic catastrophe. Failure. Unacceptable. I was ultimately and truly humiliated, but turned the shock wave inward, showed little of the devastation and signed up for a more difficult selection the following week.

That week my ego yielded as I have described. Obsession's job was clear and it began at once. What I thought was hard work was a feeble excuse compared to the efforts I produced. Tens of repetitions became thousands. Any time not spent actually rehearsing the song was spent practicing it *mentally*. This means much! This is important! All time was lived, every waking second was spent and lived rehearsing. No measure of self-belief or satisfaction with my efforts could grow, and anxiety alone was my waking companion. Dead-certain reliable habit of movement, virtual automisum in the execution of a complex task by the body, requires a measure of obsession if the task is to be learned deeply, completely or even perfectly. No less of an imprint will survive the ultimate doubt, the unavoidable distraction, the pressure! Right and wrong emerge and are certain as a cross. Each motion is described by proper technique, or it is an error. There is a right way to do everything. Perfection is quantifiable, and the only acceptable answer. It is a hard standard indeed, and when it is forgotten the result is shame, and the unacceptable must be righted and perfection found again. Repeat until each note is struck right! How glorious, right and certain is success in such a small world! A perfect hell may have achievable goals. Once tasted

nothing less will do.

The next week they were all there again, all the drummers, musicians and even more fear. I was too sick to blush and felt it all dissolving me. The thin whitening which one feels before passing out teased, threatened to end my misery. I blush often but never faint. My anxiety grew and I began to lose control, hyperventilate, and then lose all feeling in my hands; cramping half-closed like silly lobster claws, lumps of hamburger hanging loosely at the end of my arms. I could not feel my hands! My panic increased further. I picked up the sticks in my numb claws, my breath short and rapid with fear and it began. Ha! The trick had worked! My body was an automaton, each motion correct and music replaced misery. With the exception of an error in one of the breaks from which I recovered without unduly disturbing the music, I had done it! The performance was correct! My self-esteem soared as the compliments came in from the other drummers, those ill-wishers who were clearly the ones injured now as their pressure mounted, the bar now higher from my success.

Were those drummers really against me, or were they also self-absorbed and fearful, just obsessing over their turn? Did I really wound them? I do not know the real answers but I am sure that is how I perceived every bit of it, and that the pressure was therefore real, since such pressure is angst, doubt and weight produced in one's internal world. As a band leader I have often seen how I can change the internal world of a musician, and turn pressure into confidence and inspiration with a few encouraging shouts. More than once have I lied to prime the pump and find the good player I knew was there by shouting, "Yeah, all right!" at a lackluster timid solo, to see it then blossom into something superb and confident.

Having been rewarded with success for embracing an obsessive training regimen yielded more obsession, and excellent results in terms of drum technique. As my confidence grew with my ability, I was now hindered by the crutch which once served. Obsession insisted, and I gave the practice which produced true confidence and also the inhuman cost which eroded and replaced the human with reflections of obsession. Every motion was analyzed. I moved the shortest possible route to the refrigerator, using the most direct trajectory and the arm motions with the fewest and shortest steps to retrieve and put the ice into the glass. Fluid and precise movement is always in order. The world became a drum technique exercise in efficient motion. No errors were to be made. Obsession had made this a simple derivable proposition for everything in life. Now the formulas were broadly applied. Confidence in life had been replaced with being correct, when the term correct has been perverted by obsession, redefined to mean the perfect execution of a set of rules designed for another task; now inappropriately generalized into an obsession with efficiency of motion and numerical musical analysis which demand all energy and attention, and so extinguished life. I counted everything I heard. What time signature is that old fan unevenly rotating in? The thump repeats and yes! It is a 19/16! I had become obsessive. Excellence had cost me my humanity. The cost of obsession has been outlined above, and so I will choose not to go on and draw this topic out, lest I be accused of being obsessive. Any idiot knows better than to worry about that!

19

Necessity's idealist

There is an ordinary notion, a daily concept which at its heart carries as much destruction as promise.

It seeks to elevate, but it degrades. It looks to exalt while it denigrates. Idealism is of this germ and is in need of examination and replacement. In the common conception an idealist has his ideal, his preconception, his known gold standard which he compares to everything unknown to determine its value. This is the essence of error-generalization, which always fails in making the most of each specific case. It also carries toxic baggage. A person who meets one's ideal in one area becomes seductive. We may forgive him many other faults and become blind to the whole for the love of one facet. Idealism is simple. People and situations are complex, and have their meaning hidden in contradiction. The idealist hopes to simplify the world and becomes unthinking and automatic. The reflexive idealist swallows whole all which meets his ideal, and reveals his undiscerning shallow nature. When pushed to its extreme, idealism can yield an intransigent state where the ideal has crowded out all reason and narrowed vision and the ability to listen, until the victim hears nothing above the angry rushing of his own blood. He has become deaf. His idealism has reached a fevered toxic pitch. He has developed the blinding cancer which springs from idealism. He has convictions. His closed mindedness has become a point of pride, a virtue!

An idealist, however high-minded and well-intentioned, brings his simple truth of comparison which diminishes all he sees. Everything is taken apart according to the ideal formula. "This is of the ideal and that is not." The value of the whole is often sacrificed for the ease of comparison. A nasty dogmatism indeed! Things are not seen in their own terms, but are reduced to the terms of the ideal and their likeness to it. The world is a particular place which responds poorly to rule-governed thinking. A Swiss army knife has many useful tools with different functions. The right tool serves a particular job best. No one tool is above the others. The knife does not negate the spoon. Each is ideal for a particular situation. Another type of idealist feels guilty if his tools are not the same, and seeks to make each appear like the other to lose the usefulness of their different functions and different perspectives. His ideal is the absence of conflict. As soon as he gets his hands on two different ideas, he mutilates them and murders the truth trying to make them the same. This politically correct idealist synthesizes opposing perspectives into unreal useless agreement because he wants everybody to get along. The guilty idealist binds his forks so as not to offend his spoons, which he slots so the forks won't mind. Different ideas are useful because they are different! It is uncomfortable to live in this world of discord and strife but let's be honest, the knife is not the spoon nor does the knife negate the spoon. Perhaps they don't like each other much, but that's to be expected, and in fact that's why they are each useful: they are different. Whether idealism yields a dogmatic ethos of one ideal or a fearful ethos which dogmatically esteems what dulls all concepts to ease the conscience and claim the rule of none, is immaterial. Which ideal is chosen be it reverence of the one, or fear of the many, idealism is a dogmatism, a rule-governed comparative valuation which assumes the rule, the standard of value, before the specific facts of the case. This rule is how the facts are understood, the rule is the key, and so the cart goes before the horse. What might the case itself tell us? This is the question the idealist refuses to ask. This dangerous question is unsafe reasoning for anyone who wishes to find what is comfortable, affirming and familiar when they look for the truth. They do not wish to find the truth, only their ideal. Rather than an ethos of ideals, preconceptions and rules, one is best served by a morality, an ethos of the particular. Each situation may be best understood, its problems solved and profited from, by a different and unique perspective. The ability to see the same problem with a new definition, a new active principle and a new result, is a trick of genius. To understand your tragedy as comedy and laugh at your miserable self, to change perspective and start anew is such a trick. To see your despair differently and find your misery has fled to reveal a blank page, your ultimate freedom to define yourself, is another. This book is riddled with pain which is understood and becomes direction. We see our pain is not a sadist who burdens us, it is re-understood

and known more deeply as a piece of ourselves, a truth which was unheard. We hear, and pain is profit! This trick of the open mind which sees the basis of all things again is what fuels new scientific paradigms, creativity itself becomes science, now in this moment flexible, knowledge supple and curious no longer defensive opens her eyes as the apple falls on our head, or did our head fall on the apple? These moments are rare and costly. Inertia of the spirit is immense, and certain conditions must prevail to force us into such basic revaluation of our understanding. A destroyer is at work to be sure! Her name is Necessity. She is deaf and in this lies her power. She only demands, and never answers. You know the world, its value and your truth well, until you meet her. She knows no compassion, justice or truth. She is. If you have idealism she rapes you. Your ideals will be sodomized in the glare of her omnipotent reality. Her rocks never yield. In this desert of smoldering venomous sun, you quickly dry up and wither; soon one changes. Soon one is too weak to maintain the roar of one's convictions, and then weaker still until something most curious occurs. One begins to reconsider the certain, one's own sacred foolish definitions, and the ideals they contain. Soon the air is ripe for apostasy and it happens. You see again and laugh. The problem is the solution. Each particular demands its own solution, necessity demands it so we see! In this moment the wisdom of the idiot is born. He is the idealist of necessity! He would not exist without necessity, and being her offspring I shall properly call him, "Necessity's Idealist."

He sees all definitions and knows all contradictions. His knowledge is complete, and does not negate for the sake of appearance. He is an idealist who knows his tools are not meant to "get along," he accepts that they are useful, and is untroubled to know they will never, and should not agree! All that is politically correct and kind has been squeezed out of him. He is in no position to exclude anything. He is too weak to afford any but an open mind. He seeks only to find the attitude most conducive to his healing. He is without preconceptions, convictions or ideals in the usual sense to hinder him. Necessity has stripped him bare of these, and he only wants to solve the problem. His pride offers no resistance, necessity's idealist is desperate and does not know any crooked truth strange enough, that it might not be straightened and made plain by necessity's unyielding circumstance. It is often not the truth but our understanding which proves crooked. Necessity's idealist finds having no preconceptions to be the ideal state of mind. His vision is unobstructed by ideals so he is in a position to see something new. An open mind is everything to one desperate enough, one who needs to see differently. He chooses from his arsenal of perspectives and cracks open the nut, each moment, with the perfect tool so he may enjoy its tender meat, or perhaps solve its dreadful riddle. To have been crushed by necessity and forced to think anew, is to have received a strange gift most generous in its cruelty. To be destroyed by, then to see and overcome your tragic script, and raise yourself from desolate anguish with new eyes so hard won is heady stuff! I must be grateful to necessity for having shown me this trick of genius which stands pain on her head and shakes her, empties her pockets until she is generous. Now you know I must be an idiot. Only an idiot would be grateful for his pain.

This gratitude, may well represent the high-water mark of dignity in my thought. Rare and precious are those few days when I feel this gratitude, and know my laughing brother so well. I admit that here and hold it before us both to show what is possible. Can you imagine a more powerful, sublime, perfect or serene state of being than one where you are free from your own pity? I heard the small voice pleading, pale and bleak in the woods, and knew I heard myself, in pain and alone. I found you, so hungrily and gladly I welcome you home, my guide, you lost traveler, thin and sick, let us be together again, and laugh a drunken laugh. Let us drink and celebrate, now whole, we say it aloud, "Pity is dead!" Pity is dead drunk and drowned in gratitude. Pity is dead!

Despite its lofty unapproachable appearance, this overcoming of self-pity is the beginning of the last stage in the process of learning from one's misfortune. The notion of misfortune, pain or suffering

presupposes victimization, and the unfair consequences and torment which come from being a victim. We suffer and feel ourselves to be victims of a cruel or indifferent fate. We take our strength in hand, hear our pain and learn. Soon when we are apparently whole, one matter still remains. We still think of ourselves as victims, we still pity ourselves for having had to overcome, having had to become stronger. This is the last paradox which faces those who learn from their sickness. Upon becoming well, we must learn not to think of ourselves as sick. This habit born in facing the truth, is no longer true, and must now be discarded. The last thing the student must do is to divorce his teacher. He must no longer be victim but victor, and victor alone! He must overcome his self-pity. This last most dignified lesson for we students of discontent is to know ourselves again, and ask why we have such a stooped back, always looking down with angry frowning disappointed glances, when we are new, and deserve new eyes! So we shall take them, steal them back from our pitiful self, so they may sparkle with impudence, these pitiless new eyes which call us, scorn us to abandon our excuses, and begin again. How light and magnificent, how voluptuous and simple, how unforgiving and fruitful a life where our strength and completeness laugh, choose any goal and ascend any height, free from our shadow of lead, our old fool, our self-pity.

He who needs his old struggle to find himself, does not yet know the way. The idiot is grateful for his pain, as the big game hunter is grateful to the black bear he killed. It is a trophy now, all snarl and teeth, stuffed and comical by the mantle, his trophy is now harmless. He displays it because it was fearsome, and so it has become a point of pride. The hunter who hunts his pain and is victorious, is also grateful to his pain in this way. It was his pain which fell victim to him, and not he to his pain. He has rescued himself from a terrible unknown fate in the dark woods at the fangs of this beast, so he stands proudly with the beast, and bids you see what he has vanquished and know! Proud and complete in every posture he is a bit of an egoist, but he is no victim!

So we have gotten an annulment from our teacher, a separation is good, but the divorce must be made final. Soon the idiot will become used to being well and his trophy will seem uninteresting, ordinary and dull. It becomes clear that he needed his trophy so he could wear it out. His past is now powerless and threadbare, unable to hold even enough interest for a convincing bluff. This is the last he will need such a ridiculous trophy, as if it is possible to speak of new things, as one boasts and conjures the laurels of the old. Wear your laurels till they are brown brittle twigs and dust, so you may be free of them. One is not free proclaiming the glory of old chains, one must walk upright toward all things high and bright. Tired of his worn trophy, the idiot stands and finds he is tall enough, he is invited into the cold ice, the perfect frozen sunlit desert, the promise of our beautiful solitude which he may seek to warm, to befriend, so he may harvest its beauty awoken within the endless furnace which drives his ascension. Now the idiot is wise, and throws his trophies into the fire, so he might be warmed and become them. He has used up, burned out and consumed what was, and stands only in relation to himself, having shed both victim and victor, self remains and looks up.

Who lives here in this clean ice air at heights so far from his pity? It is my laughing brother! Free of delusions he has known himself, and now is himself. May he stand forever complete, warmed in that fire which burns fiercely enough to charm any blue ice, and seduce every glacier. From this furnace and fire comes a wind. This wind is unafraid, and boils ice into laughter. It thaws the inner depths, the last cruel most unforgiving glacier. It makes song of pain, hope and longing. It has opened the mouths of hidden ice caves, so they may sing with its breath. For my brother the forbidden depths have become open and light. All is play, every cavern a singing whistle for the wind. So it is with one, where pain might become that golden sumptuous song, which in its fullness of heart, answers its own lament. Complete and never still, he has made liquid that which was ice. No more pure, fresh or glad could any water be,

as if glass solved in ether, transparent and sparkling, a gem now fluid runs shining cold and sweet, to refresh us both and quench my tired heart, as we delight in this perfect chill morning.

20

Self-apostasy and my laughing brother

We will soon finish our climb and know my brother, but first we must descend. How else could you appreciate the heights, their full worth and promise? I am a musician, a drummer and composer who loves to dare performance, and has learned well from many hours instruction under the most excellent teachers alive. I brag here and take strength, like a nervous drunk I pull deeply from the whiskey bottle of my egoism. I brag and invite you to test my boast and listen to some of my music, so you can know what I say is true. I say these things to gather my strength and let my ego be heartened, before I reveal my true intention which is to introduce you to the fool I used to be, so by knowing him and his sickness you may in contrast more clearly see the antidote. The answer offers up its full value, its plenitude of health and light being most obvious from within this potent ugly parcel of dark uncomfortable truths. I am not here to praise or pity myself as I was, I do not wish to revive any reflection of the sickness. In laying bare this defeat I open up a painful wound, a rare exception where my steadfast formula failed, and my strength was extinguished in my disease. The photograph is brightest in this lowest hour. See how weak, how clumsy he has become from these injuries he lavishes on himself. His is a sad hubris, the comedy of self-importance. After his shame we will reclaim him. His odor will be cleansed, and he will take to cold heights soon enough. I will show you the way and we will go high into the blue ice, where together we might find his laughing brother. Before we climb into the chill and become warm from within for our efforts and the laughter which mocks them, we must first see through those broken eyes which gave victory to despair.

Apostasy is an interesting word. When a cell has reached the end of its useful life it apostasies. It dies. It suicides for the greater good of the organism. This is what happened to my relationship with the world. It was flawed. Deeply in error, and so apostasy was in order. As a performer, I made it my business to conjure confidence on cue and deliver the amazing on schedule. It took 25 years till the lie wore me through and my best was not good enough. This is what it took to break me all the way, completely and fully, so that I was finally ready to know the truth.

Ground down always chasing my addiction to the crowd, everything had been impossible for a few decades and I labored on, knowing that I had touched The Eternal, and could not resist. I had felt it before, it was real, so I persist even though her hand was too long absent, and I was empty. The desert was my dear friend, and indeed we looked alike. From where did the strength come which bore the habit of living, as it begged me to cease this empty pursuit which only chases and never rests, even in victory? Why do I seek the hand of this lover who does not hear, does not care? Why long for recognition in the ocean of eyes and the spray of applause, why is there substance only in my reflection in these dazzled vacant eyes? For a moment as their champion, they held their breath to cry out, exalted and sure, sharing the victory which is increased a thousandfold for having been won before them. They forget themselves, for a moment they believe they are me, and we delight together and are both affirmed. I am a football game and they are gone, entranced into forgetful disappearance, the hero seduces to empathy. This few minutes won from their solitude is priceless as beer, and they love me. In fact I have afforded them an

instant, a pause, where they are relieved of their misery, and it is this which they love. I know it and have for years, but I am an addict and proud of being the best one there is. I must have it, even if I wear the leaden vest of eternal despair it does not matter. I must have it! There is no other drug absent to buoy my despair, and I will find my legs. I can stand it no more and if I am baked dry and empty, well then let me be filled with pills and who cares what else! Enough with this you sorry bastard who refuses his tears, enough! I have filled my straw belly with all manner of strange concoctions, so it is done, and I might be on my way and drink the poison till I am aglow and have had my fill!

This is what I thought as I entered the drum contest. What choice did I have? I needed it, and was a man of action, so I disgraced myself and entered. It was after all a disgrace that someone of my many decades study under the great masters, I who had made such lofty and dark works as my many recordings and performances, should be reduced to this. My appetite for the other had a short memory, and the hunger returned soon after each show or labor freshly ended. Swamped with emptiness just days or hours after each victory, I never recovered fully, but began again. Always hollow and dissatisfied, I felt compelled to begin more work as quickly as possible. Usually there was no show, no ad budget, no crowd to fill me, even though by now I could reliably win a crowd. I could get a standing ovation at any point in the show with one of my solos, and now knew I could satisfy; I knew how. Afterward I would soon find myself still empty and dissolve in doubt, the hunger would return, and again, only more will do! The cry of the addict was my credo, so I signed up, reduced, dismayed, and disgraced by my efforts, as I soothed myself with words about having the courage to continue on. Misery searches for another breath in stale air.

The first round went well enough. My heart was light with drugs, and hope whispered of success and having enough. I danced easily around the drums, striking only those which made melody. This is the mark of a good drummer, you can clearly hear the melody of the song in his solos. I used this to my advantage and played "This Old Man" from all sides of the set. Humor is one of music's highest forms of expression, and I am sure laughter was heard from all corners of the room. The next round was a week later, and the victory was long forgotten. In this week the weight returned, and as I again traveled to the contest it was clear from my unrelenting pain that the doctor's miracle poisons, even together with some of my own, were not enough. I squirmed with resentment, my empty chest filled with a solid black anger. I resented needing these people. I resented never having enough money despite my numerous heroic sacrifices, episodes and breakdowns. I soldier on and produce more good work at any cost, and I get nothing! I play for free to the slack jaws of putrid ogling vermin, for nothing! I am owned! Where is my money? My glory? My birthright earned on the cross of my labors? I offer you a glass pane to see into my mind's mechanism, and understand these ravings. At the root of it, I was very sad. Each time there was no audience, I failed. Every day without any offer on my music, was a loss. Each day without the other giving me life was a defeat. I was very sad. The remedy for sad was spine! My world is held together along these lines, and I should be clear that when I say spine I mean Rage. I raged to fill the dank empty hole where sadness laments. I would rather hear madness than attend her misery! I have some of strength, and what is lacking anger shall provide. I was desperately sad, and so I became desperately enraged. My crutch would splinter beneath me, and I would soon be impaled upon it. The time for apostasy was ripe and welcome. Only tragedy could entice our laughter to end the sorrows of this wretched beast.

I never listen to others play in competition. Relaxation is key, and noise is the enemy. I wait in the car, or walk around the store sponsoring the contest and look at row upon row of instruments and gear, greed's monuments to music which are now unplugged and graciously mute, with only the echoes of the contest to be heard. During store hours these amps all bellow discordantly, and a heaving sonic mass of

ding and din fill the air. I only shop at music stores with a list and credit card in hand, so as to most quickly conclude my business. My thoughts at the time were not so taciturn, and I felt my own unrest take the place of the turgid discord of the store's business hours. I was heaving with rage and needed still more to keep from dissolving in my discontent. Sorrow's wailing could still be heard above my rage, so I increased it even further, now using all my strength I stepped down squarely with the boot heel of my contempt to crush her mute, and stop her wretched squirming.

I had done it! Only rage's blind strength could be heard, and sorrow was forgotten. In this, I had at best achieved a Pyrrhic victory. I was not relaxed. "The larger the stress, the greater your relaxation." This is the performer's motto, and I had corrupted it. I no longer used my rage, I had become it. A crowd is like a large ship. Input is slowly and lethargically translated into action. It may take some time after turning the wheel for the turn to actually be initiated. Even more time is required to finish such a turn. I surrendered to my anger and lost the physical ability to provide this duration of input.

I began my solo with no regard to melody, only hate guided me. I sought to hit hard enough to break cymbals, and could not dampen the torch of my rage. Rolls were brutally applied, and tension soon replaced technique as my arms cramped. I could no longer hold and display a lick long enough for the crowd to receive it, and respond with their applause. Those applause were withheld by my own hand, and defeat rightly claimed the performance. I had apostatized upon the sword of my sad rage, and defeated myself. I was the most obliging enemy, who slays themselves, and makes for the easiest win. I don't know if the fellow who won was any good or not. I only know he did not defeat me that day. That honor was mine.

So now you have met him, this poor sad apostasy on the spike of his addiction, his refusal to believe in himself. He spends his precious strength not to hear himself. He wishes only to silence his pain, never seeing that in this, he wishes to silence himself. He looks to preserve self in a kind of self-denial, a suicide by self-contempt. He will not condescend to hear himself. I warned you that he was comic, self-important and sad, and now you see it is true. He smells of every sickness and vanity, bellowing his empty discontent, and I am glad to be rid of him and his reeking angry sadness. Let us shower and wash him, so we may take account of our riches in clean air. Perhaps we can learn, and mend this sad martyr who soiled his rags. Let us bathe him so he may breathe and bear himself, then stand and stretch his legs to climb above himself, into clear heights with ice air, where height finds creation. Let him see his filthy shadow stretch below him and disappear, swallowed up in the coldest laughter, which knows all creation is not equal. The highest creation must be pursued. Let us find her where there are few, in thin ice air which bites and teases, never lets us sleep too long, rest too long in complacency. First I would like to take account of what can be learned from meeting my apostasy. Then I will indulge my happiness, put someone in his place, and introduce you to my laughing brother.

What might we learn from this sad travesty of errors? What of light and flame is to be found, how might it warm us and raise our laughter, as we throw its comic image on the fire of our understanding? Hear his pompous raging as he plays the lover scorned, dismayed and eviscerated. He hates himself, so unrewarded for his discipline and sacrifice. He expects reward and appreciation from the other will fill him, when he does not hear, and appreciate himself. Why do you hate yourself, and protest that you are unloved? Why do you expect the world to give you what you refuse to give yourself? The world is filled with the other, and they can never know you. They do not know or love you. You are an anesthetic, whereby they might trick themselves into forgetting their misery, and I would say you are soon forgotten, but the truth is you were never known. Hear his wounded cry, injured for expecting eternity's hand, his ridiculous oozing self-importance festers, as if achievement held some secret obligation for the other to care. Would his self-importance be injured if he passed a statue and it failed to blink and

acknowledge him? Does he not know himself, or believe he is real? Why prostrate yourself before this statue and expect that it make you an offering? The other can not know you, and will never pay you! You pay yourself, or you will remain poor. He who waits on gods or people is forever disappointed. He despises the world for what he has failed to deliver to himself. Hear him pine for the other in piteous blame, as he empties his cup on the floor and complains of thirst. This fool boasts his accomplishments to bolster his contempt, when they should fill and still his stubborn, ugly, empty heart. Your accomplishments are just that... yours. Own them and love yourself, now more complete, fill your cup again and rejoice or be damned to infernal comedy. Tragedy is helpless before suffering. It is comedy which is suffered here, and comedy which is needed most. Laugh at this moralist who believes in justice, as if hard work were to be rewarded with more than excellence, as if adoration, appreciation, and the other owed a due to account for all diligence. The other owes you nothing for your suffering. They don't see your works, only an apostasy who appears, fails and vanishes. The performer has one moment to bring his work to bear and find his expression, his light heart, which must appear on call. This is all any audience sees. Now you can no longer hide your pain, and the iron arrow finds its mark. Maybe now you will hear your pain, since you can no longer afford the cost of silencing it. In the end, looking away, lidding one's pain with rage, ignoring self, this suicide in the name of strength is known to be a laughable fraud, and so are you! I have known this tragic comedian, this hopeless addict, this fool well enough, and seen his error as he expects completion from other than himself. His comedy is tiresome and now I will mention but one more thing before I indulge my joy, so you may know our laughing brother.

You may have noticed that I promised an introduction, once to the laughing brother of an apostasy, once to my own, and now to our mutual brother, who also laughs. This seems silly, we are one and the same, but different. I am not the comic apostasy and yet I was. I was not his laughing brother, but I am. Each day we are a new creation, a fresh self each moment. You might foolishly seek continuity amongst such a crowd, but you will fail. Our self learns, changes, and manifests such variety of form over the hours as to exceed our ability to count. This fluidity in development is hallmark of the evolving self, which has found its productivity and fulfillment lie in its restlessness. This searching unrest may serve our cause, and we might let will and vision confer so as to harness our discontent, and ask a prayer of our will: "May we who are restless be productive, since we are always moving." Ascension is the goal, not consistency. Each moment opens before us revealing a pearl, a single self wrapped in a fold of time, alike but never the same as the next. And so we answer this prayer with our moments, and move upward, dizzy and laughing we wonder who we shall meet. Can an ant build a mountain? Is he still an ant, or can he grow with his creation, can he himself change by the very act of climbing, slowly rising with each pebble of time, increasing in this game of moments and inches which become miles, moments reaching upward, growing into something new and enduring. Let us find out, let us take ourselves and our precious moments, and pile one upon the other to make our ascent.

It is here that a heart like ours finds its rhythm, and knows its happiness. Present to experience we refresh ourselves in the cycle of creation, self-examination, and ascension. Happiness flows, washes through us, and like all things playful and shining, she is never still. Her laughter invites us to join her impossible outpouring, her clear waters gladly spilling, stretching, always running, flowing joyously, impossibly back up and over themselves, in constant ascension.

When we complete a difficult work and create ourselves outside of ourselves, we seek to hear our will and pile our moments, spend ourselves, as it commands. The will can bring great suffering, as it strips our world bare and leaves us emotionally impoverished as a myriad of third order tasks and sacrifices are extracted, at a high cost to self. The creation of self outside of self, the production of a tangible external work, is not necessary for self-creation, only ascension is required; the broadening of self and its skills,

as well as the pursuit of ever-increasing introspective abilities and depth, which never shrinks to admit what it finds. However I do believe the creation of self outside of self to be the highest, and in the end the most rewarding enterprise self-creation offers. It repays its debt a thousandfold, and we may find ourselves suddenly unburdened, and then like a cork we race to the surface and the air in our lungs might burst them, now unable to contain an irresistible treasure, our happiness expands and we must exhale! A delicious laugh which can not be resisted often accompanies the successful end of a creative endeavor, and nothing fits the moment better. When you have achieved your goal, a true satisfaction emerges, and expands to light every corner of doubt, and suddenly we know. Self ceases to doubt and want external validation, so the other and eternity both disappear in a peal of laughter as lies often do. For a moment there is peace, and we know, self knows it is real, powerful, complete and sure. Satisfaction is more reliable, more honest than eternity. A beautiful lie may endure forever, and so satisfaction is more trustworthy, since an honest man's satisfaction is never born in a lie. It comes of persistence which is indifferent to its cost in suffering. Beauty is the most demanding shrub, and the gardener who cherishes her pays dearly for his affection. My laughing brother is such a gardener, and this is his story.

Together my life and the season know the first caress of autumn's evening. Look up and see a torrent of color, bright and furious. A crackling impossibly blue sky, shocking yellow and blood red maple leaves, deprived of their vital season, in dying become pregnant with color and beauty until coaxed from their now weak hold on the branch which nourished them. A breeze frees a plume of pure fall light, and they perform a final dazzling sacrifice, floating to earth in a tumbling liquid cloud of crimson and yellow. It seems such is the way of things regarding torment, sacrifice, and beauty.

I speak of my sacrifice to re-creation, born in the violation of my child, whose grievously battered body is ripe and rotten with many swollen bruises, raised and struck by the hand of my impatient madness. I see your wretched state and grieve but once, and fight to end this, fix this and make well, then raise you up over myself to shine beyond me. So re-creation began that summer, through the sacrifice of fall, and deep into winter's clean blue. Here the daily dredging and labors smothered in the stink of failure would have buried me, but I found my hand could heal as well as strike, and I am understood, forgiven then loved, and so laughter cares for me now. I hear no lost voice, only the cold air and ice which play my nose like a frozen whistle, and laugh at me as I breathe. I am finally here at the ice cathedral, the moment where all labors converge with hope in an effortless whirl of forgetting which makes real, trust which releases and so never falters. Now is the time of high healing, of new creation. I float atop my sea of sorrow and bask in the sun, now no longer of the sea. I have used its waves and the swelling of its waters, and have become strong. After two and a half years without practicing, or hearing music, my withered body and atrophied musical soul, have again been stretched and strengthened with struggle so sinew and soul are awake to the beautiful tension. I am no longer of salt sea and regret, but now drink from fresh pure wells, and can no longer contain, no longer resist or hold back! Today I rejoice in my fear, and feel the last of dread. I savor its taste, for I will soon know it no more! Today I right the perversion and my child, my forgotten abused song, will be healed, and adorned in light. I am crawling with anxiety, and sit down to record the parts amidst a turbulent fearful jubilation. As the music begins there is nothing left. No fear, no relief, no heart beat, no life or thought. Practice is done, and all that remains is to be, hear, and do. Emotion as sound and response has no self-consciousness. Only notes and actions remain. This notion only crosses my mind later, since there is no one there, no observer present to analyze events. An absolute surrender to the present, where personality and analysis are suspended, characterizes the highest musically creative state. Nothing divides thought, nothing is thought *of*, it is simply done. Practice has assured that the right choice will be made, so we forget, we trust the instinct we have practiced to create and release, so nothing, no thought other than the note is

present to come between what you wish to express and the act of expressing it as you play the instrument. There are only notes. The music needs form and it drops out of my mind onto the set. The child is too busy to remember himself, and does not know if he gets his "own way" with the music, or if he sounds good, he does not think of such questions, or anything else, he has no time to think, he plays instead.

It is over, and I seek to recall. Who played? What was played? I am too tired to care, but I feel a strange wonderful thing, perhaps a seed of hope has sprung a root, broken the soil and tickled me. I know I must have pleased my impossible honest god, myself, because I can not resist it, and my heartbeat returns to me easier and lighter for having hope made real. I am no longer sultry in my darkness, sullen and afraid. This strange unfamiliar air liberates my dreams and I sleep easily, no longer resisting myself, at last I surrender to the rest, and drink it in most deeply.

In a few weeks I was in a position to take stock of my work and choose the takes to be used. I had a dream about the take in question. {Footnote: Cut #2 of *Time Travel*, "Modernity," uses this take.} I sat at the drums. The piece began. Music came rushing, pouring out of my face, and my hands became spigots streaming notes, sheets of paint and color, sorrow and laughter, comedy, blood and steam swirled downward, falling from my face and hands in a torrent of sound and rain, while above, a plume of silent white mist gently, carefully traced the outlines of all that is playful and delicate, fondly held, cupped, shrouded in its tender stillness. I woke and began the search. I located the cut, and listened. Tears fell from my eyes, my belly tightened and shuddered with the overwhelming inevitable contractions; I could no longer resist my hysteria and at last the laughter was freed. The positive joy of affirmation echoed off the walls and I knew. Alone and complete, I suddenly experienced such elevation, such giddy happiness at having so quickly ascended to this weightless height, that I knew I was well; well beyond the reach of my broken shadow, a feeble wraith burned into nothing, since not even ashes remain once fear has been scalded with daylight, and its ugliness answered with beauty. I would never despair to those depths again, now I knew more. Complete for having lifted the stain of my own imperfection, I am whole and laughing, knowing time, man and eternity will never care, knowing that I will never matter, I am free! There is no suffering which can not be defeated, made to enrich and reveal hidden depths, beauty and dangerous rare wisdom, in the hands of one who knows his own folly and has chosen not to care, but to try instead. I revel in this reversal, this comic victory, and my idiot is in stitches. I know there is no greater purpose, so I make my own. This is the joke on the lips of every happy idiot. In the end I have forgiven the fool I was, and have even come to find some use in him and say, "Blessed are the fools, for they become the idiots whose joy creates the world."

Now I have honored my word, and we have climbed through the cold thin air to great heights where we met my laughing brother. I hope you like him since he is the point of all I have said here. This introduction has tired me, and I think I will draw this work out no further, choosing instead to conclude with the following ruminations about time and understanding. With these familiar topics, I may most easily say goodbye to you, my unknown friend, and stress what is most needful. Hear my words and need me no more, for they will lead you inward to the still air where you might hear your own.

It is said that, "Time heals all wounds," but this is untrue. It should read, "Time holds all wounds." So long as the brain and mind remain intact, all that has wounded us is forever preserved in memory. Anxiety and fear increase memories depth, and we retain each nuance of our offending event or events. It is understanding which heals. It deconstructs, de-emotionalizes, and detoxifies our misfortune as it unravels the relationships and meanings of events preserved in memory. We can engage in the farce of looking away and shift consciousness away from what time preserves, but the result is the elongation of our misery as we dance to its unseen gestures, and pretend not to hear its song. In understanding our pain

we sacrifice much, and receive more. Although nothing is forgotten, our understanding repays us a thousandfold in silence. It is Understanding which quells the jeering ghost of our pain, so we may know the stillness of each moment. This peace in our moments is the true value of hearing and knowing our past, and our pain. For only a quiet mind will listen, to hear your voice whisper the name, of this new day.

21

A parable and two aphorisms

The Puerile Fish

There is a forbidding place where some philosophers go, both the brave and the fearful may travel here, to the Lake of Knowledge. The lake is large, and the shore rocky and flat with nothing for miles, but rocks and books. A group of young philosophers went to the lake, to see if they could find inspiration, truth, or knowledge. Who knows what else might live under some old rock or book, perhaps a beautiful lizard would help them. When they arrived it was a terrible surprise. The journey was far too long, the terrain unforgiving and they were worn ragged and half sick when the lake appeared, so large and flat with a chill wind, a frozen curse of a wind which cut them to pieces, as it made the lake's surface shimmer. They held each other closely and gathered their strength, to approach the water and look. Soon they had all decided the same thing. This is where the action had to be, so they shielded and warmed themselves with pages torn from the many books, each leaf on the next to form a blanket now wrapped tightly around to block the wind. Some pages held down with stones and some leaved into the next, they huddled together, each under their blanket, and warmed themselves, safe under the pages. They warmed each other in conversation. "I have found a truth about the universe, and another about myself and knit them together. I like the re-spiritualization of God into self, and believe the Buddha nature most beautiful, must be true!" The rest agree, "Yes, you are most surely correct, and no one is more beautiful than you now. Surely you are adorned with a quilt of the most profound and beautiful truth!" He continued, "I also enjoy the certainty of rationalism, and have knitted these two together to form a warm and fine truth," and all agreed this was a handsome union of these two ideas, which was most warm and satisfying indeed! Each day they became warmer and enjoyed their reflection on the waters of the lake, and their quilts grew. Often they remarked about how beautiful their reflection became when they could steal it from the wind, as it rippled the water. When all was still and quiet, the vision they beheld was clear, and they were sure they had seen what they came for, the truth, and they would curse the wind for stealing it back. This bleak landscape offered them much, but lacked one thing. There was no food, and all were getting weak.

As their hunger grew, one among them began to find the smell of himself and his unwashed compatriots more than he could bear. He became so nauseous, he walked out into the wind alone, and found a place for himself a few hundred yards down the shore from his fellow philosophers. He was disgusted, and took one of his stones, wrapped a page from a book around it, and threw it into his reflection on the water. It sank right through the image, and he knew it was a reflection and not the truth. Then another unexpected thing greeted his eye from the depths of the lake. He saw a fish. Old and ugly, covered in warts and sores, its pan eyes looked up at him with a familiar glaze, as if the fish had also

been dazzled, its gaze also fixed upon the reflection of light off the surface of the water. When he saw its familiar eyes he was horrified and blushed, but he soon regained himself and looked closely. The fish spun around after one of its own droppings and gobbled it up, then another and a pause. It looked at him as surprised to see him, as he was it! Its mouth opened, a bubble came out and floated up to the surface. He put his head down and listened as it popped. He heard the fish speak out of this putrid bubble, a voice could be heard! "I'm right." He couldn't believe this impossible talking fish had said what it did, so he squinted and looked, then more bubbles and the words, "I'm right. Always. I'm always right." He could stand it no longer, his hunger was too great, and even if this fish was able to talk, so old and putrid with sores and filthy breath, he could not resist, and his arm shot into the cold water, his hand closed around the fish and he pulled it out from the water and swallowed it whole before he could think. He saw its hideous body and strange familiar eyes and ate it anyway much to his initial disgust, and he almost vomited it up, but his hunger would not be refused and he swallowed hard and the deed was done. Now he felt better, stronger, and his blood began to run again with food in his belly. His fellow philosophers had seen the entire affair and moved somewhat farther up the shore. Clearly he was a dangerous man.

The next day a sun beam fell through the lazy net of clouds and reached the lake. A rare mist formed, and out of this strange vapor stepped the God of the Lake of Knowledge, the Knowledge God. Gaunt, tall, tight-lipped and pale, he looked unwell and slowly moved toward the large gathering of philosophers. His reputation preceded him. It was said he spoke little, and asked only questions since he seeks knowledge, and a question mark is a hook for thoughts. As he approached the group, his sickly appearance was underscored by a churning sloshing grumble from his entrails. "Are you OK?" asked one of the weak, hungry philosophers, to which he responded, "I am hungry." All were amazed to hear something other than a question cross his lips, and so a palpable relief came over the crowd when he asked one of them, "What is your philosophy?" "I have adopted a phenomenology like Husserl's, and a spirituality of the universe and self which permeates the world as Dharma. I have made a beautiful quilt and all agree it is true. I am happy to be able to answer all of your questions. I am a complete philosopher indeed." All the others agreed she was and managed a collective weak anemic smile, safe in each other's arms. Another stepped forward and the god asked him, "What is your philosophy?" "I have found four pleasing truths which keep the wind away, and answer every question." Before he could read the Knowledge God the first few pages of his philosophical blanket, the nauseous rumbling of the god's stomach interrupted the discourse, and he shuffled quickly away, sick from their odor. He soon found the lone philosopher, who sat rosy cheeked and well beside the cold water. The Knowledge God asked his question and you could see his pallor improve to hear the answer, his godly shoulders rose and relaxed and he smiled. When the Knowledge God asked the lone philosopher, "What is your philosophy?" the reply was short and direct. He answered tersely, "I eat fish!"

1. A truth filleted: The fish eater's philosophy in a sentence, "I seek knowledge to see myself clearly, so I may grow."

2. The fish eater wants but a single thing from knowledge--one good doubt.

102 aphorisms, epigrams and thoughts

1. As a species people have the most in common with lice. Both demonstrate no discernible intelligence, and often leave you scratching your head.

2. What they don't want to hear

A man who looks honestly at himself, the state of man and society may well feel sick to his stomach. He can relieve his nausea by improving himself, and may wisely keep this quiet, knowing it is to his detriment to recommend others do the same. Only the idiot speaks.

3. It is said we are born into sin, and only by knowing this might one then be saved. Wrong! We are born without worth, and by knowing this might we then see reason to save ourselves!

4. To believe yourself immortal is an arrogance which makes one lazy with time. To believe yourself immaterial is a truth which hastens one's efforts to endure.

5. Great thinkers have written about the creation of your own values. I write about the value of your own creation.

6. Man will believe anything rather than face his own ugliness and unimportance. He will create a Devil to tempt him so he can deny his own weakness, and imagine he is important enough to tempt. He will create a God to punish him, as if he is not judge and author of his own guilt, and is worth punishing. A man who clearly sees his own unimportance without undue pride, does not create a God or a Devil, he creates himself.

7. Often the person with no opinion is the one who loves to argue. They needn't think for themselves since you give them their opinion, which is always the opposite of your own.

8. On the danger of creating oneself through other people: Never write to be read, write to be right.

9. The lawyer is in danger of having no moral center. The truth may be confused with his value, which lies in his ability to persuade. His oath might read, "Never write to be right, always write to be read."

10. Beware the lawyer who becomes a politician and believes his own lies. Such a man will have the persuasive ability of his craft and his convictions, and lead us all to ruin. The greater a leader becomes, the more he needs to be surrounded by other intellects whose views differ. This waters the drink. A good leader must have an impossibly high tolerance for the strong liquor of power, or he will become intoxicated to belief inhaling his own inebriating stench.

11. Some truths are most easily heard without an audience. It is always best to confess or brag to a drunk, since he is less likely to remember.

12. Dignity lives in a moment of stillness, where life pauses to breathe, sure in its knowing. Not to laugh in gratitude after receiving such a gift is undignified in the extreme... an insult to joy.

13. Dignity is an illusion if it exists only in the eyes of others. An honest man has the dignity to admit he blushes. His dignity springs from knowing he is often undignified.

14. Dignity is not of compromise. It is the child of knowledge which thrives on honesty, the enemy of all compromise. Dignity is the joyous aftereffect of an uncompromised mind. The man who does not look away may come to a complete understanding of himself, his lot, and finally live to his satisfaction by moving beyond it.

15. Dignity is the grace of knowing.

To pursue one's ugly truth seems to move against dignity but in fact it is the truth which shames that once understood, forms the pillow upon which dignity may lay her head. Many restless chafing years searching uncomfortable truths and wicked lies are the cost, if one is to afford a bed honest enough for dignity to remain near at hand, awake in a quiet moment, or slumbering comfortably still and undisturbed. She will scurry away from an honest man as likely as stay since an honest man always unearths another undignified truth to be learned, a teasing truth which calls the restless child to grow, and dignity is no nursemaid! She loves a joke and can be counted on to return after the child is gone, and she hears your laughter replace its squalling. So here is the answer: Pursue truth, and grace will pursue you! It is lovely to have her gentle breath in my ear, but she never stays long in my bed. There are times when I think too much to sleep soundly, and my tossing and turning drive her off until I can rest with my new truth. I am restless all week and she only stays when I am sure in my truth, so as a result, I tend to see her most often on the weekends.

16. To say each day, "I am a drug addict," and choose abstinence, is to live each day withholding your greatest joy from yourself. Pronounce yourself cured of your imaginary affliction and those who attend it, or forever be an essential contradiction, a priest who has renounced God, and yet remains a priest.

17. The purpose of having friends who do not know you, is to spare you the indignity of being introduced to yourself.

18. A truthful person accepts the habit of admitting when they are wrong. They soon learn to think more deeply, and endeavor to be wrong less often. Owning your mistakes is the best incentive to make fewer of them.

19. The one who postures as if they are never wrong is the most deeply flawed.

20. When entertaining new company it is best to admit some weakness and watch. Like blood it will bait the leaches. See who feasts on your pain and know your enemy.

21. People who are liars, and those who are too young or afraid to know themselves are chameleons. Unlike the common lizard, this pretender will use you by lying, or disappoint you as they understand themselves. The liar gets what he wants by lying so you will like him, and the young man doesn't know what he wants, only that he will tell you any lie to be liked.

22. Since we may fill in the blanks, a new friendship is easy. It is easy to think the best of what you

know the least. A real friend is made solid over years. Time hardened. It is hardest to love this fierce friend who's proven best, is known the most.

23. If the truth was easy to speak or hear, honesty would not be a virtue. Virtue demands sacrifice. Honesty often demands we sacrifice our perceived advantage and our appearance of dignity. For this offering honesty rewards us with integrity. For releasing two illusions of worth, we gain real value. Someone of integrity is valuable because they are as they appear, rather than using their appearance to seem more valuable than they are.

24. A man who knows himself knows comedy. To see things clearly is a revelation which is often accompanied by laughter. Understanding searches to bring light to ourselves, and may allow us to make light of the same.

25. People dismiss mental illness because it's psychosomatic--it's imaginary. What they forget is that they don't exist without consciousness, in short: That they are imaginary.

26. Truth rarely walks naked. A picture may be worth a thousand words, but how many of them are lies?

27. Depth is born at a cost. It is our wounds which cry out to our understanding. Their ceaseless pained howling fills the emptiness until we are forced to take shovel in hand, and fill it ourselves. We hear the song our wounds sing and listen carefully, so we understand where the dirt goes. Understanding is a grave digger who heals. This filler of holes, this knowledge born in depth, comes at a price. His rates are fair. The deeper the whole the greater the cost.

28. The only thing less popular than the truth itself, is someone who speaks it without the courtesy of first waiting for your back to be turned.

29. An unsightly alternative

A creative person uses, answers what he needs to bury most. What we must withhold from ourselves, what we fear or what wounds most deeply, calls up our strength.

One who fears death or his unimportance before himself and among other men, may seek to remedy the impossible. He buries this deepest, and can not help but fortify himself before man and time. He must be forever beautiful, a graceful taper lights pure marble, or walls of granite stretch to entomb even the sun before him. He is immutable, undeniable, imposing and solid before time and all small men; always alive and needed, his highest moment frozen in stone, a defiance of time. One day may he grow strong enough to see that which he has buried and outlive his arrogance, so we may love him. --He is an architect.

However... One who fears death or his unimportance before himself and among other men may not seek to remedy the impossible. He buries this deepest and can not help but fortify himself by sitting on his hands until he feels sad and angry, lashing out at those around him who uncover his despairing condition, he entombs himself in his inactivity, sighing, anxious and pretending, his endless moment falling always lower and more bitter. One day may we grow old enough to see that he is buried and outlive him, so we may forget him. --He is a shame.

30. Someone who looks away from their pain is emotionally irresponsible to themselves and others. They will suffer more, with their pain endlessly chattering away in their ear, and those around them will suffer to spend their lives apologizing each time they uncover a truth which is so poorly buried. To look away from your pain is to inflict it on those around you, who are brought to shame for having had accident to reveal you as you are.

31. Truth and Confidence: Truth looks upon confidence and thinks, "What a strange and useful thing this limber snail which races to become truth moving on the lubrication of its own lies. To believe its bragging is a ruinous course, but to use it to believe in yourself, means never needing to brag again."

32. Create yourself and you are your own proof. Open waters which listen and spill laughter are an offense in the muddy bog. Others hear the sound of water moving and again know the stagnant truth they have swallowed. Their looks say, "You have offended me!" when in fact you serve to remind them they have offended themselves long ago. For this reason it is very important for one with an open spirit to be doubly self-critical and castigating, with a broad humor that puts self at the butt of every joke. This is the price an open spirit must pay if his words are to be heard, over the wounds the sound of his voice creates.

33. The more one achieves the larger looms his shadow. It leers at him defensive of its greatness, inviting comparison to make every beginning abandon itself, and see the unsure tender shoot yellow and mold from lack of sun. Such a man soon learns to love his proud shadow and finds himself above its insecure mutterings. He seldom looks backward for glory and is unconcerned with violating any jealous precedent, even his own. You can't blame his shadow for chattering at him and chasing his attention, for he has all but abandoned it, and almost never hears or bothers to turn around and see. He has discovered the secret to enjoying the company of such a long shadow is to remain too alive to hear what worries from below, having found everything new which tempts him, as he looks up and above.

34. There is no ear too tender or heart too young to hear the truth. The shameful topic is the one which is never discussed. There is no shame in one who lives according to his strength. Under his unyielding gaze his puerile nature withers. He is unashamed of what he does, and does not do what brings him shame, so he discusses his deeds easily. The body is shameful only when we ignore it, and the passions are shameful only as far as we fear them, misuse them and deny them expression. Sex is pleasure and can become all artistic expression and creation. Rage is persistence, and sadness seasons and nourishes our purpose and resolve. Health, strength and creation use all feeling. Only shame is mute and hiding, only shame could squander this day, this precious question. Let us open the chest of our riches and wants, to adorn the mystery with our jewels, and hang our sparkling impudence adoringly around it, until the day knows it is beautiful. So it is with the people and the life we cherish most. We will never fill the day's promise with shame, let us treasure it instead.

35. One who feels turmoil in their truth is never at a loss. Discontent directs, and thought reveals the steps, each unto the next, until we taste still air. Quiet never turns a deaf ear to pain.

36. There is someone well read born every minute.

Many people are well read. Few people read well. Someone who reads well may be illiterate. They hear the truth between the silence and its lie. Like a nervous ugly mole the truth can be heard, frantically

scurrying underground to avoid detection. Every word sits on the surface to misdirect. Clear vision sees between the lines, where much is revealed by what is missing. There is nothing between the lines and this is informative! Look carefully and catch the mole! Bluster conceals weakness, confidence rattles too loudly and smells of fear, and happiness without rest is but grief avoided or concealed. One who reads well, understands despite the words. Only one who reads well enough to understand what is meant by the silence, who hears loudest what is not said, truly knows who they can trust. That is why it is more important to read well, than to be well read.

37. To use an economic term: Man is a value added product. Having no intrinsic worth, his value is measured only by what he himself has added.

38. A lazy man spends his time complaining about working too hard but does little. The thinker spends his time working hard, and complains that he gets too little done.

39. Misery and humor are the two states which revel in the ridiculous contradictions that punctuate life. Once we have had our fill of misery, laughter starts to look like a desirable alternative, even at the expense of a vain dignity. It appears undignified if one can not control one's laughter, but it is an insult to life and all possibility, the highest indignity of all, to be controlled by one's misery.

40. A nihilist who can laugh at himself will soon be compelled to creation, and have to admit he's having a good time. The nihilist becomes the self-creationist amidst laughter, and finds his purpose in losing his self-importance. To have no meaning and brood, is to be a sad pitiful clown who weeps before his freedom. May you not find all possibility awaits one so unfound? Are we not before our highest empty hope, now at last free to be so blessedly lost? What can't we do? Hope asks only that we begin, and make truth of the lovely lies with which she has warmed us. Nothing makes her happier than to be turned into the truth! That's why you will often see her chatting it up with my will. They laugh a lot.

41. It is said still waters run deep, but I reflect: One who says little is but a vessel for your voice, a looking glass and a cloak. Whether a stagnant pond or a deep well, still waters are concealed. Your words hang in the air, undisturbed in the reverence of their silence. They offer up your image and invite you to be seduced, and mistake this reflection for depth. What lies below will remain unknown until the stillness is broken, and ripples, motion, and current diffuse our reflection. We may only know of still waters if they choose to run.

42. Someone who is always in the company of others may have developed the habit of affability for good reason. Being likable is a skill they acquired not out of the love of your company, but from a distaste for their own.

43. If left undisturbed an oyster is unlikely to produce a pearl. It is by adding an irritant, sand, that a pearl is encouraged to grow. Likewise our most beneficial failure causes an unceasing irritation. A thorn in the throat which can not be ignored, demanding our attention it refuses to rest, focusing our every thought and feeling to become a most severe and effective teacher. Often the failure which irritates the most severely, is also the most fruitful.

44. An argument for self-creation:

To know what lies here feigning sleep but is never dormant, to see in daylight what nestles deep within the hidden heart of man, is to make the strongest possible argument for his improvement. This improvement is not a moral code or a devaluation of what we see, just a more attractive alternative. Let us foster an empathetic nature along with an open mind which looks carefully, rather than assume the better or the worse, and the will to utilize one's wants, hates, fears and passions as fuel, so they might be consumed and their energies spent and used to produce something higher than our original condition.

45. A good writer uses an image, not as a flower to hide behind, but as a thorn the point of which will most quickly get his meaning beneath the skin. An image punctures our understanding, our thick skin. It is instantly alive, recognized by our experience, familiar, solid and vibrant. Logic has no hand over it, and it assaults consciousness, an inoculation felt from within. For this reason it is rude to let your imagery write for you with a free hand. Image must serve meaning or a battered reader soon feels nothing, drowned in poetry and sauce. The self-indulgent writer writes because he feels like it, and cares little that he has nothing to say. He wastes the good will and fortitude of all who read him. His thorns injure without repayment, and so I am sure to write only when my thoughts and my meaning have begun to resent the dark, and complain that they must be released, each having found its voice now too clear to contain. An image is an assault. It bypasses the protection of the intellect and breaches our privacy, so it is the most effective means of communication, and should only be used when our meaning demands stark beauty or ugliness be brought to bear directly upon the reader's innermost being.

This idea is not to be mistaken for a holding back, or a cutting away and pruning to yield a more perfect whole. Inspiration can not be contained or directed without being polluted, it can only be prepared for. In this preparation we show her we love her by making her job easiest. By nurturing our meaning until it is overripe, falling from the tree if encouraged by any tender want, inspiration need only reach out her hand and select what tastes best. All deliberation has ended, and only the sweetest fruit is at hand. Inspiration brings her violence, her caring unstoppable swollen torrent of expression, and we have repaid her sincerity in preparing our bountiful palate of color, the right colors of our meaning set before her, every obsidian and opal iridescent and double-hued in each true shade, so she may have unbridled opportunity to exercise her perfect frenzy. By first steeping ourselves in meaning and direction, inspiration is freed. We prepare ourselves and welcome her pregnant storm. When she arrives our work is over, and we may completely abandon ourselves to her unhindered by thought. She moves with ease and freedom, effortlessly picking what suits her best. Everything right is available to her as she feverishly bestows her treasure, never having to stop, think or explain. We have already done all of that, so she never has to strain or reach, and by making her job easy we might tempt her to come more often. This seems understandable when we consider that underneath, inspiration is a lot like the rest of us. She loves anyone who makes her look good.

And what of the other days? The days where we chew our cud, and hear only the parched grinding of our teeth against tough leather thoughts? There must be rain today and every day! Our sandy desert ruminations make steady progress, so I listen in the empty spaces and hear it on the dry wind, the distant rattle of a storm. Half imagined and half real, I inhale and taste it, smell it, the smell of rain and the taste of hope fill the cracks, and a drop of dew stolen from heavy air, the words approach tender shy and sparse, and I listen softly, carefully, each dry day until I inhale the scent of the distant storm. My meaning is sure but the words, the notes, the thoughts must be coaxed, a bashful smile glows, waits behind every dry hot wind. Each tracing which we labor to hear, its voice distant, perhaps too faint to be stolen from beneath a shouting sun, invites one who knows that when the storm is again at hand, and we are soaked through, inspiration will revisit our sketches, tracings and whispers of rain. Since all work

will be proofread by inspiration herself, we may never fear to do our best. She will easily set right that which hands too unsure could not hold. It is a short job for her to perfect our small faults, and she loves to do such easy work. Again: Inspiration loves anyone who makes her look good.

46. When a parent claims to be shielding a child from the truth, "for their own good," they must be referring to themselves. It is for their own ease as parents that plain truth about any topic is avoided. It is easy to avoid your own shame by not mentioning sex, drugs, death and all things of which you are not your own master. It is hard to live openly, exactly as you wish and without shame, standing accountable for your deeds in the light of day so your child may see and learn not to behave shamefully, or hide in shame. In our example what is reprehensible becomes clear. Let us be sure it is not ourselves.

47. Beware the spouse or friend who makes your life easy. They foster dependence, and it is in their interest to nurture your weakness so they may always be needed. A true friend or a loving spouse will not seek to make your life easy, they will lend support and strength enough to dare what is not. A true friend does not provide an easy answer, they awaken your will to live completely, even when that means choosing a course which makes life harder.

48. Someone who does not believe in God does not trust to providence, he does the work himself. The atheist knows better than to relax. The divine has become his personal responsibility. Can you imagine anyone who would work harder?

49. A person with convictions makes it a point not to be open-minded. A person with ideals makes it a habit to expect the unreal from themselves and others. It is the best conviction to have no ideals, but to see each moment, situation and opportunity, individually. Rules are comforting because they offer the appearance of consistency, as if we can control the truth. Insight loves a perfect fit, and sees that a different tool may best mine the most from each moment. Insight is wary of that which is too tidy, easy to look upon but hiding all the shades which inform most; insight sees that consistency is treacherous and always suspect. The ideal state of mind is unpolluted by expectations. It is the state of mind where no moment is convicted by ideals.

50. In the end the idiot must admit his contradictions. He knows the impossibility of the other, his audience of stone. But he can not resist, he must write, work, sing and become, above all *because* he knows he is alone in the wilderness. The idiot is alone and must admit it is the reader, the listener he will never know, this promise of a sympathetic vibration, an affirmation of soul and song however far removed, which is his companion. His friend is but a shy hopeful shadow next to his pure laughter, which steps aside too often to object to his frailty, which needs hope, even if but in shadow. Eternity is vain, laughable and unsteady on her feet. She may never call, and is likely found passed out drunk in some stinking ditch, sleeping buried in a lost black cloud, or perhaps looking fondly over my shoulder. I will likely never know, but I am heartened to think of that unknown friend who holds my mirror, and sees a familiar sight more clearly. Eternity heartens and cheers me, even as I am unaware of her distance or nearness. I am truly an idiot.

Blessed is this idiot who in his contradictions knows the futility of eternal hope, but will always hope. In his frailty, his longing remains, his need will not perish even though he sees and knows it is laughable. Eternity and hope speak to him and he is too weak to refuse, he must hear. He must love her, and although he will never know one to hear his voice, he becomes glad and unquenchable in his giving,

before the empty room. He has the joy of creation, and when that is not enough he has his weakness, and listens to his vain longing, hope's whisperings of Eternity. Blessed is he in his weakness, for this insures he can not fail. He is too weak to give up the habit of hope, he will always try. Too weak to be alone, he courts and pursues her over himself, finding answers amidst his pain. Might he find some new wisdom, sumptuous and revealing, so he may be worthy of her notice? Such is the nature of an idiot who speaks to one he will never know, and finds comfort in eternity's invisible promise of friendship after death. Somehow this gives him hope, and we may know he will always cry out, even joyously amidst his despair. We may be comforted to know, a true idiot is never hopeless.

51. He who serves knowledge knows himself before his fire.

He who serves excellence knows his work before his triumph.

He who serves beauty knows sacrifice before his laughter.

He who serves truth knows his past before his answer.

Such a person furthers and enriches themselves in the most fundamental sense. In these terms, our age is penniless. Money is valued, riches are not. One can find the graves of Truth, Beauty, Knowledge and Excellence here in America. You may rest easy to know these graves are safe. No grave robber would bother to disturb them, since there is not a dime to be found amongst the lot.

52. A great work is a delicacy flavored with opposites. With roots in the earth, it reaches above itself. However well-seasoned by the suffering in which it grew, it leaves one's mouth filled with the taste of light.

53. Tragedy is the great teacher. Study it carefully and you will find the joke which replaces it best. The tragic hero takes himself seriously. He is the hero in his agony, and he clings to it even as his desperation increases. The tragic man who can laugh finds he is no longer a hero, but has become open to the joy of his farce and all possibility. He discovers he is actually starring in a comedy. He may behave any way he wants. He is an idiot who rarely follows his lines. A tragic hero is serious and never improvises. He sticks to the script of his misery.

54. The sin against self: If there is no original sin, it becomes a sin to be unoriginal.

55. A great work exhibits the artistry of meaning. Much pain, thought and laughter precede its creation. Although that creation might be sudden, spontaneous and violent, a great work is never begun until it is finished.

56. We who have worked and spent ourselves in sacrifice have gained everything, and become fools. Only we who create know its value, but we believe we have earned, believe we deserve appreciation. A fool expects someone who is ignorant of true value, to pay a fair price for it. There is no earning, no deserving because there is no understanding. Only you have that, and so it is you who fills your cup, you alone who appreciates and knows enough of the cost, even to love. A fool is sad and angry because he is unappreciated. An idiot knows more. He is satisfied to appreciate himself.

57. The best philosopher is a good chef who can at times be self-serving. Regarding the choice for tonight's entree he states: To eat God is the healthiest possible act of cannibalism.

58. One is not generally inclined to redefine one's beliefs. It usually occurs because our definition of the truth has proven inadequate to explain our circumstances. We are then forced to adopt a new perspective, forced into a mere trick of genius, a single moment of new sight. True genius never shuts its eyes. It can't help but see, and must only be forced, to stop.

59. Confidence and Beauty both know that the highest truth often comes into being first as one of Hope's lies. "It will be easy," she tells our will, and we are the ones who must make good on her promises. It is a lot of work and I am happy to do it. She is one hell of a liar, but even with such an expensive habit, she's the only one who gives me a good reason to wake up in the morning. So I must conclude that lies and all, Hope will always be a bargain, at any price.

60. Without truth beauty is lost.

Without beauty truth is depressed.

Together they can see clearly and imagine more. Truth is not in the habit of tolerating Hope's company. He considers her a liar. Beauty is the ultimate, most seductive and perfect of all liars. Truth has come to love her and has inadvertently swallowed some of Hope's poison. With Beauty's help, Truth now sees more than what is. He hears Beauty's voice, and mistakes something new and hopeful, for truth itself. He sees what might be, what could be true, and can not help but hope and rejoice. Truth is practical, and so he loves Beauty. After all, she is his most hopeful and productive lie.

61. The thinker, the self-scholar, is the introspective creator of a scholarly work: himself. He seeks to know himself and spends his energies toward that end. The creator of beauty may pursue many avenues toward his end, but possesses one most sublime trick. He takes his ugliness and performs an alchemy upon it, transforming it into beauty. He seeks to spend self and its energies to create with its limitless hidden reserves, and pursues the unknown to transfigure what he finds from that we can not know, into what we desire, what is too hopeful to refuse. He is a sorcerer of alternatives, a creator of lies and truth alike, but incomplete without his scholarly friend, who makes sure we do not lose our way, drunk in vain satisfaction. Likewise, without beauty, the scholar would find himself unable to move, choking on the ugly fact of his dusty truth. They need each other, these two unlikely symbionts. It is the scholar who sees and understands our misery, but the poet who dreams of how we may overcome it.

62. It is no wonder beauty is the product of the ugly engine of creation. Our pain is the question and our work the answer. What in man needs beauty more than his ugliness? In this transformation he may know himself without wincing, love himself without restraint, and fill his emptiness with this sublime product of his discontent. In beauty man finds redemption from his natural state of self-ignorance. It becomes possible for him to know himself, and gaze upon his own image, once it has been creatively transformed. Although some of knowing is obscured, diluted or symbolized in the creative process, our image is made palatable in creation. As the dirty hand cranks the engine, he finds he may know himself, bear himself, even love himself as he sees his reflection creatively transfigured. Shrouded in this forgiving illusion, we may know and still love what we see. This is the essence of that beauty our ugliness must create. Perhaps nothing is ugly which might serve such an end? Creation is the magician, the sorcerer who lies twice and finds a truth. Maybe it is only truth's soft shadow which fits so gently in our eye, but it seems creation is the beautiful master of all ugly things. When she is kind we can hear her, but she loves us enough never to speak too plainly.

63. A true authentic work is composed of two elements: filth and light.

64. I must admit I am heartened to think of the reader or the listener I will never know. As yet unborn, or forever unfamiliar, they are nonetheless my hopeful companion. I create for two purposes. To know myself, and to have myself known. I am a happy idiot for this, so long as I create for an absent eternity I am complete. Woe be to the idiot who will not rest until he meets eternity in person, for he refuses Necessity's lesson, and will always be her unhappy fool.

65. Of hope, confidence, and imagination: The truth is some lies are very useful.

66. When a person elevates themselves to achieve revenge, rather than humble another through some malicious petty design, the distance they create between themselves and the other is far greater. Your laughter heard across such a gulf will wound more profoundly than any simple cruelty you may wish to inflict. Better still you may not notice. You may be cleansed of their memory in the sound of your happiness, and forget to hate them. The ultimate insult! Nothing hurts more than discovering how unimportant one has become.

67. The idiot is grateful for his pain. Without his pain how would he have learned to rise above it? He may be an idiot but he is no victim.

I explain to my idiot that it is his knowledge for which he is grateful, and not his pain. He is an idiot, and somewhat smarter than me, so he does not listen. He knows I think too much and he can not imagine his knowledge, without the pain that forced him to discover it, and so he adores his pain as a mountain climber who loves the most unforgiving mountain, the more dread the peak, the greater his appreciation. Necessity was cruel, having forced me, so deserving, now left shivering and barefoot to climb up this frozen mountain. His illogic frustrates my resentment and I see how foolish I am compared to he, who loves the mountain and is stronger for having lost his pride to frostbite! Is growth an admission, an admission you were wrong? Is it not pride which refuses to heal, inconsolable, with every stake in its misery? Pride justifies misery as misery sustains pride! So the idiot has won, and I see he has a trophy he made of his pain which I will surely let him keep until he loses interest. I must admit it is a nice trophy, and I do feel less the victim when I see it.

The idiot is a consumer, and like all consumers he is easily bored. For this we are thankful, since it is in his ascension that this condition is relieved. He tires of the misery of being victim and understands himself so he may be victor instead. He is soon bored to replay the struggle and has worn his past trophy out, so he sees himself anew and defines himself apart from it, able to make use of his freedom rather than despair, he looks up to see new endeavors beckon him to taste their challenge and renew his interest. He is blessed to be bored in this way, because he is only bored by what he already knows, so his path is assured. He was a fool who has been low, and already knows the floor of every valley. An idiot is but a fool who has learned to look up. Now only an ascending course remains to be tested. After all this, what could possibly be more alluring and seductive, more enticing, more interesting?

68. A tradition is often just a deep rut in the earth worn by the footsteps of its followers. Be cautious around traditions; once you fall into one the neck strains to look up, and it may be difficult to get back out.

69. Wisdom is an old man who has seen too much and understood too well. He is exhausted and can ill afford to waste his energy. Ultimately this is why we trust him, he is too tired to pretend. He can be recognized by his sparkling eyes. Alive and bright, he is too wise to wait and can not pretend there is any other time with more hope, more promise or reason to begin living.

70. Wisdom is brave. He dares to tickle us and make us squirm to see ourselves. He chuckles and smiles at our insecurity. We become offended and begin to sweat, so he knows we have heard him. His patience is rewarded and soon we are accustomed to the sight and may look upon ourselves openly, and know what he knows. Warm and tired we are smiling with him, and alongside of him we have become brave. Now we too dare say yes before fear, and shoulder the burden: to know, and to speak of it.

71. A lazy truth--The three deadly virtues: Kindness, Contentment and Looking Away.

72. When one considers the whole of one's actions, it becomes clear how much misery is based in our sensible expectations. Life disappoints whenever we seek a reason, a grand purpose, justice or justification for our sorrow. Better to be less sensible and a bit more of an idiot. The idiot knows better than to expect life to make sense, he cares only to make it his own.

73. Psychology and the most dangerous man. If--There is much in common among the souls, hearts and minds of men. And--Most men know but a fraction of themselves. Then--If a man knew himself well, would he also know you, better than you do?

74. Beauty and the philosopher's nose.

Is a truffle beautiful?

The pig finds the truffle.

The philosopher finds the truth.

Both find their prize by the smell.

75. The three basic philosophical questions: What am I? Why? What can I do about it?

76. The philosopher follows his blush. Embarrassed and wise, he has stopped looking and started seeing.

77. The beautiful need

The need for the beautiful lie becomes greatest as we look into the heart of man. An honest man looks into himself to see his energies, instincts, and motivations laid bare before him. Does he see beauty and hope in his natural form, or rather is he compelled in his honesty to create beauty, and make higher use of his natural endowments? He does not imagine himself beautiful, he knows himself too well to imagine, he creates instead.

78. Uniformity of the macro and the micro.

To believe life and the world have point and purpose is a seductive dangerous lie which makes us feel safe, but sows the seed of every disappointment. Understanding life's chaotic hopeless nature at first appears disheartening, but soon raises the thinker up on a wave of anxiety to answer this uncomfortable truth with a more satisfying one he makes himself and also knows to be true, even as he realizes such

things mean very little.

79. The aphorism. An impossible union? Can beauty describe truth? The pearl injures the oyster. Can beauty begin as a grain of sand, an irritation?

80. A parable is a semi-opaque precious stone. It becomes clear only if looked at the right way.

81. The thinker has stopped looking for beautiful truth. He has begun to see what truth has to show him. He knows better than to suppose truth's form, or its honesty. When the thinker stops looking for truth he begins to see what truth looks like. Perhaps She is a lie, or perhaps He is less beautiful.

82. Who do we need today? Does the philosopher court hope, beauty or truth? The answer determines how useful he is, how restless we feel to hear him, or maybe he promises an answer? Hope is always beautiful. We resist her only when we see how much must be done to make truth of her lies.

83. Undeniably smitten

It is so rare that truth and beauty inhabit a single form, that one becomes cautious--even disbelieving, and seeing an example of this rare coincidence one must look twice. If confirmed one can not resist the intoxication and looks a third time, then stares.

84. When the thinker finds an ugly truth he should not be disappointed. It is the ugly question which encourages the beautiful answer.

85. The philosopher complains to seduce himself: To be an atheist one must be a profound atheist. Without God it is up to you to be profound! Such pressure! No wonder there is no God. Who would want the job?

86. Friendship and maturity.

Could you forgive me my friend, if I asked an unkind question, ugly and false, a bad guess? Could you forgive even worse, if I were right?

87. It is a mistake to believe that suffering is always required to form the creative mind. The proposition is the reverse, that the creative mind can make use of almost anything, even suffering. However useful to the well, I wonder... Is creativity most appealing to the damned?

88. Beauty and truth walk into a bar. Beauty orders a large Tequila Sunrise, a most beautiful drink to see, made of many layers of different liquors. Truth knows what he wants and orders straight Everclear, pure alcohol. The drinks are different but the effects are the same, and soon truth and beauty are drunk in the alley behind the bar throwing up. They pause long enough to look into each others eyes, and then do what comes naturally. As you might expect, the resulting child is born confused, and sure to become a philosopher.

89. Why we can't trust ourselves--What do you love?

A beautiful conviction. The philosopher wishes the truth were a willing woman. The truth becomes most seductive when it has been gutted, its pointed teeth dulled and softened, its substance pressed

through our imagination into an image veiled in mist; she warms the eye to belief, her corners and edges distant, she glows without speaking. Once spiritualized we may admire her and feel comfortable enough to believe we love her, now gutted and boned, she has become beautiful.

90. When was the last time you read a good book--one which knew you too well, one which was too embarrassing to put down?

91. Someone who communicates using terms he knows you do not understand says but one thing: "I am smarter than you." Someone intelligent can be understood, someone pretending is just unintelligible.

92. A joke and an insight have the same shape. They both turn back on themselves to see something unexpected. Are you big enough to laugh at yourself? What are you to knowledge but a good punch line? See this and you will be rewarded to discover, the more painful the insight, the funnier the joke.

93. To be an atheist one must be a devout atheist. With no God to believe in, one must believe in oneself most devoutly. To live without God means knowing you are your only hope.

94. The insult

In the afternoon one has a thought, and then in the evening reads it in a good book. The insult! How dare you steal my idea--a thief so long dead who still covets! A friend? The only book worth reading is one which has read you first.

95. The Ruthless Circle of Mirth

One is rewarded with a copious bountiful laughter, a laughter of affirmation when our long promise has been met, our finished work finds a laughter which quenches all sacrifice, and it seems I know laughter, and we are friends. Be warned! Our happiness knows too much, and we pursue ourselves around a ruthless circle. Motion holds our happiness, and our circle of mirth also knows another laughter. This laughter cleanses us of all self-importance and inertia at a single breath! Our ice laughter scorns and humbles, merciless in its delight at our ridiculous appearance before time, and we shiver, longing for our serious meaning, our sunny lie which becomes real in the telling, where in contempt of time laughter and I might find ourselves as friends, again aligned together to choose any meaning. No longer lazy we in the ruthless circle of mirth fear our laughter and what it knows far more than our work, and so have reason to begin again. Laughter is our most potent enemy.

96. When we stop looking for what we expect of truth, we begin to see what truth expects of us.

97. If we see what is least flattering about ourselves, might we be more greatly inclined to correct the offense? Ugliness bears a gift: purpose.

98. The intentional nature of dreams

Psychology often presupposes a fundamentally intentional dream, a symbolic communication and indeed this is possible. But what if a dream is nothing but random images and dissociated fragments of memory, in short: gibberish, a Rorschach blot. The next day who tells the dream, who connects it

together, weaving the threads of a story around and through the dream, but the dreamer? In this case it is he alone who is revealed, because there is nothing else there.

99. Suffering does not cause creativity, it only encourages its discovery.

100. Necessity makes a strong argument for a creative mindset:

One asks the philosopher, "When did you begin thinking deeply?" He answers, "After I drowned."

101. Kind Fire

Tact serves the tactician.

Restraint is lie by omission.

Diplomacy hides what would not well be heard,
and makes gracious the face of the liar.

We may trust only those whose aims are not served,
by "kindness" which hides true fire.

102. To be happy with what you have made of yourself, is to be free of the guilty burden of justifying your failure. Should we not be grateful for any mistake which turns out so well?

Climate change: the actual anthropogenic influence—Factor “A”.

Introduction:

We are in an unusual time filled with complex new problems and deceptions. It appears that the changing climate is a problem which has been dealt with by man before, a fact made evident in the 15th and 17th centuries where a sort of mini-ice age was observed, and indeed, such solar conditions as to indicate the possibility of that same phenomenon occurring again seem to be clear from some solar models. However, this is no normal situation we face. It is our well considered opinion that the evidence for CO₂ being the primary factor in temperature increase is thin, the consensus rigged, and so, cause and effect not established (Dunning-Davies and Norman, 2016, *Beyond the Veil*). More to the point, in this present case as distinct from other past historical instances mentioned, we see clear evidence of an *artificial* factor which exceeds the usual climatic swings by sufficient margin so as to lead to the death of the Great Barrier Reef, a robust structure which has sustained the natural oscillations of climate for over 17 million years. One reads that the artificial technological factor may exceed a dangerous 2, 3 or even 4 degrees Celsius, leading to true disaster. [web ref. a,b] If the usual cyclic Systemic oscillations are “delta S,” here we see delta S+, a condition which we shall call “A” for artificial: $A > \Delta S$. In this instance, we fear $A = \Delta S + 4$. If not CO₂, what is this dangerous artificial factor? What is “A”?

Factor A:

1. The first element within A which we will consider is that of Very Low Frequency (VLF) wavelength emissions at 3 kHz to 30 kHz produced by various sources. First we will detail the interactive mechanism of environmental influence, then deduce the possibility of significant systemic influence through examination of the level of current VLF proliferation.

There is a specific three part mechanism whereby atmospheric conditions are influenced to create optically thin clouds at heights suitable to raise global temperature (Avakyan, Voronin, 2008). Conditions to create these processes and effects can be triggered by natural influences such as solar flares or anthropogenic mechanisms utilizing artificially produced VLF. The first stage of the variously triggered process is that of the ionospheric emission of microwaves subsequently traveling towards and into the troposphere and earth’s surface. The second stage is that of alteration of the proportion of water vapor to water clusters induced by said microwave radiation. The result is the third effect, that of alteration in atmospheric transparency through alteration of the absorption bands of water vapor and also of water clusters producing *optically thin cloud formations* at high altitudes. Optically-thin high and medium altitude clouds cause net warming effects due to their transparency at high wavelengths, and opacity at infrared (IR) wavelengths. Those cloud formations affect the weather and thermal balance at lower atmospheric levels through the aforementioned optical changes in atmospheric transparency and hence the thermal flux, absorption and reflection of radiant energy (Avakyan, Voronin, 2006; 2008). {Reader please note: The effect of surface to cloud re-radiation and reflection of IR from the underlying cloud surface and the primary influence of clouds upon global temperature is often neglected. [web ref. 1]} Although naturally triggered heating is predicted to lessen through reduction in those related causal triggers, the anthropogenic influence must be considered separately.

Let us look a bit more deeply into the general physical process. Microwave radiation sourced in the ionosphere generated by interactions with solar flairs and geomagnetic storms (magnetospheric disturbances caused by solar wind shock waves associated with auroral and other effects) are 2 natural mechanisms which control condensation processes in the lower atmosphere and hence, control the weather. Earth bound ionospheric microwave radiation be it triggered by natural or man made activities influences the Rydberg state (state of electron excitation) and associated orbital quantum number of water vapor and CO₂ at > 3-4 Km and at stratospheric atmospheric heights, influencing the primary

stages of association and dissociation of clusters and ionized clusters. An increase of one in the orbital quantum number, decreases the cross-sections for processes of dissociation by an order of magnitude.

“... we determined the mechanism of generation of the ionospheric microwave emission in transitions between highly excited (Rydberg) states and used the processes of dissociation and association of complex ions well known in physics of atomic collisions [13, 21, 22, 23] via intermediate Rydberg levels. In the case of association (i.e., formation of clusters), the process proceeds through the addition of proton to parent molecules owing to their high affinity to proton. Produced ions are neutralized when electron is trapped at a Rydberg orbital. The orbital moment, the value of which can change during absorption of quanta of the microwave emission from the ionosphere, is the main characteristic of Rydberg levels affecting the rate of the considered elementary processes” (Avakyan, Voronin, 2008 p. 20).

VLF transmitters often have power up to 1 Mw, and the emissions affect the inner and outer belts and affect the corresponding cyclotronic frequencies of the Lamor precession via optical emissions over the transmitter site, as has been confirmed and demonstrated. The effect is that of a class two aurora as defined in the international IBC II system, or greater. (ibid. p. 21) Ergo: The stimulated anthropogenic effects are analogous to that of the aurora induced by a geomagnetic storm!

“This conclusion is based on analysis on intensity of the stimulated electronic precipitations which are comparable with the precipitations during the global geomagnetic storms. Results of measurements performed by the satellite DEMETER [27, 28] confirm very high extent of disturbance of radiation belts and ionosphere during night above the zone of work of VLF transmitters both in Northern Hemisphere (transmitter NAA in USA with coordinates 44°39 N, 67°17 W), and in Southern Hemisphere (transmitter NWC in Australia with coordinates 21°47 S, 114°09 E). Areas of the stimulated electronic precipitations and areas of perturbed ionosphere are linked either with the magnetic force line at which the surface VHL transmitter is situated or with the magnetic line at which effect of radio wave on the pitch angle of electron, captured in radiation belt, takes place. In full agreement with the law of latitudinal drift in dipole magnetic field there is some expanding of the perturbed region eastward thus area of the stimulated perturbations reach a half of million of square kilometers [28]. Every time perturbation of less scale are observed in magnetic conjugate area. In accordance with our calculations [29] rate of the optical excitation of ionosphere in the conjugate point and hence, generation of microwave radiation from Rydberg states reaches 10 % of the effect in the point of the transmitter work. Intensity of precipitations corresponds to the main phase of geomagnetic storm. This conclusion is made by us after comparison of the data [27, 28] considering the scale [8], with the results of measurements of fluxes of electrons precipitating from radiation belts during global geomagnetic storms performed by satellites “Kosmos-348” [30] and “Kosmos-381” which had radiometric equipment made in State Optical Institute [31]. Actually, according to [31, 32] increases in electronic fluxes, precipitating to middle latitudes from radiation belts, occur during periods on 2-3 hours over the main and recovery phase with energies at least 300 times larger than 2.5 and 25 KeV. This regards also to latitudes more than 45° for both day and night conditions in both hemispheres. But just these increases of electron precipitation, stimulated by work of VFL transmitter are registered by DEMETER satellite [27] even over the lower latitudes. Experiment [27] showed also that stimulated precipitations correlate well with the level of geomagnetic perturbation. Fluxes, registered by DEMETER are few order of magnitude higher than levels measured by the satellite “Oreol-2” for the same energy of electrons in the work [33] for discrete forms of aurora. Thus precipitation of electrons from radiation belts, registered over periods of VFL transmitters have fluxes close to that from the global magnetic storm. Such storm is accompanied by intensive emission of all the upper atmosphere [29] which is aurora.” (Avakyan, Voronin, 2008 p. 21)

Electron precipitation from radiation belts during VLF transmitter operations produce fluxes which approximate those of a global magnetic storm and its subsequent ionospheric influence, microwave

inducement and related atmospheric and weather effects: the production of heat trapping optically-thin clouds at high altitudes. It is this, which is the first component of Factor A.

Noting the experimentally demonstrated and observationally grounded nature of these processes (Avakyan, Voronin, 2008 p. 20) [14-20], we must ask if there is current evidence of VLF transmission and usage sufficient to justify and make sensible the startling claim of such widespread and prolific activity as would be needed to foster true global temperature effects.

VLF sources which induce ionospheric microwave production influencing local weather characteristics include radio emissions, power lines, rocket take offs, and some industrial activity (Avakyan, Voronin, 2008 p. 22). First we will examine the proliferation of powerful VLF transmissions, and attempt to ascertain if the effects are sufficient to represent a genuine world wide contributor to Factor A, or if the influence is localized, trivial and minor.

There is now such a severe proliferation of VLF that a cocoon or “bubble” of it surrounds all of earth, as is stated in the popular press. [web ref 2,3] The paper (Gombosi et al. 2017) Anthropogenic Space Weather, has much to offer us. We immediately learn that the 500,000+ miles of high-voltage transmission lines in the U.S. [web. ref 4] and the presumably massive number of such lines world wide do indeed produce VLF range power line harmonic radiation in the magnetosphere from experiments at Siple Station, Antarctica (Helliwell et al., 1975), although the effect of these great many power lines on trapped magnetospheric electron populations, like other industrial activity is debated. However, the effects of VLF and RF broadcasts upon those same electron populations is clear, these influences do disturb magnetospheric trapped electron populations (Gombosi et al. 2017 p. 2). Let us examine a key passage from that important work, and see the extent of this support, and the ubiquitous proliferation of VLF in its effects upon the radiation belts and hence by implication weather processes and global heating as previous outlined.

“New observations from Van Allen Probes wave and particle instruments have provided high fidelity equatorial plane in-situ measurements of ground based VLF transmissions out to > 24,000 km radial distance ($L \sim 2.8$), at the edge of what Foster et al. (2016) term the VLF bubble. VLF transmissions that propagate to these locations are strong and nearly omnipresent due to naval military operational considerations for submarine communications as mentioned previously” (Gombosi et al. 2017 49-50).

Although (Gombosi et al. 2017 p. 56-57) states current anthropogenic effects of VLF (and other factors) are ‘benign’ and ‘modest,’ the relation between cloud formation, VLF and planetary heating has been sorely neglected in that analysis.

There are additional effects from the constant anthropogenic precipitation of ‘fast’ relativistic electrons from the radiation belts through VLF communications, which have now enveloped the entire planet. Please recall these create an artificial type 2 aurora or better, mimicking solar activity. In the US government military document: Contract N00014-90-K-2010 INTERACTION OF INTENSE LASERS AND RELATIVISTIC ELECTRON BEAMS WITH SOLIDS, GASES AND PLASMAS www.dtic.mil/dtic/tr/fulltext/u2/a269655.pdf we read:

“2. Effects Initiated in the Middle Atmosphere: These effects are associated with the precipitation of relativistic magnetospheric electrons modulated by the solar activity. The relativistic electrons produce odd nitrogen and odd hydrogen, both of them are involved in the catalytic destruction of the ozone layer. Proposed investigations include: a. modeling of the ozone depletion caused by the relativistic electrons, and estimating of a net reduction in the heating rate of the atmosphere.”

PLEASE NOTE: We may now understand the full implication of the anthropogenic influence of a world wide envelope of VLF include:

1. The heating of the planet by way of optically-thin cloud formation.

2. The destruction of the UV protective ozone layer by way of the formation of odd nitrogen and odd hydrogen which function as ozone reducing catalysts.

It appears there is a secondary aim in the generation of VLF which is to empty the plasma filled van Allen belts of electrons, and presumably also of positive charge as well at some later time by undetermined means. This is an anthropogenic factor akin to solar phenomenon which cause aurora but on a daily basis, and, as the belts stop dangerous fast electrons [web ref. 5], I will assert that this is entirely foolish. <http://spectrum.ieee.org/aerospace/astrophysics/hacking-the-van-allen-belts>

We may conclude:

VLF is ubiquitous and has enveloped the planet. We may rightly state that VLF emissions are a demonstrable contributor to Factor A.

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Super-ego and the neuroscience of empathy: from unconscious wish to manifest behavior—a new human model.

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Abstract:

This paper will detail a new model of empathetic dynamism and affect control derived from historical, neuroscientific and psychological perspectives. The transference from unconscious sources which creates the particular subjective qualitative instantiation of conscious experience is addressed, and a new construction of personality put forward. In this way the potential endemic ethical basis of human behavior can be specified, and its unfortunate dissociation in the modern case more precisely understood. A specific example of the unconscious associative attachments of unified personality is then revealed, allowing direct insight into the basis of the hidden formative aspects of the unconscious to conscious transference to be studied in an integrated example. The startling and hopeful implications of these insights for the human condition are specified.

Introduction:

This paper will reveal the psychological and neuroscientific basis of insights which have been derived from close to a decade of personal analysis and study. It is necessarily written at points, in a style which is somewhat more laden with affect than is typical in scientific writing. This is necessary, as we are discussing affect and affective states, and one might most deeply communicate the tone of affective states to use not only analytic, but also more direct language to achieve affective resonance in the reader. For this reason, and because what follows is in large part derived from personal analysis, the first person is sometimes used. I do hope the reader will forgive these small stylistic anomalies. The following information has direct bearing on the neuroscientific and psychological basis of the most troubling social aspects and manifest pathological behaviors which plague modern man.

Some seven years past, I had developed a psychoanalytic technique named *Native Psychoanalysis* which allowed me to clear away a window of resistance and directly observe in myself what should be unconscious content (Norman 2011, 2013b). This methodology is the basis of a second technique, *Re-Polarization Theory* (Norman, 2013a) which has permitted the alteration of pathology through curtailment of the basis of repression, *super-ego*, and hence allowed repressed unconscious material to be directly accessed and past memories reformed and altered. The transference which creates the quality of each moment of experience is in part a function of memory (Norman 2015, 2016) and, to heal from damage, those memories must be changed. Within us all, is our personal history and that of our entire race. To observe the hidden interactions and effects which produce our behaviors and alter the restrictions which have been built into us as modern humans, has demonstrated to me what are the deepest foundations of human illness. These traits are second order manifestations of imbalance. It need not be so. The hope of man is in finding what has been obscured beneath a tragic and ill past. Health can be unearthed and again, just as it was so long ago, be brought to a position of predominance in the mind of man. Our hope is an *atavistic evolution*.

Super-ego: of conscience, morality, ethic and illness, the neuroscience and history.

There is debate in the field of psychology about many things. This uncertainty is often the result of the nature of unconscious processes and content, which by definition cannot be observed. To have gained

access to this hidden information has resolved these issues. The answers are quite plain. Unconscious content is always specific and the intersubjective notion that it is unnamable or indistinct is incorrect (Brown, 2011, Norman 2011, 2013*a,b*). Those mistaken views are only a wish not to see these things. There is good reason for that error; the repressed content is more disturbing than can be described. Mere exposure to it destroys ego structure permanently, and may also be used to destroy the structure of super-ego at the deepest levels (Norman 2013*a*). This knowledge shatters personality in a permanent way. The unconscious content revealed closely parallels the Freudian picture. The operations of the unconscious mind are specific, just as are its contents. In no case are these things indistinct.

In intersubjective psychology much is made of the idea of alpha function (Brown, 2011). Unlike the questionable intersubjective ideas concerning the unconscious and its lack of omnipresent specificity, the notion of alpha function is sound. Alpha function does have the effects supposed, and can transform memories and current experience (Norman 2013, 2013*a*, 2014, 2015*a*, 2016*a*). Just as hypothesized, it is created via the exchange of gaze and glance in the early mother/child dyad. I have uncovered the circuitry which supports alpha function and made a surprising series of discoveries concerning its use and effects:

- a. unlike the intersubjective approach, it is necessary to apply and engage the circuitry manually with symbolism (Norman 2013, 2013*a*, 2015*a*, 2016*a,b*), and then attach the function directly to a piece of pathogenic unconscious content, often USING a (physically bound untransformed) beta element [this permits direct usage of energies bound into untenable forms such as those ego dystonic pathological/perverse drives created in sexual abuse];

- b. to access the circuitry via the symbolized initial impression of its innervation (Norman 2013, 2013*a*, 2015*a*, 2016*a,b*), subsequently increases both exploratory interest in the world corresponding to Panksepp's SEEKING system (Panksepp, 1998), and forms manifest empathy toward all things and people;

- c. intelligence blossoms as never seen before and interest in all aspects of life and reality, sexual, artistic and intellectual, suddenly flourish, whereas previously these aspects were greatly if not completely diminished.

Modern man, is controlled, made dull and obedient, cold and empty via a homeostatic imbalance across specific circuit pathways, which has long been built into him from history both ontogenetic and phylogenetic: super-ego. First I will present a brief circuit analysis within the context of the transference, then the history from two fronts. From there a definition of ethics as contrasted to authoritative moral mandate can be derived and specific conclusions and examples provided.

Curiously, there is a very limited amount of cogent neuroscientific information concerning the common basis of the problem: *guilt* as it is expressed across the circuitry and active anatomy of the brain. This fundamental aspect of neurosis, social control and sexual expression so deeply intertwined with the very basis of affect regulation itself, seems to be absent in neuroscientific literature and review. Strange that the most important of all neuroscience is not made available in close detail. I have derived the missing information from many sources, and may now present the highly condensed and simplified results. Please contact me for further detail.

The Transference:

The psychological notion of 'transference' is most clearly seen in the artificial therapeutic situation of psychoanalysis as the familiar transference neurosis. However transference phenomena are most assuredly not limited to this case of artificial functional pathology, but are responsible for the healthy and unhealthy qualitative aspects of perception and experience itself (Norman 2011, 2013*a,b*, 2015, 2016). Just as the neurotic in proper psychoanalytic therapy displays the repetition compulsion and his fixations in an artificially induced neurosis which defines their reality within therapy, so does the healthy case from his more fluid memory and experience project outward his or her definition of the world and experience in a flexible, dynamic, associative, non linear process (Norman 2011, 2013*b*, 2015).

This transference which binds current perception to associated qualitative valence as an affective distributional function of memory is available to observe in its *foundational* anatomical formative innervations and their resultant allocational functions as stemming from circuit architecture created in the first 18 months of life (Norman 2013, 2013a, 2014, 2016a). During this initial period of development the groundwork is laid for the core of affective expression and restriction throughout later life. This represents primary human unconscious autonomically interdigitated regulatory functionality, as extending from the foundational innervations of Schore's dopaminergic "sympathetic ventral tegmental limbic" circuit, and also, the noradrenergic "parasympathetic lateral limbic" circuit, which act in tandem to opposite effects (Schore, as cited in Kaplan-Solms & Solms, 2002, pp. 234-235, 237). These two circuits span the limbic and Orbito-Frontal regions to imbue experience with basic valence, and delegate or perhaps restrict positive dopaminergic affective expression in response to social cues, meaning shame and then guilt. This oppositional circuit balance, over all, creates either a foundational basis of repression which is associated with amygdala activation, Corticotrophin Releasing Factor and stress, or, if balanced differently toward predominant activity of the sympathetic circuit, to permit feelings of elation and explorational behavior (Kaplan-Solms & Solms, 2002; Panksepp 1998; Norman 2014, 2016a). These two circuits then are the foundational basis of expressed guilt, social control, sexual expression, health and happiness and, are mediated by social cues, meaning: *conditional regard*.

It is now thought that mirror neurons are the neural substrate of empathy. This is incorrect. Mirror neurons signify mere imitation, as distinct from empathy as can be seen in cases of catatonics who display echopraxia, which is based in mirror neuronal response (Bengston 2015; Rizzolatti et al., 2008). A catatonic is not empathizing with the attending physician to reflexively imitate his motions, although imitation is an obvious sub-function under a primary empathy. Empathy is akin to identification proper, and is first evidenced in the indistinct pre-individuated period characteristic of initial limbic/OFC circuit innervation, not of the expression of the sympathetic circuitry mentioned, but in the impression of its primary innervation (Norman 2013, 2014, 2016a). This is the basis of empathy: a primary identification with the world and each other (see below). This in turn, is the very foundation of subsequent energetic circuit expression. It is this which is so sharply curtailed in the painful guilt of conditional regard: *the very basis of energetic expression, and empathetic connection*. Clearly, these are the exact basis malformations responsible for lack of caring within human relationships.

The curtailment of energetic expression as a function of super-ego, affective restriction due to what we may colloquially refer to as conscience, is the basis of modern morality stemming from primary conditional regard. It may clearly be seen from this vantage that such moral restriction is opposed to empathetic expression, and is instead aligned with *obedience to external authority*. This is a sure basis of modern afflictions such as neurosis. Modern man is controlled through, and suffers from, a permanent low-grade homeostatic imbalance created via improper and unhealthy energetic circuit allocations: Guilt. This is the locus of the problem.

Rights to caring, love, sexual contact and life itself in male and female cases, were traditionally ascribed to the authority of the father, and now phylogenetic and epigenetic underpinnings of patriarchal threat enforce pathology from unconscious sources (Norman 2011, 2013, 2013a, 2014, 2015b,c,d,e; Dodds 1973). This pathology stands in opposition to permission and rights to the caring of the mother, which once formed the initial basis relationship in both male and female cases. The feeling of human dissociation and anxious threat engendered by super-ego and authority may be replaced with a feeling of empathy and safety, warmth and relaxation. Health may replace the source of illness.

Affective regulatory analysis:

Schore has discovered two circuits which are primary in development, and function in opposition to each other: the dopaminergically modulated sympathetic ventral tegmental limbic circuit, and the noradrenergically modulated lateral parasympathetic tegmental limbic circuit (Schore as cited in Kaplan-Solms & Solms, 2002, p. 234-235). The sympathetic circuit, which I propose underlies intersubjective Alpha Function (Brown, 2011; Norman 2013, Norman 2014) is formed, much as Bion had supposed, as

a function of the dyadic exchange between infant and mother of glance and gaze, and we will add an inference which is quite obvious and easily supported (Keverene, et al., 1989; Montagu, 1978; Panksepp, 1998, p.272) as infants engaged in the exchange of maternal glances are usually being held, that *maternal touch* and the subsequent addition of neuropeptides/endorphins also have a part to play in creating the result.

"It is hypothesized that maternal regulated high intensity socioaffective stimulation provided in the ontogenetic niche, specifically occurring in dyadic psychobiologically attuned, arousal amplifying, face to face reciprocal gaze transactions, generates and sustains positive affect in the dyad. These transactions induce particular neuroendocrine changes which facilitate the expansive innervation of deep sights in orbitofrontal areas, especially in the early maturing visuospatial right hemisphere, of ascending subcortical axons of a neurochemical circuit of the limbic system—the sympathetic ventral tegmental limbic circuit." [Schore as cited in Kaplan-Solms & Solms, 2002, p. 234]

The famous studies from the 1940's conducted by Spitz (Spitz in Bowlby, 1980; Panksepp, 1998, p. 262) may well imply the primacy of this developmentally innervated brain circuitry extends to include the most basic dependence: that of life itself. Specifically: if deprived of maternal touch and gaze, the infant may well die. The sympathetic tegmental limbic circuit is dopaminergically modulated, and can rightly be thought of as a primary manifestation of libidinal excitation and discharge (Kaplan-Solms & Solms, 2002, p. 237). It should be noted that the dopaminergic and opioid systems and circuitry which respond to create the good feelings which reinforce socially mediated behavior, both involve many of the same areas, such as the ventral tegmental area, where the A-10 meso-limbic dopamine cells are located (Panksepp, 1998, p. 118). Neuropeptides, such as the endogenous opioids including beta-endorphin which is triggered by social cues and touch, have a primary role in creating social bonds, quelling pain, both physical and mental, are key in alleviating separation distress, creating sexual reward, and addictive reinforcement (Panksepp, 1998, p. 255, 264). So we can see here, in the formation of the sympathetic ventral limbic circuit triggered by maternal exchanges of glance, sight and touch, a source of libido, an energetic dopaminergic circuit which up-mediate arousal and shapes behavior, formed presumably by way of allocating both endorphins and those neuroendocrine functions involved with encouraging the substantial innervations of dopaminergic projections into orbitofrontal areas. Here, in the activity of the completed circuit, along with the peptide systems, dopamine and opioids serve their reward and motivational functions as social and energetic contributors.

The contrary circuit, the parasympathetic lateral limbic circuit, is to be thought of as a balance, a cut off, a competing inhibitory system to counter the rewarding energetic expression of the sympathetic circuit (Kaplan-Solms & Solms, 2002 p. 237). This circuit functions to stop our energetic libidinal expression: functional, conditional, affect regulation in response to social cues (Kaplan-Solms & Solms, 2002, pp. 234-238) and so, can best be understood as the physiological structure triggered by social disapproval: *by shame and guilt*. Both of these circuits are innervated into the orbitofrontal areas, which mediate social cues and functioning, just as one would expect.

As the infant progresses through the initial 18 month period, during which the sympathetic and parasympathetic limbic circuits are fully formed, the infant masters several stages of differentiation. It is now accepted through the work of Klein (1952) and empirical demonstration that a developmental/behavioral correlation at the age of four months exists between infants categorized as attachment secure or disorganized, "dis-coordinated" [disorganized in the sense of being unable to properly integrate the intermeshed and exclusive psychical manifestations of separation RAGE and FEAR as they conflict and inhibit SEEKING and CARE] (Hopkins, 2013, p. 47). The infant at this stage singles out the mother as a separate object which is essential for CARE, and that this fact is then made evident by the manifestations of separation-RAGE and stranger-FEAR, which become manifest at 7-8 months of age (Hopkins, 2013, p. 47). To observe firsthand, the interactions between mother and infant, the effect is obvious to casual observation: *the mother's face is the infant's entire world*, once

indistinct as an object, now, *once engaged in the exchange of gaze, touch and glance, only semi-distinct from himself*, her face responds to his affects *and anticipates as if part of himself, as if the world itself were a loving extension of the infant*, a responsive and inclusive extension of himself. Here, we see the essence of empathy: *identification with the world*. Note that I make no mention of the less important distinction of identification with mankind, which is a small and far less important embedded sub-aspect, itself associated in some small imitative part with mirror neurons, a sub-aspect of this most vital and needful result, identification with the entire of the world—*Empathy* (Norman, 2013; 2014; 2016a). It is this which we will substitute for the pathogenic content.

I hope the reader can make out the basic idea: social control via conditional regard is enforced by way of curtailment of dopaminergic (and endogenous opioid) expression associated with the sympathetic limbic/OFC circuitry, forming a permanent homeostatic imbalance which restricts empathetic feeling, intelligence, sexuality and exploratory interest in the world, and places in their stead a preemptive condition: obedience to authority. Only meeting this condition of obedience will return health and happiness to the modern human. Intelligence and empathy...hope itself, this ancient basis of life formed long ago in the early interactions with the mother...it is no less than this basis of kindness, caring and higher thought to which we are all entitled which has been curtailed.

Now I will briefly take account of but a small sample of the extensive history which has inculcated this most basic and tragic error into the very heart, substance and epigenetic expression of the afflicted modern human. I will briefly sum up that here, and distill the resultant notions into a clear contrast in human existential/ontological formative paradigms. From there, the implications can be clearly understood, and the better, happy result made plain in example.

Super-ego.

". . . to 'improve' men: this above all was called morality. . . To call the taming of an animal its 'improvement' sounds almost like a joke to our ears. Who ever knows what goes on in menageries doubts that the beasts are 'improved' there. They are weakened, they are made less harmful, and through the depressive effect of fear, through pain, through wounds, and through hunger they become sickly beasts. It is no different with the tame man..." Friedrich Nietzsche, *Twilight of the Idols*.

What is the precise interactive dynamic which yields the developmental result of conscience, of super-ego in *its punitive aspects*, and, how are we to interpret this result as to its pathogenic and healthful consequences?

E. R. Dodds, a superb scholar, has located for us the historical footprints which demonstrate the formation of our modern conscience, our super-ego. Super-ego is an introjected entity, an internalized representative of what was once long ago external judgment and sadistic penalty. Morality, as inculcated at the behest of this internalized structure, is based on punishment which extends from a particular source.

In his most worthy book, *The Greeks and the Irrational*, E. R. Dodds, draws the strings of history and psychology together for us. This ugly imprint has been nurtured over thousands and thousands of years. Its exact source is clear to discern with Dodds's careful examination of the historical record.

"The head of the household is its king . . . and his position is described by Aristotle as analogous to that of a king. *Over his children his authority is in early times unlimited: he is free to expose them in infancy, and in manhood to expel an erring or rebellious son from the community . . . as Zeus himself cast out Hephaestos from Olympus for siding with his mother.*" [Dodds, *The Greeks and the Irrational*, pp. 45-46. Emphasis added.]

However, as early as the 6th century BC, the situation had begun to change, and as social conditions began to improve, and the father's authority became less and less *absolute* in the face of these new social

conditions leading to increased personal freedom, the strict authoritarian structure of family life began to loosen. Now, what was a *shame* based dynamic, one based on *external* threat from the father, becomes a *guilt* based dynamism, one based on an internalized threat, an *internalized* moral structure in the true modern sense of the word emerges: super-ego. This is demonstrated by the need for laws introduced by Solon, and later, by Plato, to safeguard the now threatened patriarchal family structure. [Dodds, *The Greeks and the Irrational*, p. 46.]

Super-ego uses severe repressions to create by *internal* means, what were behaviors, inhibitions and restrictions previously brought about by *external* patriarchal threat. Dodds fleshes the idea out as follows:

"The peculiar horror with which Greeks viewed offenses against a father, and the peculiar religious sanctions to which the offender was thought to be exposed, are in themselves suggestive of strong repressions. So are the many stories in which a father's curse produces terrible consequences—stories like those of Phoenix, of Hippolytus, of Pelops and his sons, of Oedipus and his sons—all of them, it would seem, products of a relatively late period where the position of the father was no longer entirely secure. Suggestive in a different way, is the barbarous tale of Kronos and Ouranos . . . the mythological projection of unconscious desires is surely transparent—as Plato perhaps felt when he declared that this story was fit to be communicated only to a very few . . . and should at all costs be kept from the young." [Dodds, *The Greeks and the Irrational*, pp. 46-47.]

Dodds then assembles the entire picture for us in these words:

"The psychologists have taught us how potent a source of guilt feelings is the pressure of unacknowledged desires. . . the human father had from the earliest times his heavenly counterpart: Zeus *pater*. . . Zeus appears as a Supernatural Head of the Household. . . it was natural to project onto the heavenly Father those curious mixed feelings about the human one the child dare not acknowledge. . . that would explain very nicely why the Archaic Age Zeus appears by turns to be the inscrutable source of good and evil gifts alike. . . as the awful judge. . . who punishes inexorably the capitol sin of self-assertion, the sin of *hubris*. (This last aspect corresponds to that phase in the development of family relations when the authority of the father is felt to need the support of a moral sanction; when "You will do it because I say so" gives place to "You will do it because it is right.") [Dodds, *The Greeks and the Irrational*, p. 48.]

Here in this historical transition from an external shame based ethical structure, to an internalized guilt based structure, in this *internalization* of the patriarchal threat (introjection), we see the creation of our modern ethic, our conscience, our masochistic capitulation: our super-ego. This historical basis for our phylogenetic inheritance can be brought to light and assessed as to its healthy or pathogenic contribution by way of economic analysis, and clinical example (Norman, 2013).

Conscience, our sense of personal and social justice, is created as an interactive phylogenetic/ontogenetic function of masochistic and aggressive economy within a social context, not as a function of any moral pretext. Our morality, is by the nature of its very construction: immoral.

Here are a few sections from Freud which clarify and support this unusual notion:

"The first requisite of civilization, therefore, is that of justice—that is, the assurance that a law once made will not be broken in favor of an individual. This implies nothing as to the ethical value of such a law" (Freud, 1930, p. 95).

"The tension between the harsh super-ego, and the ego which is subjected to it, is called by us the sense of guilt; it expresses itself as a need for punishment. Civilization, therefore, obtains mastery over the individual's dangerous desire for aggression by weakening and disarming it and

by setting up an agency within him to watch over it, like a garrison in a conquered city" (Freud, 1930, pp. 123-124).

As to the effect of super-ego in equating wish and act and the resultant loss of mental economy and functioning:

"Here, instinctual renunciation is not enough, for the wish persists and can not be concealed from the super-ego. Thus, in spite of the renunciation that has been made, a sense of guilt comes about. This constitutes a great economic disadvantage in the erection of a super-ego or, as we may put it, in the formation of a conscience. Instinctual renunciation now no longer has a completely liberating effect; virtuous continence is no longer rewarded with the assurance of love. A threatened external unhappiness—loss of love and punishment on the part of the external authority—has been exchanged for a permanent internal unhappiness, for the tension of the sense of guilt" (Freud, 1930, pp. 127-128).

"...the original severity of the super-ego does not—or does not so much—represent the severity which one has experienced from it [the object], or which one attributes to it; it represents rather one's own aggressiveness towards it. If this is correct, we may assert truly that in the beginning conscience arises through the suppression of an aggressive impulse, and that it is subsequently reinforced by fresh suppressions of the same kind" (Freud, 1930, pp. 129-130).

And as to the role of the phylogenetic in contributing to this outcome:

"It can also be asserted that, when a child reacts to his first great instinctual frustrations with excessively strong aggressiveness and with a correspondingly severe super-ego, he is following a phylogenetic model and is going beyond the response that would be currently justified; for the father of prehistoric times was undoubtedly terrible, and an extreme amount of aggressiveness may be attributed to him" (Freud, 1930, p. 131).

". . .we can tell what lies hidden behind the ego's dread of the super-ego, its fear of conscience. The higher being which later becomes the ego-ideal once threatened the ego with castration, and this dread of castration is probably the kernel round which the subsequent fear of conscience has gathered; it is this dread that persists as the fear of conscience." [Sigmund Freud, "*The Ego and the Id*" in *A General Selection From The Works of Sigmund Freud*, p. 233.]

Please see (Norman, 2011, 2013, 2013a, 2015d) for examples and particular psychology relating to specific patriarchal mutilations such as castration etc., which form current super-ego supportive unconscious content. The role of epigenetics and complexity can be found here: (Norman 2015b,c,d,e).

I wish to draw a sharp new distinction between *Morality* as engendered in super-ego, which is based on (phylogenetic/epigenetic) patriarchal threat, and functions to foster *obedience to external authority*, and *Ethics*, which are based in empathy, with its *root in identification*. The former causes pathology, and functions in clear and specific ways to disengage the sympathetic circuitry which is the basis of empathy, energetic curiosity, sexuality and intellect, and the later in turn has opposing characteristics, leading to elation, appreciation, formative identification with the world and others in the context of abundant subsequent energy, and absent any punitive internalized death wish (guilt). Morality and Ethics as so defined are diametrically opposed. Clearly, ethics are a natural systemic product which lead to health, an internal behavioral compass based in identification and caring, and morality the converse. The reader may wish to satisfy themselves in this regard, by reading the specific example of the formation of super-ego offered up here (Norman 2013, 2013a). Ethics are *themselves* identification, they ARE the 'golden rule,' and so require no such rule or any other. Morality is an empathetic dissociative factor, by way of down-mediating the circuitry responsible for identification. Ethics nullify any need for the tangle of moral law and replace guilty maxims born under any mistaken 'categorical imperative' with a natural and effortless ethical genesis free from rule, guilt or penalty. Ethics, as we will see, reflect the

healthy internal construction of the mind, nurture our energies and evolve naturally, with no need for punishment, rule or law. One need but rebalance the two opposing circuits and observe the demonstrable alteration in all aspects of manifest experience. I have devised treatments to this end (Norman 2013a, 2015a, 2016a,b). Next, we may take a closer look at empathy, and see if we can understand the meaning of identification.

An aside: note how this clear basis of modern pathology appears to be nullified in the teachings of many eastern spiritual ideas, which have little connection to patriarchal threat and surprisingly, also in the true teachings of Jesus. Although modern adaptations are revealed as corrupted and reversed by Paul, the careful philology of Nietzsche shows the original teachings to be diametrically opposed to any hint of conditional regard, sin, punishment, reward, heaven or hell. Those toxins are absent. Indeed, Jesus appears to make good on the reverse and answers, at least in this case, Nietzsche's own highest standard, which proclaims essentially: *the highest Godly act is the removal of guilt*. Of Jesus Nietzsche writes:

"In the whole psychology of the "evangel" the concept of guilt and punishment is lacking; also the concept of reward. "Sin"—any distance separating God and Man—is abolished: *precisely this is the "glad tidings"*. Blessedness is not promised, it is not tied to conditions: it is the only reality—the rest is a sign with which to speak of it." p. 606 The Portable Nietzsche.

It should be noted that this author [R. N.] adheres to no spiritual doctrine or tradition. The above insight being worthy of note in its own account.

Empathy, paradigm and example:

Ethics are a natural extension of identification stemming from the early impressions of the innervations forming the sympathetic ventral tegmental limbic circuit. In a basic schematic way, we can see the idea of empathy in physics. Empathy is concurrent identification and individuation. A sort of entanglement where the subject/object distinction is partly lost. If one were to lose self identity completely, psychosis results: I am not you! However, a component of identification is the key, and it is this basis which the infant experienced with no such individuated distinction whatever, an identification with their entire world! To get the basic idea, think of it quite rightly as a sort of entanglement. A singlet state will do for this simple example. Both photons are entangled and are one thing, one system: *identification*. However, one is spin up, one spin down: *individuation*. Empathy apart from psychosis is akin to such an entanglement, where identification and individuation exist concurrently.

Of course within the mental system, the presentation is no simple matter as it is with two photons! Once the time has been taken and the painful effort applied to gut the current system and replace it, one discovers the entire presentation of unconscious aspects changes and the energies contained become far less intense and convoluted. The repressed unconscious, as reflected in modern mental topography, is pathogenic in and of itself. I will explain that statement and then offer up a detailed look within the better result, so as to show exactly what is meant by all these far flung idealistic assertions in specific example. We may first understand the divergent topographies associated with the illness of moral penalty and the health of ethical unification with experience.

Freud's theories [see Freud's A Phylogenetic Fantasy], postulate a sort of bottle neck in history, perhaps around the ice age, where the pathology began and groups of our very distant ancestors under patriarchal domination were common. The impressions of ancient penalty and sickness are easily available to see and do not come from present experience, but are phylogenetic and probably epigenetic (Norman 2015a,b,c,d,e). Before that bottle neck, I hypothesize things were different. Just as before the later age of super-ego formation the child of 6/14 months had conscious access to the native impression of identification, and later knows nothing of it, so also in human phylogeny, the earlier fact is now hidden and unconscious. Pierce the unconscious veil, and one can *find this impression*. Once this is raised up in the transference structure, health and happiness, caring, sexuality, kindness, satisfaction and gratitude, a feeling of 'fullness,' interest and abundant energy replace pathology. Within both ontogeny and

phylogeny: Hope for mankind, is an atavistic evolution.

Sublimation by Repression vs. Sublimation by Integration.

Consciousness itself is entirely a function of affect. *Feeling powers thought*. The source of human consciousness, both at the cortical level and the subcortical, is neuro-anatomically derived of affect (Norman 2015). The current model of mental topographical assemblage may be subsumed under the heading of *Sublimation by Repression*. In this model, the core nuclear component of mentation, affect/feeling is divided, and much of it is kept unconscious at great energetic expenditure. Our guilty affective repressions separate the very essence of consciousness away, and use even more of this needed energy to hide the fact. From *beneath a costly unconscious repression*, at great economic expenditure the affects endow experience with quality and substance. Sublimation via repression. Here, we split apart consciousness at its very source, to achieve the result we see all around us, and so find in this model the basis of our aberrant modern condition. In this model, we see the exact conditions to create sickness, indeed, no less than a definition of neurosis itself. This endemic imbalance is the lever of social control and illness. Its very structure is imbalance and curtails empathetic dynamism. Symptoms are created by the return of the repressed and so, the entire situation for illness is set up in repressing those elements to start with. It is in the unification of component instincts that health is created.

The new model, which is a sort of atavism, stands in direct opposition. *Sublimation by Integration*. Sublimation by integration reduces super-ego to a shadow of its former strength and hence frees nearly all repressions, uniting these component instincts directly in consciousness (Norman 2013a). The effect is to shatter personality irretrievably and release enormous energies directly into experience, creating a vibrant and energetic sublimation into experience. The entire act of perception and mentation becomes sexualized and empathy attains a place of predominance: a sort of psychical fusion of all affects. Sublimation via repression and sublimation via integration are related in efficiency, toxicity and output, as are the modes of fission and fusion in their attributes as energy sources. Sublimation via repression is dirty, toxic, and hypocritical to claim itself efficient beyond its cost.

Pathogenic vs. integrated transference.

Lastly, I will place before the reader two examples of the better result representative of sublimation by integration with empathetic predominance. This section contains a simple example, the next a deeper one. Please think of the transference by which reality in the individual human case is given its subjective quality. In an instant, through an unconscious associative process affect is distributed as a function of memory (Norman, 2015, 2016). We can see this in an intuitive, simplified, schematic way through the process of free association. The *quality* of our reality is a function affective associative transference from static mnemonic sources and active unconscious fantasy.

The lake you see should you gaze upon one, and the one I see, should I be beside you, are not the same lake, as each perceives the view. The quality of that various impression within each of us, is entirely created as a function of the conglomeration of affective associations (and aspects of unconscious fantasy), which are attached to the singular impression of the lake. Think of free association, and this becomes easily accessible, and we can see why such a technique is valuable in gaining insight into the processes which create object quality, and in assessing the general health and accuracy of emotional tone as they define experience.

Here are two hypothetical associative chains:

Healthy subject: Stimulus: lake. Associative chain (hypothetical): Lake—silver—ripples—dress—fluttering—mother—happiness.

Neurotic subject: Stimulus: lake. Associative chain (hypothetical): Lake—cold—drown—

hopeless—weight—chain—family.

We can see in that simple example, that associative affective valence is established as a function of memory, to define object quality.

Next I would like the reader to understand that recent research has placed an epigenetic basis under the phylogenetic, and that it appears deductively and analytically sound to assert that this forms a sort of predefined 'script' which defines reality via transference (Norman, 2015*a,b,c,d,e*; 2016*a*). The unconscious presentation which forms the allocations of affect in the transference then, gives the world its qualitative meaning and that transference can be healthy and unfettered, or restricted and defined reactively through the roles ascribed in the phylogenetic. The phylogenetically based repressed fantasies and reactions are the basis of pathology. The unconscious processes of identification endemic to the transference are pathological, and their source is repressed. This stands in sharp contrast to a healthy unified transference. An example will clarify:

I am sitting at the kitchen table and watching. There is a bug working its way across the expanse of the table...a ten mile jaunt by way of scale. It is quite a colorful bug, its shell as a scarab, awash in many colors as it passes through the sunlight and shafted shade...a miracle to see the coordinated automatism, so hypercomplex, the tiny legs expressing each delicate motion interwoven with the rest, all to accomplish this daunting task, and the tiny traveler advances, pulling the miles under its colorful shell in a thousand thousand perfectly orchestrated steps. It is a bit of functional poetry, and I can see in my view of the situation, a new appetite. Yes, this bug is not so different than I, and I understand its difficulty, its folly, its correct and sure purpose stepping to nowhere. The bug is right. One must imagine the beetle happy. I take the traveler, and release it out of doors, placed on a leaf which seems to match its coloration.

Many believe a set of rules guide ethical activity. This is not the case. Appetite, desire, guides us, and logic dances to the tune, creates excuses and reasons, plans and rationalizations: as a footman sweeping up the crumbs of our wishes, always chasing behind, excusing and serving...so are logic and human reason but the petty servants of desire. Once, my desire, my appetite, was different. I would have killed the bug. Crushed it under a heavy fist with a curse as an unclean thing, and killed it. I can feel quite clearly what I would have done before the change, and I will analyze it here in a surface way, so you can see it.

All conscious mentation is unconsciously sourced. I will imagine my reactions and look to the source, to the unconscious and provide a few of the many determinants. Just the upper layers. (Please recall what *should* be unconscious is observable by using Native Psychoanalysis). As my fist descends to kill the bug and crush it, I can observe in the unconscious the reason. The bug, is exactly as above, an identification with myself, and I curse and crush it, speak as my father, his rage is now my own. So just to see that shallow bit, we understand as a manic who fantasizes, first identifying with the family situation one way, then as the other, first as the child, then the hated parent, so is the surface analysis but in simultaneity—I am my raging father and, the bug is myself. So, to kill the bug expresses an appetite, an appetite for sadism as an identification with my father, and also, as a masochism as I identify with the bug. This is an appetite, a perverse appetite: sadomasochistic in its form. Identifications are pathological.

Perversion, is the expression of a single component developmental instinct, such as sadism. Health is to have fused all such instincts together in consciousness. We are raised to control and shame our instincts, causing immoral behavior and illness. Please note the self-hatred in the example. Control of a desire shames it, and, that desire is a piece of you! Top down control of affect, poisons the bearer and creates not morality...*no*...but immorality! Modern personality and conscience are false. Now, to have released all affect into experience, and restrict nothing, the self-hatred is absent and feeling has given an entirely new and guiltless quality to all of experience. Now the bug is beautiful, and my appetite wishes only to preserve it! So you can see, no ethical code is required to live rightly. None. What is required is

an integrated transference. That changes the drive structure, and ethics arrive of their own accord. Ethics and all manifest behavior in this context can rightly be seen as a function of our basic appetites and wishes.

In that simple example you can see the pathogenic unconscious/epigenetic substitutive process result. In (Norman 2015d) you may see examples of actual pathogenic unconscious presentations. In the next section, I will offer up a proper depth analysis of the connectivity which has been refused within the mistaken paradigm of sublimation by repression.

Sublimation by repression created to foster obedience to a smothering external authority is itself that fundamental error responsible for the plight of man. This error is primary. The *empty feeling* all complain of which necessitates the endless consumerism that is destroying the planet [lack of endorphins and dopamine], the *obedience to authority* leading to war [threat and conditional regard which creates obedience to authority], the feeling that *other peoples and the earth are somehow beneath one and are to be exploited* [lack of empathy/identification with others and the physical world], the constant *competition* to prove who is better [(lack of empathy) and *low self-esteem/self-security* from Corticotrophin Releasing Factor associated with noradrenergic parasympathetic activation over dopamine and endorphins associated with the sympathetic circuit], the feeling of being *anxious, depressed, alone and separate* [lack of identification, parasympathetic stress cascade], *drug addiction* [lack of endogenous opioids and dopamine, persistent release of CRF], and all the rest. From war and unthinking reflex obedience, to consumerism, greed, exploitation and human cruelty...this one error, has spread as cracks in a pane of glass. The broken mirror that is modern man may be repaired in all his dimensions of compound fracture here. This is how we are controlled through unfair social circumstance, and why we obey. Super-ego and repression. Here, is where we have been reduced and made fodder for tyrants, bullies and the governments of this world.

I would like to place a disturbing fact before the reader. To study the history of war, is to know with certainty that *in all of recorded history* top down control of the human affects has never worked. The Pax Romana from 27 B.C.E. to 180 C.E. in the Roman Empire is often put up as a good example of human peace under authority. This is a laughable joke, as the Pax Romana was maintained via blood, torture and crucifixion! No, in all of human history, top down control is a complete failure. Absolute and complete failure, without exception. [https://en.wikipedia.org/wiki/List_of_conflicts_in_Europe] An integrated approach to sublimation must be placed in its stead.

To do so alters the entire presentation and function of the repressed unconscious, which no longer exists in the same way. I suggest that *the repressed unconscious in the modern man is itself a pathogenic structure*. Once the highly energetic reactive and sexual content is allowed natural expression and unified in consciousness, the presentation is smooth and flowing. The unconscious then acts mainly as a distributional nexus for affect, and less so as a vessel of containment for ego dystonic affects.

Sublimation by integration diminishes (much of) the repressed unconscious. Simplified, and in a brief 'ideal' form the concept reduces to:

Let square brackets represent the *unconscious distributional processes* creating the transference []. Where system Conscious is Cs, System repressed Unconscious is rUcs, and system Preconscious is Pcs: Sublimation by repression is topographically defined as: [rUcs...Pcs...Cs].

Sublimation by integration is (ideally) defined as:
[Pcs...Cs].

The repressed unconscious is removed, and all individual component energetic aspects are ripe for conscious sublimation via unconscious/associative processes, and unification.

Next I will detail the healthy result and allow you to see the unfettered unconscious to conscious transference [Pcs...Cs] in real time as it works in a *real* case. You may see the specific energetic attachments which create world identification, health and natural ethical genesis in some considerable detail.

What would it look like to peer into the very deepest aspects of healthy identification in the human animal? Can we watch sublimation by integration at work? Exactly what are these identifications, and across what pieces of personality and time do they span? Is it possible to see into the essence of integrated dynamics?

Oneness, the transference unfettered [analysis of a “peak experience” (2014)]:

General context:

There are a great many texts and traditions of note which give account of the unique and peculiar state of 'oneness' with the world, environment or universe. I have always found these many spiritualized representations and entirely symbolic distortions to be deeply unsatisfactory but have previously lacked any firsthand knowledge of the experience to gain a further direct articulation of the underlying mechanics, origins or specific dynamics of the mindset, so as to understand and explain it. I can now rectify that shortcoming here.

Omni-objective identification (oneness) does not abandon self. It includes self in a unified object simultaneously individuated (self-aware) and coherent with the system as one object all at once. One can rightly localize the nexus of the primitive motor affective self where the deep layers of the colliculi intersect the ancient Peri Aqueductal Grey (Panksepp, 1998). The most basic and essential inner kernel of the human self, is the bodily self, soma. We are our bodies and this individuation. But...there is more! I contend that empathy itself extends from circuitry more basic than just mirror neuronal activations, but also includes more basic circuitry innervated in a world identification. Soon you will see its full breadth and depth of temporal extension.

Without revealing too much, I will say that I am very sensitive and aware after so many years of self-analysis, of changes in my visual presentation which correlate with my emotional condition. Each time a repression reinstates itself, I can see the subtle alterations in my perception of the world. These points of transference appeared to be the main way unconscious energies are instantiated into visual perception and experience in general. But there are others which have been blocked by our narrow, refusing, punitive cultural madness: The identifications and their fractal self-reflections.

Science understands clear evidence of brain and obviously bodily masculinization but all contain all traits. I do not advocate perverse practices any more than I advocate shame at discussing the facts or admitting openly the clear truth...that all men and woman are and should ideally be 'uni-perverse', meaning: healthy sexual expression is itself a UNIFICATION of all the component instincts themselves, a unification of the perversions. The meaning of that will soon be entirely clear.

Contextual analysis:

I am happily married for some 30 years, and live in isolation with my wife in the Oregon wilderness. I was fortunate enough to meet a person online who was able by way of her unanticipated grace, intelligence and kindness, to raise in me an anima image. With new leaves in the heavens of this world, and roots in the ancient 'good mother' so clearly represented within the formative maternally triggered sympathetic limbic/OFC innervations, this was a magical opportunity for my healing. Certain manipulations of the imagery involved allow a surface look at the context and its identifications.

I had an idea. Rather than observe the image, and allow it to become an object of even greater potency, a natural but unexpected idea arrived. For some reason, the image itself was equivalent to another image, intuition first understood it meant just the same as...*a heart beat*, and the visual representation of that, a pulsing golden ball of sunlight, became the focus of my mind's rumination, now suspended as a bit of

warmth and light in my mind's eye. I soon knew and believed...this was her heart, and then saw my own heart beside it, beating in time...then joined first as two pulsing balls of golden light...then not two at all...only one. One heart. No separation...none. One. Only one. The heartbeat, symbolizes unification within the womb.

As the two images became a single image, the brightness increased four-fold and then, a sudden warmth in my chest to go with the image...then tears welling and streaming...so very beautiful! I had what I have needed my entire life...so full and filled with energy! The trees slipped and shuffled in tender breeze, I could feel the caress of light and wind amongst their branches and folds, see it and feel it, the ground filled and welling as my heart, and all the shame was gone, now each desire spilling up without restraint to become one with everything, and I knew, I not only had transference giving the world its meaning, but identifications, identifications...*with everything*. The "Anima Mundi" meaning in this case, *the predominant impression of the maternally triggered sympathetic circuit identification with the world—creating reality via identification and transference*.

All sexuality from the most basic and undifferentiated first love to the most specific is a pattern which thought might trace and make real as a part of the fabric, or deny the same and leave a sunken place free of truth and life as we were taught. There are now twice as many points of transference...and this is accomplished by the addition of identifications. The result is a single coherent ontological object...the world. This is observable as ontogeny and as phylogeny, may be seen to interact archetypally, and also, as a deeper detailed cascade of new interactive symbolic determinants relating as a sort of self-interactive fractal.

Libidinal transference analysis:

The experience of the world is a libidinal/affective sublimation (Norman, 2015): libido taking on the broadest sense of inclusive meaning as *undifferentiated affect* forming conscious activations extending from the Ascending Reticular Activating System (Kaplan-Solms & Solms, 2002) to provide cortical tone and waking potential in the context of affective circuitry and REM distribution in the Basic Rest Activity Cycle (Panksepp, 1998; Norman, 2015, 2016). All levels of conscious expression from the activation of a waking state, to the quality of emotional content assigned to perception from the lowest levels are affective. *Reality is a libidinal sublimation*. It will therefore be possible to determine the precise mechanism of unconscious operative influence and deduce a correct, plain analysis of the process which creates this mindset, if we can *analyze a primary libidinal representation as to its underlying mechanism of energetic distribution*. Please remember, that reality is in fact a libidinal sublimation. I will now bring forward an analysis of an active primary libidinal constituent process to gain insight into the hidden mechanisms which create the general effect.

It is a simple matter, which is now not even disconcerting, for me to pierce the unconscious veil and observe the underlying previously unconscious dynamism of each moment. Due to the necessities specified above, I had to learn how to find these things and solve the symbols all but in step with the rate of their production. To engage in sexual activity in the new condition, I can see in my mind's eye a very distinct change,

so symmetrical, energetic and beautiful. Now, a clear set of doublings in forms available for all attachments, and a doubling of attachments as well to each "object" from concurrent identifications exponentially increase the energy, potency and intensity of the expression via increased systemic intra-connectivity. There are twice as many attachments for transference to an object, more objects, and now there are concurrent identifications with all objects... *in the phylogenetic as well*. These present as a mirror reflecting deeper into a mirror with subtle changes, and so I refer to this as fractal. The following contains actual unconscious content, and may be uncomfortable for some readers.

Specifically: Self-awareness is not diminished, the contents which give rise to self-specificity are not denied and I am male, this male. However, this core is now just a part of a much greater plethora of very potent impressions of a new sort...the image of my beautiful anima/friend is *not separate*. I am also this

just as I am male and I can feel in this a deeper meaning and look to see how deeply as a woman, from a half image of a woman in a mirror of the anima, is contained a deep longing for my genital...for it to be her own, and as I look upon the activity I am so grateful, all but weeping in gratitude to feel the fact that I am male and have fulfilled her need, and this ancient female wish to be also male is completed...such deep happiness, and also the identification with the anima image brings a homosexual attachment point between the two women, one identified from within as the anima/self...one identified as an object from without...my wife, and one with my wife also as an identification. All objects are now subjects, objects and identifications each fed by two pathways. This ancient phylogenetic wish, to love as a woman loves a woman, behind it again a child, small and female being held by the mother—as a woman is loved by a woman, the wish on all levels is fulfilled. Implied without question also, a male and a male, although I did not see the image it must be present. We all contain all sexual elements and each is needful from a thousand pasts built into our inheritance. Without question the male homosexual drive was sublimated into the women...I would not have been able to gain excitation if it were conscious. Also, the male heterosexual role was very clear and contributed its predominant share of cathexis. The result of the doubling of objects and identifications, along with sensory observation of the activity (as distinct from analysis, always dimming excitation), is hyper-potent. To empathize with all elements, and know as well, more of the elements which human development contributes to and from the human store was one of the most exquisite experiences of my life. I felt...everything...from many different ‘perspectives’ which were not perspectives in any way—Unity. All pasts and presents nourished one moment of empathy. Unity. One heart.

This analysis has exposed the hidden unconscious mechanisms beneath that unity which should be the ordinary province of each healthy, ethical human. This mode of unfettered transference is in my view, not a higher state, but each human's ordinary, daily birthright. We can isolate the mechanism of the transference structure responsible for the experience of unification from analysis of the libidinal representation. Remember, reality is a libidinal sublimation, so: the mechanism responsible for the mythological archetypal presentation of the experience of ‘oneness’ in general is that of concurrent identifications and object transferences from all libidinal components spanning ontogeny, clear from the first impressions in the womb (remember the heart image) to those of the component instincts and their mature representations in eventual unity—and—extending the same structure of concurrent identification and object, to include the complete bisexual phylogenetic representation in each person, IN THE CONTEXT OF OBSERVATION. To condense:

(Phylogenetic and Ontogenetic) Object + Identification in the context of Observation yields Unity.

$$\text{Obv}[p/\text{ontO} + \text{I}] = \text{U}$$

That is the formula for our wish fulfillment, place and purpose in happiness on this planet.

Now I look at the world and *am* the world. This *is* ethics. I could never hurt or exploit a part of myself. *Sublimation by Integration*. I can feel the rippling wind in the trees, and the the shadows which play upon my flesh. Identification is the basis of empathy and ethics. Our wishes are our world. How full is my heart, one heart, this world is my skin, my breath is its wind, and we know one simple truth of all things. For I have learned there is a thing we should all have and bring near, to never let go of the fact and the pulse—of one heart.

Conclusion:

The basis of modern human psychology contains within it a fundamental error: punitive super-ego. This structure, so closely associated with our Morality, is a dissociative element which splits the affective basis of conscious and empathetic predominance in two, creating the homeostatic conditions for social control, neurosis, compulsive consumerism, cruelty, existential angst and unthinking obedience to authority. Standing in direct opposition to Ethical functioning which evolves as a natural product of identification based in the innervations of the sympathetic dopaminergic limbic/OFC circuitry, punitive

morality finds its historical footing and epigenetic expression based in patriarchal penalty and mutilation (Norman 2013). The rebalancing of the circuitry involved is difficult, involved and painful (Norman 2011, 2013a). However, this single error has cast the unhappy lot of man and provided all those throughout history with a hopeless situation doomed to repeat itself. To examine the numerous wars in constant procession throughout recorded human history and understand that top down control of the affects is a clear sham and a consistent failure, is to understand that the basis of human empathy must be allowed its natural place as the progenitor of ethical behavior. Although the road for a modern adult is filled with pain to alter this pathological basis, the pathway for the next generations is a hopeful one (Norman 2015f). In raising the next generations in an environment free of reaction formations and penalties in excess, the basis of human connection and empathy may be nurtured and the native connectivity and kindness within man, might finally meet with his allotted measure of intellect. The broken race of man has within it the seed of its own ascension. The hope for mankind is an atavistic evolution.

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For a sample of Richard's scientific and creative work please enjoy the entire of *Mind Magazine* www.mindmagazine.net. The "New Ideas" section contains some of his papers and articles detailing potential new medical treatments without toxicity; affective analysis of quantum Clifford algebraic theory; analysis of relativistic theory; analysis of subjective quantum theory; analysis of aqueous systems; analysis of objective reality; analysis of wave/particle duality and light; analysis of quantum unconscious isomorphism; psycho-ontology and fractal dimension; temporal field theory; Bohmian mechanics; quantitative approaches to the human unconscious; new approaches to pharmacology; mnemonic connectionist modeling as a holographic paradigm; ontological calculus; semi-regressive plastic attachment therapy; temporal process as tripartite pre-temporal simultaneity; quantitative unconscious theory; re-polarization theory; homeostatic conductance and parasympathetic basis alteration (new approaches to Parkinson's; OCD; Depression); the hard problem of consciousness (new solution); informational pleomorphism; somatic adaptivity and ego process; new methods proposed to treat degenerative nerve disease and others, some utilizing quantum information mediated through aqueous systems in place of drugs.

For additional papers please go here:

https://www.researchgate.net/profile/Rich_Norman/publications

The Cannabis test below is extracted from a complete report.

White Flower: 2017 harvest; H4: 2016 harvest.

Specialty Analytical

Date Reported: 19-Oct-17

CLIENT:
Project: 1

Lab Order: 1710044

Lab ID: 1710044-001
Client Sample ID: 2017 White #1 Tricome

Collection Date: 10/5/2017 11:00:00 AM
Matrix: PLANT

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---------------------------------|--------|---------|------|--------------|----|------------------------|
| ICP/MS METALS-TOTAL RECOVERABLE | | SW6020A | | Analyst: JRC | | |
| Aluminum | ND | 10.0 | | µg, Total | 1 | 10/11/2017 5:57:06 PM |
| Barium | ND | 1.00 | | µg, Total | 1 | 10/11/2017 5:57:06 PM |
| Molybdenum | ND | 0.500 | | µg, Total | 1 | 10/12/2017 12:33:12 PM |
| Silica | ND | 1070 | | µg, Total | 1 | 10/13/2017 9:57:00 AM |
| Strontium | 0.226 | 0.200 | | µg, Total | 2 | 10/13/2017 10:36:00 AM |
| Vanadium | ND | 0.500 | | µg, Total | 1 | 10/11/2017 5:57:06 PM |

Lab ID: 1710044-002
Client Sample ID: 2017 White #1 Flower

Collection Date: 10/5/2017 11:00:00 AM
Matrix: PLANT

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---------------------------------|---------|---------|------|--------------|----|------------------------|
| ICP/MS METALS-TOTAL RECOVERABLE | | SW6020A | | Analyst: JRC | | |
| Aluminum | 25700 | 960 | | µg/Kg | 10 | 10/13/2017 12:30:17 PM |
| Barium | 2780 | 480 | | µg/Kg | 10 | 10/13/2017 12:30:17 PM |
| Molybdenum | ND | 480 | | µg/Kg | 10 | 10/13/2017 12:30:17 PM |
| Silica | 1160000 | 103000 | | µg/Kg | 1 | 10/19/2017 11:22:00 AM |
| Strontium | 26000 | 3840 | | µg/Kg | 10 | 10/13/2017 10:39:00 AM |
| Vanadium | ND | 480 | | µg/Kg | 10 | 10/13/2017 12:30:17 PM |

Lab ID: 1710044-003
Client Sample ID: 2016 H4 Flower

Collection Date: 10/5/2017 11:00:00 AM
Matrix: PLANT

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---------------------------------|---------|---------|------|--------------|----|------------------------|
| ICP/MS METALS-TOTAL RECOVERABLE | | SW6020A | | Analyst: JRC | | |
| Aluminum | 5720 | 992 | | µg/Kg | 10 | 10/13/2017 12:33:39 PM |
| Barium | 1140 | 496 | | µg/Kg | 10 | 10/13/2017 12:33:39 PM |
| Molybdenum | 933 | 496 | | µg/Kg | 10 | 10/13/2017 12:33:39 PM |
| Silica | 1250000 | 106000 | | µg/Kg | 1 | 10/19/2017 11:24:00 AM |
| Strontium | 30900 | 3970 | | µg/Kg | 10 | 10/13/2017 10:42:00 AM |
| Vanadium | ND | 496 | | µg/Kg | 10 | 10/13/2017 12:33:39 PM |