The technology which will save the world.

Richard Lawrence Norman,
Editor in chief,
Mind magazine; *Journal of Unconscious Psychology*
editor@thejournalofunconsciouspsychology.com

Jeremy Dunning-Davies,
Departments of Mathematics and Physics (retd), University of Hull, England;
Institute for Basic Research, Palm Harbor, Florida, USA.
j.dunning-davies@hull.ac.uk

Science is hope. The depths of human misery and want have been answered by science, and we may all be glad. We will tell you of the highest fruits science may yet bestow, and invite you to stand beside us in wonder, and imagine the world which awaits. As you will soon see, that world is already here.

What is science? Science is man's attempt to grasp the unimaginable and place a practical harness around the inexplicable problems and facts which present themselves all around us. Science offers us answers to questions, questions of what and why. Why is the universe the way it is? What are the limits of reality, and what are its boundaries? These are the questions of science. For millennia, science has answered these questions. Does science answer these questions with certain fact? No. Never. Science, uses models.

Please think of the role of Newton. His theories were brilliant and timeless, and contained within them much truth about reality in the way models do. We quite rightly do not speak of the accomplishments of Newton as being foolish or wrong headed simply because a more detailed model such as relativity or quantum theory comes to the fore. No, we understand that the picture has been sharpened and the model made anew, so we might gain further insight into the nature of reality. Experiments sharpen the limits of our models and in this, we have scientific progress. Scientific progress is found in the refinement of its models, nothing more than that. Einstein himself understood the limits of scientific model making, and often related his doubts to those with whom he had correspondence. It is to be remembered that Einstein was a good scientist, and did himself doubt the validity of his own models, models of things which involved the concept of curved space-time. He also strongly doubted the validity of quantum models.

Einstein wrote about his misgivings concerning his own theories in a letter to his friend Michel Angelo Besso: "I consider it quite possible that physics cannot be based on the field concept, i.e., on continuous structures. In that case nothing remains of my entire castle in the air, gravitation theory included, [and the] rest of physics."

Einstein understood the situation. One must always be on the lookout for the new idea, the new model, which will claim even more of the elusive prize. Dogma has no place in science. None. Einstein knew this best.

Indeed, the models of quantum theory and relativity have brought us a new world of hope and wonder. We have nuclear fission and fusion, we have the most accurate model ever conceived by man: Quantum Electro Dynamics (QED). Of course, Feynman who helped perfect QED was no less the scientist than Einstein, and admitted without hesitation that QED was causally, a mystery of confusion to him and all others. A re-normalized theory of stunning accuracy, but based upon unknown grounds…Feynman is famous for saying this illustrious theory of unprecedented accuracy was based on a mystery, and much was 'swept under the rug' as to the causes. Recall that Feynman shared a Nobel Prize in 1965 for his work with QED and also note how clear he is about the fact that QED, stunningly accurate as it is, is a model with limits, and *not* a pure representation of truth. Just as Einstein, we see good scientific thinking, and lots of doubt. From his famous book *QED, the strange theory of light and matter* in typically direct language we read (p. 128): "The shell game that we play to find *n* and *j* is technically called "renormalization." But no matter how clever the word, it is what I would call a dippy process! Having to resort to such hocus-pocus has prevented us from proving that the theory of quantum electrodynamics is mathematically self-consistent. . . . I suspect that renormalization is not mathematically legitimate. What *is* certain is that we do not have a good mathematical way to describe the theory of quantum electrodynamics: such a bunch of words to describe the connection between *n* and *j* and *m* and *e* is not good mathematics." Here, Feynman describes the single most accurate model ever devised by man! Of course Feynman is correct and we see in QED only an accurate model and not certain truth, as science itself is based on models and mathematics, no more than that. Progress is to be found in sharpening those models. Those who profess certain truth in any current scientific dogma, are not strictly honest. We speak now as always, only of science, only of models. Just ask Einstein or Feynman. Dogmatism is anathema to good science.

As we look around us, we see what appear to be limits cast in stone. There are finite resources, the world is filled with pollution and energy is in short supply. The environmental devastation which science has wrought, as it has attempted to create a better life for us all, is clear to see. Cars spread polluted air, factories and power plants cast a net of deadly poison around the earth. It appears that science has found its limit, and humanity as well. But do remember that we speak not of reality, but of models! Clearly, the limits of our models of relativity and quantum theories may be evidenced in our current situation, and not any limit within the situation itself. Perhaps, we only see the flaws in our scientific models and not any actual limit endemic to reality!

What if the faults and limits of the relativistic and quantum models could be surpassed? What then? We have an answer for you. In a word: *Hope*. This is the situation today. The next step has been taken. We are now in the most perfect and hopeful position which has ever been the province of mankind! Many of the limits of the current models have indeed been overcome. Nearly all the problems facing modern man have been solved—*today*. This is the most hopeful generation ever to walk the earth. We are the first generation to have this knowledge.

A mathematician/scientist named Ruggero Santilli has rewritten the current quantum and

relativistic models and found the next series of solutions for us. These solutions have been brought to fruition. Now, nothing is the same. Technology currently exists to assure the following: There need be no more fuel shortage or pollution; those problems will be solved. Our generation could see the end of pollution. The models of science have again been sharpened—just as Einstein knew they would be, just as Feynman did after him with QED, so it is. Science is hope.

Ruggero Santilli was born and educated in Italy before emigrating to the U.S.A. where he held posts in the University of Miami, Florida; Boston University; the Massachusetts Institute of Technology and Harvard University, where he taught undergraduate and postgraduate courses as well as conducting research under the support of the U.S. Air Force, N.A.S.A. and the Department of Energy. In 1983, he accepted the post of Professor of Theoretical Physics and President of the Institute for Basic Research. He is the author of numerous monographs and of a large number of scientific articles, many of which have led to scientific advances bearing his name. He has also organized many international meetings devoted to advances in mathematics and physics and has edited numerous volumes of conference proceedings.

Again, Santilli's mathematics have borne tangible fruit. We assert that, in a few short years, these statements *could well be true*:

"Today, there is no fuel shortage or pollution and the price of fuel is cheap. There is no more high priced gasoline. Today, we have repaired the models of quantum theory and relativity and as a result, we can use new working technology to create *fuel from the human waste coursing through our sewer lines*. Today, breathable oxygen rather than carbon monoxide flows from the tail pipe of all vehicles. Today, the fuel shortage and pollution are but things of distant memory. Today, chemical and human waste, may both be easily turned into fuel!"

These are the fruits of science. Science has made progress, the model has been improved. The human race has had its survival assured.

Just as Einstein had predicted, science may be retooled and the future recast. These are the fruits of open-minded scientific doubt and honesty. These facts are our future and our present. Science is only models and so, its hope is unending. For nothing is cast in stone. Models, are not facts! This is the highest truth and hope of science. Science is itself: *the open mind*.

While there are over 15,000 pages of detailed mathematics which articulate Dr. Santilli's Hadronic mechanics, making it impossible to condense into a short article, we can tell you the result. The limits of quantum theory, quantum chemistry and relativistic theory have concealed an entire magnetic molecular species from view, and that magnetic molecular species is now presently available to the race of man: *the magnecule*. To apply this knowledge has allowed the conversion of sewage and chemical waste into high quality cheap fuel, and more. Diesel, and even dirty coal may be used with little or no pollution! The technology is developed and currently available for implementation. It is

efficient and cost effective. Working strategies and technology to lower CO_2 levels associated with global warming have also been created. The race of man and the delicate health of the planet need no longer be in danger from pollution. The problems could be ended. This is the technology which could saved the world.

But there is more…

What's next:

Science is pregnant with hope. Of course any such birth which might bestow a better future for mankind will be fraught with struggle. Birth is not an easy process, and we should not expect it to be. Naturally, there is a sort of inertia which sustains the currently held beliefs and, in a general sense, it is not easy or natural to think of things in a new way. Overcoming this inertia is part of the process of proving out new science. We will state again, that science is sharpened and refined through its experiments.

However, often times when new experimental evidence is presented or a new theory advanced, the ideas are too different to be quickly understood, and sometimes the experiments are misinterpreted or disbelieved. The current thinking seems to take on a life of its own and defend itself. But over time, experimental evidence will clear the air of misunderstanding, and once again science may advance.

Experimental evidence has been gathered which may indicate that the structure of the neutron is different from what had been previously derived, and more closely follows the theories of Rutherford. Neutrons have been synthesized from protons and electrons using an arc of current within a volume of slightly compressed hydrogen gas. The implications from these experiments and others, simply put: these insights may well allow a sort of controllable fusion reaction that sits midway between hot and cold fusion and, better still, the process might be 'reversed' and nuclear decay, fission, might be stimulated so as to solve the problem of nuclear waste using a resonant field! Of course as we might expect, Dr. Santilli's life was threatened when this process was discovered, presumably since so many billions of dollars are made storing and transporting nuclear waste, and so, the experiments were halted. However, we believe that, as is quite usual, in time the experiments will be permitted, and we will see if nuclear waste is simple to dispose of directly at the site of its production. One of us (JD) alerted Europe and the relevant commissioner in the European commission to this at a public forum entitled *Aria Nuova* held in Monza, Italy in 2008. So science remains pregnant with hope.

An alternative method for disposal of high-level radioactive waste.

An alternative method for disposing of high-level radioactive waste has been proposed recently 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. Santilli has attempted to resolve these

issues by formulating what might be termed a new form of quantum mechanics, known as hadronic mechanics, which is based on a new type of mathematics called isomathematics. If this new theory is a true representation of nuclear and molecular structure, then it predicts that neutrons may be viewed as compressed hydrogen atoms. 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 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. 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. [1]

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

[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 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 neutralised. 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 categorised as another target radioactive nucleus for the resonant photons.

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.

Medical Science: What's Next

Of course, medical science is no different. It too may have its models recast, and a future of unlimited hope may then be made available. It sometimes happens that, when a new idea is proposed or new experiments performed to validate a new concept, the idea seems incomprehensible, as was the case in the early days of relativity when it was said only two people on the planet really understood it. Sometimes great lengths are gone to in order to suppress such a new idea which contradicts current thinking. New science must pass these hurdles to gain a foothold.

In 1988 a new idea was presented by a scientist named Benveniste which, by our estimation, demonstrates that a sort of quantum information is associated with molecules such as those composing drugs, and that this information can be transferred independent of the drug as an electromagnetic signal to affect living tissues in a way similar to the actual drug molecule from which the signal was derived. Plainly put: information can replace drugs. These effects take place through the specific properties of water. If one counts the molecules, the human body is in fact composed of nearly 99% water! Clearly, this substance which composes so much of our bodies, must have many purposes and surprising aspects, and these functions in transferring information are just a few of many. There is much still to learn.

Those early experiments by Benveniste were at first discredited by way of a sort of scientific tribunal, but the attempt to hide the information did not hold good, and now many experiments have been run confirming just these sorts of effects over and over again. Any interested parties may see sources referenced at the end of this article. Experiments always clear the air once they are fairly run, and this instance is no different. The same sort of magnetic molecule found by Santilli (the magnecule), but in a different and specific informational form created amongst water molecules, appears to be at work. If the result is brought to fruition, it is possible that a whole new world of medicine may soon be available, a new world with very low drug prices and perhaps, reduced toxicity.

It may well be the case that if we investigate here, many diseases and maladies might be treated, safely and with little cost. Addiction may be treated and perhaps its pain may be

ended without using drugs such as methadone or nicotine patches. Also, informational fields might be used to deliver the effects of dopamine in the case of Parkinson's, and a great many more possible applications might soon be available if this science were to be investigated and proved viable. The medical model may be sharpened through the addition of physics and information theory. What are the possible implications in practical terms? That is a question for the future to answer. That future is but years away and may hold a completely new way to practice pharmacology which is not limited to the use of toxic expensive drugs. It may be that within a few years a computer could be established which for little cost might distribute drug information over the internet, then to be received and applied to the patient with an electromagnetic solenoid or coil, all without toxic chemicals or drugs. In place of the current medical/drug model, we might distribute quantum information to treat and heal.

The finest minds are working tirelessly and the fruits of their labors seem to be ripening. Luc Montagnier, the famous Nobel Laureate who discovered the AIDS virus has been hard at work, and he too, has sharpened the model of current medical practice. He has found a further function of water and electromagnetism carrying *genetic* information within the human body.

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.

In this case, 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 via a simple electromagnetic process. 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 the exact DNA encoding sent, which was then synthesized back into DNA via PCR (a replicative process where an existing piece of DNA is used as a physical template), even though there was *no such template of DNA in the water*! Information alone, once placed via an EM field into water 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 water, which receives the encoded information and interacts with chemicals and biological structures to create the DNA specified. Biology is based on physics, and physics is based on information. The film crew's presence assures us there is 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.

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. A resonant field 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 notes: "we have detected the same EMS in the plasma and in the DNA extracted from the plasma of patients suffering of 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." A great many diseases seem to share the same mechanism of reproduction, and so may all be treatable and diagnosable in one simple way. Field effects 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.

We wish to suggest to the reader that we are now in the most hopeful and productive period of scientific advancement ever reached within the course of human events. Soon, pollution could be eliminated and energy might be cheap and plentiful. Soon, medical practice could be free of toxins and excessive cost, and so, would then be safely available to all. Soon, disease might be better understood and the human race could benefit.

Is it possible that Dr. Santilli or Dr. Montagnier have each point right in every detail, and, have they found for us the certain truth? We may easily answer these questions in a single word: No. They have only sharpened the current model and then solved specific problems which could not previously be solved. This is the fact of scientific progress, and these are the fruits borne upon it. Science is the open mind, and the future. Science is hope.

Links/references to further content:

http://www.world-lecture-series.org/santilli-cv

http://www.santilli-foundation.org/

http://www.world-lecture-series.org/newtron-synthesis-08-14

http://www.world-lecture-series.org/

https://www.youtube.com/watch?v=Qccwba7c9yg&feature=youtu.be

Santilli R. M. (2001) *Foundations of Hadronic Chemistry.* Kluwer Academic Publishers, Dordrecht.

Santilli R. M. (2005) *The New Fuels with Magnecular Structure*, International Academic Press. http://www.i-b-r.org/docs/Fuels-Magnecular-Structure.pdf

Santilli, R. M. (2008) [Draft Feb. 26] *HADRONIC MATHEMATICS, MECHANICS AND CHEMISTRY Volume III: Iso-, Geno-, Hyper-Formulations for Matter and Their Isoduals for Antimatter*. International Academic Press.
http://www.i-b-r.org/docs/HMMC-III-02-26-08.pdf

Norman, R.L., Dunning-Davies, J., Heredia-Rojas, J.A. and Foletti, A. (2016) Quantum Information Medicine: Bit as It—The Future Direction of Medical Science: Antimicrobial and Other Potential Nontoxic Treatments.
World Journal of Neuroscience, 6, 193-207. http://dx.doi.org/10.4236/wjns.2016.63024

J. Dunning-Davies, R. Norman (2016) Beyond the Veil: Deception, Truth and the Hidden Promise of Science, Further Thoughts on the Effects of 'Conventional Wisdom.'
https://www.researchgate.net/publication/307508001_Beyond_the_Veil

Antimicrobial Effect of Vancomycin Electro-Transferred Water against Methicillin-Resistant Staphylococcus aureus Variant. Heredia-Rojas et al.

Entamoeba histolytica and Tricho- monas vaginalis: Trophozoite Growth Inhibition by Metronidazole Electro-Transferred Water. Heredia-Rojas et al.

Antimicrobial Effect of Amphotericin B Electronically-Activated Water against *Candida albicans*. Heredia-Rojas et al.

Experimental Finding on the Electromagnetic Information Transfer of Specific Molecular Signals Mediated through Aqueous System on Two Human Cellular Models. Foletti et al.

Differentiation of Human LAN-5 Neuroblastoma Cells Induced by Extremely Low Frequency Electronically Transmitted Retinoic Acid. Foletti et al.

Montagnier, L., Aissa, J., Del Giudice, E., Lavallee, C., Tedeschi, A. and Vitiello, G. (2011) DNA Waves and Water. *Journal of Physics*: Conference Series, 306, 012007.
http://dx.doi.org/10.1088/1742-6596/306/1/012007

Electromagnetic Signals Are Produced by Aqueous Nanostructures Derived from Bacterial DNA Sequences

Montagnier Video.

Feynman, R. (1988) *QED, the strange theory of light and matter*. Princeton Paperback. Princeton, NJ.