Our Primordial Recipe… and other delights

Once upon a time before time, there was rock and sea, salt and stone…chemistry's cauldron of froth and light, sparks snap down from the sky and into the brine…and then…magic. Are we born of primordial soup, a speck of meat from sea and salt? If you wish to see a bit more deeply into the subject, please go here, read the bio and follow the links: Dr. Arvydas Tamulis: Quantum Prebiotic Evolution:

http://www.mindmagazine.net/#!test/c1uqw

I am so very lucky indeed…now that I have abandoned the music business and found my love of literature and science! Ah…science is itself a sort of poetry, each theory wraps tender hands and fingers around the world, and unfolds it for us…but…in science, there is often a right and wrong ending, and that, is not always a matter of aesthetics. How lucky I am! I opened the email…and there was a new abstract…from Hameroff! Fantastic! For those unfamiliar, Dr. Hameroff is the researcher, who alongside Penrose, has crafted the Orch OR, a really splendid theory of mind and universal consciousness:

http://www.sciencedirect.com/science/article/pii/S1571064513001188

Such an opportunity! I am really quite lucky, in all matters except finance.

As a child with a new toy still concealed under crackling paper, I read the abstract, and opened the gift. What a rare privilege. The start was quite familiar to those who love the Orch OR…but the end! What a novel notion…perhaps dopamine was itself the primary evolutionary incentive! Wow! I love it…and indeed, he sees what one should see stemming from this inference…Freud! *The Pleasure Principle.* Also called the unpleasure principle, the negative valence must be associated with simple absence of dopaminergic contact…(and perhaps excessive excitation as well…a bell curve?). Evolution as a function of dopamiergic predominance! To read cognitive neuroscience…one is often disappointed to see the way all talk of the dopamine system in continuous pulsation, ready as wishes always are in REM…is sometimes ignored. Much good science becomes sufficiently specific so as to ignore the unpleasant psychological context inherent in brain processes and corresponding anatomical activations. That is itself a wish…the wish not to discuss these things! Well…here stands one better!

Affective Neuroscience however, is not afraid of the correct contextual systemic relations associated with our primary affective consciousness. Please read this book!: Panksepp, Affective Neuroscience, Oxford Press, 1998. I can not recommend the work highly enough. Once you have read it…all the Panksepp papers make sense. His writing is very transparent…he is no Jason Brown. The result of a close look into the text revealed the following:

It is possible to infer by way of the more caudal structures being more ancient, that the evolutionary topology in developing the catecholamine system is: Epinephrine (lowermost) [c1, c2 cell groups, metabolic arousal], Norepinephrine [a1-a7, sensory

arousal], Dopamine [a8-a14, psychomotor arousal]. So, it seems unlikely that dopamine is the ancient evolutionary incentive of pleasure (and negative valence). Dopaminergic dynamism appears as a later systemic refinement. Perhaps a better choice is the ubiquitous Glutamate, so essential in initiating neuronal firing…this may have been an incentive in the primordial soup as it were. Perhaps positive valence then, would be attributed to Glutamate interactivity, negative to its absence, and over-excitation itself would also account for negative valence, as a bell curve. Indeed…that looks quite solid! Then one can perhaps infer, from knowledge of indoleamine interactivity, that it may well be 5-HT which follows next, as the nirvana principle in psychoanalysis! That is a possible progression.

I believe the following ideas may allow a test of the Orch OR:

p. 69 of the Orch OR: "Coherent photons will be detected from microtubules. A positive piece of evidence in this direction is the detection of gigahertz excitations in MTs by Bandyopadhyay's group, which may be interpreted as coherent photons."

So, perhaps this is the way in.

1. Re-create the effect detected by Bandyopadhyay.

2. Confirm, using other methods, that the excitations produced are in fact coherent biophotons. [This confirms by necessity that a quantum process is taking place to produce coherence in photon output.]

3. Note the following from p. 55 Orch OR:

a. AC frequencies appear to follow several types of pathways through the microtubule—helical, linear along the microtubule axis, and 'blanket-like' along/around the entire microtubule surface. Second, using various techniques, the Bandyopadhyay group also determined AC conductance through 25-nm-wide microtubules is greater than through single 4-nm wide tubulins, indicating cooperative, possibly quantum coherent effects throughout the microtubule, and that the electronic properties of microtubules are programmed within each tubulin. Their results also showed that conductance increased with microtubule length, indicative of quantum mechanisms.

b. The resonance conductance ('Bandyopadhyay coherence'–'BC') through tubulins and microtubules is consistent with the intra-tubulin aromatic ring pathways (Section3.3, Figs. 5–7) which can support Orch OR quantum dipoles.

4. Alter the intra-tubulin aromatic ring pathways by selecting an MT with different construction.

5. A specific quantum effect must then be available to predict outcome alterations associated with the modifications.

6. Test and see if the predicted effect is correct.

The problem with this approach is that one must use AC! It would be more convincing to duplicate the exact electrical conditions in the brain.

Perhaps a different approach is implied: The neuronal MTs are to be used, and those should be stimulated with electrical dynamism from recorded action potentials coursing through the tissue *as they would affect the area of the neuron the MT is derived from. A recording of action potentials from an entire ensemble*, a system of neurons must be used, as that simulates real systemic activations. [Stray thought: Then, perhaps, another MT (although not stimulated directly) might display alteration in biophotonic output demonstrating a coherent system. (I must refine this notion).] In any case, the greatest insight into the operation of the system is sure to be gained by observing MT dynamism in laboratory conditions which as closely as possible mimic the real world situation and systemic dynamics found during true active mentation and biologic functioning.

The Orchestrated aspect could be tested by applying mentation to an MT…it should be modified in its biophotonic output. I must think more deeply to distill the principle further here.

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