

Higher Evolutionary process as self-affecting (wish) states

Higher Life, I will define as: Consciousness which is aware of its own system states and can influence those system state evolutionary outcomes.

One can infer it's basic schematic emergence at around 300 neuron neuronal mass in the Cambrian period in creatures akin to the modern C-elegans, which should then, according to Hameroff and Penrose, have self-aware self-influencing states emerge at a rough grained minute conscious interval of perception...a one minute sampling rate. We will analyze the role of (libidinal) affective wish-states within the context of their self-regulatory and self-evolutionary capacities supportive of higher *life*. Higher *being*, is based upon affective *self*-regulation of evolutionary process as a function of empathetic identification. [See neuroscience citation at end of article.] Please note:

Please see *The Answer: Roadmap for a New Humanity* for referenced citations below (free versions and hard copy linked below this article).

C-Elegans, the basic motor-self and evolutionary connectivity.

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 end 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!

The basis of evolutionary teleology (by which I mean the effects of 'intention' (purpose) upon the evolution of physical and biological system state outcomes and somatic morphology) is based in *motor-wish*, in bodily affective expressions as is made clear in C-elegans. Those expressions at our higher human level of evolutionary development are mediated by affective empathetic identifications. It is this fact which justifies the qualifier "higher." *The evolution of mankind is dependent upon his affective circuitry being properly allocated and defined, within an empathetic affective context.*

See neuroscience and psychology here:

Journal of Consciousness Exploration & Research | October 2016 | Volume 7 | Issue 9 | pp. 677-697 Norman, R. L., *Super-ego & the Neuroscience of Empathy: From*

Unconscious Wish to Manifest Behavior - A New Human Model

https://www.researchgate.net/publication/309566203_Super-ego_and_the_neuroscience_of_empathy_from_unconscious_wish_to_manifest_behavior-a_new_human_model

Hard copy of *The Answer*.

https://www.amazon.com/Answer-Roadmap-New-Humanity/dp/0984569391/ref=sr_1_1?s=books&ie=UTF8&qid=1516156592&sr=1-1&keywords=the+answer+roadmap+for+a+new+humanity+norman

Free version of *The Answer*:

https://www.researchgate.net/publication/321533169_answer_Final_hard_copy

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