

FOUNDATIONS OF MIND V

INTRODUCTION - THE NEW AI SCARE¹

Sean O Nuallain, founder and CEO FOM and UOI

In less than 4 years, foundations of mind (fom) has published 150 papers from over 100 different authors. Our latest conference is as ever ably described by Cynthia Larson; <https://cynthiasuelarson.wordpress.com/2017/11/10/foundations-of-mind-v-conference-the-new-ai-scare>. We occasionally publish papers from authors who could not attend the conference; the best example I can give is a Trappist monk whose Abbot does not even allow him visit his friends on Sunday afternoons. Brother Eoin's paper can be seen in my Irish conference report on this site in 2017!

Likewise, we did not require Dr. Varanasi Ramabrahmam to come from –well, Varanasi! Dr Ramabrahmam provides a framework from the Upanishads remarkably similar to that in my “Babel” paper with a conscious moment of about 0.1 seconds. His compatriots Deepak Bansai gives us some necessary process metaphysics and Mansoor Valiki equally necessary systems thinking, no longer as fashionable as a generation ago.

We balance these speculations by choosing the most technical of the 3 excellent papers submitted by Zheng Ma; it was invidious in the extreme to be in a position to “reject” the others which we hope to publish in the future. I include three papers – one each by Leanne Whitney, Jack duVall and Chris Langan – from our “21st century sacred” session on Oct 5 2017 in honour of the Benedictine monk Sean O Duinn, who passed away on Oct 9 2017 at 83, and we were grateful to have the privilege of honouring him.

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The redoubtable Jack Sarfatti is no monk, but is not included in Cynthia's report as he attended the Bohm centenary in London. His claim to have solved the hard problem (HP) of consciousness is not really borne out in this rather meandering paper so here is a summary of his view as proposed by his close colleague Paul Zielinski of the fom discussion list, and the pilot wave is seen as a Qubit field:

He says that qualia are what physical information *feels like inside* the Q (quantum – ed.) field, which is no different from Leibniz, for example, attributing "indistinct perceptions" to a rock -- except that Jack attributes this to the PQM (post quantum mechanics – ed.) guide field instead, which he considers to be a physical entity. The point here is that the Q-field is where information about the outside world is processed by the mind. Its observable physical behavior is a *physical correlate* of awareness, just like those CT scans that show what happens physically in people's brains when they are looking at various objects.

In short, the HP is either a perennial Wittgensteinian "puzzle" given new gloss or it is a real *explanandum* to be couched in the terms of information theory. Insofar as it is coherent qua information, it should be solved with an encompassing physical formalism – like the Bohmian “post quantum” system – with plausible links to subjective experience as Sarfatti et al supply here. Otherwise it is simply Lennon's rhetorical “How many holes does it take to fill the Albert Hall?”. The answer; either 42 or 4,000 (holes in Bolton, Lancashire)!

We announced this conference as follows;

“Foundations of mind 5; The new AI scare

Nov. 3–4, 2017 • Room 304, CIIS 1453 Mission St, San Francisco, CA 94103.

AI systems will keep us as pets. Massive unemployment as computers learn to drive cars, translate accurately, stock shelves, and much else. Silicon-based life forms reflecting on the brief carbon-based intelligence era before the singularity.

All of these themes are rampant in the second decade of the 21st century. Yet they do not reveal the full story. The “pets” idea, repeated ad nauseam by Elon Musk, is an echo of Marvin Minsky a generation ago. It is a safe bet that no, you will not be ordering a driverless taxi to take you to a random destination you specify anytime before 2022. The much-vaunted successes of Deep Thought are due to a venerable algorithm called stochastic gradient descent, which now converges to a solution because computers are about 100 million times faster than they were during the last AI scare of the 1980's and almost infinitely faster than during Minsky's abortive 1950's scare.

This session invites papers on what computers, even now, can't do and above all why that is the case. It encourages participants to speculate on aspects of the architecture of the cortex that allows a 20 Watt "computer" to outperform machines with Terahertz speed and petabyte memory. It invites papers on quantum computation as a natural outcome of human cognition and noesis. It also welcomes those who in turn wish to usher in the new post-singularity era. After all, the phrase and concept originally derive from Johnny von Neumann, the founder of many aspects of computing as well as quantum mechanics.

Above all, we invite recapitulation of the themes broached in Penrose's masterpiece about the relationship between consciousness and computability. His viewpoint fused elements from the theory of computability (partially recursive functions), non-determinism, tiling theory and phenomenology. The relationship with formal language theory was not explored, nor was an explicit engagement with the fact that all observer-dependent measurement in QM involves the infinite. The re-assertion of human noesis may pave the way for that of human dignity.

Specifically, we invite papers on the following themes;

1. Machine Translation (MT). Computers have been getting MT almost right since the 1950's. attendees are asked to consider two dilemmas; that checking a translation is at least as time-consuming as producing one, and that 99.9% correct is not good enough even for an academic textbook.
2. Kill Chain; use of AI systems in the "Kill Chain" in combat is burgeoning. Yet it is being done in the face of objections like military strategists Rivollo and van Riper, who insist on precise targeting and reading of the enemy's psychology.
3. Neglected research: the apparent magic wrought by the likes of Sutskever at Google has meant that linguistics research into issues like speech-acts and conversational implicatures is being elided? The inappropriate use of the word "neural" as a modifier for convolutional nets has led to neuroscience reverting to its 1940's archetype with invasive fiddling around under the hood again the method *de jour*?
4. Language was famously promoted as the royal road to the infinite by the symbolists. What is the relation between their "semantic transcendentalism" and the role of infinite quantities in quantum mechanics? What does this mean for AI?
5. Finally, we invite papers that explore the fact that ordering on a smartphone has met that both AirBnB and Uber were somehow exempt from normal regulations for accommodation and transport (in the meantime the European court ruled against the latter on this point – ed.) Could this AI scare be a way of persuading us that resistance is futile in our Taskrabbit dystopia? Papers also are welcome that explain that it is in fact a Utopia. Or is it arguable that the

successes of Google, Facebook et al are largely based on truly cosmic levels of copyright violation, and that states should administer many of their functions under the rubric of public libraries (and indeed e-mail systems)

Papers also are invited on the classic foundations of mind themes; the formal inadequacy of received accounts of mind and brain; the foundations of biology; the observer in physics; quantum mind.

Special sessions, fom 5 Room 304 CIIS Fri 3 Nov 2pm – late!

Launch of Henry Stapp's latest book, "Quantum Theory and Free Will: How Mental Intent Translates into Bodily Action" (Springer, 2017)

The great Henry Stapp, an alumnus of both Pauli's and Heisenberg's labs, has just released a book a few months short of his 90th birthday. It argues that responsible human action has a correlate in quantum mechanics, with Von Neumann's classic treatise demonstrating how pure mind can choose a neural correlate in the cortex to make a measurement. Of course this is controversial, and we invite papers addressing it.

(Post) Quantum computation and the foundations of physics

Special session, fom 5 Room 304 CIIS Sat 4 Nov 2pm – late!

The issue of now a true (post) quantum computer will work cannot be debated without engagement with foundational physics issues like a unification of general relativity with QM. Penrose's response has been clear; quantum gravity supplies such unification. Since alternatives exist, Penrose's view cannot remain the last word. Intriguingly, the Bohmian version of Post QM facilitates a dual mind-matter description, using the battle-tested Action-Principle Lagrangian formalism, of a mental Qubit field pilot wave interacting with classical matter dynamical degrees of freedom (aka "hidden variables" "beables") as the substrate for what later becomes consciousness, now biological and in the near future artificial. In fact, computational non-determinism can be achieved through schemas open to retrocausality, ranging from Aharonov's to Cramer's, and envision technological applications from truly conscious AI, teleportation as the no-cloning theorem is refuted, and the end of the RSA algorithm. The active interest of the intelligence services with telepathy research, and the CIA's stated satisfaction with their remote viewing initiative, was premiered through Russell Targ at FOM 4 in Jan 2017, in a video we at fom released in august 2017 from a talk Russell gave fom 4 in Jan 27 2017,

The format of this session is invited papers, followed by refereed such, As well as the

topics above, we invite treatment of closed time curves, formal language recognition, biosemiotics and other topics writers can establish bear on the issue. Please submit a 500 word abstract to universityofireland@gmail.com by Oct 1; invite to present by Oct 8 2017”

Cynthia leaves one presented paper out, and we can thank the SF Bay traffic for this; the one in which I introduced the conference. It outlined the metaphysical and epistemological background to what we do, is a *summa* of my work 2014-2017 which I did not have time to make shorter, and is featured implicitly below in this introduction. My deterritorialization paper alludes to religious and societal aspects. Please note that the repeated references to “Celtic Europe” are made fully in the knowledge that no such imperium ever existed, but that it seems to be the only non-discredited cultural affiliation in Europe that can cater for diverse ethnicities; the others are empires or “ecumenisms”, empires like the UK that dare not speak their name as such. In a previous article, I argued for panentheism as the natural credo of “Celtic Europe”.

Yet fom is after even bigger game and we will take a moment to look at it and the resulting “Bionoetics” framework. An advisory; I am well aware of issues like those surrounding propositional attitudes, substance dualism, quantum ontologies, non-coding dna, decoherence in biological systems, the importance of timing in neural firing, moral and epistemological relativism, and indeed state and civil society and so on. To explain how the Bionoetics framework encompasses these and myriad other issues has been one of the tasks of our publication series, and I’m not going to attempt to recapitulate it here.

FROM FOUNDATIONS OF MIND TO BIONOETICS

The project began with a conference in March 2014 (published in June 2014 as FOM 1 and in 2016 as the “dualism” book) opened by the scholars Jacob Needleman and Robert Spitzer speaking about the science/religion debate from the complementary angles of transcendence and the cosmic order dealt with by the anthropic principle. That conference also explored the relationships between mental concepts as used in cog sci and QM, as well as the notion of what constitutes formal adequacy in theories of mind. In later conferences, we focused on - inter alia - ecological thought, the foundations of biology, ontology and science, neurodynamics meeting QM, and the AI scare here. We received many fine papers on ancillary themes, most of which are published by us here and did not require the author giving up copyright, or paying to keep copyright.

Formal adequacy became a leitmotif. It seems self-evident that the brain cannot in formal terms be simpler than the mathematics it produces. It is likely that co-ordinate free flows, treatable by Lie groups and higher-order tensors, is as close as we’re going to get to the native language of the brain. Math, in turn, we treat as a language capable of

the most veridical and elliptical description of reality that can reliably be communicated. We leave open the idea that individuals may possess an even more powerful idelect.

The founder's experience of academia is relevant as motivation for the radical intellectual and personal freedom we espouse. In the first instance, he was tenured at 29 and created the first new degree programme at Ireland's first new university, with the courses he designed being accepted for credit at Bielefeld, Saarbrücken, the University of Lorraine, Paris 7, Gothenburg, and many others.

From 1999, in conjunction with what increasingly looks like a neocolonial development in Ireland, there was a notorious and disgraceful attempt wholly to remove state universities from any statutory supervision prior to their explicitly announced planned privatization. All this while setting a global precedent in summarily dismissing tenured academics without cause and abusing students, the better to turn the latter (and indeed the former) into corporate drones, stealing money and property, and much else. While all of this was flagrantly illegal, and over a dozen civil cases right up to supreme court level were fought and lost by the neoliberal elite, nobody has been punished.

It is worth characterizing this coup. In "Overthrow" Kinzer (2006, NY: Times books) spells out the regime change the US government, recently through the CIA, has perpetrated from Hawaii through Honduras, Guatemala, Iran, Vietnam, Iraq and so on. Indonesia, he argues, does not qualify. However, the parcelling out of Indonesian wealth described by John Pilger is perhaps the most similar to Ireland.

We have a specific culprit. Science foundation Ireland was largely set up by a trustee of the CIA's venture wing, Anita Jones of InQTel, whom the WSJ has accused of profiting personally from her position, and is extravagantly funded by the Irish taxpayer to provide services for the CIA, including research goals identical with InQTel in communications and specific aspects of biology.

Many experiments were run eg fixing mortgage defaulters with the full debt after eviction; Trump's cabinet pick Wilbur Ross benefited handsomely from this, after clearly getting inside information on state investment in a failing bank he then bought part of. Coupled with that was an assault on identity, exemplified by the deliberate destruction of the native software and music industries. All that can be repaired.

Moreover, the Irish state's obsession with silicon Valley companies in Ireland is very CIA. (Let us note the least they owe is a blockchain peer-to-peer system of payment so that creators can get paid. I'm not holding my breath, and such an internet should be created in the 15% or so of the internet infrastructure that is public).

As the Moroccans might say, one swallow does not a winter make. What else went on? The use of law as instrument in my case and others was unprecedented in Irish history. The state was perfectly prepared to countenance a situation in which all its edicts

were illegal, and that came home to roost in the Irish water fiasco, wherein they had to repay those “citizens” who had paid the illegally fixed charges.

The whole world lost when the boomer generation in the USA allowed Obama to criminalize the Occupy movement, spy on them as their house prices and 401 (k)’s were doing so well. Ireland may come to mean “Saoirse” –freedom again as our political system is clearly one that never expected another election after 2004. as my final paper shows, the opposition is actually in cahoots (sorry – “supply and confidence”) with the government and this is inherently unstable.

The founder initially had a background in cog sci, particularly comp sci, linguistics, and psych, and his general scientific chops were fortunately and rather providentially deepened by a decade (2002-2012) at Stanford and Berkeley where he worked with the late greats Richard Strohman on epigenetics and metabolism in biology, with Walter Freeman on neurodynamics, and with Pat Suppes on tough-minded axiomatic-based approaches to problems of mind and world.

As DCU in Ireland had seized all his intellectual property, including books, notes and the software that had prompted an NDA with Stanford in 2001, and only after repeated visits to the cops did they commit to returning the books and notes (not the s/w), this was just as well (see my 2017 conference report on “Parallel Irelands”, IP section). Moreover, the pretext for dismissing him summarily was his refusal to “arrange” a meeting whose arrangement would have resulted in him and other tenured academics now all being subject to such dismissal gíe immediate and without cause). He has earned less in the past 15+ years than 2 months’ worth of his salary and had to sell the house he grew up in; however, he refused a deal (delivered in our parliament) to walk away in exchange for full salary and various other less criminal blandishments done through the union. (Irish university salaries are already the highest in the world and, in an insane misunderstanding of what will attract intellectual excellence, our minister for Education is proposing their being doubled). And, yes, part of my motivation in setting up fom was to demonstrate that Ireland would have experienced transcendent success had our political “masters” kept their hands out of the till from 1997.

The Stanford era ended in 2012 with a restriction on visa categories (to be more precise, a program of Irish passport theft co-ordinated between the Israeli and US embassies in Dublin - see “Ireland in crisis from our sister organization) forcing him to give up his Stanford position and work full-time as a Celtic and jazz musician. He is open to the argument that the very encompassing themes of fom are perhaps a manifestation of professional frustration, if a happy one. Let us look at them.

What have we found out in our 4 years and 150+ papers from over 100 authors? It is worth pointing out that some of our authors do not have Ph.D’s; in fact, Chris Langan,

perhaps the most downloaded, does not have a degree. However, Chris has one of the highest IQ's ever recorded and incredible discipline as he alternates farmwork in Wyoming with research. What was more important for us was to get a range of viewpoints on critical issues of life and mind that conventional academia is not addressing.

There is a more formal description following; for now, let us look at QM and mind. there is no universally accepted interpretation of QM, so we must humbly try and find universal themes. One is holistic in the extreme; whether a Bohmian or not, you accept that your mind is capable of moments when it dissolves into a Noosphere like a river returning to the sea. Secondly, whether like Sarfatti you imagine subjective states as essentially information "written" on a pilot wave or like Stapp you accept a nesting of possible observers culminating in pure consciousness, there is a transcendent aspect to Q observation.

On more practical levels, it does seem to be the case that the Q Fourier transform can emulate processing over superpositions as the classical Fourier transform models how neurons can process sensory and possibly cognitive data. A second commonality is that attention gets rid of cross terms both in the quantum and classical worlds. There is a possibility that will be related to changes in metabolism through quantum effects in the NADH/NAD+ ratio.

Returning to the transcendent, both the Bohm/Sarfatti and Stapp interpretations, wildly different as they are, assert that Q observation involves connection to the infinite, either as a pilot wave or Dirac's wave function of the universe. We certainly have the basis for the kind of new story that can assert the sacred, in essence form a new type of religion. What would it look like?

It would begin with certain statements about what it is not. It is not an Abrahamic faith. It does not think you can talk to God. In fact, it would argue that the opium of the people encouraged this delusion precisely because we tend to narrate to ourselves more intensely when being harassed by powerful sociopolitical forces like a criminal state in what we call the "exigent" realm. To overcome these forces is a very dark noumenal struggle, no less complex than socio-political life itself. .

It is not Advaita. In fact, Advaita is an ideal religion for a criminal state which wishes to tell its subjects that its crimes and impositions are not real, It also suits that criminal state to inculcate in children the delusion that this narrative is being heard by an Abrahamic God – intriguingly, a point made with a straight face by Carly Fiorina in her abortive presidential run who likened God to the SIRI server that handles over 100 billion requests a year! Advaita and other creeds are brilliantly parodied in the documentary "Kumare" in which a New Yorker of Indian parentage creates a new cult,

while pointing out the suspect interpretation of Tantra that attracts a certain caliber of guru.

Moreover, it is not a recipe for violating freedoms in our societies as the Abrahamic faiths, being theocratic in essence, always threaten to do. In fact, it regards these freedoms as sacred as also is a rule of law with private property inheriting its nature from civil society understandings. It is not sectarian or racist; we use the “Celtic” banner precisely because the Celtic Christian church – uniquely – converted without force.

It is not in favour of the current dispensation in which – in almost eschatological fashion – remuneration is going to those providing carriers and manipulating that exchange term we call “money” instead of those producing art, science and critique (aka “content”). In the 1990’s Saul’s “Voltaire’s Bastards” argued presciently that what we are experiencing was the dismantling of an order that had been painstakingly created after WW2, one in which opportunity and equality flourished side by side. Again, this type of process, while being rationally defensible, may also be viewed as sacred precisely because – apart from its intrinsic value – it is currently against the grain of paid-for economic thought.

What are we in favor of? We were compelled to give this some thought as Bionotics was registered as a religion in California where unaccredited third-level institutions are illegal. A first issue is clearly the celebration of the order in nature which begot us, a celebration that forms the core of most religions. Ceremonies for initiation (like baptism and marriage) are best performed in a religious context, and it is a fact that the Abrahamic God has the best venues – usually in city centers. Ceremonies for our oneness with nature have been proposed by neo-pagans and certainly we need something better than bread transubstantiation.

From our work, we have imported transcendence, ontology, will and metabolism into scientific discourse. Avoiding the reaps of psychologism and logicism means our neuroscience is the most veridical in the world. A critical issue is the distinction between exigent and genuinely transcendental experience. Such writers as Jon Kabat Zinn are perceptively parsing our experience and isolating the eternal subject. That is indeed a sacred task.

Another is due to the fact that will involves invocation, with a truly numinous capacity to change reality in QM. The “Jesus prayer” – incessant repetition of “Lord Jesus, have mercy on me, a sinner” – seems to be standard pietistic irrelevancy at first glance. Its esoteric use is completely other – it has nothing to do with Christ, but is rather an incantation to make the feelings and intellect cohere so that true presence can awaken.

The MK-Ultra and other projects, led by the CIA’s Gottlieb, attempted to break up

the psyche by confounding the intentional expectations that Freeman termed “preaffference”. Transcendence is an entirely benign contradiction of these intentional expectations initially by observing oneself in meditation emerge as one of many disparate phenomena. QM allows us think of this as the Absolute knowing itself – momentarily and imperfectly –through us.

Meditation instructors universally tell us not to expect it to last (as the gamma coherence cannot last). However, here is a root experience for a new faith. And way of life. It can be extended to situations where indeed one attempts to become free of one’s subaltern, intersubjective status in the exigent realm but that is usually the result of a very long, political struggle, worthy in its complexity of John le Carre.

Ultimate reality, then is seen as low entropy, subject/object undifferentiated, vast, impersonal, initially as fugitive as a quantum fluctuation and now a cosmos in becoming. We are vehicles for it to know itself, and this process can be exemplified in meditation. In dance (like the Billy Eliot character) we sometimes disappear; so also in sport “in the zone” and in love. It is fair to say that sex involves experiencing the world so much as the other that chastity is required of real seekers.

There are several ways into the Bionoetics framework, considered as the study of knowing encompassing enough to cater for knowledge that is not simply cognitive, and they are summarized again in my “Ireland” paper.. One might ask that if everything is relative to consciousness, in that it is apprehended consciously, surely we should simply study consciousness? More prosaically put, and more in keeping with conventional academic discourse, surely psychology can inform us about the entities that mind deals with (that would be the world) as a natural consequence of explaining mind?

Alternatively, we might decide that, since math can afford the most elliptical and veridical description of Reality/the world, surely we should defer to the descriptions in math physics? On the other extreme, we might argue that the spectacularly ordered cosmos (and particularly the biosphere as Gaia) revealed over the past half-century might usher in another God, fully as transcendent, immanent, exigent and awesome as that “Revealed” to Abraham, Moses and Mohammed? The true genius of the Semitic religion is ironically that it became portable, perhaps because the exile required it to be written down. Holy places exist in reality, but more powerfully and universally when deterritorialized

We may prefer to begin with Cartesian meditations. Unlike our French predecessor, we may prefer to think of entities that are independent of consciousness (like digestion and sensations), relative to it (voluntary action) and transcendent to it. In fact, we may prefer to start at a level even more basic than Descartes; mind and world *simpliciter*, whether experience is involved or not.

There are two orthogonal classifications of mind/world relations. The first distinguished between coupled, intentional and “determinative” mentation. Coupled mentation covers a gamut from tropism (if that can be called mentation as early psychologists argued), through intersubjective social behaviour, subaltern power relations, etc and reflects co-variance of processes interior to the organism with those outside. This can be as simple as chemical homogeneity between the external and internal environment, or as complex as echolalia and political conformity.

Intentional mentation, on the other hand, is *a fortiori* the stabilization of a far-from-equilibrium neural process by an object in the environment. FOM takes as true the neurodynamical account of the brain, which construes mind in terms of the language of chaoplexity. The mind lines up hypotheses, which are differentially confirmed or not by the environment, This is beyond the intersubjective to the authentic; beyond the subaltern to the Bewusst (politically radicalized); beyond sensorimotor action-reaction to the paradox of egocentric movement in an allocentric environment.

So we can conceive of sensorimotor loops, like those simulated in the Roomba vacuum and other iRobot products, as culminating in primitive “intentionality” in which a far-from-equilibrium neurodynamic system is stabilized by and object in the environment. Adapting a Kantian term, we can call the search for a veridical subject and object relation a “noumenal” one. It may not be conscious. Crossing to the cognitive level, the Cartesian meditations domain, we ultimately end with a similar path through the noumenal to a state of being in which the terms “authentic”, “enlightened”, “flowing” are appropriate. Finally, using the “unreasonable effectiveness” of math in the “noetic” realm, we culminate in what Unruh calls “determination”, ultimately changing a reality previously construed as “objective”.

Our two sets of categories, then, are coupled, intentional and “determinative” on the one hand and sensorimotor, cognitive and noetic on the other. We posit a noumenal process in which the coupled becomes intentional and the noetic becomes determinative. We know from QM that in certain restricted circumstances mentation actually does involve a “reality distortion field” in which both present and past realities can be changed and this we call “determinative”. It is the moment when the noumenal also becomes numinous, the idea from Karl Otto that hitherto “external” has subjective qualities, and unpacking its consequences will keep our best minds busy for decades.

Fritjof Schuon and other “traditionalists” argued that the central truths of religions are still true, but the art of transubstantiating a host has been lost. Controversial; what we do know is that architectural masterpieces from that period are still standing, and a la Koln cathedral show mastery of earthquake damage attenuation. For example, builders at New Clairvaux monastery near Chico, Ca, USA, have floundered while

trying to replicate the work of master masons of the past. The determinative may be a new category of mentation, originating in QM, or may reflect a facility formerly achieved by groups in states of emotional sacred frenzy.

In any case, nobody is yet predicating determinative capacities of AI systems. It is possible that Q computing may be achieved as Google and others achieve Qubit coherence times in milliseconds. That does not facilitate the ability to mentate as humans, with their billions of years of evolution, achieve in asking questions of nature in a manner that, as von Neumann established and Stapp expanded on, involves a mapping from matter to disincarnate mind in conjunction with superposition and algorithms like the quantum Fourier.

Secondly, the ignoring of ontology by modern science has led researchers to use techniques on genetics that are too primitive even for chaotic physical systems. Ironically, the treatment of the brain as precisely that – a chaotic physical system – affords a perspective that not alone explains the timing of neural firing, gives flesh to the abstract notion of “intentionality”, but also could well clean up the quagmire that has loosed \$6 billion on brain imaging in 25 years without a single therapy emerging. In short, we predict that the approach we use with syntax explicit in genomics, metabolism featured (again explicitly) in accounts of gene-expression, and dynamical systems used in neuroscience will help cure diseases, particularly currently intractable ones like diabetes and Alzheimer’s.

Moreover, while the jury will remain out – if clearly not cloistered – on which interpretation of quantum mechanics (QM) will prevail, two facts will remain salient. One is that QM observation involves a free choice, thus opening the door to free will, and dualism. Secondly, both the Bohmian and Von Neumann/Stapp interpretation of QM involves a choice that is informed by, and has consequences for, the wave function of the universe. On a less ethereal level, it has yet to be pointed out that, just as attention “collapses” the wave function in QM by dispensing with quantum entanglement, so it also decorrelates informational fluctuations at the classical neural firing level. Human choice seems intrinsically causal. Indeed, as my “Babel” paper suggests, it can change states of affairs in the past; the noumenal becomes truly numinous.

The second issue the founder agonized over is tertiary education, and how properly to institutionalize it. Briefly put, a school becomes a university if, having enunciated a view, the instructor gives resources to the students to refute this view. Likewise, having explained a technique, he can point to alternative pedagogy for this technique. On no account should students be punished for independence of mind, and it is easy to publish every key instructor- student interaction.

We have a companion prize-winning free online university (universityofireland.org)

which with its .com companion was originally set up to parody the commercialization of tertiary education; then the situation in Ireland went beyond parody to the antinomial.. It is only a slight exaggeration to state that university education is currently a project to dumb down gifted students, choose the most obsequious as free labour grad students, and encumber the rest with sufficient debt to make them anxious corporate drones.

In 2017, we taught for academic credit up to Ph.D level at the universities of Siena, Berkeley and CIIS. We do not wish to be accredited ourselves as it is neither transparent nor peer-reviewed. If the description of Bionoetics above interests you, and you would like to master the knowledge required to understand it in detail, we invite you to enroll.

Many thanks to Cynthia, John Kelly, the participants in all fom events, and all the others who made this fantastically underfunded series possible. Much of the work for the last 3 fom's was done on a 2005 laptop in Carrie Estill's house in Ouistreham, France and this volume is dedicated to her. We regret to say Carrie passed away in late 2017; and therein lies a tale.

She was the victim of a very aggressive cancer but had it been diagnosed properly she would be still with us. Specifically, exploratory surgery found an ovarian cancer cell near her chest and the major invasive surgery was done on the basis she had ovarian cancer. In fact, it had originated in the appendix and metastasized to the ovaries; more aggressive surgery, like she would have received in the USA, and computational linguist Dr Carrie Estill would still be with us.

This tragic incident exemplifies what fom is trying to say about context. Currently, there is no theory of metastasis that works; indeed, a liver donor whose melanoma had remised decades before gave his donee friend melanoma. Our framework proposes that all gene expression, like linguistic behaviour, has symbolic (ie formal grammar/gene expression) operational (world knowledge/metabolic context) and ontological (self as object/immune recognition) components.

Moreover, cancer is aneuploid ie all cancers show irregular numbers of chromosomes a la Down's syndrome. Finally, modeling environments should reflect the fact that the genome, like LISP, is homoiconic ie programs and data have the same form. How many others have to die the excruciating death that Carrie suffered before the science begins to reflect the complexity of nature's design?

WEEKLONG INTENSIVE IN TUSCANY, APRIL 16-22 2018 THE FORM
WITHIN; FOM MEETS GESTALT

While poor as churchmice, we are planning (subject to sufficient donations) the following

residential intensive, and can guarantee full board in a beautiful place. Please contact universityofireland@gmail.com with a CV if you believe you can contribute to 3 days of discussion followed by grant-writing strategizing as we can't keep going as before. ;

While “The form within” was the title of our colleague and mentor Karl Pribram’s intellectual autobiography, it also catches the impetus in the Gestalt tradition’s search for an immanent ordering principle. In this workshop, we intend to do justice not only to the better-known Koffka and Kohler, but the problem-solving approach of Wertheimer, the field approach of Kurt Lewin, and the visceral psychodynamics of Fritz Perls.

We group the week with respect to the following topics; fields; the self; posthumanism; theory in biology, religion and meta- religion; deep ecology; healing; meditation and open discussion. The format is 3 days of intensive discussion among 10 invited residents. Others for a fee may come and audit this section, which will be filmed. We expect to offer paid residential placements to suitably qualified applicants for this 3 days. In the last 4 days, we intend to arrive at consensus positions on topics suggested by the earlier discussions, positions that will inform grant proposals.

Here is an outline of each of the topics;

Fields

It is a commonplace that Maxwell formalized Faraday’s intuitions about fields; what is less well-known is that what we know as Maxwell’s equations are in fact due to Heaviside, who reduced the variables from 16 to 4. Moreover, the current attack on the wave/particle duality in QM is suggestive of a new field approach.

Yet that is only the start. The biofield has been an fom pre-occupation. From the Gestalt side, Lewin sought to describe social situations in field terms.

The self and consciousness

“What is the self?” asked Kierkegaard. It is not, he argued, the relation of this entity to itself; it is the fact of its self-reflexivity. We hope to throw a little more light on this! In particular, the recent Western Advaita fad neglects the fact that classically science needs a clear subject-object cleavage. It is interesting that Wertheimer’s “rho-relations” concept subject-object immediacy is an exceptional event, rather like “authentic existence”.

It has become acceptable to think in terms of a cognitive immune reaction compressing the gigabits of data assailing us every instant as intrinsic to our experience of self. Yet the metaphysics of classical QM gives us alternative traction. Moreover, for Perls, a raw expression of one’s Buddha nature was the only satisfactory response to this

questioning, as the actress Nathalie Wood found out.

Part of the problem with Consciousness studies has been the insistence that biological systems already have observer status. Wilczek argues that this point is critical and that QM awaits a theory of conscious awareness; http://ctpweb.lns.mit.edu/physics_today/phystoday/QuantumTheory.pdf

Ironically, this may grant the psychologists too much credit. The critical step may be when we have intentional systems (a la Aquinas and Brentano) with a formal power \geq standard arithmetic. At that point, Gödel incompleteness, nonrecursive sets, and much else kick in. The alternative is granting observer status to Schrodinger's cat, paramecia, etc. and this, while perhaps absurd, is happening in Consciousness studies.

Another alternative is of course completely dispensing with observers through spontaneous localization, or whatever mechanism involving decoherence is bought to bear. This may or may not work in math, but also dispenses with the very fact of observation that undergirds science. As indeed it undergirds responsible human behaviour

Posthumanism

The dystopia of Bladerunner with omnipotent corporations pushing humans to the periphery and then over the edge seems much more likely to come to pass than a decade ago. We will together watch this movie and its sequel and discuss the AI scare in all its manifestations.

Healing (Riccardo Zerbetto/ Tania Re)

Health has always been a major form/Bioethics topic and the estate has hosted many therapeutic interventions by Riccardo and Tania.

Biology

Several decades before the HGP was initiated, a diverse group of scientists, convened by Conrad Waddington held 4 conferences at the Villa Serbelloni, on Lago di Como to tackle the troubling lack of theory in biology. (Waddington was the major figure in the 1940 - 1970 range uniting developmental biology of the organism with genetics).

The solutions they proposed were various, from an untroubling emphasis on hierarchy to a reinstatement of Aristotelian material and final causality to a network-based approach to the interaction of metabolism and genetic code. It is fair to say that the HGP to its cost – and that of the public who paid for it – ignores these guidelines. Is it time for a fresh period of reflection?

Biosemiotics has arguably gone into perhaps irretrievable schism between “code biology”? and Peirceans. A common idea that both sides could agree with is that while Kripke may be correct that syntax is not intrinsic to physics, it is certainly intrinsic to Biology.

It is unfortunate that “Biolinguistics” is taken as a subject name to exemplify the existence of syntax and semantics in Biology. “Bionoetics” is proposed to add to theoretical Biology syntax, semantics and function as well as formal and material causation in addition to the efficient causation in classical physics, and much else. The general view envisaged is consistent with the “great chain of Being” with ontological chasms between the quantum and classical physical, the biological, the intentional and the potential existence of other superior levels.

Religion and meta- religion

At this point in postmodernity, we cannot “invent” a religion. We can say that there are “meta-religion” criteria constraining any new revelation. It should be consistent with best process in science, while not dependent on individual findings; it should be compassionate; it should present itself as a portal to an Absolute that is beyond ken, the finger not the moon; it should imbue certain communities of practice (including western achievements of freedom) with a sense of the sacred.

Deep ecology

Political green parties come and go while the environmental crisis gets ever exacerbated. Deep ecology, at its minimum, insists that activism should be based on deep insights into Gaia. As we are almost certainly entering a new era of ecoactivism, we believe it important that thoughtful people enter the discussion.

Meditation

It is clear by now that meditation has substantial health benefits. Is that shared in common with conscious experience, and what is the organics mechanism for this salutary effect?

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