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quantum paradigms of psychopathology a global scientific initiative

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This email will serve to let you know about the new QPP Task Force on Quantum Neuroethics, which was just formally constituted by QPP's Scientific Program Committee. The need for such a "task force" had been raised by recent progress seen in QPP's scientific endeavors, which are now moving from disparate abstract concepts to attempts at both theoretical integration and, especially via the Cocchi group's lipid raft/microtubule protocols, experimental inquiry, fueled by recent empirical demonstrations of non-trivial quantum processes in living physical systems (<http://www.nature.com/nature/journal/v446/n7137/full/nature05678.html>). Insofar as the science enfolded by QPP has always aimed over the long term at clinical praxis connected with mental illness, momentum in basic research must be expected to generate ethical questions. Some preliminary issues have now been raised, and it is hoped that expertise in addressing them will be helpful.

Here are a few examples of moral concerns that might develop along with future quantum-enhanced technological instrumentalities affecting human neurocognition: 1) **What will be the risk of unintended negative clinical consequences assuming benign intent by "quantum psychiatrists"?** (For well established existing pre-quantum progenitors of this problem see: Phillips J editor, *Philosophical Perspectives on Technology and Psychiatry*, Oxford University Press, Oxford, 2009, 218 pp.; Sadler J, *Values and Psychiatric Diagnosis*, Oxford University Press, Oxford, 2005, 540 pp.; Bloch S and Green S editors, *Psychiatric Ethics*, Oxford University Press, Oxford, 2009, 538 pp.) 2) **Might truly revolutionary, sci-fi-like increases in the potency of treatments due to quantum-psychological and/or quantum-neurodynamical insights present irresistible temptations for deliberate misuse?** (Possible instances include commercial or political manipulation of public opinion, brain "hacking" for purposes of surveillance, "weaponization," etc. See http://en.wikipedia.org/wiki/Edward_Bernays; http://www.synesisjournal.com/vol2_no2_t1/vol2_t1.html; http://www.darpa.mil/Our_Work/DSO/Programs/Quantum_Effects_in_Biological_Environments_%28QUBE%29.aspx; http://www.darpa.mil/Our_Work/DSO/Personnel/Dr_William_Casebeer.aspx; http://www.amazon.com/Mind-Wars-Science-Military-Century/dp/193413743X/ref=sr_1_1?ie=UTF8&qid=1373379770&sr=8-1&keywords=jonathan+moreno; <http://www.americanprogress.org/about/staff/moreno-jonathan-d/bio/>.) 3) **May ethical systems themselves, including their application to psychiatry, be amenable to future transformation through quantum-paradigmatic perspectives?** (Consider splaying Aristotle's "virtue ethical" life path of maximal moderation into a quantum-like sum over histories; reworking Kant's classically reasoned categorical imperatives through the non-distributively superpositional logic of Quine; expanding quantum-computationally the contingently imperative algorithms of Bentham's utilitarianism.)

Members of the new QPP Task Force on Quantum Neuroethics, are: J. Melvin Woody, James Phillips, John Sadler, Jack Tuszynski, Fabio Gabrielli, Donald Mender, and Gordon Globus. These scholars are already among those serving on QPP's Advisory Board, and I believe that their additional inclusion on the new task force will provide a productively synergistic mix of clinical wisdom, philosophical depth, and technical sophistication.

The task force's immediate plan going forward is for me solicit from each willing contributor a brief (220-500 word) statement on the general challenge of applied ethics in relationship to emerging quantum neuroscience and its potential psychiatric nexus. The deadline for these written statements will be November 30, 2013. I will try to assemble all the contributed statements for possible publication, subject to peer review, as an aggregated unit in *Quantum Biosystems*. Pending approval by a majority of QPP's Scientific Program Committee, I will also attempt to create a digest of all the task force members' contributions and present that summary with proper attributions as the topic of a 20 minute talk at this coming spring's general QPP meeting in Florence.

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