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### **The Future of Scientific Probing and Social Being: Quantum Computation, Artificial Intelligence, and Consciousness**

Assessing the state of the art advances in scientific research and the state of the affairs in our social life, this paper evaluates and forecasts the course of the future human development. In particular, it addresses both sides of our polarized responses to the progress of artificial intelligence and transhumanism – the celebratory excitement, on the one side, and the anxiety-infused doom pronouncement, on the other – and it searches for an outlook that would go beyond both.

I begin by referring to the joint work of Roger Penrose, mathematical physicist, and Stuart Hameroff, anesthesiologist and consciousness researcher, on the relatedness of the quantum physics processes and human consciousness processes. Proposing the notion of quantum gravity, Penrose developed with Hameroff a model of how quantum computation can occur at the sub-neural scale of our brains. Preoccupied with the issues of the high level of computational complexity and the non-computable, they maintain that the brain is performing quantum computation and that consciousness is a quantum process in the time/space geometry. Consciousness is defined by them as a self-organizing process at the fundamental level of the Universe, which is characterized by the principle of non-locality according to which everything is connected to everything else.

The notion of interconnectedness does not only preoccupy these fields of research but also deeply affects and increasingly manifests in the expansion of our social lives. Our times are marked by the parallel advances in what Jean-Luc Nancy, one of the most renowned philosophers of our time, calls the Copernican revolution of Social Being. Paradoxically, the revolution in social consciousness and social being simultaneously questions the potentially detrimental effects of scientific research and is also informed by the finding of such research that alerts us to the laws on non-locality and entanglement on the deepest lever of our bio-chemistry. On that level, theoretical physics, quantum mechanics, neuroscience, and consciousness studies demonstrate that advances in scientific probing and revolution in social being are interrelated developments.

When it comes to the matter of artificial intelligence and deeper probing into human consciousness and biomaterial, Penrose and Hameroff point out the difference between intelligence and consciousness, consisting of qualia (uniquely subjective way of experiencing life) and capacity for emotions (a nuanced emotional range of our inner life). Consequently, increasing computational complexity might mean taking artificial intelligence to the brink of consciousness. And yet, from AI there will always remain an

irreducible difference, distance, and deferral to consciousness. As I examine the question and problematic of clones and qualia; prosthetic bodies and artificial minds, I evaluate what we have charted for our future course. As we push the frontier of exploration and forward into the ever-receding horizon of inquiry, we are poised to evolve and transition into a society lead by collaborative work between consciousness experts and scientific visionaries who are themselves interdisciplinary boundary benders; a society which is engendering an increasingly spiritualized science and scientifically supported spirituality.