Review of: "Quantum Mind-Induced Subjective Realism: a Quantum Consciousness-Based Management Model of Reality Perception"

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The author gives a very interesting interpretation and application to practical life of some of the characteristic features of quantum mechanics which make it differ from macroscopic classical physics. These features include Heisenberg uncertainty, entanglement of states shared by two or more observers and the physical world around us, state collapse following measurement, and influence of measurements (on the system by an observer) on the final, ie, post-measurement system state. He claims that the consciousness of an observer has an influence on the material world surrounding him consisting of all its living and non-living entities and likewise, the material world around him has an influence on the observer's consciousness and hence on his decisions. The observer's state (in his mind) is entangled with the state of the world around him and hence when the observer makes a measurement and notes the final outcome (or even if he makes a measurement but does not note the final outcome) it causes a collapse of the state of the material world around him which includes other conscious observers. This causes another observer of the world to take measurements on a different state of the world with a different state of his mind that arose from the collapse of its state due to the first observer's measurement. The conclusion of the author is that the material world must have a consciousness of its own that not only influences a living observer's measurements and decisions, but also gets influenced by such a measurement. Further, the set of all conscious observers in the physical world is mutually influenced by each other, no matter what the distance between the two observers is (action at a distance). This is because the second observer measures only the state of the world after it has collapsed to that state owing to the first observer's measurement and entanglement of the state of the world with that of the observer. The author notes that the latent environment consisting of the physical world along with all its conscious observers is thus, before any observer's decision or measurement, described by an entangled state and that this latency can be described as giving a potency to the whole world to act in a certain way. This potency gets transformed to reality after one or more observers make measurements or take decisions after observing the world. The author suggests that this fact shows up in management theory in the form of unpredictability of people's behaviour, but according to a pattern defined by the entangled state of the world consisting of its material and living entities and that this pattern is in accordance with the collapse postulate and Heisenberg uncertainty. The fact that observers in general cannot operate according to a fixed or determined pattern even though they

desire to do so is because each observer, after acting in a cerain way, disturbs the environment, causing other observers to act in the framework of the disturbed environment. Although each observer, according to the fundamental rules of quantum mechanics, acts in a random way in accordance with a certain pattern of a probability distribution determined by the state of the world, no two observers can in general act according to a well-determined joint probability distribution, for Heisenberg's uncertainty principle tells us that even a joint probability distribution of twononcommuting observables may not exist. Unless we attribute a certain kind of innate consciousness to the physical world that accounts for randomness, uncertainty, and entanglement, we cannot design effective rules for management systems within our society. Conventional models for management systems are probabilistic in nature so that one is able to postulate a probability law for the operation of society, including its changing dynamics with time, using the theory of random variables and stochastic processes. However, the laws of quantum mechanics transcend even such classical probabilistic models in that entanglement and Heisenberg uncertainty make it impossible to describe this societal dynamics using such models. The inequalities of John Bell further imply that no model for quantum mechanics based on classical probability theory using the apparatus of Boolean algebras and measure theory can ever be constructed, and the author rightly observes that such is indeed the case with our human society, which is the reason for the unpredictable behaviour of people, ie, not predictable by even classical probabilistic models and algorithms. Such erratic patterns in human behaviour can only be explained if we attribute a consciousness to the physical world of objects just as we attribute consciousness to living entities that constitute the realm of observers. In fact, such an attribute of consciousness to the physical world is also required to give meaning to the objective reality of phenomena and not just to claim that phenomena occur in a certain way only because an observer perceives it to happen in that way. If the world of phenomena is real, it must then be independent of the presence of any observer (because an observer perturbs the world by making observations), and this can be the case only if the world has an innate consciousness. This is in agreement with the philosophy of Adi Sankara: God being real, his creation must also be real. The paper is very illuminating and simultaneously useful for those developing mathematical models for management systems.