

A New Interpretation of Quantum Theory

Based in the Holism of Veda

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Abstract

One of the most significant implications of quantum theory is that consciousness needs to be included in a scientific account of the physical world. Although the major interpretations of quantum theory each make a useful contribution, even after 100 years there is little consensus about what quantum theory means. This paper proposes that a richer ontological model of levels of nature is needed. The holistic Vedic 3-in-1 model, such as enumerated in Sankhya and Ayurveda, provides the foundation for a coherent interpretation of quantum theory that addresses long-standing dilemmas about the matter-mind-consciousness relationship.

In his critique of quantum theory, Albert Einstein pointed to ‘hidden variables’ that would fundamentally change the theory. This talk is about a crucial ‘hidden variable’ Einstein didn’t address: the developmental state of the theorist, the scientist. It is how my background and interest in applied developmental psychology relates to a new interpretation of quantum theory.

Quantum theory is the most successful theory in modern science. But after more than 100 years, there is little consensus about how to interpret it. There are 5-10 major interpretations, each bringing out an important angle. But all of them are increasingly recognized to be incomplete and unsatisfying. Otherwise, there wouldn’t be such diversity of interpretations about what quantum theory means. As they say, it ‘ain’t rocket science.’ In rocket science, you have to be precise and certain; in quantum theory, apparently you have to be uncertain.

In this paper I certainly won’t try to explain quantum theory. Rather, I want to suggest that, to resolve the uncertainty, what is needed is a more comprehensive model of phenomenally real levels of nature.

The physical model has governed modern science. And it relates directly to common experiences in the ordinary waking state of consciousness. With systematic development of the minds of scientists, deeper levels of nature become more familiar. This impels a deeper interpretation of quantum theory—which brings us to Vedic Science.

Maharishi Mahesh Yogi has worked to reestablish the completely holistic value and practical application of Veda, as Maharishi Vedic Science and Technology. This completely holistic account, such as enumerated in Sankhya—and also in Ayurveda, Yoga, Vedanta, and all the six Darshana—provides this more comprehensive model. It

addresses long-standing dilemmas about the meaning of quantum theory and the matter-mind-consciousness relationship modern scientists were compelled by quantum theory to consider.

Classical physical science is associated with the belief that things we commonly hear, touch, see, taste, and smell with our senses in the ordinary waking state of consciousness are what exist as *real* in nature. And there is virtually no recognition of this state-dependent limitation. It is a one-level ontological model—associated with physical realism, materialistic monism, and emergent monism—increasingly recognized to be untenable.

Cutting edge quantum and unified field theories are now going beyond the one-level model to three-level models: the ordinary gross physical level, the transcendent unified field, and a third subtle level in-between. Scientific speculations about this in-between level can be found in quantum information field, dark energy, inflation, wormhole, loop quantum gravity, and string field theories. But these mathematical glimpses are still quite foggy due to lack of direct empirical validation.

In the holistic 3-in-1 Vedic model, the in-between level is a finite nonlocal field that underlies and permeates the finite local physical level, all within the unified field. In contrast to the physical level, this subtle level appears to be not limited by light-speed, the closed physical causal chain, the light cone, classical gravity, and the corresponding Planck scale dimensions.

In the following quote, Maharishi Mahesh Yogi (*Science of Being and Art of Living*, 1963, pp. 32-33) describes modern scientific progress toward the holistic 3-in-1 Vedic model:

If and when physical science arrives at what Einstein was trying to pinpoint by his unified field theory, one element will be established as the basis of all relative creation. With the rapid pace of development in nuclear physics, the day does not seem to be far off when some theoretical physicist will succeed in establishing a unified field theory. It may be given a different name but the content will establish the principle of unity in the midst of diversity, the basic unity of material existence.

The discovery of the field of this one basis of material existence will mark the ultimate achievement in the history of development of physical science. This will serve to turn the world of physical science to the science of mental phenomena. Theories of mind, intellect, and ego will supersede the findings of physical science. At the ultimate or the extreme limit of investigation into the nature of reality in the field of the mind will eventually be located the state of pure consciousness, the field of the transcendental nature lying beyond all relative existence of material and mental values of life. The ultimate field of Being lies beyond the field of mental phenomena and is the truth of life in all its phases, relative and absolute. The Science of Being is the transcendental science of mind. The Science of Being transcends the science of mind which in its turn transcends the science of matter which, again, in turn, transcends the diversity of material existence.

Being is the ultimate reality of all that exists; It is absolute in nature. Everything in the universe is of a relative order, but the truth is that eternal Being, the ultimate life principle of unmanifested nature, is expressing itself in different forms and maintaining the status quo of all that exists. The absolute and relative existence are the two aspects of eternal Being; It is both absolute and relative.

In the one-level physical model, the analysis of nature begins with ordinary sensory experience of outer objects from the perspective of subject-object independence and mind-matter duality. These outer objects have been reduced to their essential parts, from concrete gross macroscopic objects to microscopic molecules, elements, ultra-microscopic sub-atomic particles, and now abstract mathematical, randomly-fluctuating quantum potentials.

How these lower-order parts create higher-order wholes such as conscious biological organisms is not adequately addressed. In other words, how the physical brain creates subjective mind and consciousness is not explained.

Modern scientific attempts to account for higher-order subjectivity and consciousness in terms of bottom-line inert energy/matter through entirely blind, meaningless random mutations and natural selection. Biological survival is considered basic to natural selection, but there is no coherent account of how the *value* of survival gets into the closed physical causal chain that began long before living organisms existed. Higher-order biological organisms with minds are believed to be due to (supervene on) lower-order inert processes. This is called *epistemological emergence*.

Then it was recognized that there must be some means for the whole unit to guide its lower-order inert parts into something more than the sum of the parts—so-called *ontological emergence*. But all the processes, higher-order and lower-order, remain within the closed causal chain, so there is no real top-down causal guidance by a real biological organism as a unitary functional ‘self’ that is in some way more than the collection of parts.

Then arguments were made for ‘self-organizing systems,’ again without any planning or intelligent guidance. But these unitary systems are now becoming recognized to require at least some intelligent planning in order to function as a holistic unit.

The current speculations are that the intelligent guidance comes from somewhere outside, as in artificial intelligence; or from some unknown source in outer space riding to Earth on meteors; or from random fluctuations of literally nothing (frequently associated with big bang theories). The ‘right values’ of nothing are said to have led to a non-random information processing system, which since has managed to maintain and systematically build upon the first instance of non-random order, eventually creating extremely complex biological organisms that can know themselves and their world.

This part of the story emphasizes the synthesizing of parts into wholes. What is missing, and needed for a coherent account, is the other part of the cycle: the unified field of nature as fundamentally orderly and whole that phenomenally diversifies into parts and then synthesizes into wholes. This is detailed in the Veda.

In the completely holistic Vedic account, phenomenal nature is an eternal cycle of creating parts from within ultimate wholeness, and then evolving to reveal the wholeness in each part. The current scientific theory of evolutionary biological emergence can be viewed as consistent with one phase of this cycle. Higher-order, top-down processes

emerge in the physical with increasingly complex physical structures. But these physical structures are shaped by subtle non-physical processes all along the way via ‘evolutionary pathways.’ This relates to the Vedic concept of Dharma as the force of evolution in the laws of nature.

As the field of all possibilities, the field of consciousness itself, the unified field or universal Being can be said to be its own physiology, and contained within its fine fabric is the intelligence and energy that manifest all beings and objects.

Its grossest level is particle-like and atom-like. On this level, the inherent intelligence and energy appears to be the least integrated, and mind and matter appear to be separate—the mind/matter and subject/object duality of ordinary waking experience. This is the experiential basis for modern science as it has been practiced.

At the subtle level, the in-between level, energy and intelligence are more integrated or entangled. It can be said to be wave-like, but not made of particles. This level has more the character of mind and thought forms than gross material forms. It includes subtle sensory objects and the subtle mind that initiates and directs the gross body. Mind and body interact with each other and reciprocally influence each other. As mind and body develop, top-down control of mind over matter is increasingly evident. Objects and processes in the finite subtle relative level reflect locality while at the same time are nonlocal and interdependent. At the infinite level, all is infinitely unified, infinite self-interaction or entanglement, and unity predominates: oneness *is* Oneness.

As an example from Vedic literature, the *Sankhya* model of levels of nature, summarized in Maharishi’s 1967 book *On the Bhagavad-gita*, describes the sequence from the unmanifest unified field of consciousness itself to subtle and gross manifest phenomenal levels of nature. Here is one way of presenting the Sankhya model. In this depiction, the gross local manifest level can be related to the fundamental particle-force fields in modern physics.

Gross/local [manifest]	Gross sensory environment <i>Gross macroscopic brain/body</i> <i>Electrochemical cellular processes</i> Atomic/sub-atomic particle processes (Mahabhutas)
Subtle/ nonlocal [manifest]	Subtle wave processes and constituents (Tanmatras) Subtle organs of sense/action (Gyanendriyas/Karmendriyas) Mind (Manas) Intellect (Ahamkara) Holistic self or ego (Mahat)
Unified field [unmanifest]	Universal Being (Prakriti/Purusha)

As enumerated in *Sankhya*, the sequence is from the unmanifest unified field of consciousness (*Purusha/Prakriti*) to the subtlest level of manifest nature (sometimes called

Mahat or cosmic ego), to *Ahamkara* (cosmic intellect, also called *Buddhi*), to *Manas* (cosmic mind), to the *Gyanendriyas* (organs of sense) and *Karmendriyas* (organs of action), to the *Tanmatras* (subtle objects of sense, the five essences of space, air, fire, water, and earth), and finally to the *Mahabhutas* (gross objects of sense, the five gross elements associated with particle-force fields).

This means that all levels of phenomenal nature can be said to exist as relatively *real*, whether or not any particular individual observer is observing or measuring them. However, what is obtained in observation and measurement depends on the level of nature being observed and the processes used to observe it. This leads to a more comprehensive interpretation of quantum theory.

This interpretation of quantum theory relates to the holistic Vedic 3-in-1 model, experienced as relatively *real* at gross levels, relatively *hyper-real* at subtle levels, and the only *reality* at the transcendent infinite eternal unified field level. Again, quantum and classical levels of nature are both relatively *real* and objective; what is obtained in measurement depends on the level of nature being measured and the means used to measure it.

The holistic 3-in-1 model in ancient Vedic science provides a rich enough ontology to clarify fundamental issues so recalcitrant in classical and quantum theories about the consciousness-mind-matter relationship, including relatively real individual minds with free will.

As increasingly complex biological units spontaneously emerged, empirically some were more adaptable and thus able to last longer. In this view, the difference between living and non-living is a matter of a unitary system complex and flexible enough to maintain 'itself,' with the ability to behave as a functional unit and make copies of itself for individual and group 'survival.'

In the analysis part, nature manifests from wholeness to parts, from unity to diversity. The transcendent infinite eternal unified field of consciousness itself, the 'home of all the laws of nature,' the simplest state of nature, phenomenally diversifies within itself, and then progressively unifies from parts back to wholeness. Cosmic evolution involves condensing from wholeness to parts in phenomenal diversification and synthesizing parts into wholeness in an eternal cycle.

According to the completely holistic Vedic account, it is not that survival behavior, intentional top-down causation, self-awareness, and consciousness are *created* as emergent properties in the processes of biological evolution. And it is not that these higher-order processes did not exist in latent forms before their emergence, or that there is no inherent direction or purpose to them. Rather, through long periods of time conscious biological beings become expressed in higher stages of evolutionary development. And in the human species, they are increasingly prominent in natural evolution toward full potential, eventually reflecting free will. Evolution is impelled and guided all along by non-local causal dynamics subtler than the classical chain of cause and effect.

In this context, emergence refers to higher-order expressions of latent functions, not emergent epiphenomena with no ontologically real substrate. Experiential reports of higher evolutionary development appear throughout the history of religious and spiritual traditions—although the descriptions are quite obscure in many of them. With advances in modern science, hopefully the subtle levels and relationships in nature, historically believed in by many but difficult to describe, can be seen to fit into a coherent and rational scientific model.

To apply the interpretation briefly outlined in this paper, what does the holistic Vedic model mean with respect to the major quantum theory interpretations? In a nutshell, it eliminates the need for:

1. *instantaneous* quantum wave function collapse and *fundamental* randomness, as in orthodox interpretations
2. intrinsically fragmented infinity of separate worlds, as in many-worlds interpretations
3. epiphenomenal minds and intrinsic probabilism, as in the decoherence, information field, and ‘QBism’ or Bayesian quantum probability interpretations
4. conflating mind and consciousness itself as in Bohm’s neorealist interpretation.
5. the view that consciousness is not primary
6. the view that there is no free will.

Again, this means that all levels of phenomenal nature exist as relatively *real*, whether or not any particular individual observer is observing or measuring them. What is obtained in measurement is due to what level of nature is being measured and the methods used to measure it.

To summarize, in this interpretation of quantum theory the phenomenal structure of both the subtle (now becoming associated with quantum reality) and the gross (associated with classical physical reality) already existed in nature. We human observers initially made scientific observations of the grossest surface level, which appeared to be objective and inert, independent of subjectivity, devoid of sentience, and the most *real* from the limited object/subject duality of the ordinary waking state.

With top-down subtle guidance as a predisposition for ‘evolutionary pathways’ (Dharma)—seemingly spontaneous but applying the laws of nature including principles of random order—the parts had long ago naturally congealed into more complex wholes as biological organisms, in recent eons with increasing causal power to direct their own unitary behavior in free will (Boyer, Unless we are robots, classical and quantum theories are fundamentally inadequate, *NeuroQuantology*, 2014).

With more refined experiences in higher states of consciousness, such as through the systematic empirical methods in Maharishi’s reestablishment of the Yogic practice of effortless transcending, the subtler, interdependent, non-physical level of nature associated more with sentience and subjectivity appears even more *real* than the physical.

Satisfying scientific knowledge of the totality of nature requires the ability to directly experience the totality. Total knowledge is the integration of understanding and direct experience. This is core to Maharishi Vedic Science and Technology, and currently missing in modern science.

In the highest state of unity in Maharishi's clarification of seven states of consciousness, all phenomenal levels of nature are experienced as finite, ever-changing 'measurable' existence—sometimes called Maya. And together with the infinite eternal never-changing unified field of universal Being, the essence of individual self, that is *total reality*.