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YOU ARE THE UNIVERSE

Deepak Chopra & Menas Kafatos

Harmony Books, New York 2017

Reviewed by Shelli Joye

In *You Are the Universe*, the contemplative endocrinologist Deepak Chopra, and the MIT physicist Menas Kafatos, offer a lucid groundbreaking work on consciousness that is refreshingly accessible without relying upon mathematical language or overspecialized jargon. In summary, their book is a serious attempt to address the fundamental contemporary question, "Is the universe made of matter that learned to think, or is the universe made of mind that created matter?" (Chopra & Kafatos, 2017, p. 154). By the end of the book Chopra and Kafatos have gone so far as to argue that *not only* is the universe created and sustained by an underlying mind, but that we *are* the universe, we *are* that mind. In a real sense, they declare, we as an organic species have co-created this universe.

The material is presented in two major sections. Each of the first nine chapters poses, discusses, and answers its own key question. For example,

Where Did Time Come From?

Is There Design in the Universe?

Do We Live in a Conscious Universe?

These questions set the stage for the ninth chapter question,

Does the Brain Create the Mind? To this final question, Chopra and Kafatos answer with a resounding, "No."

This answer is at odds with the current mainstream assumption that consciousness and mind are evolutionary byproducts, recent epiphenomena of brain activity involving electrical signals flowing among neurons. In support of their panpsychist view of the cosmos, Chopra and Kafatos manage to avoid the use of various popular nebulous terms that are so often used as easy grounds for dismissal by the scientific community. For example, they even go so far as to state that *psychic* is "a word that science shuns" (p. 213). Clearly this book has been written for a wider audience than the usual readership of philosophers, yoga practitioners, and those interested in consciousness studies. By minimizing their use of terms such as "religious" and "spiritual," the authors offer arguments that should be more comfortably digested by the more demanding scientific audience.

In the second section of the book, Chopra and Kafatos argue that the universe is *both* personal and whole. They declare that there is *one* cosmic mind, that it encompasses *everything*, and they go so far as to say that this "cosmic mind is built into your nervous system" (p. 219). The authors go even further, telling us what many religions assert, even if tacitly—that most of us are asleep to the fact that *we are, ourselves*, the universe. Though our immediate reaction may be one of doubt, we are reassured by the authors, who tell us, "Skepticism would be a normal, natural response if someone told you that you were connected at every second of your life to cosmic mind" (p. 220). They then present evidence throughout the rest of the book designed to overcome this skepticism, and it is quite a ride.

The authors contend that we *are* in connection with the entire cosmos at every place and at every time, but that early in life we forget this link and begin to operate under the assumption that we are separate, and thus *not* connected. As infants, we come to identify with the perceptual activity of our brain systems and neuronal networks and begin to lose touch with that more fundamental, deeper, single entity that underlies space-time. Chopra and Kafatos argue that the ground of our mind is *beyond* the manifest universe of space-time, yet that consciousness itself is radically nondual; it has the ability of peering *out* into space-time to experience its own projections, while simultaneously *projecting form* into a universe that is the cosmos we know and love. In this sense, what we call *mind* is not identical with the complex sensory system we call the brain, but instead operates at a much deeper level. The function of the brain is seen to provide a sensorium in space-time, a theater for a mind that operates not only *within* the field of space-time, but projects *from beyond* space and time. Brain structures themselves provide the operational basis for those *qualia* through which the real “I,” the one mind, *my* mind, is able to observe the universe from the billions upon billions of unique perspectives in phase space, or to use an image penned by author Kurt Vonnegut (1982), through our many little “peepholes.”¹

The implication is that this one “I” tunes in to space and time through an unimaginable range of perspectives offered by innumerable qualia systems, each conveying to the perceiving universal mind itself a unique perspective via taste, touch, sound, flavor, smell, and so on. The superpositioned holonomy of all qualia from this metaverse of unique perspectives, reveals a cosmos that is (assuming we agree with Chopra & Kafatos [2017], and Bohm [1982]), at the bottom level simply *myself*. How then do we, from these various seemingly-isolated perspectives, ultimately discover again how we might *perceive* that we are the single Self that is the universe, and act accordingly?

Chopra and Kafatos posit that what is needed is a new branch of science, a *qualia science*, which will extend the domains both of classical physics and quantum physics into a wider spectrum model to include the domains of qualia and consciousness. Ultimately, an understanding of qualia becomes of primary importance for any attempt to bridge the gulf that separates the physical, perceivable universe with the transcendental, perceiving universe. With this in mind, our review turns to focus upon the list of “Qualia Principles” that the authors provide at the end of the book.

Appendix 1 itself would make this a book of significant value. It is here the authors articulate a map linking qualia to primary consciousness. Listed in a series of 40 short assertions, which the authors label “Qualia Principles,” we find striking congruence with a theory of the cosmos put forth by the quantum theorist David Bohm (1980), whose theory of the “implicate order” holds that the universe as a whole is divided into (a) our explicate space-time region and, (b) the implicate order, a timeless, spaceless region that may be found within a plenum of quantum black holes underlying space-time at the subquantum (quantum vacuum) level.

¹ The full quote from Vonnegut’s *Deadeye Dick* reads as follows: “I was a wisp of undifferentiated nothingness, and then a little peephole opened quite suddenly. Light and sound poured in” (p. 1).

Chopra and Kafatos seek to map qualia as the bridge between the universe and the primary consciousness that they declare to be "You" in the title of their book. In a similar sense, we can see qualia as the bridge between Bohm's implicate order and explicate order. And while Chopra and Kafatos declare that their collection of qualia principles should be understood as "The Foundation for a Science of Consciousness," Bohm's (1982) conjecture adds to that foundation in the startling declaration, "Let me propose that consciousness is basically *in* the implicate order" (p. 62). In his focus upon the importance of the implicate order, Bohm goes even further, declaring "the basic relationship of quantum theory and consciousness is that *they have the implicate order in common*" (Bohm & Hiley, 1993, pp. 381–382).

The authors present a perspective congruent to Bohm's theory of the Whole, in which they conceptualize consciousness as the basic energy underlying all dimensions. Bohm's colleague, the neuroscientist Karl Pribram, clarifies the model with the following metaphorical image of an iris-like lens between Bohm's implicate and explicate order:

These two domains characterize the input to and output from a lens that performs a Fourier transform. On one side of the transform lies the space–time order we ordinarily perceive. On the other side lies a distributed enfolded holographic-like order referred to as the frequency or spectral domain. (Pribram, 1991, p. 70).

In Pribram's image we can see qualia at work, acting as lenses to focus and bridge sensation and information. In such an image, qualia are taken to be various lenses for which the human sensory system can be thought of as an exterior extension, a set of remote systems in the explicate order of space-time supporting the ability of the implicate order's "primary consciousness" to sense and see within the remote domains of space-time. This is analogous to the function of sensors on a Mars Rover, which act as sensory extensions for the primary human operator back on Earth.

From such a perspective, what are called "qualia" in space-time do not operate completely within space-time dimensions. The qualia center of gravity is to be found ultimately as resonant loci on the "side of the lens" *within* the implicate order, where there is neither space nor time, where all is non-local and omni-present—in the dynamic living personality of the universe in its entirety, superpositioned upon itself within the implicate order.

This mirrors the thinking of Chopra and Kafatos, and they could very well be describing Bohm's implicate order as the source of qualia as well as quanta. It was Bohm's effort to achieve an ontological understanding of the quantum vacuum that led to his conceptualization of the implicate order and its relation to space-time. Bohm's thinking is mirrored here in this passage from *You Are the Universe*:

But it must be understood that there is a deeper level of consciousness that has no dimensions, because any dimension in space-time contains qualia, and in itself, pure consciousness has no qualia—it is the source of qualia, just as the quantum vacuum is the source of quanta. (Chopra & Kafatos, 2017, Proposition 5, p. 249)

Proposition 14 argues that while each life-form has its own “qualia niche,” these niches remain inaccessible to us, due to each species having separate nervous systems, and the disparate intricacies encompassing the nervous systems of not only separate species, but separate entities within each species. Yet not all life-forms are endowed with nervous systems, and we can imagine that life-forms *without* nervous systems experience qualia with what must be assumed are their own unique characteristics. For the panpsychist, even a diamond crystal or an electron is understood as experiencing its own unique varieties of qualia in their resonance between the frequency domain and space-time, between the implicate order and the explicate order.

But this begs the question of how to differentiate between qualia and the experience itself. Appropriately, the next proposition clarifies this distinction between perception and *that which perceives* the perception, and can be seen as a reasonable approach toward solving the hard problem of consciousness.

We do not see because we have eyes. We do not hear because we have ears. The organs of perception do not create perception but are the lens through which consciousness and its qualia create perceptual experience. (Chopra & Kafatos, 2017, Proposition 16, p. 251)

Here we are again reminded of Pribram’s lens metaphor. Pribram’s holonomic brain theory holds that all of the various qualia characterizing space-time are *experienced from within* the spectral dimensions; in this sense Chopra and Kafatos agree with Pribram and Bohm that the root awareness or fundamental experience is to be discovered within the nonlocality of the implicate order, which Bohm indicates is to be found everywhere at subquantum levels (Joye, 2016). The universe thus implements the observation of qualia via a Fourier lensing process in which space-time qualia continuously transform into frequency spectra within the implicate order. It is the nonlocal implicate domain, an inner set of dimensions, *which experiences the qualia* which themselves are sensory within our familiar outer explicate order in space and in time.

Proposition 19 introduces the concept of “pure consciousness,” characterizing it as both the field of all possibilities as well as the fundamental ground of existence, which is also in accord with Bohm’s assertion that “consciousness is *in* the implicate order” (1982, p. 62). Bohm not only proposes that consciousness is basically in this implicate order, outside of space-time, but his collaboration with Pribram led to their common understanding that this subquantum implicate order may be the ultimate repository of all information, including human memory (2013). This concept also agrees with the “holofield theory” published by Ervin László, an integral theorist and Nobel Prize nominee. László’s publications provide support for the reality of a nondual field outside of space-time, and which, László (2009) tells us, is the likely mechanism behind “nonlocal healings, near-death experiences, after-death communications, and past life recollections” (p. 1). László also argues that this is the same dimensional region that has been intuited by contemplatives for millennia, an experiential dimension frequently referred to in India by the Sanskrit word “ākāsha.”

Such a concept is also congruent with a theory of black hole physics, pioneered by Stephen Hawking, in which information from space-time enter a black hole as entropy to become permanently part of the inner nonlocality of the black hole. In this sense, “pure consciousness,” the timeless, spaceless fundamental ground of everything, exists at subquantum dimensions,

below the Planck length, in regions which the theoretical physicist John Archibald Wheeler (1990) has termed "quantum black holes" (p. 297). The implicate order, being nondual (e.g., outside of the dimensions of time and space), is thus everywhere-connected and basically the "One without a second" acclaimed in an early Vedantic source, the Chandogya Upanishad (Radhakrishnan, p. 391).

In Proposition 21, the authors state that both human understanding *and* the sense we term empathy result from what they call the resonance of shared qualia: "What we call empathy is a shared resonance that registers in awareness" (Chopra & Kafatos, 2017, p. 253) In Bohmian terms, the experience of empathy is the blending of the particular space-time spectral signatures of the qualia as they resonate with their corresponding spectral signatures within the implicate order. Bohm points out that this is why music is so powerfully experienced: the active perception of music is *a direct experience* of the implicate order in resonance with acoustic vibrations in the immediate external explicate order. The experiential intensity of such resonance between implicate/explicate orders is undeniable; whether we are listening to classic, contemporary, or other genres of music, we share in the resonant experience with all others who have ever (or will ever) resonate with the same empathic frequency-patterned "musical information" signature bridging the explicate and implicate orders through the qualia of "hearing."

In the next proposition, there is a marked shift in the discussion as the authors move beyond qualia as perceptions to characterize *each human life* as "a particular qualia program . . . that unfolds as life," and assert that in death, each qualia program (i.e., each human life-matrix) returns to the implicate order to "reshuffle and recycle as new living entities." The authors go on to tell us that "these qualia are nonlocal and immortal." Space-time itself is said to be "a qualia experience in the nonlocal consciousness field" (Chopra & Kafatos, 2017, p. 253).

The mathematics of quantum mechanics is briefly touched upon, and we are reminded that while the map is not the territory, we must agree that from a certain perspective it is still pure mathematics that maps so well the many relationships within the cosmos. Accordingly, the authors make the case for contemporary science to branch out into what they call "qualia physics, qualia biology, qualia medicine," and to remain open to the possibility that much information and understanding may lie ahead in undertaking future scientific explorations of traditional approaches to consciousness in a broad range of wisdom traditions found throughout world cultures.

The final propositions move into more philosophical considerations regarding the theory of evolution, and it is here that Chopra and Kafatos articulate what they see to be the *purpose* of evolution:

"The wild variety of life on Earth is a collective attempt to turn one planet's ecology into a playground for qualia. The purpose of evolution is to maximize experience of every kind." (2017, Proposition 34, p. 255)

Evolution is said to be "purpose-driven" through experimentation and feedback. Genetic structures are recording devices that are self-organizing, and yet allow for fantastic variation. The authors tell us that human beings have a special endowment which they call "the gift of self-

awareness,” and that we are not imprisoned by our own inherited qualia propensities, but that we have the potential to be able to cultivate new qualia that will give us the capabilities of connecting with the pure consciousness, that which is the observer behind the scene, itself. They go even further by telling us that when we connect with that pure consciousness, we will finally realize that we have connected with our true *Self*, and we will discover that “it” is really “me.” By developing this capacity to *tune* our explicate qualia to the bedrock fundamental consciousness, we can accelerate transformation into a greater adaptation to the present, allowing us the possibility to detach from “layers of aggression, war, poverty, tribalism, fear, deprivation, and violence” (p. 257).

In their 40th and final proposition, the authors again make an argument for the establishment of a new science, a *qualia science*. This, they believe, is where we should focus our efforts in order to “take our civilization in the direction of wholeness, healing, and enlightenment” (p. 257).

In *You Are the Universe*, Deepak Chopra and Menas Kafatos have given us a well written, fascinating compilation of ideas that challenge conventional wisdom. In their efforts to describe a universe in which each human is seen as integral to the whole, they have been able to avoid the use of overly technical, specialized, or obscure philosophical or mathematical language, and as a result, their arguments are accessible to a widely inclusive audience. The wealth of original observations and discussion presented in this book should provide a springboard for further discussion among those fascinated with conscious studies, philosophy, and cosmology, and anyone who may be seeking to understand who we are, where we came from, and where we might be headed.

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