

Misuse or Breakthrough? Mind and the Quantum Model: A Response to “Quantum Misuse in Psychic Literature”

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ABSTRACT: The classic problem of how the mind and body relate, which is part of the general problem of how the physical universe may have given rise to consciousness, cannot be solved with a purely physical approach. In an attempt to locate a region of nature where mind and matter closely meet, many theorists both in and out of physics have looked to the quantum field. In their article “The Misuse of Quantum Physics in Psychic Literature” that appears elsewhere in this *Journal* issue, Jack A. Mroczkowski and Alexis P. Malozemoff proffered the accusation that these theorists engaged in “psychic” speculation, a misuse of quantum mechanics, and a misappropriate of science to further a spiritual agenda. In this invited response, I argue that the use of quantum in this way is entirely correct and suggests a radical paradigm shift.

KEY WORDS: quantum, mind-body, paradigm, psychic, psi

Quantum physicists have a right, even a professional duty, to clarify what quantum theory says, and in their article, “The Misuse of Quantum Physics in Psychic Literature,” Jack A. Mroczkowski and Alexis P. Malozemoff (2019) set about the task more civilly and with less knuckle-rapping than many critics have. My name is prominently featured among the alleged misusers of quantum theory, and I am tempted to point to the two books I wrote with professional physi-

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cists (Chopra & Kafatos, 2017; Chopra & Mlodinow, 2011), as well as peer-reviewed articles I authored or co-authored in various scientific journals; see, for example, Chopra (2019) and Narasimhan, Chopra, & Kafatos (2019). My interest and involvement in the field is serious and has been for three decades.

But the issue of “misuse” that lies at the heart of Mroczkowski and Malozemoff’s (2019) argument brings up more important points than finger wagging by two physicists chiding supposed interlopers like myself. The tables could be turned, in fact, considering that their use of “psychic” is arguably more misinformed and misguided than the use of “quantum” by the writers they wanted to correct. I found their references to “mind-over-body” healing equally misinformed, sweeping the vast range of alternative and complementary medicine into the same dustbin.

It is more productive for both sides, I think, to grant mutual respect. The article’s authors may not know that the so-called mind-body problem has attracted some of the best scientific minds, that annual international conferences are held to discuss science and consciousness, and that highly qualified physicists and neuroscientists participate in these proceedings. I mention this point because the general tone that Mroczkowski and Malozemoff (2019) adopted implies that all kinds of unqualified duffers are fancifully throwing around the word “quantum” to the snickering amusement of those who are really in the know.

The reality is that the emergence of mind in the physical world is as mysterious and unexplained as ever. The reason that theorists undertaking serious speculation have looked to quantum physics is that the behavior of processes in the quantum field offers some of the best clues available to them for discovering the origins of mind. Nothing is cut and dried, because no one can say if quantum behavior parallels the behavior of mind or is simply analogous. Mroczkowski and Malozemoff (2019) brush aside some striking ideas from very prominent thinkers—John von Neumann, Henry Stapp, and Roger Penrose among them—as if the opinions of “many physicists” is sufficient to disqualify them.

It is in the nature of new paradigms to overturn the apple cart, and nowhere is that truer than in quantum physics. Behind the unruffled assertions of fact delivered by Mroczkowski and Malozemoff (2019) lies a state of startling disarray in modern physics. The late Stephen Hawking (Hawking & Mlodinow, 2010) went so far as to say that physics may have reached the point at which the most advanced mathematical models do not match reality, and it is probable that the

situation will grow only more intractable. I have addressed this foment in modern physics in *You Are the Universe*, a book co-written with physicist Menas Kafatos (2017).

Let me risk correcting the correctors. The possibility of mind interacting with matter in the observer effect has never been satisfactorily settled. von Neumann (1932) and Stapp (2009, 2011, 2017) prominently upheld the position that reality itself, including the cosmos, must have a psychological component. Heisenberg (1979) asserted that elementary particles are not real but constitute nature's response to the questions being posed. The vast majority of working physicists are technicians occupied with specific tasks, and they live by the old dictum, "Shut up and calculate." Fruitful speculation that ventures beyond provable facts is often dismissed as "metaphysics" rather than "real" physics.

If they care to, however, Mroczkowski and Malozemoff (2019) can read any number of quantum physicists and cosmologists who take seriously the following notions that arose directly from quantum theory:

- Consciousness is innate in the universe and cannot be reduced to any material process. This assertion was put forth by Max Planck (Sullivan, 1931), who named the quantum.
- There is no getting past the issue of consciousness, another assertion of Planck's (Sullivan, 1931).
- Subatomic particles appear to make choices, according to the prominent physicist-writer Freeman Dyson (1988).
- Mind moves matter. This notion was stated in stately Edwardian prose by the eminent British physicist Sir James Jeans. He is worth quoting: "For aught that the new science can say to the contrary, the gods which play the part of fate to the atoms of our brains may be our own minds" (Jeans, 1930, pp. 29–30).
- As far back as the 1930s, Jeans was able to write that:

today there is a wide measure of agreement, which on the physical side of science approaches almost to unanimity, that the stream of knowledge is heading towards a non-mechanical reality; the universe begins to look more like a great thought than like a great machine. Mind no longer appears as an accidental intruder into the realm of matter. (Jeans, 1937, p. 137)

Looking back, it now is evident that Jeans misread the tea leaves. Physics headed in the opposite direction, away from any possibility of cosmic mind towards stricter mechanistic explanations. Mroczkowski and Malozemoff (2019) argued, in fact, from a totally mechanistic view of quantum theory, betraying, if I might dare to say so, a dis-

regard for the great minds that devised the theory a century ago. In various ways Heisenberg, Bohr, Pauli, and Schrödinger strayed into metaphysics, as their colleagues saw it, and the momentum for solving the mind-body or mind-matter problem was lost.

Now it has returned with a vengeance, and writers inside and outside physics are seizing the opportunity to discover a satisfying solution. I am afraid that Mroczkowski and Malozemoff (2019) are chasing a will-o-the-wisp in their focus on “psychic” writing. In their own field there is the implicate order of David Bohm (1980), the participatory universe of John Archibald Wheeler (1990), and other mind-inclusive ideas from Eugene Wigner (1995), not to mention Dyson, von Neumann, and Stapp cited above. The most basic assertion that Mroczkowski and Malozemoff (2019) made is that the microscopic activity in the quantum domain has no bearing on macroscopic activity in the physical world. Some important thinkers would disagree (see, for example, Radin, 2016). It might even be that quantum activity is crucial in the transmission of mental activity into brain activity.

In short, I do not believe I have been misusing “quantum” ever since I wrote *Quantum Healing* in 1986. I embraced breakthroughs that Mroczkowski and Malozemoff (2019) labeled a misuse. No doubt they feel certain about their assessment, but it seemed only fair to the general reader to wipe the stain of fanciful misappropriation from what I and others are trying to achieve.

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