

WHAT IS THE NATURE OF A POST-MATERIALIST PARADIGM? THREE TYPES OF THEORIES

Gary E. Schwartz, PhD

What does it mean to have a post-materialist theory? I propose that there are three classes or categories of theories. (1) *Type I post-materialist theories*: neo-physical theories that are derived from materialist theories, where the materialist theories are still seen as primary and are viewed as being fundamentally necessary to create “non-material” (yet physical) phenomena such as consciousness. (2) *Type II post-materialist theories*: post-materialist theories of consciousness existing alongside materialist theories, where each class of theories are seen as primary and are viewed as not being derivable from (i.e. are not reducible to) the other. And (3) *Type III post-materialist theories*: where materialist theories are

derived from, and are a subset of, more inclusive post-materialist theories of consciousness; here post-materialist theories are seen as primary and are viewed as the ultimate origin of material systems. Type I theories are the least controversial, Type III are the most controversial. The three types of theories are considered in the context of the history of the emergence of post-materialist science.

Key words: post-materialist science, paradigm shift, physicalism, primary, consciousness

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I believe we are riding the cusp of the biggest paradigm shift in the history of science. What could be more exciting!!!

Neil Grossman, PhD

What does it mean to have a “post-materialist” theory?

If, as Charles Tart¹ wrote in his book *The End of Materialism*, the mainstream paradigm in science is being expanded (if not seriously questioned) by a wealth of contemporary findings in consciousness studies in general, and parapsychology in particular, what will replace this paradigm? What might a post-materialist theory look like?

In this paper, I propose that there are three basic categories or types of theories that may be required for addressing what could be, as Grossman² puts it, “the biggest paradigm shift in the history of science.”

The three types of post-materialist theories are

Type I post-materialist theories: neo-physical theories that are derived from materialist theories, where the materialist theories are still seen as primary and are viewed as being

fundamentally necessary to create “non-material” (yet “physical”) phenomena such as consciousness.

Type II post-materialist theories: Post-materialist theories of consciousness existing alongside materialist theories, where each class of theories are seen as primary and are viewed as not being derivable from (i.e., are not reducible to) the other.

Type III post-materialist theories: where materialist theories are derived from, and are a subset of, more inclusive post-materialist theories of consciousness; here post-materialist theories are seen as primary and are viewed as the ultimate origin of material systems.

Whereas Type I theories are minimally controversial, Type II theories are moderately controversial, and Type III theories are the most controversial.

Before considering the three types of theories, it is useful to briefly review the history of emerging formalization of post-materialist science and place the evolution of future theories in context.

TWO SEMINAL MEETINGS ON POST-MATERIALIST SCIENCE

These challenging theoretical questions were addressed in the course of two seminal “think tank” meetings on the emergence and evolution of post-materialist science. The first meeting was conceived and organized by Lisa Miller, PhD and was held at Columbia University in the spring of 1999. It consisted of approximately a dozen senior scientists, spanning

Laboratory for Advances in Consciousness and Health, Department of Psychology, University of Arizona, Box 210068, Tucson, AZ 85721-0068

This essay was inspired in part by a set of e-mail exchanges in various forums including the participants of the 2014 International Summit on Post-Materialist Science, Spirituality and Society concerning historic and emerging post-materialist theories. I would like to thank the reviewers of this article for their careful and thoughtful suggestions. I have cited a few of their comments and recommendations in this article.

e-mail: gschwartz@u.arizona.edu; gschwartz@spamarrest.com

physics and engineering to psychology and medicine. Most of the participants had contributed invited chapters to the *Oxford Handbook of Psychology and Spirituality* edited by Miller.³

I had written a chapter for the Miller volume,⁴ and I had the good fortune to participate in the meeting. It was there that I first learned of the term “post-materialist science” and was introduced to its profound conceptual, empirical, political, and societal implications.

Inspired by the Columbia meeting, I decided to convene a follow-up meeting in the winter of 2014 titled the International Summit on Post-Materialist Science, Spirituality, and Society. The Summit was co-sponsored by the University of Arizona and Columbia University, and was hosted by Canyon Ranch in Tucson. The Summit was co-organized by Miller and by Mario Beauregard, PhD, who had recently joined the Laboratory for Advances in Consciousness and Health at the University of Arizona as a senior researcher.

In the final report of the Summit,⁵ I recounted one of the more striking differences I had witnessed among the participants at the Columbia meeting. I described them as “apparent tensions” between

- (1) *participants who wanted to restrict post-materialist science to those effects of consciousness, which were least controversial and presumably mediated by the brain (e.g., research documenting mind to mind telepathy and the effects of mind on physical objects), versus*
- (2) *those participants who wanted to feature the emerging integration of science and spirituality as inspired by—and some would say, as required by—the evolution of post-materialist science (including applications to health and healing, ecology, and the evolution of consciousness broadly defined).*

In creating the list of eleven participants invited to attend our Arizona Summit, we purposely restricted the participants to those individuals whose professional and personal lives fit the broad category of (2) above. We wished to give equal weight at the Summit to (A) the emergence of post-materialist science and (B) its deep implications for the evolution of connections between science and spirituality in contemporary society.

Interestingly, even among the eight senior scientists who were able to attend the Summit,⁵ and despite their overlapping spiritual proclivities, they varied substantially in their predictions and preferences concerning the evolution of future post-materialist theories. These differences were motivated not only by fundamental theoretical and methodological considerations. They were motivated by sociological and political considerations as well—e.g., the co-organizers' strong intention to foster conditions of openness (and friendliness) for encouraging innovative (and controversial) theories and research. The website www.opensciences.org, which was conceived at the Summit, was designed with these considerations in mind.

Following the Summit, I participated in the process of our attempting to formulate a concise consensus definition of post-materialist science for an anthology (www.parammedia.com, in progress) of invited chapters on the evolution of

post-materialist science (edited by Mario Beauregard, PhD, Gary E. Schwartz, PhD, and Natalie Trent, PhD). As I witnessed the differences of opinions expressed about what future theories of post-materialist science might look like, it became clear to me that there were three general categories or types of theories being put forth as potential candidates for future post-materialist theories.

Moreover, in pondering these different types of future theories, it became clear to me that in principle, it was possible that future research might discover that post-material science would need to incorporate *each of the three types of theories* to fully encompass what Rupert Sheldrake,⁶ PhD, calls the “nature of nature” and the cosmos.

What follows is a brief consideration of each of the three types of theories. The reader should recognize that the intention of this article is not to review the evidence addressed by a given theory per se, but rather to consider the nature of the types/classes of theories that are being developed to explain certain classes of evidence.

TYPE I POST-MATERIALIST THEORIES

Type I post-materialist theories assume that (1) materialist theories are primary and (2) phenomena such as consciousness, including non-local consciousness, although they may be “non-material” (e.g., do not meet the classical criteria of having mass and being localized as such), are nonetheless still “physical” and obey physical laws.

I sometimes think of this as “neo-physicalism” in the sense that these theorists posit that energy and information are in essence “physical” even though they are not “material” (i.e., their form and properties are not of classical matter with properties of mass and momentum).

Neo-physical theories allow for “info-energy” and “fields” (including “quantum” fields) to exist “independently of matter” and therefore operate in “non-material” yet physical ways. Proponents of neo-physical theories posit that this class of theories can potentially be used to explain phenomena including near-death out-of-body experiences and evidence of life after death.

For example, Stuart Hameroff, PhD, and Roger Penrose, PhD, microtubules theory of consciousness in biological systems proposes that consciousness is created materially via microtubules, but once created, can exist and operate as organized quantum fields in the vacuum of space.⁷ Hameroff and Penrose are “materialists” in the sense that they view matter (e.g., neurons as material systems) as being essential to the creation of consciousness, but they are “post-materialists” in the sense that the hypothesized quantum field physical nature of consciousness (a “neo-physical” theory) allows it to function above and beyond its original material form.

Similarly, when I was a professor at Yale University in the early 1980s, I derived a mathematical model which integrated feedback and systems theory with electromagnetic and quantum physics. The core of the theory was the creation of “dynamical info-energy feedback systems” within material systems which could continue as dynamical self-organized info-energy feedback systems in the absence of material structure.⁸

This generic theory of feedback/systemic memory predicted and explained a host of paranormal and other anomalous phenomena, from psychometry and memory in water, through cellular memory and memory in DNA, to near-death out-of-body experiences and survival of consciousness after physical death. Again, this was a “materialist” theory in the sense that matter was required to create the dynamic info-energy feedback systems, and yet it was “post-materialist” in the sense that the hypothesized organized dynamical info-energy feedback systems (again, a “neo-physical” theory) had “self-consciousness” and could continue to function above and beyond its origination in material systems.

Ardent Type I theorists believe that such theories are sufficient to explain all of consciousness, including parapsychological phenomena. However, this opinion is far from universal, and alternative Type II and Type III are being actively explored.

One of the reviewers raised the following question about Type I post-materialist theories. I quote the reviewer's question below, paraphrased it slightly for clarity:

One way to understand this is in a kind of trivial way. Without making any statements about the nature of something like telepathy (one could certainly say its expression), is my telling you that what I think is in your mind is certainly mediated by my brain (e.g., as the knowledge in my mind has to activate appropriate brain circuits to make my muscles work in the right way to make me may talk). On the other hand, I fear this could be interpreted to mean that Type I theorists would be claiming that telepathy, for example, is based on a physical brain process, whereas I would argue strongly that at this stage of our knowledge, physical energies and processes in the brain simply cannot account for some kind of telepathic “signal” being generated in one brain, traveling over a spatial distance, and affecting another brain.

What is being confused here is the essential distinction that to be classified as a Type I post-materialist theory, the new theory must explicitly posit that (1) materialist properties of a system are essential to (2) create novel “non-physical” like processes which (3) have special properties (e.g., they may allow for faster than speed of light communication, or even allow for instantaneous effects like those observed with entangled particles). One can imagine innovative “neo-physical” interpretations for explaining “quantum weirdness” in quantum physics bridging entanglement and consciousness. In this sense, the underlying mechanisms of telepathic communication are not material in the classical sense (i.e., they are neo-physical instead) and yet they depend upon the presence of materialist mechanisms for their creation.

These kinds of theories, though clearly controversial, are minimally so when viewed in comparison to Type II and Type III theories.

TYPE II POST-MATERIALIST THEORIES

Type II post-materialist theories assume that certain phenomena in nature and the cosmos cannot be explained by

materialist explanations and therefore require innovative non-material theories to understand them. Moreover, they view the phenomena as being separate from matter and, in their essence, on a conceptually equal footing with matter and what we experience as material reality.

A prime example of a Type II post-materialist theory is David Chalmers,⁹ PhD, analysis of the “soft” versus “hard” problems in consciousness research. For Chalmers, the hard problem of “qualia” will never be explicable in material terms—or even neo-physical terms derived from contemporary physics. He sees the need to envision the formulation of new theories which go beyond basic physical concepts.

This does not mean that concepts or methods from physics and mathematics cannot be adopted so long, as they are appreciated as being metaphors or analogies. For example, the concept of a field can be adopted from physics without necessarily requiring that it be deemed “physical” in its essence.

For example, Rupert Sheldrake's¹⁰ theory of morphogenesis, morphic fields, and morphic resonance is derived from abstract ideas of forms and fields, but it is not necessarily assumed that the morphic fields are physical in nature. Sheldrake's hypothesis that these form fields are (1) not localized in space or time, and yet they are (2) built up over time with repetition; hence he puts forth a hypothesis which is beyond known material or physical substances.

However, the addition of Type II theories is not meant to expand or replace physical theories of the physical world. The new theories are meant to compliment them, adding to a more complete description of nature and the cosmos without requiring a re-envisioning of physical theories of the material world.

Recently, Beauregard¹¹ has proposed a “Primordial Psyche” theory which he calls a “Theory of Psychelemerity.” His theory proposes that the psyche is a force that plays a role “as *primordial* as that of matter, energy, space-time, and the fundamental forces of physics.” (italics added). He goes on to state that “another central premise of this theory is that the psyche cannot be reduced to physical processes.” Beauregard's theory is an exemplar of a Type II post-materialist theory.

By their nature these “non-physical” theories are more controversial and challenging to the mainstream materialist paradigm than “neo-physical” theories.

TYPE III POST-MATERIALIST THEORIES

By far, the most controversial and innovative category of post-materialist theories concerns Type III theories which expressly predict that phenomena such as consciousness are not only (1) separate conceptually from material systems (Type II theories) and, (2) not created by material systems (Type I theories), but they are also (3) precursors to the creation of matter itself. In other words, they are “primordial to matter itself.”

Type III post-materialist theories envision consciousness, for example, to be a necessary condition for (1) the emergence of material systems and (2) our understanding the evolution of material systems as well.

At present, Type III theories tend to be offered by big picture visionary theorists who have an eastern background, such as physicist Amit Gowsami,¹² PhD, or physician Deepak Chopra,¹³ MD, or theorists who have an affinity for both western and eastern spiritual perspectives, such as physicist Bernard Haisch,¹⁴ PhD, and physician Larry Dossey,¹⁵ MD.

Type III theories are also seriously entertained by scientists who have strong mathematical and statistical perspectives. An example is my analysis of order, randomness and the essential logic of positing the existence of some sort of guiding—organizing—designing process in nature and the cosmos.¹⁶

Type III post-materialist theories are the most paradigm challenging (and paradigm changing) in that they radically alter our fundamental views of reality and the essence of the cosmos. For example, in physics Einstein's theory of general relativity was not merely (1) complimentary to Newton's theory of gravity and the nature of the universe (i.e., Type II-like), and it was not only (2) more inclusive of Newton's framework. It literally proposed that Newton's idea of a gravitation field as being an attractive force extending out into space was in actuality (3) incorrect, and that Newton's idea of "force" needed to be replaced with Einstein's radical idea of the "bending of space–time."

It should be recognized that what we are calling "post-materialist theorizing" is not new. One of the reviewers of this essay commented that "the centrality of consciousness in the elaboration of what we call reality is not a radical idea, but one that has a long and storied history since humans began to record such things. This view did not cease to exist with the advent of modern science; its proponents have simply been ignored."

For example, this reviewer invites us to consider what Nobel physicist Erwin Schrödinger said

Although I think that life may be the result of an accident, I do not think that of consciousness. Consciousness cannot be accounted for in physical terms. For consciousness is absolutely fundamental. It cannot be accounted for in terms of anything else If we have to decide to have only one sphere, it has got to be the psychic one, since that exists anyway.

Max Planck, the founder of quantum mechanics, said

I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness.

Furthermore, near the end of his life, Planck said

As a man who has devoted his whole life to the most clear headed science, to the study of matter, I can tell you as a result of my research about atoms this much: There is no matter as such. All matter originates and exists only by virtue of a force which brings the particle of an atom to vibration and holds this most minute solar system of the atom together. We must assume behind this force the existence of a conscious and intelligent mind. This mind is the matrix of all matter.

These visionary Type III positions are explicated in great detail in John Spencer's¹⁷ book *The Eternal Law*, a

comprehensive examination of ancient Greek philosophy, modern physics, and ultimate reality. Spencer explicates how Type III theories reflect the essence of Platonic logic and philosophy, and he explains how this "metaphysical" framework is re-expressed in the foundation of quantum physics.

It is conceivable that a radical new idea about the nature of mind, implicit in Dossey's vision of "One Mind," will need to be formulated to fully account for what is emerging in science. In the process, our very concepts of matter and material may need to be reformulated accordingly. Post-materialist science needs to be open-minded and visionary enough to allow for the creation of Type I, Type II *and/or* Type III theories.

THE POSITIVE PURPOSE OF POST-MATERIALIST SCIENCE

Semantically, post-materialist science may sound "negative" in that it emphasizes the "end of an era" of thinking, and it does not explicitly put forth a prescription for what a new theory (or theories) will be. This "negative" position is intentional. By leaving the future completely open, it inspires the vigorous pursuit of new ideas and observations. The "naming" of this/these perspectives will emerge in time.

As one of the reviewers reminds us, it is the evidence of "anomalies"—as interpreted by conventional materialist theories—which inspire the search for innovative, more inclusive theories which can explain and even predict them (hence, rendering them no longer anomalous).

As Grossman expresses it, we are at the "cusp" of this potential paradigm change. We are, metaphorically, just seeing the "point" at the very top of the tip of what may be a colossal shift of iceberg-like proportions. Pursuing all testable theories, regardless of type, is both prudent and exciting, and holds great promise for science and humanity.

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