

Can We Determine the Metaphysics Underlying Reality?

The classical physicist's view, with its roots in the 17th century physics that matured under Isaac Newton, has influenced biology and psychology, an influence that began in the 19th century and still continues, although somewhat abated. The most devastating consequence of this metaphysical view (called *material realism*) of biological and psychological beings, which includes us, is that all our subjective experiences, indeed, our minds and consciousness, are regarded as meaningless epiphenomena of matter—only matter is real. This means that the dance of the elementary particles of matter is the real thing; mind and consciousness are merely ornamental, having no causal efficacy. “A physicist is [merely] an atom's way of knowing about atoms,” says the classical physicist. (The biologist puts this epiphenomenalism slightly differently; “A human being is a gene's way of knowing about genes.”)

But this myopic view does not jibe with the experience of the people of the arts and humanities. There would be no art, none of the disciplines of the humanities, if all our subjective endeavors lacked meaning, value, and causal efficacy. And the materialist view of the world squarely contradicts the worldview of spiritual traditions, still quite popular even among scientists. The spiritual traditions of the world continue to uphold the belief that the world is fundamentally spiritual—the kingdom of God is everywhere, to paraphrase Jesus, although people don't see it readily. But people do see the causal efficacy of matter and machines readily, and this increases the confusion.

How do you, dear reader, think of yourself? Are you at ease thinking of yourself as a material, determined machine, as a meaningless dance of quarks and electrons? How do physicists and other scientists think of themselves? I always like to tease my materially oriented scientist colleagues: “If you believe yourself to be determined material machine, basically a zombie, why do you take yourself so seriously?”

But bantering goes nowhere because the physicist can easily retort that taking ourselves seriously is also part of the meaningless ornamental extravagance that we are!

Dualism

In truth, the reason we all tend to take ourselves seriously, the materialist view propounded by physicists notwithstanding, is that we are hidden dualists. Descartes long ago gave us the philosophy of modernism, in which the world is a machine, but the mind is not. Mind is a dual world separate from the machine world; it has free will; it can control the machine world of things by discovering that world's mechanical laws and manipulating them. We take ourselves seriously because we are these thinking minds. "I think, therefore I am."

But dualism is hard to uphold because if mind and matter are two separate things, separate substances comprising separate worlds, how do the two interact? Think about it. Two things that have nothing in common cannot directly interact. They need a mediator. But where is this mediator? In our experience, there is an internal component and an external component: we call the internal mind and the external we see as the playground of matter. It sure does not seem that there is a third mediator substance anywhere.

On top of this difficulty with dualism, the resounding success of classical physics in explaining the external material world opens us to the parsimonious hypothesis that it is all matter, including the interior mind. This is the philosophy of epiphenomenalism.

Epiphenomenalism, taken seriously, leads to a deep despair of spirit. This is the origin of much of the post-modern malaise that we see around us—in our art, in our culture, in our politics and media. We seem to be in a pit of meaningless extravaganza, and there seems to be no way out. We cannot win. If we believe in modernism, we contradict what physicists and other scientists are telling us. If we believe that we are materialist machines, then nothing matters. A scientist was asked, "What's mind?" He said, "Doesn't matter." And when asked, "What's matter?" he quipped unabashedly, "Never mind."

Holism

Along came some optimistic post-modern thinkers and a new philosophy called holism was born. This is the idea that the whole can be greater than the sum of the parts. The parts and their interactions, when things become very complex, perhaps give rise to a whole that does have causal efficacy, does have meaning, does have interconnectedness that we can identify as spirit, as the kingdom of God, or consciousness.

Instead of reductionistic physics that gives us existential despair, should we not opt for this holism, this "Tao of physics?" A recent advance of physics, chaos theory (see Volume I of this book), seems to support the idea of emergent holism. Chaos theory works within the ideas of mechanism, determinism, and materialism; but it is founded on a recently discovered surprise that many mechanistic systems are determined, but not so much predictable. For such chaotic systems (weather is a good example), the butterfly

effect holds: a little dance of a butterfly in one part of the system affects parts of the system far away. Notice how close this is to what the mystic poet Francis Thompson wrote:

All things by immortal power
Near or far
Hiddenly
To each other linked are,
That thou canst stir a flower
Without troubling of a star.

A Zen dialog between a student and a master has the same flavor as Thompson's poetry. "Master, from where comes your spiritual power?" asks the student. The Zenmaster replies, "By being connected to the source." "You are connected to the very source of Zen?" retorts the student with not a little incredulousness. "Yes. And beyond that. I am Zen. The connection is complete," replies the master nonchalantly. "But isn't it arrogant to claim complete connection with the source?" The student is still incredulous. "On the contrary," says the master. "Everything is connected. If you think you are not connected to the source you are thumbing your nose at reality itself."

So does realizing the "Tao of physics"—the interconnected wholeness that holistic physics promises—restore the damped spirit of the post-modern world? Unfortunately, holistic emergence of causal efficacy and interconnectedness is totally unfounded from what we know of material systems and their interactions. Elementary particles make atoms, atoms make molecules, molecules make cells, cells (neurons) make brain. In this hierarchy of material things, we do not know much about the brain, and although molecular biology gives us much knowledge about the living cell, the knowledge is far from complete. But our knowledge of molecules and atoms is so complete that we can refute emergent holism with quiet confidence—why don't new holistic properties emerge at the levels of atoms and molecules that are not reducible to their constituents and their interactions? And chaos theory does not really help, because it implicitly accepts determinism. True, the lack of complete predictability may give us a pseudo free will, the appearance of a free will, but what is such appearance good for? We still don't have real causal efficacy.

So are we to become existentialists, asserting that only existence is and there is no essence? Perhaps metaphysical assertions are for the birds, why bother with metaphysics? But alas! Even this assertion is metaphysics!

Is there an alternative to materialism, dualism, and no-metaphysics-ism (for which the technical name is logical positivism)? There is. This philosophy holds consciousness as the primary being and is called monistic idealism.

Monistic Idealism

The point is this. We undoubtedly have an interconnectedness, but is this interconnectedness explainable with the holistic notion that everything interacts with everything else, nothing is truly isolated in view of the fact that some of the forces of

nature have infinite outreach? Monistic idealism has a different track to interconnectedness. Here all things are interconnected nonlocally through consciousness, not through force fields and signals. This is what the Zenmaster in the episode above calls “the source.”

What is consciousness? We can start the discussion with what it is not. It is not part of the mind-matter, internal-external, duality. It is not an object, although objects appear in it. It has also to do with the subject, the experiencer, the knower of objects.

But the knower and the known, subject and object—isn’t this another kind of duality? The philosophy of monistic idealism avoids this trap by declaring that consciousness, the source, the whole, the ground of being, is nondual; there is no split in it whatsoever. All duality, including the subject-object duality, is appearance only.

What is consciousness? Because consciousness is the ground of being, all else, including words, concepts, and metaphors, are secondary to it. We cannot define consciousness completely with items that are secondary to it, accentuating the mystery. But, say the spiritual sages, the discoverers of the monistic idealist philosophy, although we cannot define it, we can be it, we are it. It is our ignorance that is preventing us from seeing our original nature, our interconnectedness with the source.

There is another way of seeing this. There are three aspects of our everyday experience that point to consciousness. The first is existence. We exist; we don’t need a doctor to tell us we exist, we are alive. The second aspect is awareness, our ability for subject-object split experience. And the third is bliss or happiness. Materialists think that our happiness comes from material objects, but only a little self-study will convince you that happiness is an intrinsic inner phenomenon; external sensory objects may trigger it, but they are neither necessary nor sufficient. The origin of bliss is our interconnectedness, our unlimited wholeness.

For interconnected wholeness of the local kind, we have chaos theory supporting it. Is there any supporting physics for this nonlocal interconnectedness through consciousness? There is. Quantum physics is radical in yet another respect. Besides the local interactions between material objects that take place through the exchange of energy or signals, in quantum physics there are also nonlocal influences that do not propagate via signals, that do not propagate through space and time at all. This quantum nonlocality is the supporting physics for the kind of nonlocal interconnectedness that consciousness presumably is.

Bridging Science, the Arts and the Humanities, and Spirit

The artists, the humanists, and the spiritually inclined among us have long recognized that their endeavors are nothing but adventures in consciousness, a sometimes round-about way to search for our “souls.” Once we see the metaphysical unity of all of our exploration, including science, the scientists, too, can join in the dance of reality, hand-in-hand with the artist, the humanist, and the mystic. But we should not be too hasty; otherwise the bridge thus built for the cross-cultural dance would only be temporary.

The scientists have a gripe that the artist, the humanist, and especially the mystic are guided by belief, in God, for example, that cannot be upheld via rational means and hard data, which is how science works. And from their side, the artist, the humanist, and the

mystic bitterly complain against science's total reliance on rationality and empirical data. They talk about intuition, and they invite the scientist to try other methods of knowing.

But this methodological debate is totally unfounded. I have shown in Volume I of this book, through several case histories, that scientists also use intuition in their discovery process, that scientific creativity involves a crucial stage called insight, in which neither empirical perception or sensing (hard data) nor reasoning (rational conceptualization) is involved. Instead, insight is obtained as a discontinuous movement of the mind. It should not take long for the reader to realize that what the artist, the humanist, and the mystic is calling intuition or other means of knowing, the scientist is already using. The creative methodology used in all human endeavors is the same.

Likewise, is the artist or the mystic propelled by belief? In the beginning of the journey in these enterprises a belief may be necessary. It is similar to the "initial hypothesis" of the scientist's strategy. But for the artist and the mystic, too, the proof of the pudding is not in the hypothesis, but in the eating. The artist, the humanist, and the mystic discover through their experiences the working of their hypothesized "God" in their lives. In other words, the methodology of all the endeavors under discussion is the same, although different languages are used to describe it, creating confusion.

Besides ontology (metaphysics) and methodology, there is also cosmology. We have an exterior and an interior awareness. Science works with the cosmology of the exterior. The artists, the humanitarians, and the spiritual seekers look inside for their exploration, and their cartography tends to concentrate on the inner landscape. This reminds me of a couple of cartoons. In the first one, a professor (male, of course) is being asked by a wide-eyed female admirer, "Professor, how do you know so much?" To this the professor smugly says, "I open my eyes." In the next frame, a Zen student is asking his Zenmaster a similar question, "Zenmaster, how do you know so much?" To this the Zenmaster, who is serenely meditating, replies, "I close my eyes."

How can we put together the findings of the two complementary approaches? This is obviously a great need for the life sciences, where neither exteriority nor interiority can be denied. Can we ever unite the conceptual basis of the life sciences, in which both exteriority and interiority must be valued, with those of physics, with its clear emphasis only on the exterior? We can't, so long we stay within classical physics. But with quantum physics within consciousness, we can. You will see the demonstration in this book.

Experimental Metaphysics

Quantum physics formulated within the philosophy of monistic idealism enables us to develop an integrated science of body, mind, and spirit, as we will see. But is this enough to suggest that monistic idealism is the correct metaphysics of reality?

The beauty of the current development of science is that today, as the philosopher Abner Shimony has emphasized, we can let experiments decide what is the metaphysical truth. Is the basis of our interconnectedness a holistic metaphysics or a monistic idealist metaphysics? This question is experimentally tractable because it can be translated into the experimental question, "Is our interconnectedness due to local or nonlocal influences?"

The Physicists' View of Nature Part 2

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