The Sacred in Science

Session 6 – *The Physical & Spiritual Nature of Science*

http://www.bickart.org/

1. ***The Wholeness of Nature:*** **What if you woke up tomorrow and could see wholeness in every part of the world?**

    - First of all, you would realize that you had been asleep for a very long time.
    - Then, you would realize that NOW you are AWAKE!
    - Then, you look at a blade of grass; but somehow, you also see the stars. You know the stars are somehow IN the grass.
    - You look at a grain of sand and see the whole world.
    - You look at a wren's egg and see the whole wren.
    - You look at a single wolf and see the whole mind of all wolves.
    - You look at people; but you also see their relationships.
    - Physical objects are not separate from each other.
    - Physical objects are not separate from relationships.
    - Physical facts are not physical only; they are the result of relationship.
    - You see people's beliefs.
    - You watch as people's beliefs cause the physical world.
    - You see the whole mind of all minds in one person.
    - You see the potential for one person's beliefs to change the world.

"I believe a leaf of grass is no less than the journeywork of the stars, And the pismire is equally perfect, and a grain of sand, and the egg of the wren." (Whitman, Morley, & Daniel, 1940/circa 1800)

"A Fact is the end or last issue of spirit. The visible creation is the terminus or the circumference of the invisible world." (Emerson, Atkinson, & Ebrary, 1992, p. 18)

"The Scientific Method relies for its supracultural validity on principles that are themselves among its own assumptions. The logic of its justification is circular. A parallel would be an aborigine insisting, 'Okay, let's settle this question of whether scientific experiment or dreaming is the way to true knowledge once and for all … Let's settle it by entering the dreamtime and asking the ancestors.'" (Eisenstein, 2013a, p. 113)

2. ***Needed! … A New Scientific Method:*** **Does Quantum Physics require your Belief to be considered as part of the experiment?** (Eisenstein, 2013a, 2013b)

"It is natural to the tendency of mechanics to assume these material points, and the laws of forces acting between them, as invariable, since time alterations would lie outside of the scope of mechanical explanation. From this we can see that classical mechanics must lead us to an atomistic construction of matter. We now realize, with special clarity, how much in error are those theorists who believe that theory comes inductively from experience. Even the great Newton could not free himself from this error ('Hypotheses non fingo')." (Einstein, 1950/2011, p. 29)

- Current use of the Scientific Method often makes two omissions: 1) the effect of different observers of 'repeatable' experiments [What about "The Observer Effect" and the observer's beliefs? (Greenstein & Zajonc, 1997)], and 2) that physical objects are the only things that determine physical results. ["Young's Double Slit Experiment" (Young, 1804)]
- Is the Nature of Reality that the world is made of separate, physical objects, only?
- Is the physical world isolated or is it a *responsive medium*, connected to a non-physical world? And, if it is responsive, could it be responding to intention and belief? (B. H. Lipton, 2005, 2006, 2014; B. H. Lipton, Bhaerman, S., 2009)
- In the Next Version of Humankind, is there some way to grow as separate individuals and yet coexist?
- Take Away Mindfulness Demonstration: "Two Wolves II"

"Here is a central assumption of the Scientific Method that may seem so obvious as to be beyond dispute: if two people perform an identical experiment, they will get the same results. This requires (1) determinism: that the same initial conditions will result in the same final conditions, and (2) objectivity: that the experimenter can be separated out from the experiment. These two assumptions are intertwined. If we include the experimenter as part of the "initial conditions," then they are never really identical—not even if the experimenter is the same person performing it at a different point in space and time.

At bottom, the Scientific Method assumes that there is an objective universe "out there" that we can query experimentally, thus ascertaining the truth or falsity of our theories. Without this assumption, indeed, the whole concept of a "fact" becomes elusive, perhaps even incoherent. (Significantly, the root of the word is the Latin factio, a making or a doing, hinting perhaps at a former ambiguity between existence and perception, being and doing; what is, and what is made. Perhaps facts, like artifacts and manufactures, are made by us.)" (Eisenstein, 2013a, p. 111)

"The Scientific Method relies for its supracultural validity on principles that are themselves among its own assumptions. The logic of its justification is circular. A parallel would be an aborigine insisting, 'Okay, let's settle this question of whether scientific experiment or dreaming is the way to true knowledge once and for all … Let's settle it by entering the dreamtime and asking the ancestors.' The principal assumptions of objectivity and determinism that underlie the Scientific Method are by no means shared by all the world's traditions of thought. A nonobjective, nondeterministic, yet coherent system of thought is possible. It is more than possible: it is necessary given the impending collapse of the world of the discrete and separate self that we have wrought. It is also necessary in light of the new scientific revolution of the last hundred years. Our ways of thinking and being are not working anymore.

Science is the intensification of trends of self-conception going back thousands of years. Objectivity and determinism reflect profoundly the way we understand ourselves in relation to the world, infiltrating at the deepest levels our thought, language, and reason. Witness the above phrase, '… if the universe were 'really' like that.' What is this 'really'? It means something like, 'Not just in the opinion of some, but in actual fact.' And what is this 'actual fact.'? Non-objective thinking is exceedingly difficult to communicate, when the assumption of objectivity is built in to the language of that communication. Again, the master's tools will never dismantle the master's house. Objectivity and determinism are woven into our very self-definition. That is why the new sciences of the twentieth century have been so difficult to integrate into our general understanding of the universe. That is why the findings of quantum mechanics seem so counterintuitive, so weird." (Eisenstein, 2013a, p. 113)

3. ***SpaceTime:*** **Where / When is the Observer**

"When I had translated what I considered to be Faraday's ideas into a mathematical form, I found that in general the results of the two methods coincided, so that the same phenomena were accounted for, and the same laws of action deduced by both methods, but that Faraday's methods resembled those in which

we begin with the whole and arrive at the parts by analysis, while the ordinary mathematical methods were founded on the principle of beginning with the parts and building up the whole by synthesis." (Maxwell, 1873/2010, pp. x-xi)

"The thoughts of a Hopi about events always include *both* space and time, for neither is found alone in his world view. Thus, his language gets along adequately without tenses for its verbs, and permits him to think habitually in terms of space-time. Properly to understand Einstein's relativity a Westerner must abandon his spoken tongue and take to the language of calculus. But a Hopi, Whorf implies, has a sort of calculus built into him." (Whorf & Carroll, 1964, p. viii)

- Ancient Scripture questions which is real: the dream world or the physical world.
- Newton's Universal Law of Gravitation eliminates spiritual. All is physical.
- Einstein's gravity depends on curvature of Space – and Time is mutable!
- Quantum Physics: Observer Effect, Entanglement, and Co-location experiments transcend physical SpaceTime.
- Take Away Mindfulness Demonstration: "Meditating to Leave SpaceTime".

For a reference to *current writers on the hoped for, next version of humankind*, go to "Good Reading" on http://www.bickart.org/.

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