

Scientists, Alchemy, Religion, and Spirituality January 24 2010

Frances A. Yates, a distinguished Renaissance scholar, argues that the main influence on the new turning towards the world in scientific inquiry lay in the desire for renewal and transformation fostered in the Hermetic-Cabalist tradition. ¹

Isaac Newton's private notebooks reveal that at the same time he became a professor at Cambridge, at age 26, he began experimenting with alchemy, which is part of that tradition. Other scientists, including those in the Royal Society, also practiced alchemy. The universal law of gravitation was attacked by some, perhaps followers of Descartes, who thought it was a return to belief in the occult. Some even thought it was related to his alchemy experiments. They may have been correct. Pamela Smith of Columbia University notes that Newton pursued alchemy because he thought it gave insight into the active principles of nature. Gravity did not have an explanation; It was an occult force, so Newton believed that it might be one of those alchemical active principles of nature.

Recently released documents from the National Library of Jerusalem reveal that for Newton, religion and science were inseparable; two parts of a lifelong quest to understand the universe. Newton wanted to design a universe in which God was present and powerful. "A most beautiful system of the sun planets and comets can only proceed from the council and dominion of an intelligent and powerful being." Pamela Smith, of Columbia University notes: In Newton's day, science and the investigation of the natural world was a part of religion." ²

In Werner Heisenberg's *Science and Religion*, ³ we see that although having differing perspectives on religion, Heisenberg, Wolfgang Pauli, and Niels Bohr all hold a deep respect for "spiritual" frames of reference. ⁴

"The finding of the truth can only be secured by a determined step into the realm of metaphysics." observed Max Planck, who is said to have embraced religion. ⁵

University of London physicist David Bohm suggested that Aspect's findings of non-locality imply that objective reality does not exist, that despite its apparent solidity the universe is at heart a phantasm, a gigantic and splendidly detailed hologram. ⁶ He concluded that mind and matter "are two aspects of one whole, and are no more separable than form or content. ...Deep down the consciousness of mankind is one." ⁷

Is mysticism different from spirituality? Einstein wrote: "The most beautiful and most profound emotion we can experience is the sensation of the mystical. It is the power of all true science. To know what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty which our dull faculties can comprehend only in their most primitive forms- this knowledge, this feeling is at the center of true religiousness."

While at Imperial College, Abdus Salam had the privilege of interacting with great minds, such as Bertrand Russell, Einstein, Oppenheimer, and Wolfgang Pauli to name a few. In his first meeting with Einstein, their whole discussion was about religion, and they became close friends. Dr Salam won the Nobel Prize in Physics 1979 for his research in "Grand unification theory". This theory was inspired by his spiritual beliefs that all forces emanate from a single source. The hours he spent conducting scientific research at his home, would be against the backdrop of recorded naats and talawat of the Holy Quran. ⁸

Sir John Eccles, an Australian Nobel Prize winning neurophysiologist, suggested that spiritual psychons interact with presynaptic vesicular grids by a process *analogous to* the probability fields of quantum physics. A kind of spiritual cerebral cortex interacts with the physical one undetectably but effectively at thousands of tiny sites. This allows interaction between mind and brain without violating the conservation laws of the physical world, while preserving the autonomy of the spiritual world. ⁹

Fritjof Capra is by profession a quantum physicist. Although his book *The Tao of Physics*, published in 1976, notes parallels between ancient mystical traditions and the discoveries of 20th century physics, it does not equate them. In Capra's words: "Mystics understand the roots of the Tao but not its branches; scientists understand its branches but not its roots. Science does not need mysticism and mysticism does not need science; but man needs both."¹⁰ Such parallels include an emphasis on the energetic nature of physical objects, the unity of opposites, a primordial ground of being, and the interconnectedness of all things.¹¹

After Capra, a number of books by scientists, mostly physicists, have appeared which focus on the connection between science and spirituality.

Ervin Laszlo is an internationally known philosopher of science. His book *Science and the Akashic Field* takes an important step, moving from "parallels" between mystical traditions and physics, to an actual assignment of a scientific reality to a mystical notion; specifically he identifies the quantum vacuum, or Zero Point Field, with the Akashic records of the early 20th century Theosophy movement¹². In Hindu mysticism, "akasha" is thought to be the primary principle of nature from which the other four natural principles, fire, air, earth, and water, are created.¹³

Ken Wilber believes that the scientific community which has associated the quantum world and the quantum vacuum with consciousness and spiritual potentiality and are incorrect, because the quantum world and quantum vacuum have physical properties. He notes that the original and pioneering physicists themselves—from Schrödinger to Planck to Einstein—refused to identify the findings of quantum or relativistic physics with any sort of spiritual reality. However, all these great physicists turned to mysticism for true knowledge of the world and thus became modern mystics in the process."¹⁴ Wilber also concludes, in apparent opposition to Capra, in *Quantum Question*, published in 1983, that "modern physics neither proves nor disproves, neither supports nor refutes, a mystical-spiritual worldview."

But what of the majority of scientists, who do not write books on the subject? Charles Tart, one of the founders of transpersonal psychology, has found that scientists do have spiritual experiences, but are reluctant to talk about them for fear of ridicule. In 1999 he created a website called TASTE (The Archives of Scientists' Transcendent Experiences), allowing scientists from all fields to share their personal experiences in a safe, anonymous, but quality controlled space to which other scientists and the public have access.¹⁵

Still, the link between scientists in general and spirituality is becoming more well recognized.

Mathematician Roger Penrose does not hold to any religious doctrine, and refers to himself as an atheist. In the film *A Brief History of Time*, (1991) he said, "I think I would say that the universe has a purpose, it's not somehow just there by chance ... some people, I think, take the view that the universe is just there and it runs along – it's a bit like it just sort of computes, and we happen somehow by accident to find ourselves in this thing. But I don't think that's a very fruitful or helpful way of looking at the universe, I think that there is something much deeper about it."¹⁶

The July 20, 1998 issue of Newsweek Magazine sported a cover story "Science Finds God"¹⁷ The article states "The achievements of modern science seem to contradict religion and undermine faith. But for a growing number of scientists, the same discoveries offer support for spirituality and hints of the very nature of God."

A study conducted from 2005 to 2006, and published in 2007 by Elaine Howard Ecklund, assistant professor of sociology at the University of Buffalo, examined the religious and spiritual beliefs of academics in the natural and social sciences at twenty-one major universities in the US.

The study found that although scientists are not very religious compared to the general public, they are surprisingly interested in spirituality. Analysis and interviews revealed definitions of spirituality that varied

from “a vague feeling there is something outside of myself” to “a deep and compelling other-centered world view” For many, spirituality just means having a larger purpose or meaning that transcends daily concerns. ¹⁸

The trends seen in the thinking of Einstein and the early quantum physicists and in popular books by physicists and now recognized at the university level by Ecklund’s study are now becoming reflected in the activities of academia. A consortium of about a dozen colleges in the Philadelphia area, including Bryn Mawr, Drexel, and Temple, hosted its 9th Annual Public Issues Forum in 2003, with the title of “*A Dialogue on Science and Spirituality II: Exploring the Emerging Integrative Paradigms & The New Science.*” Dr Ervin Laszlo was the featured speaker. Dr. Ralph Abraham, Professor Emeritus of Mathematics, presented a talk entitled “Chaos, Fractals and the New Mathematical Mysticism”. ¹⁹

A Legitimate Subject of Leading Edge Scientific Research

The nature of spirituality has become a legitimate subject of leading edge scientific research. The Center for Spirituality and the Mind at the University of Pennsylvania is using brain imaging technology to learn more about the neuroscience of spirituality. The director, Dr. Andrew Newberg, confirms the importance of belief in our lives: “The brain is a believing machine because it has to be... Beliefs affect every part of our lives. They make us who we are. They are the essence of our being.” ²⁰

¹ *The Rosicrucian Enlightenment*. Frances A. Yates Barnes & Noble 1996 p. 226 f.

² NOVA Newton’s Dark Secrets (DVD) BBC 2003.

³ http://www.edge.org/3rd_culture/heisenberg07/heisenberg07_index.html

⁴ According to Brad Reynolds, who has provided a book by book summary of the works of Ken Wilber. *Quantum Questions: Mystical Writings of the World's Great Physicists* was pieced together in late 1983

⁵ http://www.edge.org/3rd_culture/heisenberg07/heisenberg07_index.html

⁶ David Bohm, *Wholeness and the Implicate Order* 1980. Google preview:

[http://books.google.com/books?id=-OE9AAAAIAAJ&dq=David+Bohm,+Wholeness+and+the+Implicate+Order,+1980\)&printsec=frontcover&source=bn&hl=en&ei=JzIBSoaQCZzmsgPE78XwBQ&sa=X&oi=book_result&ct=result&resnum=4#PPR6,M1](http://books.google.com/books?id=-OE9AAAAIAAJ&dq=David+Bohm,+Wholeness+and+the+Implicate+Order,+1980)&printsec=frontcover&source=bn&hl=en&ei=JzIBSoaQCZzmsgPE78XwBQ&sa=X&oi=book_result&ct=result&resnum=4#PPR6,M1)

⁷ Daniel Robinson: *Consciousness and Its Implications* CD The Teaching Company, 2007

⁸ <http://www.chowk.com/articles/8387>

⁹ <http://www.consciousentities.com/alternatives.htm>

¹⁰ <http://www.fritjofcapra.net/bibliography.html>

¹¹ Paradigm Wars by Mark Woodhouse

http://books.google.com/books?id=dejmdCWwEHsC&pg=PA112&lpg=PA112&dq=parallels+between+mystic+and+physics&source=bl&ots=BwpEHwA6UY&sig=wQAx2J43Hb-xoHIQQXRxbVP7cig&hl=en&ei=GcooSs-IDoaMtgOI5fm0Cw&sa=X&oi=book_result&ct=result&resnum=1#PPA113,M1

¹² http://www.absoluteastronomy.com/topics/Akashic_Records

¹³ <http://stason.org/TULARC/new-age/magick-kreeeping-ooze/9-What-does-akasha-mean-Is-it-a-library.html>

http://www.ramakrishnavivekananda.info/vivekananda/volume_1/lectures_and_discourses/the_vedanta_philosophy.htm

¹⁴ <http://www.integralworld.net/summaries.html>

¹⁵ From *The End of Materialism* by Charles Tart. New Harbinger Publications 2009. Appendix 3. The website is www.psychology.ucdavis.edu/tart/taste or www.issc-taste.org

¹⁶ http://en.wikipedia.org/wiki/Roger_Penrose
<http://topdocumentaryfilms.com/a-brief-history-of-time/> on line 1 hr 19 minutes

¹⁷ BY SHARON BEGLEY With MARIAN WESTLEY <http://www.encyclopedia.com/doc/1G1-20940583.html>

¹⁸ Elaine Howard Ecklund Religion and Spirituality Among University Scientists
religion.ssrc.org/reforum/Ecklund.pdf

¹⁹ <http://www.complexsys.org/philadelphia.htm>

²⁰ Associated Press Jan 27 2007 <http://www.msnbc.msn.com/id/16842848/>