

Facilitator's Body of Knowledge Research Project

David Bohm, Ph.D

David Bohm (1917-1992) was one of the most distinguished theoretical physicists of his generation, and a fearless challenger of scientific orthodoxy. His interests and influence extended far beyond physics and embraced biology, psychology, philosophy, religion, art, and the future of society. Underlying his innovative approach to many different issues was the fundamental idea that beyond the visible, tangible world there lies a deeper, implicate order of undivided wholeness. Bohm was deeply influenced by both J. Krishnamurti and Einstein.

Dr. Bohm was born in Wiles-Barre, Pennsylvania on December 20, 1917. He became interested in science at an early age, and as a young boy invented a dripless teapot. His father, a successful businessman, urged him to try to make a profit on the idea. But after learning that the first step was to conduct a door-to-door survey to test market demand, his interest in business waned and he decided to become a theoretical physicist instead.

In the 1930s he attended Pennsylvania State College where he became deeply interested in quantum physics, the physics of the subatomic realm. After graduating, he attended the University of California, Berkeley. While there he studied under Einstein and Oppenheimer and worked at the Lawrence Radiation Laboratory where, after receiving his doctorate in 1943, he continued his landmark work on the Theory of Plasma and on the Theory of Synchrotron and Syndrocyclotrons until 1947.

In 1947 Bohm taught at Princeton University as an Assistant Professor and worked on Plasmas, Quantum Mechanics, Elementary Particles and conducted research to the study of electrons in metals.

It was while writing *Quantum Theory* during this time that Bohm came into conflict with McCarthyism. He was called to testify before the Committee on Un-American Activities



against colleagues and associates. Ever a man of principle, he refused. Because of this when his contract at Princeton expired, he was unable to obtain a job. Bohm suffered great distress when he was forced to leave the US in the early '50s on account of the Marxist views he held at that time. He spent time in Brazil, Israel, and finally landed in Britain in 1957, where he worked first at Bristol University and later as Professor of Theoretical Physics at Birkbeck College, University of London, until his retirement in 1987. Bohm lived in London until his death in 1992.

Bohm was a member of the Royal Academy, the originator of the causal interpretation of quantum theory, and the author of a famous text on quantum mechanics and of numerous articles and other books. The best-known recent work was *Wholeness and the Implicate Order*. His classic book, *Quantum Theory*, was an attempt to understand quantum theory from Nils Bohr's point of view. After collaborating with Einstein reviewing it Bohm remained unsatisfied with the theory. His challenge to the conventional

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understanding of quantum theory has led scientists to re-examine what they are doing and to question the nature of their theories and their scientific methodology.

A profoundly contemplative man, Bohm arrived intuitively at universal truths and presented them in imaginative models, in the languages of both physics and philosophy. His physics and cosmology were all-encompassing and so far ahead of his time that few people were able to appreciate them. Mainstream physicists considered them too mystical, and few mystics could follow his subtle scientific reasoning. (Krishnamurti was a notable exception.)

Bohm redefined physics. To him it was not about mere prediction and control, nor even mathematical equations. Though central to the enterprise, they are not its essence. Physics is about nature and our understanding of nature. For Bohm, its meaning and its message were creativity, the signature of an infinite universe. He saw it an undivided wholeness enfolded into an infinite background source that unfolds into the visible, material, and temporal world of our everyday lives. He said that thought can grasp the unfolded, but only something beyond thought - intuition, unmediated insight, intelligence - can EXPERIENCE the enfolded. At some point deep within the implicate order, thought and language fail us and only sacred silence can reveal truth. That silence is the language of the whole, the universe expressing itself through us in a life of integrity rather than fragmentation. It was during this period that Bohm discovered and began investigating Dialogue.

But there was another side to the scientist which could be seen as the driving force in his life. It was his deep concern for the plight of humanity: the fragmentation of heart and mind that leads to hatred, cynicism, irrationality, and war. From an early age his aspiration was to give people a holistic understanding of life. Once this fundamental holism was really understood, human nature would change, and

people would act according to the welfare of the whole

Bohm envisioned a transformation for those who grasped quantum mechanics in depth: a world of interconnection and interdependence, of direct and instantaneous communication, in which we have learned to harness the energies of compassion. Giving voice to the marvelous possibilities of a new future, he was himself an example of his ideas. Many who knew him thought of him as a sort of "secular saint." He had a visionary quality that drew others to him and inspired them. He was transported by the clarity of his vision and energized by it to such a point that he swept his listeners with him into the orbit of the possible. He believed in a world that was meaningful, clear, intelligent and spiritual, where the implicate order is expressed as a living force in our explicate lives.

Bohm believed that the general tendency for individuals, nations, races, social groups, etc., to see one another as fundamentally different and separate was a major source of conflict in the world. It was his hope that one day people would come to recognize the essential interrelatedness of all things and would join together to build a more holistic and harmonious world. What better tribute to David Bohm's life and work than to take this message to heart and make the ideal of universal brotherhood the keynote of our lives.

Resources:

<http://twm.co.nz/Bohm.html>

<http://www.muc.de/~heuvel/bohm/>

"Quantum Theory," New York, 1951

"Unfolding Meaning," (record of a dialogue with David Bohm), London, 1985

"Thought as a System," London, 1994