

# DAVID BOHM, GENIUS OF MODERN SCIENCE IN SERCH OF TRUTH

**Explicate, Implicate Orders in Nature.**

**Every Part of the Whole contains the Whole.**

**- by Scientix**

The small boy David, was climbing a hill nearby his town-Wilkes-Barre, (Pennsylvania). What could all this be this nature around my own existence? - he was thinking. It was an evening: the sun had set. As he reached the top, he saw the lights on in the town. He had a strong feeling, seeing those light coming out and scattering around. It seemed to extend beyond the earth and to fill the universe. Was it not comparable to his own thoughts, which seemed to spread out throughout the endless universe? Is not the whole Nature a web of energy – including himself? It was an overwhelming wave sweeping his mind. He looked on, stunned.

Later in his life he was destined to develop this feeling in a well groomed theory of Physics, which brought modern science nearer to the mystical depths of reality.

David Bohm (1917-1992) was not a sage. He was a brilliant scientist, and a Professor of physics at Princeton University and later in Bristol University. He had even worked with Robert Openheimer on the "Manhattan Project" for building the first atomic bomb in America. He was accused of communist leaning, not because he was one, but because he refused to spy over his own colleagues during the McCarthian witch hunting times (1949). He moved to Brazil and then to Israel. In 1957 he went to Britain, worked at the University of Bristol till 1961 and from 1961 to 1983, he was the Professor of theoretical Physics until he retired in 1983 and died on 27-10-1992.

What a life? On the day he died, his close friend Renee Weber wrote a tribute :

"His Physics and Cosmology were so profound, so all encompassing and so far ahead of his century that few people understood how creative his ideas were. Mainstream Physicists considered them too mystical and few mystics could follow his subtle scientific reasoning."

**"Voices on the Threshold of  
Tomorrow" by George and Trisha  
Feqerstein (Quest 1993)**

Renee Weber had her roots in Philosophy, but was ever in quest of reality and truth. She had equally keen interest in Scientists as well as in Sages. That led her to publish a book **"Dialogues with Scientists and Sages"**, which every human being on earth should read at least once. (Arkana 1885). Though written 19 years back, it is a book of tomorrow for the Western world. The book contains Renee's dialogues with the Scientists: Rupert Sheldrake, Illya Prigogine, Stephen Hawking and David Bohm. The list of Sages with whom she conversed is more formidable : Lama Angarika Govinda (1898-1985), a German but a leading authority on Mahayana Buddhism: the 14th Dalai Lama (means "Ocean of Wisdom"); Father Bede Griffiths (1906-1993) a Benedictin Monk from England who found India, a place where everything including food, water, earth, mountain, river, air, sky, sleeping, sex is sacred and lived in a self-made "Sachidanand Ashram" – just a furniture-less simple hut, near Trichy on the banks of the holy Cauveri River, and died in India, never abandoning his own Christian Religion and revered by the villagers as the White Saint; Krishnamurti a Philosopher sage, who refused a Messiahhood tried to be thrust upon him, and who was Bohm's great friend.

David Bohm is the principal character in Renee Weber's "Dialogues." He has two with Renee; the third, a triangular between Bohm, Sheldrake and Renee; and the fourth between Dalai Lama, Bohm and Renee. What powerful streams of ideas in search of truth! The last was perhaps the best, held at Rikon, a Tibetan village in Europe - near Zurich! The crackling infectious laughter of Dalai Lama; original, dynamic, exciting and yet gentle style of Bohm and Renee's conducting of the physical-cum-mystical music - a unique Mehfil of

the lovers of God and truth - perhaps the angels must have come there, unseen, to enjoy it. Renee's questions were just sprinkles, but so full of thirst that Bohm and Dalai Lama converted the sprinkles to beautiful fountains with breath-taking spectra. Look at this :

Weber : "Does Nature have a Karmic pattern of its own?" OR "Can we clarify what is meant by this space-particle? Is that a concept recognisable to modern physics?"

OR "From where do those waves come?"

OR "Is the rock conscious?"

And the Sage and the Scientist burst out with their answers, emanating from their expertise (or more appropriately) experience.

[My Khshnoomic friends will hear echos of Ilm rising in their hearts from Renee Weber's questions.

Karmic Pattern? : Our Ruvaan's Boat in Zareh Kiaansej

Space Particle? : Anaasar-Gavchithra?

Source of Waves? : Staota Yasna?

Rock-consciousness?: Fragments of Ruvaan?

Remember, my friends! where modern science ends, Khshnoom begins. The highest mountainous end of Science is the starting particle of Khshnoom.]

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What is, then, this "profound physics and cosmology" of David Bohm, which Renee refers to in her tribute written on the day of his death? Let her speak, herself, (vide "Introduction" to her book: Dialogues with Scientists and Sages) :

"In his first dialogue, Bohm outlines his basic theory. He suggests that the world we live in is multidimensional. The most obvious and superficial level is the three-dimensional world of objects, space and time, which he terms the **EXPLICITE ORDER**. Its matter is composed of a dense grade and although it can be **described** by reference to itself alone, Bohm feels that it can neither be explained nor clearly understood in this way. Unfortunately, he says, this is the level on which most of physics operates today, presenting its findings in equations, the meaning of which is unclear.

A clear understanding is possible only by going to a deeper level- the **IMPLICATE ORDER**, which is the all encompassing background to our experience, physical, psychological and spiritual. This source lies in yet a subtler dimension called the **SUPER IMPLICATE ORDER**. Beyond this, we can postulate many such orders, merging into an infinite n-dimensional source or ground." (page 25).

In essence, Bohm is saying the same truths which the mystics, Western as well as Eastern, have presented to the humans since ages. These Truths have four phases: the first is that the observable universe of our experience is a reflection or extension of higher mystical universes. The second Truth is that the consciousness of a non-saintly human is confined to 3 dimensions of space viz. length, breadth and height and one dimension of time. The higher universes or "orders" (as Bohm puts it) have n dimensions where n can be any number - even infinity. As Williams Blake's well known poem says:

**To see a World in a grain of sand  
And heaven in a wild flower  
Hold infinity in the palm of your hand  
And Eternity in an hour.**

The third Truth of the Mystics is that the consciousness of an ordinary non-saintly human is capable of expansion, so as to experience the higher universes.

The fourth Truth is that the expansion of consciousness can be achieved by various practices, like 'Yoga's, meditations, 'Manthra Prayers' Religious Tarikats, coupled with stringent moral disciplines, like

controlling the mind from its own enemies, like carnal passion, lust, anger, greed, craving towards worldly objects, ego, pride jealousy, selfishness, hatred.

David Bohm's Scientific training and thinking brought him to the first two truths and led him to believe that grasping those two, will make humanity more human and lead it to the other two. in his early career, he wrote a standard text book on quantum theory, which was so lucid that Einstein declared that he had not fully understood the theory until he read Bohm's book. That was in 1951. Three years before his retirement from Birkbeck College, London, he came out with the cream of his life-time thinking : a book, "**Wholeness and the Implicate Order.**" (Routledge & Kegan Paul - 1980; Ark Paperback 1983, reprinted in 1984, 1985, 1987.)

It was a long and fruitful intellectual journey of a scientific genius from quantum Theory to wholeness.

Bohm's concept of wholeness germinated from his boy-hood vision on the hill near Wilkes-Barre. Lights from the town spreading out all over tile sky which, in turn, is shining with the points of light the stars! You SEE this! It means you have contained the whole space in your small eye-ball! You are seeing "**structures covering immense stretches of space and time!**" "**A total order is contained, in some implicit sense, in each region of space and time.**" (Bohm's own words: p. 149 - ibid).

Do you follow? He says each region of space-time contains the whole universe! This is explained by Bohm himself by an analogy. Take a photo of somebody on an ordinary camera. Take out the negative. Cut out the upper part, so that the head of that Mr. Somebody is chopped off the negative. Now if you develop the negative, the picture will be of a headless Mr. Somebody. But there is a kind of photography called holography, where if you cut out a piece, say of 2" by 2" from the holograph of 4" by 4", the cut piece will show the **whole picture!** This means every region howsoever small on the holograph contains the whole picture. This in fact happens in holography. On that analogy the Universe is a huge holographic plate where every part contains the whole. The plate is a momentary frozen version of what is happening on an infinitely vaster scale in each region of space all over the universe. As Briggs and Peat say in their excellent book, "**Looking Glass Universe - The Emerging Science of Wholeness**" (Touchstone 1986), "Everything mirrors everything else; the universe is a looking glass."

As Science entered the 21st century, such knocking of the door of mysticism has increased, Throughout the later part of the last century, a number of truth seeking scientists have worked experimentally on the concept of what is called a "Zero Point Field", a concept appearing in the equations of quantum physics itself. Everything in the universe is connected with everything else through a FIELD of Energy. These researches are very ably and lucidly summarised in 2002 book: "**The Field - The Quest for the Secret Force of the Universe**" by **Lynne McTaggart**, an American investigative journalist. (Quill - 2003). On the very first page of her prologue she summarises the situation :

Human beings and all living things are a coalescence of energy in a field of energy connected to every other thing in the world. This pulsating energy-field is the central engine of our being and our consciousness, the alpha and omega of our existence."

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This is how the Science has encountered with mysticism. A reviewer of Lynn's book says that this is "hard evidence for what spiritual masters have been telling for centuries". It is a Zero point end of science and an infinitely small beginning of a crawling, towards mysticism. How far the concept of energy field is relevant to Khshnoom is a vast subject. Here, we can say only this : There is non-physical energy in the Nisti realm of Creation as also **within** a human being-Azda, Keherpa. Man is a replica of the whole creation Our Earth-Geyti-is the evolutionary ground for the Ruvaan, to be liberated from Druj, through the non-physical and Yazatic Energies. The divine machinery of Ahura is founded on a single pillar: Hamo Manangha-ho, Hamo Vachangha-ho, Hamo Shyothnaongha-ho..... Everybody is connected with everybody else as Ham- and with Ham-Mithra.

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My friends! This is the story of a Science-genius, who had the youthful vision of vast space in a small eye.

The visions which set a life time tremor in the hearts and souls of humans are not rare. Here is one :

"One morning I took some parched rice in a small basket and was eating it while I walked along the narrow ridges of the rice-fields. In one part of the sky, a beautiful black cloud appeared heavy with rain. I was watching it and eating the rice. Very soon, the cloud covered almost the whole sky. And then a flock of Cranes came flying. They were as white as milk against that black cloud. It was so beautiful that I became absorbed in the sight. Then I lost consciousness of everything outward. I fell down and the rice was scattered over the earth.

Who was this?

**He was Ramkrishna Paramhansa**, a Saint (1886-1886) of India, whose Samadhi states were like a Sufi dance, whose mere touch could turn an athiest, Narendra, into a Swami Vivekanand, and who gave to India a treasure of Saints, Swamis and Sadhus. He was a spiritual scientist who experimented with different Religions and divine paths.

From Bohm to Ramkrishna is a long long way, but who knows, Bohm's burning desire to search out the truth and dream of humanity in the humans in this life, may bring him back as a sage in the next birth.

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## WHAT IS SCIENCE?

"This brings us to an important root feature *of Science* :.....to be ready to acknowledge any fact and any point of view as it actually is, whether one likes it or not. In many areas of life, people are, on the contrary, disposed to collude in order to avoid acknowledging facts and points of view that they find unpleasant or unduly disturbing. Science is however dedicated to seeing any fact as it is and to being open to free communication with regard not only to the fact itself but also to the point of view from which it is interpreted"

**- from Bohm and Peat's "Science, Order and Creativity" p. 241 (Bantam 1987).**

Apply this to the Science of Khshnoom. Those who are in search of Truth accept Khshnoom. Those who are unduly disturbed by it, run away from it and bark at it from a long distance.

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