

WAVE-PARTICLE DUALITY

Compiled of Articles from *The Mystic's Vision*
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1. A Wonderful New Science

Over a century ago, the science of physics was revolutionized by the discovery that light and matter appear to behave both as waves and as particles. The long-standing question of whether the nature of light and matter was wavular or particulate had gone back and forth throughout the previous three centuries, the consensus now favoring one, now the other. But then, in the early twentieth century, the leading scientists in the field of theoretical physics were unanimous in declaring that matter and light evidenced *both* wavular and particulate properties—properties that alternately appeared, depending on how they were measured. Thereafter, for all practical purposes, waves and particles (quanta) were considered to be “complementary” ways of describing light and matter.

But even though the standard ‘Copenhagen’ interpretation considers this complementarity a fundamental property of the universe, there are others who think that the ambiguity lies not in the nature of light and matter but in the fundamental nature of human perception and measurement. There are yet others who believe that the universe consists of one single wave-propagating continuum—and that the appearance of light and matter as particulate is merely the effect of the countless number of ways of perceiving the distinguishable manifestations of that one continuum. However, those scientists involved in practical experimental physics completely avoid dealing with the controversy simply by following the established mathematical formulas (involving the ‘collapse’ of the wave functions) that allow for whichever interpretation—wave or particle—that is called for; thereby leaving such theoretical questions regarding the ‘true’ nature of reality to more philosophically adventurous minds.

A distinctly more philosophically adventurous mind, that of David Bohm, gave expression to a ‘new’ conception of the universe in a 1975 article written with Basil Hiley. Here is a relevant portion of that article:

“The world which we perceive cannot properly be analyzed into independently existent parts with fixed and determinate dynamical relationships between each of the parts. Rather, the ‘parts’ are seen to be in immediate connection, in which their dynamical relationships depend, in an irreducible way, on the state of the whole system (and indeed on that of broader systems in which they are contained, extending ultimately and in principle to the entire universe). Thus, one is led to a new notion of unbroken wholeness which denies the classical idea of analyzability of the world into separately and independently existent parts. We have reversed the usual classical notion that the independent ‘elementary parts’ of the world are the fundamental reality, and that the various systems are merely particular contingent forms and arrangements of these parts. Rather, we say that inseparable quantum inter-connectedness of the whole universe is the fundamental reality, and that relatively independently behaving parts are merely particular and contingent forms within this whole.”¹

The ‘old’ way of conceiving the universe, I will remind you, regarded all the things, particles, and individual beings as separate independent objects and creatures that interacted in accordance with physical ‘laws’. The ‘new’ way of conceiving of the universe regards every particle, object, and living being as inseparably united in an integral conscious continuum of which all particles, things, and beings are constituted. Everything that once appeared to be random outcomes of merely blind forces, and governed by laws of probability, is now seen to be acting in harmonious accord within an “unbroken whole” conceived and contained within the one Mind, wherein “all things move together of one accord, and wherein assent is given throughout the universe to every falling grain.”

The most amazing and most wonderful aspect of this new way of seeing the universe is the recognition that every individual mind partakes of the one Mind and is capable not only of establishing a meaningful connection to the one Mind, but of actually experiencing its identity with that one all-pervasive Mind. For those to whom this identity has been revealed, all things and all beings are seen to be connected in an all-inclusive matrix of what some call ‘Spirit’, and others refer to as ‘Mind-stuff’; and all things are seen to be interrelated through one universal will or intention. Those who have experienced their own existence and the existence of all phenomena as manifestations of the one Spirit, the one immortal Mind, know with certainty that all identity is one. Such people, known as ‘mystics’, are yet few, but their numbers are growing, and one day the vision of a divine cosmos, existing

within a divine Mind, will become the ‘standard model’ of a wonderful new science.

NOTES: 1. Bohm, David and Hiley, Basil, “On The Intuitive Understanding of Non-Locality as Implied By Quantum Theory”, London, Foundations of Physics journal, Vol. V, 1975, pp. 96, 102.

2. Consciousness And Matter

I. Consciousness

Humans meet reality on two fronts: the mental front and the physical front—what the ancient Greeks referred to as *Psyche* and *Cosmos*—or what we today might call the subjective and the objective realities. Another way of referring to these two fronts is as the realm of *Consciousness (Mind)*, and the realm of *Matter (Body)*. And so, if we are to give a full picture of our experience of reality, we must give an account of both its mental and its physical aspects. The mental aspect of our reality, or consciousness, is experienced as wavular; the physical, or material aspect of reality is experienced primarily as particulate. But, since Consciousness is the source and creator of Matter, every distinct particle of Matter also contains Consciousness; and so, Matter is both wavular and particulate, as is the Light from which Matter is made. There is one all-pervasive Consciousness, and the consciousness of every distinct individual is included in and partakes of it.

Consciousness is like an ocean in that it is a continuum that is wavular; in other words, it is capable of producing waves of consciousness in the form of thoughts. We are all familiar with the waves we produce in our consciousness, and we are familiar with the fact that waves, in whatever continuum, are formed of two opposing movements: a crest and a trough—each movement necessitating the other. This became clear to me during a ‘mystical’ experience that occurred when I was in my twenties:

The experience had begun as an intense prayer, and initially, while I was still identified with my separate self, I was addressing God as “Thou”; but when God’s grace revealed to me that I was merely a wave on the one ocean of Consciousness, and that He alone was the sole reality, I realized that, now, to speak the word, ‘Thou’, would be to re-establish duality. For I saw that, with the thought of ‘Thou’, I bring into existence at the same time, an ‘I’.¹ ‘I’ and ‘Thou’ are interdependent; there is no ‘Thou’ without an ‘I’, no ‘I’ without a ‘Thou’. The

crest and trough of a single wave are opposing twins, two sides of one coin. It is the same with all such pairs of contraries: “I love and (thereby) create (its opposite) hatred; I am in peace, and am fashioning chaos; standing on the peak, I necessitate the depths.” All opposites occur as the crest and trough of a single wave. It is only in a continuum capable of producing waves that opposites necessitate one another in this manner. Thoughts, created in and of consciousness, are therefore undeniably wavular.

These waves of thought on the ocean of Consciousness produce duality, but Consciousness Itself, like an ocean, has no contrary to Itself, no opposite; It is the one substratum, the boundless and undivided ocean of Consciousness, and has no duality in It. Grace having revealed that ‘I’ and ‘Thou’ are merely the crest and trough of a wave of thought, both were resolved in the one ocean of Consciousness who alone exists absolutely. Then, the false ego-identification simply vanished, leaving only the one all-pervasive Consciousness aware of Itself; and in that expanded awareness, all became clear: “Now, weeping and laughing are gone; night is become day; music and silence are heard as one; my ears are all the universe.” In that moment beyond time, “All motion has ceased; everything continues. Life and death no longer stand apart (because that One contains everything—living or otherwise). No I, no Thou; no now, or then. Unless I move, there is no stillness (for stillness cannot be without movement).”

This is the realization of the one eternal ocean of Consciousness; It is *That* which has been called ‘God’, ‘the Absolute’, ‘the Unchanging Ground’, ‘the divine Self’. When it is known, It is known to be the ultimate Reality, the final irrefutable answer to the question, ‘Who am I?’. Anyone who has experienced the divine Self in this way will tell you that the experience at its peak does not last forever; but it is certainly transformative and lasting in its joyous certainty.

II. Matter

What, then, of the material universe that surrounds us and constitutes our bodily form? Theoretically, the universe of Matter is the result of an initiating eruption of high-frequency electromagnetic radiation, or Light, that occurred around fourteen billion years ago from the eternal Consciousness. That Light transformed into wave-particles, collected into atoms, molecules, gases, stars, and entire galaxies spread throughout this vast universe. The one eternal Consciousness, manifesting

in this way as multiple forms within Itself, then imparted Its own awareness to these forms as Life and Consciousness, and multiplied.

Eventually, after the passing of a lengthy stretch of time, this universal expansion will reverse like the alteration of a breath, becoming a universal contraction; and all Matter will implode back to its energy state in the eternal Consciousness from which it originated, and the universal cycle will be repeated once again. That high-frequency Light which transforms into the fabric that we call *Matter* is woven of God's Intelligence and Light. Scientists prefer to say that Matter is made of *wave-particles*; but, of course, no one has ever seen a wave-particle. In fact, no such thing actually exists; 'wave-particle' is merely a statement of alternate possibilities.

Since the first half of the twentieth century, physicists have regarded both Light and Matter as possessing the contradictory but complementary properties of both waves and of particles. This has become well known as the Wave-Particle Duality (WPD), observable in physics experiments at the Quantum level. Equally well known is Werner Heisenberg's Principle of Uncertainty (or Indeterminacy), which states the impossibility of simultaneously measuring both the position and momentum of a wave-particle. It now turns out that these two limitations on our ability to know and understand Matter are really one and the same! This astonishing discovery appears in detail in the December 19, 2014 edition of *Nature Communications*. International researchers Patrick Coles, Jedrzej Kaniewski, and Stephanie Wehner made the breakthrough while at the Centre for Quantum Technologies at the National University of Singapore. They found that 'Wave-Particle Duality' is simply the quantum 'Uncertainty Principle' in disguise.

An article describing this new understanding appears also in the PhysOrg Newsletter for December 19, 2014, and is entitled "Quantum Physics Just Got Less Complicated".² It states:

The quantum uncertainty principle is the idea that it's impossible to know two certain sets of information about a quantum particle at once. For example, the more precisely you know the position of an atom, the less precisely you can know the speed with which it's moving. It's a limit on the fundamental knowability of nature, not a statement on measurement skill. The new work shows that how much you can learn about the wave versus the particle behavior of a system is constrained in exactly the same way.

What's really surprising about this discovery is that, for three quarters of a century, the entire scientific community has been widely discussing and utilizing in their experimental researches these two recognized limitations on our ability to know, and yet no one before now even suspected that they were related, let alone that the Wave-Particle Duality was simply another manifestation of the principle of Indeterminacy. In fact, there was a great deal of speculation over the years by well-respected physicists that the Wave-Particle Duality referred, not to a merely *apparent* duality, but to an *actual* duality in the objective nature of light and material substance.

In the case of the experimental determination of whether an elemental constituent of matter behaves as a particle or a wave, as well as in the case of determining its position or its momentum, the very act of observing that constituent of Matter has the power to alter the experimental result. Whether the outcome of an experiment results in a wave or a particle, and/or whether its position or its momentum is measured, each outcome is wholly dependent upon the experimenter's intent, since in both cases, one kind of experiment will give one result, another kind of experiment will give another result.

In other words: If we perform an experiment that allows us to know the *position* of a wave-particle with some certainty, that experiment precludes the accurate knowledge of its *momentum* (velocity times mass); and if we perform an experiment that allows us to have accurate knowledge of the *momentum* of a wave-particle, that experiment precludes the accurate knowledge of its *position*. Similarly, if we perform an experiment that allows us to know the *particulate* nature of a wave-particle, that experiment precludes our knowing (observing) its *wavular* nature; and conversely, if we perform an experiment that allows us to know the wavular nature of a wave-particle, that experiment precludes our knowing (observing) its particulate nature. All of these limitations on our ability to know are described by Heisenberg's Principle of Indeterminacy, or Uncertainty. The question is 'what, if anything, does the unification of these two phenomena, previously thought to be separate and uniquely distinct, say about the nature of Matter that was not previously known?' To physicists, this new understanding places both of these limiting phenomena under the common umbrella of one mathematical formula; but that hardly tells us anything *new* about the nature of material reality. Despite all the words and the mathematical formulas, we remain as ignorant concerning the mysterious nature of Matter as we were before this mathematical unification.

All that we really know is that Matter, in its very tiniest forms, appears to us as either waves or particles. If we ask the question, ‘Waves or particles of what?’, we are back to the original electromagnetic impulses—elusively invisible forces created, governed, and coordinated by a transcendent Intelligence. That Intelligence that projects the Energy by which the material universe is formed is the same Intelligence, the one divine Consciousness, in which our individual consciousness exists. That one conscious Self, that Lord of the universe, is the ultimate Source of the progression of all causes—both mental and physical. He is the uncaused Cause, existing in Himself alone, remaining unaffected by all this busy world and all our mind-born creativity. And so, all enquiry comes to an end: we, with our material form and our conscious awareness, are projections of the one divine Mind. We consist of Him and live in Him; He is the one reality, our own eternal Self.

The only question remaining is: ‘Can we give up our addiction to worry and doubt, our addiction to fear and fault-finding, and rest simply in the peace of God, our eternal Self? Can we accept our inability to know all the mysterious details of this material universe, and put all our trust and faith securely in God, knowing that we are upheld in His mercy, guided by His wisdom, enlivened by His breath, and made happy in His joy?’ Is it possible that such knowledge could be enough for us simple mortals? Can we learn to turn our gaze within, to quiet our own minds, purify our hearts, and know God as our own eternal Self? Yes, with His Grace, we can. Praise God.

NOTES:

1. See the account of my mystical experience in *The Supreme Self*, Fallsburg, N.Y., Atma Books, 1984. Or download the book or the excerpt “My Experience of Enlightenment” on my website at: www.themysticsvision.com.
2. See the article at:
<http://phys.org/news/2014-12-quantum-physics-complicated.html>

3. Complementary Perspectives

Part I. The Coincidence of Science And Mysticism

In the field of physics, the dispute over whether light is particulate or wavular continued to play out over several centuries. Newton asserted that light was particulate; Faraday and Maxwell showed that it was wavular. Plank and Einstein

showed that it was particulate; DeBroglie and Schrödinger showed that both light and matter (electrons) were wavular. Eventually, Neils Bohr attempted to settle the matter by declaring that light and matter appear to be either wavular or particulate, depending on how you measure them; and he declared them to be “complementary” perspectives, each contributing to the total information about light and matter.¹ This became known as the ‘Copenhagen interpretation’ since that’s where Bohr’s institute was located; and this notion of ‘complementarity’ was eventually adopted by the majority in the physics community.

As a result, today we have become somewhat accustomed to the picture of the world presented to us by modern physics which asks us to accept that the world consists of either particles or of waves—depending on how we decide to analyze it. Suffice it to say that, in some experiments both light and matter prove to be particulate; and in some experiments both light and matter prove to be wavular. This empirical ambiguity is so prevalent in the field of physics that we now refer to the constituents of both light and matter as “wave-particles” or “wavicles”; and the phrase “wave-particle duality”, despite the clearly contradictory nature of the term, is commonly heard, though few seem to understand what it means.

Reality, as we all know, is one; and yet it can appear to be divisible into individually distinct and separate perceivable entities or appear as waves on a single continuum in the experience of which there is no distinction between subject and object. Back in the 1930’s, many were pondering these two ‘versions’ of reality which physics had discovered were complementary but irreconcilable descriptions of the reality we experience—among them the highly respected mathematician and dabbler in physics, James Jeans (1877-1946). Jeans attempted to explain in a picturesque way why these two complementary versions of reality were required:

“When geography cannot combine all the qualities we want in a single map, it provides us with more than one map. Theoretical physics has done the same, providing us with two maps which are commonly known as the particle-picture and the wave-picture. It is perhaps better to speak of these two pictures as the particle-parable and the wave-parable.

“The particle-parable, which was first in the field, told us that the material universe consists of particles existing in space and time.
 “...The wave-parable ... does not describe the universe as a collection of particles but as a system of waves. ... [In this parable,] the universe is no

longer a deluge of shot from a battery of machine-guns, but a stormy sea with the sea taken away and only the abstract quality of storminess left...”²

“The old particle-picture which lay within the limits of space and time, broke matter up into a crowd of distinct particles, and radiation into a shower of distinct photons. The newer and more accurate wave-picture, which transcends the framework of space and time, recombines the photons into a single beam of light, and the shower of parallel-moving electrons into a continuous electric current. Atomicity and division into individual existences are fundamental in the restricted space-time picture, but disappear in the wider, and as far as we know more truthful, picture which transcends space and time. In this, atomicity is replaced by ... ‘holism’: the photons are no longer distinct individuals each going its own way, but members of a single organization or whole—a beam of light.

“...And is it not conceivable that what is true of the objects perceived may be true also of the perceiving minds? When we view ourselves in space and time we are quite obviously distinct individuals; when we pass beyond space and time we may perhaps form ingredients of a continuous stream of life.”³

It suddenly struck me, in reading this description of the Wavular version of reality, that this is a description of ‘the mystical experience’ that occurred to me in my cabin in the woods in 1966.⁴ At that time, I had experienced a shift in consciousness from what I regarded as the ‘normal’ version of reality consisting of numerous distinct objects into another, unfamiliar, version of reality in which subject and object are one. But what does that even mean? What is ‘another version of reality’? Is there more than one reality? You see, there has been no vocabulary other than that of spirituality with which to describe the Nondual reality in which one finds oneself in this so-called ‘mystical’ experience—until now. Perhaps we must look to the vocabulary of the physicists to comprehend and explain it!

In order to understand these two complementary ways of viewing the universe from the perspective of the scientists, let’s look at the characteristics, the qualities, of these two ‘versions’ of reality and see in what ways they differ. First, the Particulate, or ‘corpuscular’ version:

The Particulate (Dualist) Version of Reality

1. Here, each perceiving subject and each perceived object possesses a unique identity, each individual subject or object being distinct from any other.
2. Here, every perceiving subject and perceived object consists of smaller units, referred to, in sequence, as molecules, atoms, and sub-atomic particles.
3. Here, the consciousness of each subject perceives, in addition to the subject-object duality, a self-created duality of values, emotions, qualities, consisting of pairs, such as like-dislike, happy-sad, pleasure-displeasure, approval-disapproval, etc.
4. Here, both subjective and objective events occur within the parameters of time and space. Within these parameters, each perceiving subject (soul?) is born, matures, and eventually dies (perhaps to reincarnate at a later time).
5. Here, the struggle for individual existence sets creature against creature according to the diversity of self-interest and motive.

That is the Particle Version of Reality. And now, the ‘version’ of reality into which I shifted during my ‘mystical’ experience:

The Wavular (Nondual) Version of Reality

1. Here, only one limitless continuum of Consciousness exists, containing within It all phenomena, including one’s own body, consisting of waves in the continuum.
2. Here, all wavular phenomena consist of and are manifestations of the one continuum, having no distinct identity of their own.
3. Here, consciousness experiences itself as the one continuum. There is only the One, with no division anywhere.
4. Here, what is experienced is one’s eternal Self. Time and space do not exist. All that occurs is the correlation and natural evolution of the waves of the one integrated continuum.
5. Here, all the wavular phenomena move together of one accord, one harmony, one purpose.

In 1966, when I was sitting in my cabin before the fire in the stove, I was experiencing ‘reality’, as all of us normally do, from the perspective of a distinct individual existing *within* the phenomenal universe of time and space. But, following my prayer, I entered into this ‘mystical’ experience. When my mind entered into that unfamiliar realm of awareness, I was suddenly seeing from the perspective of the one eternal Consciousness from whom the world of time and space is projected and sustained. There was no difference between that one eternal Consciousness and I. And there was no difference between the world and I. One consciousness pervaded and constituted all. It was clear to me then, and remains clear to me now, that the ability to make that shift in awareness does not lie within my control. And for that reason, I am compelled to regard its occurrence as a matter of Grace. Nonetheless, I believe that we are endowed with the ability to either recognize and cooperate with that grace or to ignore and deny it.

On the historic level, such ‘mystical experience’ has been occurring to individuals since the beginning. Though they are “few” in relation to the “many”, nonetheless, thousands, perhaps millions, have known that eternal reality underlying the temporal one. Though it is usually a fleeting experience, it has been the experiential foundation of religion, and the bedrock of idealist philosophy, for lo these many centuries. It was no doubt that very experience occurring to Jesus twenty centuries ago that led him to declare, “I and the Father are one.” The wave-theory of the scientists has only been around since the late nineteenth century. Mystical experience and Wave Theory have just never been associated together before. But today marks a momentous occasion. The recognition that the mystical experience provides experiential confirmation of the scientific theory of an underlying wave-based reality signals the long-awaited and undeniable *coincidence of science and mysticism* in our time. Halleluia!

Part II. Are There Two Versions of Reality?

Not only is wave-particle duality a recognized property of light (electromagnetic radiation), Quantum theory implies that “Wave-particle duality is a property of all matter as well. The electron, which we think of as a particle, is really a quantum bundle of an ‘electron-field’ which acts with wave-like properties.”¹ However, we humans regularly perceive our macroscopic world (which is made up of the microscopic world) not as a Wavular (Nondual) *Field*, but as multiple Particulate (Dualistic) entities. Yet these two perspectives (or ‘parables’) are vastly dissimilar, one having its basis in an eternal sub-reality, and the other occurring as its gross manifestation in a spatio-temporal version of reality that only came into being fourteen billion years ago with ‘the Great Radiance’.

As anyone can see, neither of these two quite different ‘versions’ of the one reality are remotely similar to the other, though they are complementary versions of the same reality. How can this be? Most of us experience the Particulate (Dualist) version of reality every day. It is our ‘normal’ view of the world. But, few of us, it seems, actually experience the “Spiritual” or Wavular (Nondual) version even for a few minutes of a lifetime. Nevertheless, it appears that these two ‘versions’ of reality are not entirely independent, though one exists in time and space, and the other in eternity. Amazingly, they exist together, overlapping, as it were, one projected *upon* the other, and *from* the other.

The Wavular (Nondual) version of reality is absolute. It exists noumenally, but not phenomenally; that is, it can be seen in inner vision by the higher mind but does not appear as a physical reality. “Physical” requires time and space; and that’s where the Particle-version of reality exists. The two versions of reality exist as exclusive, yet complementary realms, or perspectives. The Wave-version of reality can be discovered as operative in the Particle-version; but the Particle-version of reality is ultimately illusory, being identical to the Vedantic concept of ‘Maya’, an appearance.

Some mystics, including myself, have experienced for themselves, in inner vision, that the nature of reality is a wavular continuum, and that this one eternal continuum of Consciousness and Bliss is all that is. This is clearly experienced at a ‘higher’, or subtler, level of consciousness, but having experienced it, how and why do we then sink from there to the ‘particulate’ reality that we all normally experience in the framework of time and space? Is it possible that this particulate reality is a construct of our individual minds?

What *is* this indescribable ‘quantum field’, this undivided continuum of Consciousness— this wavy ocean of reality? Is It the universal Mind that encompasses and includes everything, including each of ‘our’ individual minds? We are in it and part of it; we and everything in the universe flow along in its tides and evolve according to its whims. It is the manifest Divinity. Some say it is God’s *lila*, His play!

But the *real* unanswerable question is ‘whence comes this Particulate world that we experience?’ If the Nondual, Wavular, vision of reality is the ultimately *real* one, then whence comes this Dualistic, Particulate, vision of reality that is ubiquitously present to each of us throughout our lives? Is it a result of human perception only? And if it is a product of our own perception, is it ego-generated?

In other words, is the Nondual ‘ocean’ of reality overlayed by a projected ‘reality’ produced by the sense of ‘I’—which then necessitates ‘not-I’ (or ‘the other’), and hence a multitude of pairs of opposites? Or is our delusion a universal one, created and ordained by God?

In my own experience, these two ‘frames of reality’, the Particulate and the Wavular, the Dualist and the Nondualist, are wholly differentiated perspectives that almost seem to be distinctly separate dimensional realms: One, the Particulate, is our normal, personal, ‘Technicolor’, world of subject-object perception and interior mind-born qualities and values. The second, the Wavular, is a non-personal, transcendent awareness from a perspective beyond time and space, which is identical with an eternal and undivided Consciousness that spreads as waves to include all existence. The Wavular, Nondual, reality is absolute; but the Particulate, Dual, reality is a product of the individual mind. It is initiated, I believe, by the arising of the sense of ‘I’—that which we refer to as “the ego”.

Let us examine the evidence: the creation of all the pairs of opposites (dualities) occurs in the individual mind and is personally unique for each individual. Each mentally constructed value is created from the unique perspective of each ‘I’: I-other, here-there, now-then, night-day, pleasant-unpleasant, like-dislike, good-bad, beautiful-ugly, etc. One thing is essential to the creation of each of these dualities: the ego, the I. Without the ‘I’, they have no footing in this world.

But, as we all know, that ego is a *false* sense of identity. It vanishes when the real *I*, the one Consciousness, the absolute Self, is revealed. That absolute Self is *experienced* as the eternal awareness of the Wavular (Nondual) reality when, by divine grace, one is lifted above the individually created Particulate perspective to that of the divine Mind. There, all is one Self. But how can we reach that ethereal vision? First, know that your current Dualist perspective is false, and begin behaving in such a way to bring about the transformation of your perspective from that of a personal individual self to that of the One. I know well that it is not an easy task, and one that will require long effort; but you can begin simply by treating everyone with love and respect, as yourself.

Part III. David Bohm’s Implicate Order

According to the mystics who have seen into the nature of reality at the noumenal level, God, the one absolute Consciousness, is the Source and Cause of all phenomena, manifesting the universe by His Creative Power in a manner similar to the projection of thought in the mind of an individual. This Divine Thought

contains implicit within it the conscious Intelligence of the Source; and implicit in it also is the entire design and evolution of the universe, from its initial coming into being to all the refinements and transformations necessary in the process of its ultimate realization. Science does not recognize such a scenario as tenable and relegates the visionary knowledge of the mystics to the category of speculative metaphysics. However, one brave scientist stepped forward to acknowledge the possibility that the mystic's vision could provide a basis for a true and consistent worldview; his name is David Bohm.

David Bohm (1917-1992) was born in Wilkes-Barre, Pennsylvania on December 20, 1917. His father was a Jewish furniture dealer, but David went to college, receiving his B.Sc. degree from Pennsylvania State College in 1939 and his Ph.D. in physics at the University of California, Berkeley, in 1943. At U.C. Berkeley, he studied with Robert Oppenheimer; and when Oppenheimer went to Los Alamos to work on the "Manhattan Project", Bohm remained as research physicist at Berkeley, working on the Theory of Plasma and on the Theory of Synchrotron and Syndrocyclotrons until 1947, when he took a position as an Assistant Professor at Princeton University, working on Plasmas, Theory of Metals, Quantum Mechanics and Elementary Particles. It was there he met and had regular meetings with Albert Einstein.

In 1949, during the repressive McCarthy political era, Bohm was called before the House Un-American Activities Committee, and he was asked to testify against Robert Oppenheimer who was being accused of Communist sympathies. Bohm refused to testify, and he was thereafter tried and acquitted. But the damage had been done; he was fired from his position at Princeton University, and was unable to find work in this country. He then moved to Brazil where he taught briefly at the University of Sao Paolo. He also taught for a brief time in Israel before moving to Bristol, England in 1957. In 1961, he became professor of physics at Birkbeck College of the University of London, and remained there for the next 30 years, writing and publishing his several books: *Causality and Chance in Modern Physics* (1957), *The Special Theory of Relativity* (1966), *Wholeness and the Implicate Order* (1980), and *Science, Order and Creativity* (1987). David Bohm died in 1992.

In the 1950's David Bohm was widely considered one of the most talented and promising physicists of his generation. Albert Einstein regarded him as his successor. But his primary work from the 1950's to the 1990's—the ongoing development of his "causal interpretation" (which he later referred to as an "ontological interpretation") of quantum mechanics as an alternative to the standard 'Copenhagen Interpretation'—was met with dismissive hostility by the

majority of the world physics community. In an attempt to provide a scientific formulation of quantum physics consistent with the mystic's vision of a Divine origin and manifestation of our world, Bohm developed and presented his ontological theory, postulating the "unfoldment" of the order of the phenomenal world from an "enfolded" order at a subtler invisible level, referring to these two as "the explicate order" and "the implicate order". These two 'orders', one invisible and eternal (the implicate order), the other phenomenal and temporal (the explicate order), comprise what Bohm calls 'the holomovement', "the unbroken wholeness of the totality of existence as an undivided flowing movement without borders".¹

According to his theory, the implicate order is an invisible substratum containing an archetypal template for the emergence and dynamics of both matter and consciousness, much the way the human mind is the archetypal template of conscious thoughts produced from it. And in his wonderfully lucid writings he endeavored to explain how an "explicate order" — such as this perceived universe — has its source in and unfolds from an implicate, or enfolded order. The implicate order implicitly contains and manifests the explicate order, and the explicate order contains within itself the implicate order.

Bohm theorizes that, in the implicate order, all things are interconnected in a way that transcends space and time. This is because the implicate order is an integral noumenal substratum resembling a transcendent Thought-matrix which generates, forms, and organizes the constituents of the explicate order. Everything in the implicate order consists of one wavelike continuum (as does thought) until it is manifest in the explicate (spatio-temporal) order, i.e., is witnessed by a conscious observer. Then it becomes particulate, i.e., 'an individualized 'thing''. Bohm suggests that this wave/particle complementarity can be explained by the implicate-explicate order duality. In the implicate order, objects consist of waves in a continuum (a *Field*); in the explicate order, those objects appear to be particulate.

Bohm eventually felt it necessary to amend his theory to acknowledge a yet subtler Source underlying the implicate order as its Fount, a superimplicate order (or even a subtler super-superimplicate order, both of which were only vaguely defined), which could be interpreted as an eternal multidimensional Ground resembling the Absolute Consciousness, or "the One", of Neoplatonism, or the absolute Brahman of the Upanishads. Thus, not only is the emergence of time and space, matter and energy, given a causal base in this superimplicate order, so is the subjective consciousness of man. This view, while it replicates the metaphysics of the mystic, and has the advantage of being a consistent and plausible model, also

has the disadvantage, from the standpoint of science, of being wholly undemonstrable, as is any metaphysics that postulates a transcendent and noumenal source for the physical universe. But Bohm was more interested in a correspondence with truth than with a correspondence with scientific criteria.

Bohm presented his ‘ontological’ theory, not as empirical evidence or ‘scientific’ proof, but as a plausible framework to answer many of the questions that were and remain to this day so baffling to science—such as the source of the wave-particle duality, the Mind-Matter duality, the apparent purposive activity of natural elements, the so-called ‘entanglement’ of individual particles, and many other unexplained phenomena. His multi-dimensional framework is consistent with the ‘mystical’ visions reported repeatedly by mystics and seers of every spiritual tradition throughout history. And, though there is no mention of a personal ‘mystical’ experience in any of his writings, one suspects that Bohm did indeed experience a revelation of sorts in his early life that led him to devote his future life and career to the framing of a metaphysics inspired by that vision and applicable to many of the recent observations in quantum physics, his chosen field.

In his original theory, Bohm postulated the existence of a “quantum potential”, which he saw as a wave-like complement to each individual quantum (particle) that provided the information to guide and control the movement and function of each particle. In his later writings, he amended this concept to a “quantum field potential” assigning the guidance-wave—not merely to the individual quantum particle, but to the entire energy field from which the particle arose, and by extension to the entire universe. This brings Bohm’s theory more in line with traditional mystical theology which suggests a single divine Mind as the one guiding and controlling force operative throughout the universe.

We may readily recognize that the concept of the “implicate order” is quite similar to what the mystic describes as ‘the divine Mind’ (*Nous*), or ‘the creative Energy of God’, out of which all phenomena arise, and in which all are contained. While remaining ever-free and clear, the divine Mind extends Itself by way of this Energy to the entire universe. The divine Mind is inherent and implicit in Its Energy, and so It fills all animate and inanimate beings, to varying degrees according to their evolution, with Its own Consciousness and Joy, and moves them all according to Its will. Thus, the manifested living beings, who are the evolutes of Its Energy, are able to know within themselves Its being, Its freedom, Its Consciousness, Its Joy. By the grace of the divine Mind, they are able to transcend in mind the limitations of the egocentricity imposed on them in the process of manifestation and are able to ascend in consciousness to the very being of God, knowing Him as their original and authentic Self.

In that ascension, they perceive the perfection of God's universal manifestation in which all created things are linked in a wonderful unity of being and becoming. Like the atoms in a cresting wave, or in the flowering of a rose, they are welded together in a synchronous dance of movement toward their intended evolutionary culmination. How vast and perfect in every way is their dance! It is indescribably wonderful! In the mystic's vision, the unfolding of the universe and all that that entails is seen to be a coordinated and integrated presentation wherein "all things move together of one accord;" and "assent is given throughout the universe to every falling grain." This vision is to be found also in David Bohm's expression of the implicate-explicate order of the universe. He sees the "superimplicate order" as the ultimate conscious Source of the implicate order, and the implicate order as the causal framework of the explicate order—the explicate order (the manifest universe) being merely a limited "reflection" of the implicate order. In the mystic's vision, as in Bohm's theoretical postulations, the causal source, dispensed with in the 'Copenhagen Interpretation' of quantum physics, reappears as an inherent principle in the design of the Whole.

In Bohm's broad suppositional proposition, causality is seen to rest in the implicate order (and ultimately in the superimplicate order), whose phenomenal effect is the explicate order in all its manifestory effusiveness. And, while this 'ontological interpretation' of David Bohm's is a marvelous restatement of and extrapolation on the expressed vision of the mystic, it remains, from the standpoint of science, merely another speculative philosophy, unprovable and unfalsifiable by science's criteria of proof.

But consider: On the evening of November 18, 1966, I was privileged to "tap in" to what I now consider to be the subtle-level aspect of reality that Dr. David Bohm labeled "the implicate order". Dr. Bohm founded his conception of 'the implicate order' on purely theoretical grounds, never suggesting that this hidden 'order' could be known intelligibly; but the fact remains that the visual experience described by myself and other mystics is identical with what Dr. Bohm describes as the characteristic features of 'the implicate order'. Surely, this would tend to lend credence to the reality of what is experienced in 'the mystical vision' as well as to offer confirmation of the theories of David Bohm.

Though the non-spatio-temporal aspect of reality that Bohm refers to as 'the implicate order' has been called in the past by many different names, no one prior to Dr. Bohm has so clearly connected its existence to current scientific evidence and the requirements of a logically consistent scientific framework. Clearly,

Bohm's work is ground-breaking proof that gnosis is a fruitful source for scientific investigation and understanding. In effect, Bohm has translated the great mystical theology of mystics like Plotinus and Shankara into the vocabulary of physics and given it a form and rationale that is relevant today. Perhaps other scientists will follow the path he has shown, expanding on his vision, and bringing us closer to a science that corresponds with the declarations of revelation proffered by the gnostics.

Here is a graphic to show how each of the prominent mystical traditions relate to Bohm's 'causal' scheme:

<i>Plotinus</i>	<i>Vedanta</i>	<i>David Bohm</i>
The One	Brahman	The Superimplicate Order
The Divine Mind	Ishvara/Maya	The Implicate Order
Soul/World	Jiva/Jagat	The Explicate Order

Bohm's vision is, in its essence, compatible with, and virtually identical to, the perennial vision of the mystics. It is flexible enough to encompass consciousness, creativity, and all the phenomena experienced in the subjective and objective world of experience. It also provides the answers to nearly all of the questions put forth by quantum physics in recent times; in fact, it was designed by Bohm to answer these questions. For example, the question regarding the wave-particle duality and the phenomena of non-local effects. "Non-locality" refers to the fact that particles from a larger particle that are split off from one another are able to affect one another immediately even at great distances—hence non-locally, as well as acausally. Since there is no actual causal relationship between such distant particles, these non-local interactions are considered to be *entangled* or synchronous, representing instantaneously connected ripples in a vast conscious ocean of energy.

Thus, in Bohm's scheme, as in those of the mystics, all things, as projections of a higher dimensional reality, are immediately linked in a web of relationship which is not determined by proximity, or interacting forces, but simply by participation in that common conscious Whole. That distinct entities need not share the same local region of space to be immediately interconnected is therefore explained by Bohm's theory. As Bohm has stated:

Ultimately, the entire universe (with all its particles, including those constituting human beings, their laboratories, observing instruments, etc.) has to be understood as a single undivided Whole, in which analysis into separately and independently existent parts has no fundamental status.²

This explanation of the nonlocal (acausal) interconnectedness of particles that are constituents within a whole, as well as an unbroken continuum of Consciousness, suggests an explanation for clairvoyance, telepathy, and the oft-experienced phenomenon of synchronicity in human events, first given attention by Carl Jung. ‘Synchronicity’ refers to the occurrence of unexplainable and causally unconnected, yet meaningful, “coincidences” such as the type all of us have at times experienced. It may involve thinking of someone who then immediately calls on the phone. Or it may involve the uncanny repetition of a theme or motif in our daily life, such as an image, name or number repeatedly appearing in various circumstances. Or it might be evidenced in the actuality of some occurring event that you had dreamed of the night before. Such “coincidences” are explained similarly in terms of the quantum interconnectedness of all things in both the implicate and the explicate orders.

On the cosmic and the human scale, “synchronicity” refers to the universal propensity of matter and consciousness to follow a specific governing energy pattern: what Jung called an “archetype”. *Archetype* is the name given to specifically defined “energies” which exist as invisible real-world “forces” that manifest in both the material and the mental realm. For example, the Sun, Moon, and the planets all have “archetypal” energies associated with them. These energies were described and elaborated into metaphorical personalities by earlier civilizations, namely the Babylonians and the Greeks, who regarded them as “gods”, embodied as the planets. Thus, each of the bodies within the solar system, including the Sun and Moon, individually embody an archetypal energy which is said to define its particular “influence”. These archetypal influences continue to exist today, even though we no longer think of them as “gods”.

Many events which we would normally think of as synchronistic, or coincidental, occur in a common astronomical milieu, i.e., under common planetary conditions, as, for example, a retrograde station of Mercury, a Moon-Neptune square aspect, or any other similar configuration occurring in the heavens. A violent dream might occur at the exact time of a Mars transit to the position of a planet in our own personal natal planetary map. This would constitute a synchronistic relationship between the Mars’ transit and our own psyche. However, most of us

are unaware of the continuously changing angular interrelationships between planets or of their relationship to our own natal maps. And while many hold that such interplanetary relationships are not the *causes* of earth-events or psychological states, they are synchronous with them, and serve to signal the presence of archetypal energies operating in the external universe for those who are prepared to read these signs.³

How, one wonders, do the planetary positions and angular relationships relate to human subjects? And most especially, how do the current positions of planets and their angular relationships relate to the positions of the planets at the time of the birth of the individual? Most scientists would answer, 'They don't! Such a notion is simply a relic of ancient superstition!' But the reality of the synchronicity of planetary positions and their archetypal energies with actual events or states of consciousness is unquestionable to one who has made a long and careful study of the planetary motions and their synchronous correlations. And yet the question of *how* these distant planets can affect a significant change in one's world and in the subjective content of one's mind is still an open question, and a matter of yet unresolved controversy. Is the connection local or non-local? Is it causal or acausal?

The theory of a local connection, adhered to by some, derives from the classical mechanistic view of the universe, and suggests some kind of wave pattern interference or facilitation. If there is an electromagnetic type of wave field that extends from all the planets to earth and also interacts with human brain waves, then the connection is local, and the phenomena of astrological correspondences can be explained as a *causal* relationship. To date, however, no such field has been discovered. The alternative theory is that mind and planets are instantaneously interconnected *non-locally* as embodiments of one all-pervasive Intelligence. Such correlations exist not in any cause-effect manner, but rather in the same way as the other acausal connections we have discussed; they exist because of the interconnectedness of all things within the universe at the "implicate" level. Clearly, synchronicity, the synchronization of events, takes place only within a coordinated whole. In such a coordinated whole, we would never be able to know or prove *how* such correlations work; we could only say, "Thy will be done." According to this theory, the universe is not a great clock; it is one conscious and coordinated Whole established in the one great Mind.

According to this theory, it is a consciously projected and integrated Thought-construct in which we live; a dream-world. The planets and their synchronicity with mental and physical actions are, like us, constituents in an integral Thought-

drama. Who can measure the relationships between items in a dream? They are not separate; they are constituents of a Whole, in which there are no divisions. The same is true regarding the relationships between items in the objective world: It's all God – His Thought-projection. He is both the Cause and the effect. Within this Thought-drama, planets move, people evolve; it's all organically coordinated, but there are no independent causal relationships going on within it. It is the way it is because that is just the way He thought it, willed it. In other words, the planets are to be seen as signs, or markers, of particular archetypal energies contained within the whole, signifying elements of the cosmic design fashioned by a transcendent Intelligence. In such a universe, what clearer understanding could one gain by pursuing the matter further? Additional scientific enquiry would be irrelevant. Communing with the Author through love would be far more fruitful.

Part IV. The Synchronicity of Cosmos And Psyche

The dawning recognition by many scientists of the quantum interconnectedness of everything in the cosmos is one of the most significant recent developments within the scientific community. And one of the most potent sources of evidence for this view has recently been produced by Richard Tarnas, a cultural historian and professor of philosophy, whose book, *Cosmos And Psyche*, gives lucid and dramatic expression to one particular facet of this wholistic view. In his book, he relates the results of the thirty-years of research he accumulated on the relationships between the ordered movements of the planets and the historical events and psychological states observed in our Western culture over the last two millennia. From this study, he concludes:

I have become convinced, after the most painstaking investigation and critical assessment of which I am capable, that there does in fact exist a highly significant—indeed a pervasive—correspondence between planetary movements and human affairs, and that the modern assumption to the contrary has been erroneous. The evidence suggests not that the planets themselves cause various events or character traits, but rather that a consistently meaningful empirical correspondence exists between the two sets of phenomena, astronomical and human, with the connecting principle most fruitfully approached as some form of archetypally informed synchronicity.¹

Drawing upon an enormous amount of research, which is divulged in the course of his book, Tarnas builds an impressively unassailable case for the above conclusion. He has shown by scientific methods that there is, indeed, a proven correlation

between the recognized archetypal energies associated with the various planets and the manifestation of those energies in the lives and activities of humans on earth. I had attempted to show, in my book, *The Supreme Self*, that even the mystical experience, what has been referred to as ‘the union of soul and God’, is seen to be signaled by particular planetary patterns, especially as those transiting patterns relate to the positions of the planets at the time of the individual’s birth; and Tarnas’ work now confirms and corroborates those findings.

What an extraordinarily remarkable and amazing discovery this is: that our lives, our births, our very thoughts, are intertwined with the planetary energies and their angular relationships to one another! I too have watched and wondered at the amazing synchronicity evidenced between the planets and my own inner and outer world for over thirty years, and I too have become firmly convinced of their factual validity. I doubted, however, that I would ever see a comprehensive presentation of empirical evidence for these synchronicities in my lifetime. But Richard Tarnas has accomplished the impossible. For that, he will take his place among the giants. In this recently published book, Richard Tarnas, one of the finest, most well-informed, minds of our time or any other, has shown in an overwhelming fashion the synchronous correlations between various planetary patterns occurring throughout history and the events and cultural motifs that have surfaced historically in human affairs. It seems almost certain to me that this book will be regarded in the future as a significant watershed in the intellectual and spiritual development of our Western culture. Whether the minds of average citizens are capable of the mental subtlety required for grasping and utilizing this knowledge in their lives remains yet to be seen.

Tarnas’ monumental study does not omit the recognition of a noumenal Cause behind the many interconnections in the universe; in fact, he acknowledges the limitations of a purely “scientific” engagement with the cosmos, and advocates a larger engagement that integrates science with spiritual vision:

.. This larger engagement with the cosmos will require of us a profound shift in what we regard as legitimate knowledge. It will demand an initial act of trust in the possible reality of an ensouled cosmos of transformative beauty and purposeful intelligence.²

... The cosmos as a living whole appears to be informed by some kind of pervasive creative intelligence—an intelligence, judging by the data, of scarcely conceivable power, complexity, and aesthetic subtlety, yet one with which human intelligence is intimately connected, and in which it can consciously participate.³

Though Tarnas is clearly an exception, there is a tendency among many of the purveyors of the newly formulated synchronistic worldview to omit or entirely dismiss the concept of an ultimate intelligent Cause, immanent within Its own creation. Acausal connections within the Whole do not eliminate the requirement of a Cause for the Whole itself. We must not simply take the ‘implicate order’ to be an independent *a priori* substratum.

There is a Supreme Ruler from whom the implicate order derives, who generated the universe and set it in motion, who is its efficient and its material Cause as well as its underlying order, and who permeates every particle of the Whole. He is not merely the implicate order; He is the Cause of all that exists, and is the center of our intelligence, our creativity, our soul; He is our true and lasting Self. He cannot be seen or measured in any way; and so, He is beyond the methods of science. He can be known only through His gracious Self-revelation—in other words, through gnosis. He is the One to whom we must look, and the One to whom we offer reverence and gratitude for all that we are and all that we enjoy. Yes, Virginia, there is a God; He does exist. He really exists! And yes, He is loving; He is full of kindness and joy, and He knows everything. I know; I have seen Him.

Part V. Summarizing Complementary Perspectives

For David Bohm, the wave-particle duality is indicative of the perspective from two different planes or levels of reality, one invisible and beyond time and space, consisting of a field of spreading waves, and a second plane or level of reality manifesting in the physical time-and-space world consisting of particulate matter. The first, the subtle-level plane, he called “the implicate order”; and the second, the physical plane, arising from the former, he called “the explicate order”. He explained the wave-particle duality in terms of these two “orders”, both of which, he believed, contribute to our experience of the world that we perceive and with which we interact.

As Bohm points out, from the eternal perspective of *the implicate order*, one contiguous field, or continuum, spreads its ripples, and everything consists of those ripples or waves—there are no distinct individual entities; all are interconnected in one, and consist of that one, as waves spreading on the ocean consist of the ocean. But from the perspective of the (spatio-temporally manifest) *explicate order*, things are individualized, particularized; as each wave on the ocean has its own individual characteristics, each thing or being in the explicate order has its own separate identity or soul. So, in a way similar to, and directly related to, the wave-particle

duality, there is also a duality of self-identification. Just as, from different perspectives we may appear wavular or particulate, similarly, from different perspectives we may appear to be identical to the universal Consciousness or distinct as an individual soul.

Another dispute similar to the wave-particle debate had been going on for centuries in the realm of metaphysics: it was between the advocates of causal determinism and the advocates of free will or choice. The question is “Are we entirely governed by the will of the One, or do we have a free and independent will to do as we choose? Do we move in accordance with the will of one all-inclusive causal tide, or do we each have the ability to determine our own fate according to our individual choices?” Through the centuries, this dispute went back and forth in a manner reminiscent of the wave-particle dispute, with no resolution. And no one seemed to notice that this dispute was directly linked to the wave-particle dispute! Just as light and electrons, viewed from different perspectives, appear to be either wavular or particulate, our identities, viewed from different perspectives, may appear to be either contained in and identical with the universal Consciousness or as distinct individual souls. The perspective from the vantage point of eternity is quite different than the perspective from the vantage point of time and space! Likewise, viewed from these different perspectives, we may appear to be either totally determined by universal causal factors or entirely free to choose our own actions.

The notion that we, and everything in the universe, may appear as wavular from one perspective, and particulate from another has not yet sunk into the collective psyche; no doubt, it will also be difficult for humanity to come to terms with the understanding that, from one perspective, we are entirely at the mercy of the universal causal fiat, and from another perspective, we are entirely self-determined and solely responsible for our actions—in other words, that we are *both* the manifestations of the one nondual continuum and an individual soul, that we are *both* determined and free!

Mystical experience such as that of my own and others, along with the experimental findings of respected physicists, leads us to acknowledge that the wave-particle duality is not just a curious paradox; it represents a new paradigm whose implications have not yet fully dawned on the scientists—let alone on the public. The fact that light and matter reveal themselves to be particulate in some experiments and wavular in others suggests to some (like David Bohm) that there are two separate perspectives overlapping—a wavular one and a particulate one

(even if the particulate perspective turns out to be merely a subjectively induced illusion).

So far, humanity has not been able to come to terms with the question of whether we are determined or free in our willing; but perhaps we will also eventually come to an understanding that the determinism-freedom duality, like the wave-particle duality, is a complementarity of perspectives that we can accept, recognizing that we may appear to be causally determined *and/or* appear to possess a free will, depending on our perspective. Such an understanding, however challenging to our current worldview and to everyone's sanity, would certainly serve to clarify and resolve one more long-standing dispute over the question of whether we are free or determined in our will.

We may also eventually see that this complementarity of determinism and freedom is closely bound up with the complementarity of identities—the recognition that from an eternal perspective we may appear to be participants in the continuum of the one world-soul, and therefore identical with It; and we may also appear from the spatio-temporal perspective to be distinct individualized souls (*jivas*). Both of these perspectives contribute information necessary to the complete knowledge of ourselves and are therefore complementary. The relationship between the underlying unity of Consciousness (the implicate order, or wavelike continuum) and the manifold universe of individual subjective souls and objects (the explicate order, or particulate phenomena) is comparable to the relationship between the ocean and its waves. What we mean by 'the ocean' is the self-contained body of water; 'the waves' are the varied unique configurations of water that play on its surface. Like waves, each soul, defined by the astronomical pattern that accompanies its embodiment, is unique and may or may not be harmoniously compatible with other souls, who are associated with different astronomical patterns.

The relationship between the varied soul-manifestations may be harmonious or disharmonious; but in the underlying Consciousness (the level of the implicate order), as in the depths of the ocean, there is no differentiation, no multiplicity, and therefore no relationship which may be either compatible or conflicting. At the level of the explicate order, from the perspective of a particular soul, another soul may indeed appear to be incompatible, unlovable, and indeed unlikable; while, at the level of the implicate order, all souls are in fact inseparably one in the indivisible unity of Consciousness. The question of how we are to reconcile these two seemingly irreconcilable perspectives is one to which we have as yet found no answer.

I am convinced that, so long as we are embodied on this earth, there are two complementary identities within us: one, an undifferentiated continuum of Consciousness which we usually refer to as ‘the eternal Self’; and the other, an assembly of predispositions, habits, and karmic history, that we refer to as ‘an individual soul’. And until we come to terms with both complementary aspects of our identity, we cannot wholly know who we really are; we cannot know the full truth about ourselves.

Many spiritual teachers have advised that this ensemble of qualities that comprises the individual soul must become transparent to the light of God, the eternal Self who is within us, so that those finer divine qualities may shine through. One such spiritual advisor, Meister Eckhart (1260-1327), put it this way: “The very best and utmost of attainment in this life is to remain still and let God act and speak in thee.”

God, our eternal Self, has created everything from Himself, and so, ultimately, all is God. But within His creation, there are *apparent* dualities—such as body-soul, matter-space, the One-the many—all *appearances* only. “I” and “Thou” is another of these apparent dualities. So, Meister Eckhart’s saying, “let God act and speak in thee,” presumes a duality between “God” and “thee” which is only an apparent duality; there is no *real* distinction between the two—and yet there certainly appears to be a distinction: “I”, the individual soul, am that separate ego, that isolated “me” that stands over against the all-embracing One in whom all the universe exists. My little mind engages in self-centered noise and chatter; God’s Mind is pure clarity and inspiration—so, clearly, “I” must be still, and let God do all the speaking and acting. But these two, “I” and “God”, are simply two different perspectives from two different levels of consciousness in the same manifest individual. They are what David Bohm called the Explicate Order and the Implicate Order.

From the perspective of one’s individualized consciousness—what we refer to as “the soul”—God is other; God is the heavenly Father in whom we live and move and have our being. Our relationship to Him is to a hazily perceived Overseer who guides and inspires us. But from the perspective of the illumined soul, dissolved in and made one with the Divine Consciousness that is God, the duality of ‘I’ and ‘Thou’ that is apparent only in the world of time and space vanishes, and the only perspective remaining is that of the One who alone is—the Implicate Order and not the Explicate Order.

Still, the *apparent* duality persists through habit, through the long-accustomed habit of separating one's *individual* identity from the One, creating an "I" and a "Thou" where only the One truly exists. So, while this *apparent* duality exists (i.e., while we are embodied), the practical solution would seem to be to regard the two—"I" and "Thou"—as complementary. Of course, when the true eternal Self is revealed, both I and Thou will vanish, and only the One will experience Its ever-present existence. The fact is, while we are always the nondual Reality, we are temporarily confined to a Divinely produced universe of complementary identities, both of which must be thoroughly known and acknowledged.

NOTES:

I. from Part I. 'The Coincidence of Science And Mysticism':

1. Neils Bohr: "Evidence obtained under different experimental conditions cannot be comprehended within a single picture, but [it] must be regarded as *complementary* in the sense that only the totality of the phenomena exhausts the possible information about the objects." From "Discussions with Einstein on Epistemological Problems in Atomic Physics", in P. Schilpp, *Albert Einstein: Philosopher-Scientist*; New York, Open Court Publishing, 1949.
2. From James Jeans, Aberdeen Address to the British Association For The Advancement of Science, 1934, "The New World-Picture of Modern Physics". The full text of James Jeans' 1934 Aberdeen Address may be found at:

[history.mcs.st-and.ac.uk/history/Extras/BA_1934_J1.html](http://www-and.ac.uk/history/Extras/BA_1934_J1.html)

3. *Ibid.*
4. See the description of that experience in my book, *The Supreme Self*, available as a free download at the Downloads page on my website at: www.themysticsvision.com.
5. The brilliant physicist, David Bohm (1917-1992) regarded these two 'realms'—the Wavular and the Particulate—as the "Implicate Order" and the "Explicate Order" respectively. Here is an explication of Bohm's vision by Michael Talbot:

"Bohm ... posits that we can look at reality as if it consists of two levels. He calls the level we inhabit—where things like electrons, toaster ovens, and

human beings appear to be separate from one another—the *explicate* order. The level of subatomic reality—where things cease to have separate location, quantum interconnectedness reigns, and all things become a seamless and unbroken whole—he calls the *implicate* order.

As we have seen, because everything in the universe is ultimately constituted out of things that exist at this unbroken level, the apparent separateness of objects at our own level of existence is also an illusion. ...Because we are constituted out of the nonlocal level, Bohm feels it is ultimately meaningless to speak about consciousness as having a specific location. It may manifest inside our heads while we function in life, but the true home of consciousness is in the implicate, says Bohm. Thus, consciousness, the great ocean of consciousness that has divided itself up into all human beings, also exists in all things. Despite its apparent inanimate nature, in its own way a rock is also permeated with consciousness. So are grains of sand, ocean waves, and stars.”

(from Michael Talbot, *Mysticism And The New Physics*, New York, Penguin Group, 1993; p. 158 [originally published by Routledge and Kegan Paul, 1981].)

II. from Part II. ‘Two Versions of Reality?’:

1. Neils Bohr: “Evidence obtained under different experimental conditions cannot be comprehended within a single picture, but [it] must be regarded as *complementary* in the sense that only the totality of the phenomena exhausts the possible information about the objects.” Quote is from: “Discussions with Einstein on Epistemological Problems in Atomic Physics”. In P. Schilpp. *Albert Einstein: Philosopher-Scientist*; New York, Open Court Publishing, 1949.

III. from Part III. ‘David Bohm’s Implicate Order’:

1. Bohm, David, *Wholeness And The Implicate Order*, London, Routledge, 1980; p. 172.
2. Bohm, David, *Wholeness And Implicate Order*, London, Routledge, 1980. (For a brief, intelligent and lucid exposition of Bohm’s visionary physics, see “Lifework of David Bohm”, by Will Keepin at:

http://www.vision.net.au/~apaterson/science/david_bohm.htm

3. For more information on the mystical interpretation of astrological synchrony, please see my website: www.theastrologersvision.com.

IV. from Part IV. ‘The Synchronicity of Cosmos And Psyche’:

1. Tarnas, Richard, *Cosmos And Psyche*, New York, Viking, 2006; p. 68.
2. *Ibid.*, p. 468.
3. *Ibid.*, P. 489.

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