

Article

The Nature of Quantum Reality: What the Phenomena at the Heart of Quantum Theory Reveal About the Nature of Reality (Part III)

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ABSTRACT

What quantum theory has revealed about the nature of reality has remained hidden in plain sight for almost one-hundred years because what quantum theory has revealed about the nature of reality cannot be comprehended in the context of the materialist model and conception of reality in which science presently operates, which materialist model places physical reality at the center of reality and Consciousness at the periphery, as a secondary or derivative reality. What this work will demonstrate, by explaining the heretofore inexplicable basis of the phenomena that lie at the heart of quantum theory, is that it is Consciousness rather than physical reality that lies at the center of reality, and that it is physical reality rather than Consciousness that is a secondary or derivative reality. Specifically, wave-particle duality, quantum uncertainty, quantum non-locality, the probabilistic nature of the wavefunction, and the collapse of the wavefunction, will all be shown to be phenomena that have as their basis the way in which the fundamental Reality of Consciousness, through relation to Itself, creates what it apprehends as physical reality.

One of the most important things the phenomena that lie at the heart of quantum theory will be shown to reveal about the nature of reality is that the nature of physical reality is like that of a reflection, and like a reflection, physical reality is able to obscure from view what is actually there, as long as it is mistaken for what is actually there. Thus, in revealing the reflection-like nature of physical reality, the phenomena that lie at the heart of quantum theory indirectly reveal that what is actually there, underlying the reflection that is physical reality, is the non-physical, non-experiential Reality of Consciousness that is, through relation to Itself, both creating and apprehending experiential reality in general and physical reality in particular. Ultimately, understanding the reflection-like nature of physical reality should make it possible for Individuals to understand that what actually Exists directly where they are, where their physical bodies appear to be, is not different in Nature than what actually Exists everywhere else as well, where the rest of physical reality appears to be, thereby disabusing them of the notion that what they are is a physical reality, while at the same time revealing to them their true Nature as Consciousness, which, through relation to that which is also Consciousness, creates what they, as Individual points of Consciousness, apprehend as experiential reality in general and physical reality in particular.

Part III of this series of three articles includes: 3. The nature of the wavefunction; 4. There is no spoon; and 5. The connection between quantum physics and eastern philosophy.

Key Words: Nature, quantum reality, quantum physics, Consciousness, materialist model.

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3. The nature of the wavefunction

When answering the question regarding the nature of quantum reality, it is necessary to be clear what is being referred to as quantum reality, just as when answering the question regarding the nature of reality, it is necessary to be clear what is being referred to as reality. That is, just as there is Reality and reality, there is quantum Reality and quantum reality. Put another way, there is the Reality that is actually there that is the basis of what is apprehended as quantum reality, and there is what is apprehended as quantum reality.

The Realities that are actually there that are the basis of what are apprehended as quantum realities are second level Relational Structures composed of Existence that has become configured and structured in relation to Itself. Those second level Relational Structures extend from the first level of Relational Structure that underlies what we apprehend as the physical experience of space, and which first level of Relational Structure is also composed of Existence that has become configured and structured in relation to Itself. The second level Relational Structures that are the basis of what are apprehended as quantum realities, although they too are composed of Existence that is configured and structured in relation to Itself, are different from the first level of Relational Structure, in that they are formed through a different sort of relation of Existence to Itself, and so are a different sort of Relational Structure, which different sort of relation and Relational Structuring is only made possible by the Existence of the first level of Relational Structuring. Most of what are referred to as physical laws derive from constraints imposed by the first level of Relational Structuring, from which and within which the second and third levels of Relational Structuring extend and within the Structural confines of which those second and third level Relational Structures must then operate.

As we dig deeper into material reality, e.g., from the molecular to the atomic to the subatomic, what we are actually doing is digging deeper into Reality, and in digging deeper and deeper into Reality what we are actually doing is digging into lesser and lesser degrees of iteration of Existential self-relation, because Existence being progressively in relation to Itself is What Is Actually There underlying the etching that is physical experience-reality. Put another way, as we dig deeper into material reality we are actually digging deeper into Reality, and as we dig deeper into Reality what we are actually doing is progressively untwisting the rubber band of Existence that has, through iterative relation to Itself, become progressively twisted upon Itself. That is, Existence first forms relations with Itself in a way that creates the Relational Structure that underlies what we apprehend as space. The Relational Structure that underlies what we apprehend as space then forms relations with Itself to create the Relational Structures that underlie what we apprehend as subatomic or quantum realities. The Relational Structures that underlie what we apprehend as subatomic or quantum realities then form relations with each other to create the higher order Relational Structures that we apprehend as atoms, and the Relational Structures that we apprehend as atoms then form relations with each other to create the higher order Relational Structures that we apprehend as molecules or crystals, and so on and so forth, until here we are, Organic Processes that are Ourselves forming relations with this Universe composed of Existence that has, through iterative relation to Itself, become configured into a progressive Relational Structure, and as a result of those relations apprehending this Universe of progressive Relational Structure as physical reality. Thus, as we dig from the macroscopic level into the subatomic level, what we encounter are less iterated Relational Structures, i.e.,

Relational Structures composed of fewer relations of Existence to Itself. So it is that, as we dig deeper into reality and so into Reality what we are doing is unraveling the relations between lower order Relational Structures that compose a particular higher order Relational Structure, and in so doing providing experiential access to those lower order Relational Structures, by making it then possible to form an impactive relation with those lower order Relational Structures and create a physical experience as a result.

And the excavation of Reality and reality was going along swimmingly and seemingly without a hitch until scientists reached the point in their excavation of reality where the instrumentation needed to create physical experience through impactive relations with the unraveled and now exposed Relational Structures at the quantum level of Reality had to be so sensitive that the experiential limitation, which had always been there, could no longer be ignored, thereby introducing uncertainty, which then led to the development of the wavefunction as the most accurate expression of what was found to exist at the quantum level of reality, the development of which has left scientists, for nearly the past one-hundred years, scratching their heads wondering what it is that the wavefunction actually represents and so what the findings of and phenomena associated with quantum theory actually have to say about the nature of reality. Thus, the question has been for some time, what does the wavefunction actually represent? For example, does the probabilistic nature of the wavefunction mean that physical reality actually exists in a state of probability prior to being observed? The answer to that question is no, physical reality does not exist in a state of probability prior to being observed, because physical reality literally does not even exist prior to the relation that creates it as an experience and so as an observation apprehended by an Individual. And so, if the wavefunction cannot represent physical reality, because it expresses the state of that reality prior to its observation and so prior to its even being brought into existence as a reality, then just what is it that is being expressed by the wavefunction, i.e., what does the wavefunction represent?

In the context of understanding the experiential process as presented in this work, i.e., how physical experience is created, including the limitation inherent in the Individual creation of experience, it can now be stated definitively what the wavefunction represents. Quantum reality, expressed by the wavefunction, represents the translation of the second level of Reality, i.e., a second level Relational Structure, into terms of physical experience prior to the involvement of that second level Relational Structure in a relation that actually creates a physical experience. In short, quantum reality is the translation of second level Realities into terms of third level realities or physical experiences, absent the involvement of those Realities in a relation that actually creates a physical experience. Put another way, quantum reality is the translation of second level Realities into terms of a reality that only arises and comes into existence, as it were, at the third level of Reality, as Existence becomes involved in another level of self-relation, i.e., a third level of Existential self-relation, absent the actual involvement of those Realities in a third level Existential self-relation. Put another way, the wavefunction does not represent physical reality; rather, it represents a second level Reality or Relational Structure, expressed in terms of that Realities' potential to become involved in the third level or impactive relations that create what is apprehended as physical experience.

However, the wavefunction is not what is actually there as Reality, but is itself an experiential reality. But the wavefunction is not a physical experience, because it is the expression of a

second level Reality that is not yet involved in the relation that creates a physical experience, and so expresses that Reality in terms of its probability or potentiality for functioning in the creation of a physical experience. Thus, the wavefunction seems to be a very unique and special sort of experience, in that it seems to be a hybrid mental-physical experience, in that it contains components of both mental and physical reality, i.e., experiential components derived from both second and third level Existential relations. The wavefunction contains mental reality in terms of its abstract mathematics and it contain physical reality in terms of what that abstract mathematics is expressing, which is the probability of creating a physical experience. Put another way, the wavefunction expresses the potential of what Exists at the second level of Reality, where mental experience is being created and where physical experience has not yet been created, to become involved in the third level relations that actually create physical reality.

Thus, the wavefunction seems to be an experience that is neither purely physical nor purely mental, but is some combination of both, which makes sense considering that the wavefunction is derived from third level Realities, i.e., Organic Processes, poking their noses into the second level of Reality where the relations of Existence to Itself at that level create mental experience, and then translating what they find at that level of mental experience into terms of the third level of reality, i.e., into terms of physical experience, as shown in figure 21.

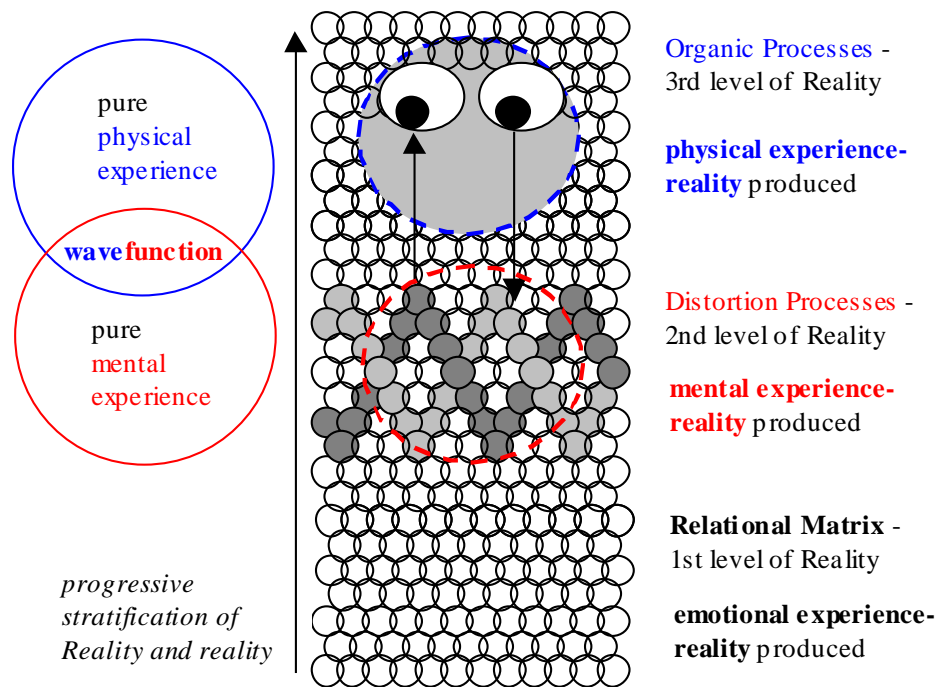


Figure 21 This drawing depicts the hybrid mental-physical experiential nature of the wavefunction as being derived from the stratified Structure of Reality and reality, since the wavefunction is what is created when we dig into the second level of Reality (represented by downward arrow), where mental experience is created as a result of the Existential relations that are occurring at that level, and force the second level Realities or Relational Structures at that second level to express Themselves in terms of relations that only occur at the third level of Reality (represented by upward arrow), where physical experience is created.

In a way, the wavefunction is what we get when we force a second level Reality to tell us what physical experiences it can function to create. And the second level Reality complies and presents us with the wavefunction, but it makes no sense to us because our senses present us with determinate physical realities, whereas the wavefunction presents us with indeterminate physical potentialities. But that is the best the second level of Reality can do, prior to its involvement in a relation that actually creates a physical experience, because prior to its involvement in a relation that actually creates a physical experience, at which point it becomes constrained by the experiential limitation, that second level Reality can function in the creation of opposite physical experiences, and which it will ultimately function to help create cannot be determined prior to its direct or indirect involvement in a relation that actually creates a physical experience. It is as if we are interrogating a second level Reality and say, "tell us what you physically are," and It tells us the best It can, through the wavefunction, but we do not understand what It is telling us, because we do not understand that the Reality we are extracting the information from, and trying to determine the nature of, is of a Nature that is completely different than the nature of the physical reality that we are demanding it express Itself in terms of.

Perhaps it can now be understood why what the phenomena at the heart of quantum theory have to say about the nature of reality has remained hidden in plain sight for so long, so radical is the nature of what understanding those phenomena first requires to be understood regarding the nature of physical reality as a created and peripheral reality, and so as a sort of reflection that is not what is actually there where it appears to be, relative to what is presently the dominant materialist view of physical reality as the central and source reality, in which view physical reality is assumed to be what is actually there where it appears to be. Again though, the strange is only strange in the context of considering its opposite to be normal. But again, what are we to do when what we consider to be normal is itself an illusion, thereby making what is actually the normal state of affairs seem strange by comparison? As previously stated, we either see through the illusion and so realize what is actually the normal state of affairs, or we cling to the illusion, in which case what is actually the normal state of affairs remains hidden from view, as a body of water remains hidden as long as one takes the reflection that only lies on its surface for what is there.

4. There is no spoon

Understanding what has just been described in this work as the nature of both quantum Reality and reality requires that one at least be able to consider the notion that physical reality is derivative of Consciousness, and so requires one to loosen their grip somewhat on the materialist notion that Consciousness is somehow derivative of physical reality. Understanding what has just been described in this work also requires that one at least be able to consider the notion that physical reality is not what is actually there where it appears to be, in the same way a reflection is not what is actually there where it appears to be. These things are required because, owing to the same experiential limitation that functions to create quantum uncertainty, which limitation precludes an Individual from being involved simultaneously in the mutually exclusive relations necessary to create opposite experiences, unless and until one is able to loosen their grip on the materialist assumption regarding the relation between physical reality and Consciousness, as well as the assumption that physical reality is what is actually there where it appears to be, then the

explanation and description of quantum Reality and reality presented in this work simply cannot be realized, i.e., cannot be created and apprehended as a conceptual reality, because the relations in which an Individual must be involved in order to conceive as real what has been described in this work as the overall nature of reality are mutually exclusive of the relations in which that Individual must already be involved if they are conceiving as real the opposite conceptions of reality, which opposite conceptions in this case are the related notions that Consciousness is somehow derivative of physical reality and that physical reality is what is actually there where it appears to be.

The experiential limitation that has been shown to be central to the functioning of the quantum phenomena of wave-particle duality, uncertainty, and non-locality, functions in the creation of all experience, because experience of every sort, , i.e., emotional, mental, and physical, is created as the product of some relation of Existence to Itself. This is why, as already stated, one cannot feel good while feeling bad, and vice versa, because those opposite emotional states are the product of one's involvement in opposite and so mutually exclusive relations, and so while involved in one relation, and as a result creating and experiencing one emotional state, it is not possible for an Individual to be involved simultaneously in the opposite and so mutually exclusive relation necessary for that same Individual to create and experience the opposite emotional state. Likewise, the experiential limitation also functions in the Individual's creation of mental or conceptual experience. And owing to the unavoidable functioning of that limitation, no one who was unable to let go of the notion of the earth as being flat was ever able to conceive of the earth as actually being round, and no one who was unable to let go of the notion that the sun orbited the earth was ever able to conceive that the earth orbited the sun. And so it is also that no one who is unable to let go of the related ideas that physical reality creates Consciousness, and that physical reality is what is actually there where it appears to be, will ever be able to conceive how Consciousness creates physical reality, or how it is that physical reality is not what is actually there where it appears to be, leaving such a one unable to truly understand quantum mechanics, or what it has to say regarding the nature of reality, because the conceptual context in which physical reality is conceived to produce Consciousness, and in which physical reality is conceived to be what is actually there where it appears to be, is the exact opposite of, and so mutually exclusive of, the conceptual context required to understand the experiential process that lies at the heart of the phenomena that lie at the heart of quantum mechanics.

In order to truly understand what quantum theory has to say about the overall nature of reality it is necessary to understand that physical characteristics, be they of the quantum or the macro variety, are not characteristics of What Is Actually There, i.e., not properties that inhere in the Existence in relation to Itself that is actually there. Rather, physical characteristics are created as products of the relations of Existence to Itself, and as such those characteristics and properties inhere in the relation that is occurring between What Is Actually There and not within the Existence in relation to Itself that is actually there. What Is Actually There, i.e., the Existence that is actually there, is not a particle, nor is it a wave. Particle and wave are physical characteristics that are created as the products of relations occurring between Realities that are themselves composed of Existence being in relation to Itself. Apprehend the created impactive boundary from one perspective and what is apprehended is the physical experience of a particle. But if that same impactive boundary was instead apprehended from the opposite perspective, what would then be apprehended instead would be the physical experience of a wave. Where

then is the reality of wave or particle? Not in What Is Actually There, but only in the relation occurring between What Is Actually There, which includes the perspective from which the product of that relation is being apprehended as a physical experience.

The Relational Structure that underlies what we apprehend as an electron does not have a spin state either before or after it takes part in a third level or impactive relation that creates the observation of a determinate physical spin state. The spin state of an electron, like all physical reality, is a created reality, and not a property that inheres in What Is Actually There. The spin state may be directly or indirectly related to some aspect of the electrons Relational Structure, but as a physical experience or physical reality, the spin state itself is not a characteristic or property that inheres in the Existence that is actually there. Put another way, What Is Actually There does not have a spin state; rather, a spin state is a physical property we create through impactive relation to What Is Actually There. Likewise, the quality of hardness does not inhere in What Is Actually There where we apprehend a rock, nor does the quality of softness inhere in What Is Actually There where we apprehend a pillow. Nor does the hotness or coldness of a bowl of water inhere in What Is Actually There where we apprehend the water. Rather, these properties all inhere in the specific relation that creates the specific physical experience. All experiential qualities of every sort are created as the product of some relation of Existence to Itself, and only exist in the context of the specific relation and relational orientation between Observer and Reality that creates those qualities as specific experiences.

There is no quantum soup, no ocean of probability underlying what we apprehend as physical reality, there is only Existence being in relation to Itself. The Existence that is actually there, configured into various Relational Structures and levels of Relational Structuring through iterative and progressive relation to Itself, does not Exist in a probable state. That is, the Existence that is actually there at every level of Reality or Relational Structuring is configured in a specific way in relation to Itself. If It was not, the physical laws and constants that are, for the most part, an expression of that Structure, would be ever-changing, i.e., they would not be laws nor would they be constant. It is just that, for reasons already given, second level Relational Structures can function in the creation of opposite physical experiences, or some combination thereof, but a particular second level Relational Structure can only function in the creation of one of those opposite physical experiences, or one combination thereof, in any one moment through relation to any one Individual, and it is not possible to know which experience it will help function to create prior to the establishment of some relation between the Individual and the Relational Structure, because what is ultimately created and apprehended as experience is not a function of What Is Actually There, but is a function of the relational orientation occurring between What Is Actually There, i.e., between the Individual and the "observed" Reality. Thus, the Existence that is actually there, configured into a particular second level Relational Structure, may be indeterminate relative to its involvement in a relation that creates what is apprehended as a physical reality, but does not Itself Exist in an indeterminate or probable state. Again, the appearance and introduction of physical probability occurs when What Is Actually There as a second level Reality or Relational Structure is translated into terms of physical experience prior to the direct or indirect involvement of that Reality in a relation that actually creates a physical experience.

Before the advent of quantum physics scientists thought that material reality was composed of determinate physical realities, because that is how material reality presented itself. However, at the quantum level physical reality no longer presents itself as determinate, but instead presents itself in terms of physical probabilities, and so now many scientists and philosophers think that what is there instead, where physical reality appears to be, is a reality that exists in a state of probability. However, to conceive of What Is Actually There, underlying physical reality, as existing in some indeterminate or probable state just because that is how What Is Actually There must be translated into physical experience, prior to its involvement in a relation that creates a physical experience, is to simply substitute one illusion for a more elaborate and yet more subtle illusion. Quantum theory has made it clear that a deterministic physical reality is not what is actually there where we apprehend deterministic physical reality to be. Thus, quantum theory has shown macroscopic physical reality to be an illusion of sorts, in as much as the appearance it presents at the macroscopic level, where it appears to be deterministic, is not the appearance it presents at the quantum level, where it appears to be probabilistic. However, the probabilistic appearance that physical reality presents at the quantum level, which probabilistic appearance is expressed through the wavefunction, is also an illusion, if the probabilistic way physical reality appears at the quantum level is, like macroscopic physical reality, mistaken for what is actually there where it appears to be.

At no point in time is any experiential reality what is actually there where that experiential reality appears to be. Experiential reality of every sort is the product of a relation occurring between What Is Actually There, as that product is apprehended by, and so from the perspective of, the Existence that is actually there composing at least part of one side of the relation that creates it. Physical reality in particular, be it if the quantum or the macro variety, is always the one-sided apprehension of a two-sided boundary that is created where What Is Actually There becomes defined in relation to Itself. Therefore, form and tangibility are creations, and not characteristics or properties that inhere in What Is Actually There. What Is Actually There has neither form nor tangibility, and yet is nonetheless Itself the source of all form and all that is tangible, as It, through relation to Itself, produces the boundaries that are the basis of what It apprehends as the form of mental experience, and the form and tangibility of physical experience.

Form and tangibility arise as the relations of Existence to Itself become complex enough at the second and third levels of Existential self-relation to create the more elaborate experiential boundaries apprehended as mental and physical experience, respectively. Thus, there is no spoon, meaning that what we apprehend as any physical object is not what is actually there, because what is actually there is non-experiential Existence configured into a Relational Structure that, when we are involved in an impactful relation with that Structure, creates a defining boundary that we, from our perspective within that relation, apprehend as the physical experience or physical reality of spoon. Nor is there even the idea of spoon, because underlying the creation of all thought is also Existence being in relation to Itself, albeit being in relation to Itself at a different level and so in a different way, and so in a way that creates what is apprehended as a mental rather than physical reality, and so apprehended as the idea of spoon, i.e., as a mental object, rather than as a physical object.

To summarize then, the particulars or characteristics of an experiential reality do not inhere in What Is Actually There, but only inhere in the particular relation occurring between What Is

Actually There. The hardness of a rock, the softness of a pillow, the particular spin state of an electron, these are all the products of a relation, the apprehension of a boundary that arises and is created where Existence becomes defined in relation to Itself, as that boundary is apprehended by and from the perspective of the Existence-Consciousness that occupies and composes at least part of one side of the relation that creates it. And what determines the nature of that boundary, and so determines what is apprehended as experience, cannot be the Nature of the Existence that is actually there, because that is always and everywhere the same.

We experience different objects because underlying those different object-experiences are different Relational Structures. And there are different Relational Structures owing to the different and endless ways in which Existence can become fractally configured, arranged, and structured in relation to Itself through the process of iterative self-relation. And all of those Relational Structures, no matter how different the experiences they function to help create, are composed of the same Existence. Thus, if what we experienced was what is actually there, then there would only be one experience, because all that is actually there is Existence, albeit Existence configured and structured in different ways in relation to Itself. But what we experience is not what is actually there; rather, experience is the Existence that is actually there apprehending the boundary that is created as a result of Its becoming defined in relation to Itself through relation to Itself, from a particular perspective within that relation. And what allows Existence to become defined in relation to Itself has to be some difference between what is here as Existence and what is there as Existence. And yet, if what is actually both here and there is Existence, then what is the difference? The difference is in the way Existence here is configured and structured in relation to Itself versus the way Existence there is configured and structured in relation to Itself. And those relative differences allow Existence here and there to become defined in relation to Itself, through relation to Itself, and so create an experiential boundary that an Individual point of Existence-Consciousness involved in that relation apprehends as a particular experience, from Its perspective within that relation.

So it is that all that has been written here comes down to the simple understanding that what actually Exists at every point in the universe is not different than what actually Exists directly where we are. And what is it that actually Exists directly where we are? Well, there are only two things that exist directly where we are: experiential reality, of which physical reality is but one variety, and the Consciousness that apprehends experiential reality. And as the phenomena that lie at the heart of quantum theory have shown by revealing the nature of physical reality, experiential reality is not what is actually there where it appears to be. So, what actually exists directly where we are cannot be an experiential reality, since experiential reality only presents the appearance of being what is actually there. Therefore, if experiential reality is not what actually exists directly where we are, then what actually Exists directly where we are must be the Consciousness that apprehends experiential reality. And once one has dispensed with the illusion that experiential reality in general and physical reality in particular is what is actually there, then there is simply no valid or logical reason to assume that what actually Exists anywhere else is ultimately of a different Nature than what actually Exists directly where we are.

What is it that makes us think that what exists directly where we are is different in nature than what exists elsewhere? For example, what is it that makes us think that what exists where we are, i.e., where our bodies appear to be, is different in its essential nature than what exists where a

rock appears to be? What makes us think that is the mistaken idea that physical reality is what is actually there where it appears to be. And because physical reality here appears different than physical reality there, we assume that what exists here, where our physical bodies appear to be, is somehow different in its essential nature from what exists there, where other physical objects appear to be. However, as has been described, physical reality is not what is actually there where it appears to be, but is more like a reflection, thereby leaving open the question of what it is that is actually there underlying the reflection that is physical reality. And to answer that question we need only look to what it is that exists directly where we are that is not itself experiential in nature. And what exists directly where we are that is not experiential in nature is the Consciousness that apprehends experiential reality.

We assume that what we apprehend as physical reality is what is actually there simply because that is how it appears or presents itself, from our common perspective, and so we assume that what we are is our physical bodies, and we further assume that it is our physical body that somehow produces our Consciousness. And based on those assumptions it seems that what we are must be of a different nature than what exists elsewhere. However, as an understanding of the experiential basis of the phenomena that lie at the heart of quantum theory makes clear, physical reality cannot be that which creates Consciousness, because, physical reality only appears to be what is there. Instead, what those phenomena indicate is that we are points of Existence-Consciousness, i.e., Individuals, that create what we apprehend as experiential reality in general and physical experience in particular through our relation to other points of Existence-Consciousness.

There is no pot of gold at the end of the rainbow because rainbows are not actually there where they appear to be. Rainbows are illusions that present the appearance of being structures that are actually there, wherever they appear to be. Likewise, physical reality presents the appearance of being actually there, where it appears to be, and in this way physical reality is like a rainbow. And like someone who harbors the delusion that rainbows are actual structures and so goes off in search of the pot of gold that is said to lie at the base of that structure, modern science harbors the delusion that physical reality is what is actually there where it appears to be, and so has gone off in search of Consciousness at the end of that rainbow. However, Consciousness cannot be the pot of gold that somehow arises at the end of the physical rainbow, because like a rainbow, physical reality is not what is actually there where it appears to be, but only presents the appearance of being what is actually there, and so cannot itself actually produce anything, other than illusion.

For the same reason, physical reality cannot actually be constructed of more fundamental physical realities, because physical reality at every level only presents the appearance of being what is actually there. Put another way, in the same way that larger rainbows are not constructed of smaller rainbows, since regardless of scale they are still illusions, what we apprehend as macroscopic physical structure is not constructed of smaller physical structures, because there are no actual physical structures at any level, there is only the appearance of physical structure. Rather, what is actually there, at every level, quantum or macro, is Existence that has, through iterative self-relation, become configured and structured in relation to Itself into some sort of Relational Structure which, when involved in an impactive relation with another Relational

Structure, brings into relative existence a boundary that is apprehended by the Existence that is involved in that relation as the sort of rainbow we refer to as a physical reality.

The related ideas that physical reality is what is actually there where it appears to be and that physical reality creates Consciousness are the flat earth ideas of our time. That is, they are ideas that arise from and appear to be true from a limited and common perspective, but which do not maintain that appearance when considered and viewed from a broader perspective, which broader perspective in this case has been afforded by quantum physics. The time will come, how soon or far off I do not know, when future generations will look back upon us and be somewhat amused by our naiveté with regard to the nature of reality, as we are often amused by those who once thought the earth to be flat. They will chuckle at the notion that we thought of ourselves as physical bodies, and will wonder why it was not obvious to us what it is that actually Exists directly where are, as well as what must then Exist directly everywhere else as well.

If one stands in the middle of illinois the earth still appears to be flat, but it is understood to be only an appearance and not the actual state of affairs, and so one is not taken in by the illusion. Likewise, physical reality will always present the appearance of being what is there, but at some point humanity will understand this to be only an appearance and not the actual state of affairs, and so future generations will, unlike ourselves, not be taken in by the illusion. At some point the actual state of affairs will be obvious to those future generations, because they will not be saddled and constrained in their conceptualizations regarding the nature of reality with the same preconceptions and false assumptions regarding the nature of reality with which we are, by and large, presently saddled and constrained, which are again the related materialist assumptions that physical reality is what is actually there where it appears to be and that physical reality somehow creates Consciousness, both of which false assumptions arise from the same sort of common perspective that at one time made it seem reasonable and correct to believe that the earth was flat, and both of which false assumptions have prevented and continue to prevent scientists from understanding what their own experiments at the quantum level have revealed about the nature of experiential reality in general and physical reality in particular.

Ultimately there are only two things required to understand the nature of quantum reality: that whatever is apprehended as a physical reality is not what is actually there, but is instead the apprehension of something that has been created as the product of one's relation to what is actually there, from one's own perspective within that relation; and that the requirement of one's involvement in a relation in order to create whatever one apprehends as a physical experience imposes an unavoidable and inviolable limitation upon what one can create and apprehend as a physical experience in any one moment, since it is not possible for an Individual to be involved simultaneously in the mutually exclusive relations necessary to create opposite physical experiences. However, it is one of the great ironies that the experiential limitation that has been revealed by the phenomena that lie at the heart of quantum theory is the same limitation that has kept scientists from recognizing the experiential limitation revealed by their own experiments, because implicit in the conception of the experiential limitation is the concept that we participate in the creation of whatever it is that we apprehend as physical experience, and that concept is mutually exclusive of the concept of realism to which most scientists adhere. That is, the relation in which scientists, as Individual's, must already be involved in order create and apprehend the concept of realism to which they adhere, i.e., that an external reality exists independent of

observation, is mutually exclusive of the relation in which they each, as Individual's, need to be involved in order to create the opposite concept, i.e., that no external reality exists independent of observation, which opposite conception is a prerequisite to understanding the experiential limitation their own experiments at the quantum level have revealed. It is a sticky wicket, and it is this sticky wicket that has caused science's dogmatic adherence to the philosophy of materialism to keep what quantum physics has revealed about the nature of reality hidden in plain sight for nearly one-hundred years.

Again, knowledge, like all experience, is not just found lying about, but must be created in order to be apprehended. And an Individual cannot create knowledge that is the opposite of the knowledge they are already creating, because to do so would require that Individual to be in the impossible position of being involved simultaneously in what are mutually exclusive relations. For this reason, the preconceptions and false assumptions that we cling to regarding the nature of reality make it as impossible for us to conceive of the actual nature of reality, i.e., the actual relation between Consciousness and physical reality, as well as the actual nature of physical reality, as it was for someone who refused to let go of the idea that the earth was flat to conceive of the actual shape of the earth. However, thanks to the work of quantum physicists and theorists, and the new perspective upon reality which that work provides, future generations will, at some point, once what quantum theory says about the nature of reality is more widely understood, come to understand and accept that physical reality is not what is actually there where it appears to be and so will also come to understand that it is Consciousness that must create physical reality, in the light of which understanding it will be obvious to them what it is that actually Exists directly where they are, as well as what it is that actually Exists everywhere else as well.

All the Universe is molded from the same Clay, and that Clay I refer to as Existence. But we cannot experience the Clay from which the Universe is molded because experience is of a different nature than the Clay. Experience is created, the Clay is not. Experience is the product of a relation, the Clay is not. All we can do is make experiential etchings of the Clay, which etchings in some way reflect how the Clay has become arranged and structured in relation to Itself. But although we cannot experience the Clay from which the Universe is molded, which Universe underlies the reflection that is physical reality, the Clay is not beyond us, because it is What We Are. What We Are has been given many names. There is much discussion and argument about which name is correct, all of which is somewhat pointless, since names are experiential in nature and What We Are is not, meaning that all names for It must, in the final analysis, miss the mark. Nonetheless, in discussing such matters it is necessary to use a name to indicate or point toward that which Exists directly where we are and is not other than What We Are. I have chosen to call it Existence. Lao Tzu, on the other hand, chose to call it the Tao.

Look, and it can't be seen.
Listen, and it can't be heard.
Reach, and it can't be grasped.

Above, it isn't bright.
Below, it isn't dark.
Seamless, unnamable,
it returns to the realm of nothing.

Form that includes all forms,
image without an image,
subtle, beyond all conception.

Approach it and there is no beginning;
follow it and there is no end.
You can't know it, but you can be it,
at ease in your own life.
Just realize where you come from:
this is the essence of wisdom.¹

5. The connection between quantum physics and eastern philosophy

There have been countless books and articles written that suggest a connection between eastern philosophic traditions and quantum physics, owing to parallels identified between the way reality is described by those eastern philosophies and the way quantum physics has been forced to describe reality. However, as depicted in figure 22, nowhere in any of those works is a direct connection ever actually identified linking reality as it is now being described by quantum physics to reality as it has been historically described by the mystics and sages of those eastern philosophic traditions.

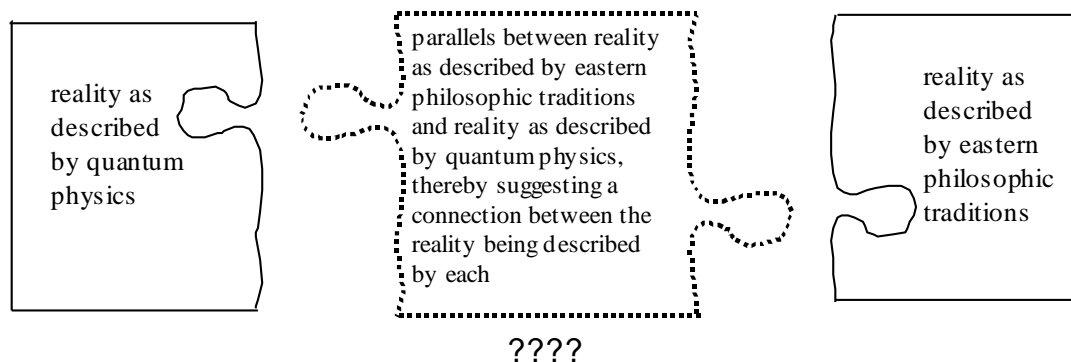


Figure 22 Depicted here as pieces of a puzzle are, on the left, reality as described by quantum physics and, on the right, reality as described by eastern philosophic traditions. Depicted in the middle is the missing piece that actually connects these two ways of describing reality, which connection is suggested by similarities in the way reality has been described historically in eastern philosophic traditions and the way reality is being described presently by quantum physics.

Eastern philosophies maintain, in general, that Consciousness is more fundamental than physical reality. Science has taken the opposite view, maintaining that physical reality is more fundamental than Consciousness. However, owing to the findings of quantum physics, one branch of science is now being forced to the view that Consciousness may be at least as fundamental as physical reality, since what is observed as physical reality, at least at the quantum level, can not even be said to exist as a physical reality in the absence of its observation as such by a Consciousness, thereby making somewhat problematic the argument that physical reality

somehow gives rise to Consciousness. Thus, most of the works that suggest a connection between reality as described in eastern philosophic traditions and reality as described by quantum physics do so, at least in part, by noting that quantum physics has been forced to describe reality in a way that, like eastern philosophies, ascribes to Consciousness a more central role in the hierarchy of reality. And so, although it is Consciousness that is often suggested as that which connects these two ways of describing reality, no direct connection is ever actually established, beyond stating that the reality of Consciousness, which is integral to the way eastern philosophies describe reality, has now become integral to the way in which quantum physics must describe physical reality, as shown in figure 23.

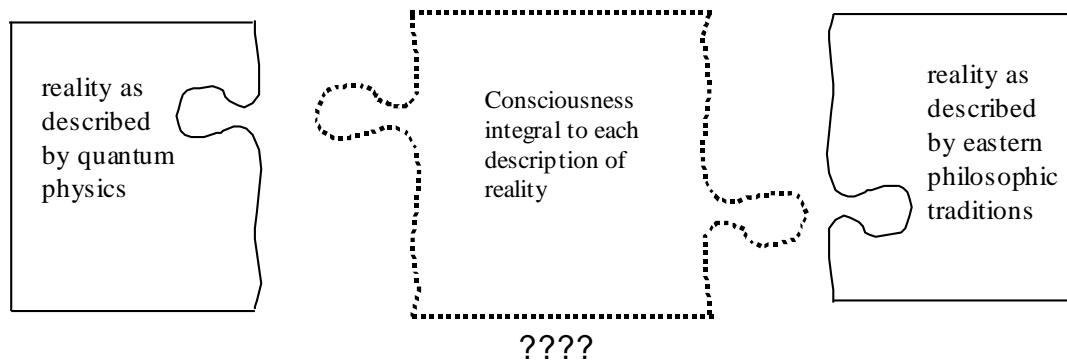


Figure 23 Since Consciousness is integral to the description of reality put forth by both quantum physics and eastern philosophic traditions, in works that suggest a connection between eastern philosophic traditions and quantum physics it is Consciousness that is most often suggested as that which links reality as described by quantum physics to reality as described in eastern philosophic traditions. However, in none of those works is the way in which these two descriptions of reality are actually linked by Consciousness actually identified.

The reason no direct connection has ever been identified or established between reality as described by eastern philosophic traditions and reality as described by quantum physics is because what connects eastern philosophies and quantum physics is the overall nature of reality, which includes both the Nature of Reality and the nature of reality, as well as their relation, and until now that overall nature and relation had remained hidden. Put another way, there is reality as it is apprehended and described by the quantum physicist, and there is Reality as it has been apprehended and described by the mystic, and so the piece of the puzzle that actually connects these two descriptions of reality is the one that contains a description of the relation between Reality and reality, and that piece had yet to be found. However, now that the experiential basis of the phenomena that lie at the heart of quantum theory is understood, which understanding provides a way of understanding how Reality, though relation to Itself, creates what it apprehends as reality, that missing piece has been found and so a direct connection can now be made between reality as described by quantum physics and Reality as described by eastern philosophic traditions.

Quantum theory describes reality in terms of physical experience and so describes reality in terms of reality. Eastern philosophies, on the other hand, describe reality in terms of that which is the basis of and apprehends experience, and so describe reality in terms of Reality. Prior to the discovery of the phenomena that lie at the heart of quantum theory science could get away with

the idea that Consciousness plays no role in the creation of what we experience as physical reality. Eastern philosophies, on the other hand, have understood for some time the central role Consciousness plays in whatever we apprehend as experiential reality. However, although eastern philosophies long ago identified the correct hierarchical relation between Consciousness and physical reality, as well as the difference in nature between them, referred to by some as discrimination between the Real and the unreal, what those eastern philosophies have not yet been able to do is describe the precise nature of the relation between Consciousness and experiential reality in general and physical reality in particular. That is, although eastern philosophies recognize Consciousness as more fundamental than physical reality, and so also recognize that physical reality must be in some way derived from the more fundamental Reality of Consciousness, what those philosophies have not yet done is provide an explanation regarding how the Reality of Consciousness gives rise to or produces what is apprehended as experiential reality in general and physical reality in particular. And so, as shown in figure 24, although the overall view of reality put forth by eastern philosophies with regard to the relation between Consciousness and physical reality is essentially correct, it is also somewhat incomplete, inasmuch as there remains a gap in that view regarding just how it is that non-physical, non-experiential Consciousness gives rise to the tangible world of physical experiential reality.

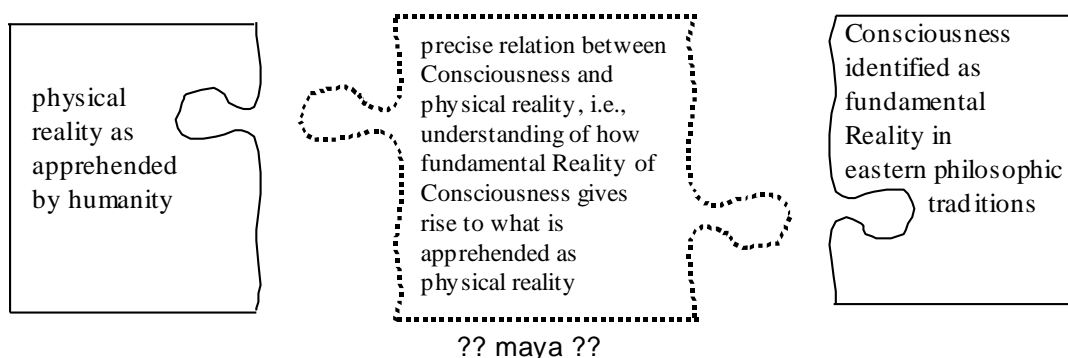


Figure 24 Although eastern philosophies correctly identify Consciousness as being more fundamental than physical reality, those philosophies have been unable to explain how the Reality of Consciousness gives rise to physical reality, thereby leaving missing the piece of the puzzle that connects the Reality those philosophies identify as fundamental to the reality those philosophies identify as being derived from that more fundamental Reality, which derivative reality is often referred to in those philosophies as an illusion of some sort, and which derivative reality humanity apprehends as physical reality.

It is the eastern philosophy of vedanta that has perhaps come the closest to describing the relation between Reality and reality, as put forth in the concept of maya expounded by the vedantist philosopher Adi Shankara, which concept is expressed in the following quote by another vedantist, Swami Vivekananda:

Ignorance or Mâyâ, as it is called, is the cause of all this phenomenon — the Absolute, the Unchangeable, being taken as this manifested universe. This Maya is not absolute zero, nor non-existence. It is defined as neither existence nor non-existence. It is not existence, because that can be said only of the Absolute, the Unchangeable, and in this sense, Maya is non-existence. Again, it cannot be said it is non-existence; for if it were, it

could never produce phenomenon. So it is something which is neither; and in the Vedanta philosophy it is called Anirvachaniya or inexpressible.²

However, as this quote indicates, the vedantist concept of maya is not so much an explanation of how Reality creates reality, rather it is an acknowledgement of the fact that although what is actually there is Reality, it somehow appears as reality, but exactly how that occurs is considered to be inexpressible.

That having been said, and as explained in detail in one of my previous works, in the context of understanding the unavoidable limitation inherent in the Individual creation of experience, as well as the reflection-like nature of physical reality, both of which understandings are made possible by understanding the experiential basis of the phenomena that lie at the heart of quantum theory, it becomes possible to understand how Consciousness, in mistaking the physical reality it has created for what is actually there, initiates and places Itself in a self-perpetuating cycle of illusion and delusion, wherein the Consciousness that is actually there becomes hidden from Itself in plain sight, since once It conceives of physical reality as what is actually there It must then conceive of What Is Actually There, i.e., Consciousness, as not what is actually there, and so must conceive of Consciousness as a sort of illusion, thereby perpetuating the illusion that physical reality is what is actually there, which in turn perpetuates the delusion that has the Consciousness that is actually there conceiving of Itself as a secondary or derivative reality, i.e., as a product of the physical reality it mistakes for what is actually there, thereby perpetuating the illusion that physical reality is what is actually there, thereby perpetuating the delusion that keeps the Consciousness that is actually there hidden from Itself in plain sight, and on and on and on....³

In any case, having lost sight of our true Nature, science and humanity, by and large, went with the philosophy of materialism, went with what seemed obvious really, at least on the surface, i.e., that the universe was composed of physical reality and that somehow or another physical reality gives rise to the non-physical reality of Consciousness, which then apprehends the physical reality that is its source and basis. And materialism worked out quite well for some time as a description of reality that seemed to explain how the world worked, until technology and understanding reached the point that it became possible to begin probing into the subatomic realm in order to see how reality at that level was arranged, at which point it became impossible to ignore the ever-present limitation inherent in the Individual's creation of experience, thereby introducing uncertainty, making it difficult to ignore completely the role Consciousness plays in the creation of experience, given that whatever is experienced as a quantum physical reality can only be said to exist as such in the context of its observation, i.e., in the context of its being apprehended as a physical reality by an Individual Consciousness.

As Ken Wilber points out, many of the pioneering physicist's of the twentieth century, e.g., Einstein, Heisenberg, de Broglie, Schroedinger, and Plank, among others, became mystics, as opposed to materialists, as they came to realize that there had to be a more fundamental reality underlying the reality they were themselves observing, as they came to realize that the quantum realities they were observing were not what was actually there, but were more like the shadows on the wall of Plato's cave.^{4,5} Thus, Sir Arthur Eddington stated: "The frank realization that physical science is concerned with a world of shadows is one of the most significant of recent

advances."⁶ Likewise, Schroedinger stated: "Please note that the very recent advance [of quantum and relativistic physics] does not lie in the world of physics itself having acquired this shadowy character; it had ever since Democritus of Abdera and even before, *but we were not aware of it; we thought we were dealing with the world itself.*"⁷

However, as Wilber also points out, none of these Individuals felt that modern physics in any way provided direct evidence for that more fundamental reality. Rather, they felt that the mystical and the physical were two separate domains and that each was to be probed independent of the other. However, although the mystical and the physical may be different domains, they are not separate domains, because as has been described, they are connected, since it is the more fundamental Reality that both creates and apprehends reality, and it is the phenomena that lie at the heart of quantum theory that have revealed the nature of that connection by revealing how Reality, through relation to Itself, creates reality.

Thus, although quantum physics does not and cannot ever provide direct evidence regarding What Is Actually There, because physics deals with experiential reality and What Is Actually There is, by its very Nature, non-experiential, quantum physics, through the phenomena that lie at the heart of quantum theory, nonetheless does provide direct evidence that what we apprehend as physical reality is not what is actually there, once that evidence is analyzed and understood in its proper context, i.e., in the context of understanding the actual relation between physical reality and Consciousness, which includes the way in which Consciousness, through relation to Itself, creates what it apprehends as physical reality. And that evidence can be of assistance in helping the Individual to free themselves from the self-perpetuating cycle in which, owing to the experiential limitation, their true Nature must remain hidden from them while still in plain sight of them as their own Consciousness, as long as they continue to believe and so conceive that physical reality is what is actually there where it appears to be, since their ongoing involvement in the relation that creates for them that erroneous conception makes it impossible for them to become involved in the opposite and so mutually exclusive relation in which they need to be involved in order to create the opposite and more accurate conception of Consciousness, rather than physical reality, as what is actually and directly there where physical reality appears to be.

So it is that, thanks to the probings of quantum physics we have come almost full circle and have arrived back at a description of reality that finds at least some level of agreement with the eastern philosophic traditions that hold Consciousness to be more fundamental than physical reality. However, also thanks to quantum physics, we now know something that was not known before with regard to Consciousness, in as much as we now know, owing to our understanding of the experiential basis of the phenomena that lie at the heart of quantum theory, precisely how Consciousness creates what it apprehends as physical experiential reality, thereby clearly revealing the relation between Consciousness and physical reality. And in revealing the relation between Consciousness and physical reality, quantum physics has found the piece of the puzzle that had been missing from the description of reality put forth in eastern philosophic traditions, which piece directly links the Reality of Consciousness to experiential reality. And as shown in figure 25, it is that same newly found piece of the puzzle linking the Reality of Consciousness to experiential reality that is also the piece that is needed to directly connect Reality as described by eastern philosophic traditions to reality as described by quantum physics.

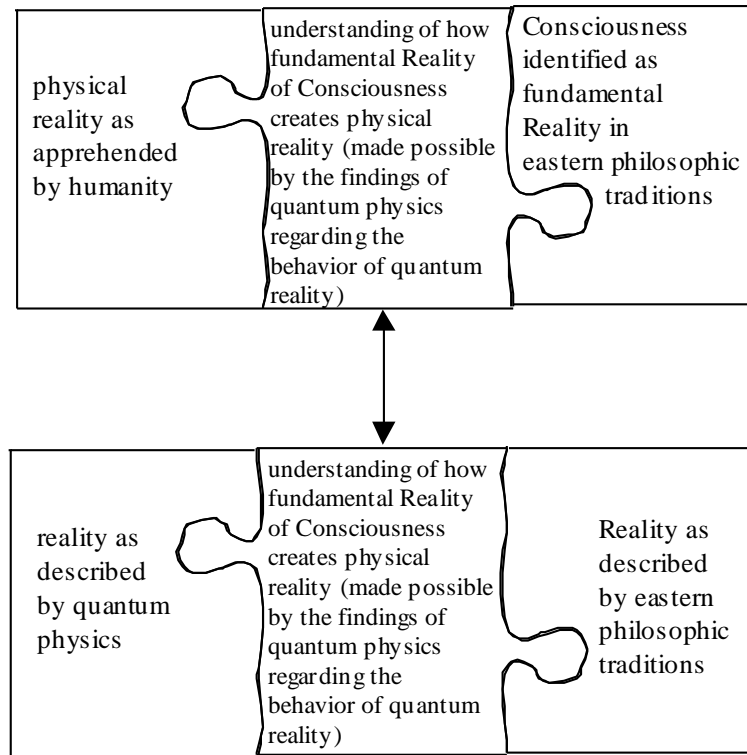


Figure 25 What these two drawings illustrate is that the same missing piece that is able to connect eastern philosophies' understanding of Consciousness as a fundamental Reality to physical reality as a secondary or derivative reality (top drawing) is the same missing piece that connects Reality as described in eastern philosophic traditions to reality as described by quantum physics (bottom drawing). And in both cases that missing piece, indicated by the double arrow, is the understanding of how the fundamental Reality of Consciousness creates physical reality, which understanding is made possible by the findings of quantum physics regarding the behavior of physical reality at the quantum level, since the only way to explain that behavior is through an understanding of the unavoidable and inviolable limitation inherent in the Individual's creation of experience, and the only way to understand why there is such a limitation is through an understanding of how physical experience is created as the product of a specific type of relation of Consciousness to Itself.

Thus, the model of Reality and reality presented in this work that allows for an understanding of how Consciousness creates experiential reality does not suggest a connection between Reality as described by eastern philosophic traditions and reality as described by quantum physics; rather, it demonstrates what that connection is directly, by explaining how Absolute Existence or Consciousness, described in eastern philosophies as the fundamental Reality, through relation to Itself, produces physical experiential reality, as described by quantum physics. And all it takes to understand the model of Reality and reality presented in this work is the ability to understand what happens to a rubber band that is twisted repeatedly upon itself, combined with the willingness, where necessary, to loosen one's grip upon preconceived and dogmatic notions regarding the relative positions of physical reality and Consciousness in the hierarchy of reality as a whole, which preconceived and dogmatic notions themselves arise from a limited flat-earth type of perspective that causes physical reality to appear to be what is actually there, which

appearance, as has been demonstrated, does not hold up when viewed from the broader perspective afforded by quantum physics.

Those who study eastern philosophy are advised, if they would arrive at the truth, to learn to discriminate between the Real and the unreal. Likewise, modern physicists would be well advised, if they would know the truth of what their own experiments reveal about the overall nature of reality, to do what the founders of quantum physics were apparently able to do in some measure, which is learn to discriminate between Reality and reality, between What Is Actually There and what only appears to be what is actually there. Both science and eastern philosophies have it as their goal to describe the nature of reality in the fullest sense possible. The findings of eastern philosophy were arrived at as Individuals, seeking to understand the ultimate nature of reality, probed deeply into Reality within themselves. Conversely, or likewise, depending on how one looks at it, the findings of quantum physics were arrived at as Individuals, also seeking to understand the ultimate nature of reality, probed deeply into Reality external to themselves. Thus, eastern philosophers arrived at their description of reality using the method of introspection, or inward probing, i.e., probing into Reality that is internal to the Individual, whereas science, on the other hand, has arrived at its description of reality using extrospection, or external probing, i.e., probing into Reality that is external to the Individual.

Both eastern philosophers and scientists analyze reality by progressively breaking experiential reality down into its constituent parts to uncover what is there. The eastern philosopher, approaching Reality from within, breaks down the objects of thought into their most fundamental components to see what that reveals. Likewise, the scientist, approaching Reality from without, breaks down physical objects into their most fundamental components to see what that reveals. Thus, eastern philosophers and scientists both try to get at the nature of reality by progressively unraveling the progressively raveled components of the different experiential realities they each encounter according to the different directions from which they are each approaching Reality; the former approaching Reality from within their own Individuality, thereby encountering and unraveling mental reality, and the latter approaching Reality from outside their own Individuality, thereby encountering and unraveling physical reality. And the reason both the philosopher and the scientist must use the same method of approach, i.e., the unraveling of reality, even though their direction of approach is divergent, one being internally directed and the other being externally directed, is owing to the fact that underlying what we apprehend as both mental and physical reality is a singular Existence that both has evolved and continues to evolve, through iterative and progressive relation to Itself, into Reality and reality, i.e., into more highly ordered Relational Structures thereby allowing for the creation of more elaborate experiences, leaving what is there as both Reality and reality to be most effectively analyzed through the unraveling of the Existential relations that both compose Reality and also create reality.

Thus, even though these two ways of describing reality are divergent, i.e., the description of eastern philosophy and the description of science, one approaching Reality from within and the other approaching Reality from without, respectively, ultimately these two ways of describing reality both end up converging upon the Reality of Consciousness, because no matter how Reality is approached, from within or without, one is still approaching the same Reality and so one eventually arrives at the same destination. And that destination is the understanding that experiential reality, like a reflection that lies on the surface of a pond, only appears to be what is

actually there, and that What Is Actually There, underlying that reflection, and obscured from being seen as what is actually there by that reflection, as long as experiential reality is taken for what is actually there, is What We Actually Are, which, regardless of the name we choose to superimpose upon It, remains That which is Itself uncreated and yet which, through relation to Itself, creates what It apprehends as experiential reality.

¹ From the [Tao Te Ching](#) as translated by Stephen Mitchell, Harpercollins, 1988

² *The Complete Works of Swami Vivekananda*, Advaita Ashrama, 2003, Vol 1 pp. 363-364

³ Kaufman, S.E., [The Experiential Basis of Maya: How the Limitations Inherent in the Individual's Creation of Experience Function to Conceal the Nature of Reality \(Part I and II\)](#), Journal of Consciousness Exploration & Research | May 2013 | Volume 4 | Issue 5 | pp. 458-514

⁴ [The Allegory of the Cave](#) from *The Republic* by Plato

⁵ Wilber, K., *Quantum Questions: Mystical Writings of the World's Great Physicists*, Shambala Publications, 1984

⁶ Ibid., pg 7

⁷ Ibid.