The Collision of the Universes: Crossing the Rubicon

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ABSTRACT: The paper focuses on the synthesis of science and religion, aiming at a modern religion, as outlined in the Book of Eli. Quantum physics, in its basic form, is necessary if there is to be any philosophical or scientific notion of free will and self-determination. Classical physics is fully mechanistic and deterministic, and cannot accommodate potentiality. Our treatment includes the major world religions in order to harmonize our goal of broad synthesis of relations within our field of endeavor. The One Mind has become a viable model of quantum reality, and the One Mind Model is congruent with the view that God is the source of all mentality. Evolution is viewed here as the progression of living things in the actuality that becomes through increasing levels of experience and novelty. Natural selection has a permissive, but not causal, role in evolution. The Prophet Eli now manifests with one commandment, usury is forbidden. The nature of the hidden time is revealed. The potential of the future involves two kinds of universes, one in which we meet our demise by continuing usury, which is most probable, and one, which is only possible, in which usury will be forsaken. The "Collision of the Universes" entails the destruction of humankind in the battle between the worlds of usury and the worlds of no usury. The work of Prigogine allows us to analyze such a collision, and predict that collision will be

disastrous to humans if usury continues. To avert this, usury must be abandoned, as soon as possible. Should we continue in usury, we will soon be "Crossing the Rubicon," such that there will be no escape for humankind from its demise.

Prelude

On Friday, April 5, 1996, the day after the end of a total lunar eclipse, at about 6PM, I had just finished my dinner after work and sat down in the chair in the living room. I had not had any wine, and was not in any altered state – I felt totally normal. I then found myself in the presence of the God of Abraham. There was no audible voice or visual appearance. I felt as if a veil had been lifted and that the God of Abraham was speaking to me silently through my thoughts. I was very perplexed, and asked why God had come to me. I told God that I had not asked Him to come to me on that night, and inquired why He had come to me rather than perhaps to a priest of someone waiting on His call. I tried to summon up Jesus or Mary, but to no avail. God identified Himself as Lord of all of humankind. I received the name of Eli, on the basis of a recent dream, when my deceased father had come to me and gave me this name.

God gave me to know a number of things, which I wrote down in seven chapters and seven verses, which are still available, over the course of about thirty minutes. In 1999 I posted these verses on the Internet, which we will call *Verses*, as *The Book of Eli*. *The Verses* remained on the Internet, where they still are posted, under the name of *The Book of Eli*, and on the same Internet site. I had translated it to a number of popular languages and also posted other pages. The posts went down in 2000, and these documents were lost, but the text remained, as I had it posted. It has been posted since that time. Years later a movie came out called *The Book of Eli*,

which had no relation to the revealed verses. In 2011 I published a book, *The Book of Eli*, which contained the *Verses*, which became the revealed text of a new religion, which was explicitly based on science, as well as interpretations thereof and other writings. I adopted the name of *The Prophet Eli*, and the religion was named *The Church of Eli*, and I formally earned the title of Reverend. God has come to me, and recently Jesus has come to me, since my initial experience.

There are many others like me, as well as false prophets, as I have learned. The message I must deliver is very simple, and it is all we need to do to avert the "times of great suffering" (*Verses* 7:6). There is the only one commandment in the *Verses* (5:5) of *The Prophet Eli*, and it the only thing we must do to avert the suffering and destruction that is soon to come. Usury must be abolished. This includes interest on loans, and "money making money," in any way. Usury of any kind must become a crime of great magnitude, and treated as such. If this is done, it will cause some troubles, but the alternative of continuing usury will be total, world-wide devastation, such as to cause suffering that the world has never before seen, with grave consequences for all living things on earth, and with the possibility of human extinction or near extinction. My efforts to promote the religion and its teachings have been anonymous up until this time, but I now find it necessary to reveal myself to the public, as the "time of great suffering," caused by the practice of usury and predicted in *The Verses* (7:6), will soon be at hand. In doing so I forfeit my former intentions to publish this paper, as it will be judged in a variety of ways. This is the context of this paper.

Introduction

Here we advance a synthesis of religion and science, or at least to begin to build a foundation to do so, based largely on the work of Alfred North Whitehead and

Process and Reality (*PR*). Such a synthesis cannot be based a single religion, but must be based on a survey the major religions and spiritual traditions, within the author's scope and the scope of this paper, such as the move towards a harmony and completeness of our treatment of the subject matter. Realizing that there are conflicts and disagreements within and between the religions, we have synthesized what they seem to have in common, both actually and potentially.

Recently, there have been many books, as well a number of eminent scientists and scholars, that allege that science has disproved the existence of God. Often such books refer to the Darwinian theory of evolution by natural selection as the final word on the phenomenon of man. I recently asked a child if he believed in God. His answer was: "No, I believe in evolution." The notion that the existence of God and the general theory of evolution are mutually exclusive seems to have penetrated the very fabric of our society. Darwin has, in a sense, become the prophet of a new religion, "survival of the fittest." Many of the objections from science and scientists to the integration of theology and science are based on deism, the theory of God as the "prime mover," which is a notion inherited from classical physics. Stephen Hawking, the renowned physicist, had embraced deism on the basis of a beginning in time, but later found that there no "beginning" in time of the Universe, and on this basis made a very public profession of atheism (Lennox). Quantum physics has opened science up to an indefinite number of potentials in all levels of description, and an actuality based purely on Mind. We will argue here that evolution does not exclude the agency of God, but, in fact, requires God.

The theory of mind is a burgeoning field, and, following the doctrine of eliminative materialism

to explain mind by "eliminating" or discounting subjective experience, the agency of the mind and the subject is ignored. God has been banished from science, with the justification that science must be naturalistic, while God is said to be

supernatural. Scientists are increasingly identifying themselves as atheist, as are students of science, and the lay public that has been influenced by such science. Those who have not embraced the "scientific" dogma of atheism, and who believe in God, generally give no place for God in science, and often hold two separate and mutually exclusive belief systems, a spiritual one and a scientific one.

Process theory, particularly the metaphysics of Alfred North Whitehead (*PR*, *RM*), gives us a natural, relational theology in which God does not simply sit idly by and watch the world go round, but is an active participant, indeed a necessary predicate, to any scientific view of reality. The work of Whitehead and Henri Bergson has been incorporated into the quantum dynamical systems science of the late Ilya Prigogine, supported by evidence (*Prigogine*). With this exception, the explanatory power of the major scientific theories of physics, mind, and evolution have reached a limit, and much of atheistic science has become a collection of leaps of faith in the dogma of neo-classical, materialist fundamentalism.

The focus of this paper is on a process view of mind, brain, and mentality in general, in keeping with the major religious traditions. We will argue here that function of the mind involves final causation or teleology. As stated by Whitehead (*PR* 277):

> The mental operations have a double office. They achieve, in the immediate subject, the subjective aim of that subject as to the satisfaction to be obtained from its initial data. In this way the decision derived from the actual world, which is the efficient cause, is completed by the decision embodied in the subjective aim, which is the final cause…Thus the mental pole is the link whereby creativity is endowed with the double character of final causation, and efficient causation.

The process of mind can be viewed as a cycle involving the conceptual or mental pole and the physical pole. This would be consistent with Whitehead's assertions (*PR* 348): "For God the conceptual is prior to the physical, for the World the physical poles are prior to the conceptual poles…*God is the infinite ground of all mentality*" (italics added). Mind/matter dualism, in the Cartesian sense, posits a substantial mind or "mind stuff." There is not a shred of evidence that such exists, or that the mind is substantial. Whitehead's panexperentialism makes experience primary. All we know is based on experience. The actual occasion is, fundamentally, a quantum of experience, and this "quantum" view has a relation to quantum physics. The existence of matter is implied by experience. Entities that are thought of as substantial can be viewed as relational, and all of empirically-derived science is based on relations.

The spiritual and religious orientations we take here is intended to be eclectic. We begin with the concept of "Self" in the Upanishads (*Ten*). Self, which is Universal, is distinctly different from "ego," which is the individual identity. The nature of Self, as reflected in the Upanishads (*Ten* 13), is as follows: "The Self is one…Out of Self comes the breath that is the life of things. Unmoving, it moves, is far away, yet near; within all, outside all." In the Fall, Lucifer, an angel of light, was Self. In becoming ego, Lucifer thought himself equal to God, and so was cast down. He reigns in hell (Milton), which is right here on earth, along with heaven. The reign of ego, however, is a growing and advancing process, with the possibility of causing the suicide of the human species, which is only a push of the nuclear button away.

The same process has its parallels in human history and in the life of the child, who is still in the amble embrace of Self, prior to acquiring a full-fledged ego. The role of Jesus, as the Self, is to bring us back to this Self, as redemption from the Fall into ego. This may be why Jesus said (*KJB*, Matthew 19:14): "Suffer little children, and forbid them not, to come unto me: for such is the kingdom of heaven." It seems

clear that Jesus taught that we go back to the state of a child, which is prior to learning to serve the ego. In the parables, it is written (Matthew 13:38): "The field is the world; the good seed are the children of the kingdom."

Regarding the practice of usury, Jesus became angry and turned over the tables of the money changers, who were practicing usury at the temple. This is the only time in the Gospel narratives when Jesus becomes angry, and he did not give the usurers forgiveness, as he did for all other sins. This is evidence that, based on Jesus's action, usury is the greatest of sins, perhaps unpardonable. The same attitude with respect toward money is in the following passage (*KJB*, Matthew 5:40): "And if any man will sue thee at the law, and take away thy coat, let him have *thy* cloke also." The language of Jesus in the Coptic Gospel of Thomas (75: 95) was totally explicit: "If you have money, do not lend it with interest, but give to the one who will never pay you back."

The Gospel of Thomas (*Leloup*) was found in Egypt in 1945 with other documents near the village of Nag Hammadi. It is collection of sayings of Christ, and has much in common with the accepted gospels, but also many differences, and has been received in a variety of ways, outside of the scope of this paper. It seems to be authentic as an ancient text of the gnostic sect. Whitehead (*RM* 62) discusses a saying of Jesus, from a then-existing fragment of the Logia of Thomas, "Cleave the wood, and I am there." In the Gospel of Thomas this saying is in the context as follows (*Leloup* 77): "I am the All. The All came forth from me and the All came into me. Split the wood, and I am there." This is the doctrine of immanence. God breathes through every pore of reality, and the Kingdom of God is among us, but we do see it, to paraphrase the Gospel of Thomas (*Lehoup*).

The Holy Qur'an (*Qur'an*) seems to reflect the macrocosm and the microcosm. As macrocosm, there is the famous opening, variously translated (*Qur'an* 1:2): "All praise be to Allah, the Cherisher and Sustainer of the worlds." This passage reflects

the idea that God sustains more than one "world," whether it be on earth or in the cosmos. In terms of the microcosm, the Qur'an states (99:1): "Then shall anyone who has done an atom's worth of good, see it." The word "atom" implies "a little bit," and the place in which we will "see it" corresponds to an afterlife or to our lives here on earth. The Qur'an also expresses mutuality in terms of our love of God and God's love for us (3:31): "If ye do love Allah, Follow me: Allah will love you and forgive you your sins: For Allah is Oft-Forgiving, Most Merciful."

Buddhism, fundamentally, espouses the doctrine of non-attachment. Although Self, or Atman, as in the Vedic construct, is said to be rejected in Buddhism, there is a strong reliance in Buddhism on the concept of Mind. Since we equate Self as Mind, we find no conflict with the Buddhist construction and the Vedanta. Perhaps Buddha was referring to the concept of separate, individual minds, as separate from the One Mind. *Dhammapada*, 1:1 and 1:2, repeats the same words, translated (*Mascaro*) as "our life is the creation of our mind." "Our life" and "mind" are translated as singular.

The idea of a spiritual creation within the process of evolution involves the actualization of potentiality. In the spiritual literature, this process appears in the Jewish mystical tradition of the Kabbalah (*Matt*). The idea of a spiritual creation in evolution is central for our synthesis. The account also addresses the actualization of potential. This passage is congruent with our concept of evolution as the Creation of God, indicated by the agency of the *Ein Sof*, the indefinable God (31).

The theory of evolution accords with the secrets of the Kabbalah better than any other theory.

Evolution follows a path of ascent and thus provides the world with a basis for optimism. How can

one despair, seeing that everything evolves and ascends? When we penetrate the inner nature of

evolution, we find divinity illuminated in perfect clarity. Ein Sof generates, actualizes potential

infinity.

We find here is the center of a fundamental meta-spirituality that is most applicable to our purposes, in the Jewish literature. The writings of Rabbi Abraham Isaac Kook are particularly helpful in this regard. The nature of the *Ein Sof*, rendered as *En Sof* by Kook, is important in our treatment of the nature of God. The *En Sof* is described as follows (*Kook Essential*, 12): "The inwardness of the soul has its source in the absolute and eternal perfection in the *En Sof* [the Infinite]." The "soul," as translated here, receives primary, direct manifestation from the unmanifest *Ein Sof*. The soul, as "God within us," is the light as the "Light of the *En Sof*." Kook expresses this as follows (*Lights 221*): "The spiritual waves stirring the individual and the world derive from the *inner* endeavor of all things to conform to the light of the *En Sof*" (italics added). All things, inwardly, endeavor to conform to the light of the *Ein Sof*.

Regarding this "light," which, in the language of Kook, shines on the "soul," we find, in the sayings of Jesus (*KGB* Matthew 5: 14-16): "Ye are the light of the world. A city that is set on a hill cannot be hid.
Neither do men light a candle, and put under a bushel, but on a candlestick, and unto all that are in the house. Let your light so shine before men…" Love can be viewed as the light in some contexts. At the Passover meal, now called "command Thursday," Jesus said (*KJB* John 13:34): "A new commandment I give unto you. That ye love one another; as I have loved you, that ye also love one another." This is a command Jesus gave to all humankind.

However, the meaning of love needs qualification. The Judeo-Christian tradition is folded together such that we may bring Judaism and Christianity together in a way that enriches both (*Kook, Essential* 176):

> On the basis of the great conception of the unity of existence there is eliminated the problem of self-
> love, which for some is the chief sin, and for others the basis of morality…There is only the love of everything, which is in truth the higher, enlightened self-love. The fraudulent self-love…hates the more authenticated self-love, that [fraudulent self-love] is only a blindness, which is no less foolish than it is wicked. (insert added)

> The sinful love is egotism. We can and should love ourselves, but not as isolated from one
> another. Egotism reflects on persons, and their differences. Kook (*Essential* 32) describes the nature of *the person* as follows: "…the inclination to aspire for the nearness of God, which expresses the humanity of the whole, *is the same in its diverse manifestations*." (italics added)

Albert Einstein (*Einstein*) held that our separateness from the Universe and others, which we ascribe to the ego, is a delusion, as in the following quotation:

> A human being is a part of the whole, called by us, "Universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest – a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us.

The Brain and the Mind

Here we will examine the role of the progress in the sciences in our thinking since the times of the founding of the major religious and spiritual traditions, including mind, evolution, and quantum reality. We do not intend to be the final word in this process, but perhaps we can make some progress. We will first contextualize the various constructions of quantum reality, which we find necessary, and to argue in favor of a One Mind Model of quantum reality. Whitehead's (*PR*) concept of "qaunta" of experience is congruent with the emergence of quantum theory, but there needs to be an effort to bridge the connection between experience and quantum physics in process metaphysics. The fulfillment of this effort must include the functions of the human brain, as well as the role of quantum processes.

Classical physics, which is incurably mechanistic and deterministic, cannot support the notions of free will and self-determination, nor, for that matter, can it truly support process metaphysics. In a sense, Whitehead seemed to recognized the need for a broader approach to process (*PR* 238-9): "Modern physicists see energy transferred in definite quanta. This quantum theory also has analogues in recent neurology." There has been enormous progress in the field of neurology and neuroscience, as well as physics, since Whitehead's time, and it is important for us to bring such progress up to date, as it related to process metaphysics.

The recurrent action of subjective or conceptual process is needed in order to achieve a reiterative becoming of levels of progressively higher orders of mental function, and this process includes the agency of the person or Self, which is

derivative of the One Mind or Mind of God. God is the source of all mentality, and, as such, there can only be One Mind. The process is not purely one of efficient causality in the physical processes that are generated by quantum uncertainty, which imply that subjectivity emerges without reference to a subject. Mentality, as we will discuss, is primary as in a teleology in the creativity of God. The subjective aim brings the subject into the process of mentality. The subjective aim is teleological.

Mentality is necessary to distinguish experience from what is purely physical. Physically, the "field" is the quantum potentials is derived from the wave function and the potential "worlds" that is engendered thereof. Actuality requires the "observer," which is Mind, having its source in Self, which brings about a singular reality in the metaphysics of Whitehead (*PR*). In the microcosm, the wave function has a vast number of potential particle locations, and observation brings about the transformation of all these potentials into a single, localized, actual particle.

Hugh Everett (*Zeh*) argued that there is no collapse, implying that all of these single particles did not, in fact, "collapse" into one actual particle, but that each of the potential particles of the wave function would occupy a separate universe, which is called the "many worlds" model of quantum reality. It is also proposed that the wave function of the brain brings about "many minds," again a virtually infinite number, "cloned" off of each person in every moment of becoming (*Zeh*). However, the final causality of the actual occasion is singular in becoming from the mental pole, actualizing all potential, and this is missing from the purely physical process of generating a virtually infinite number of potentials, awaiting actualization.

This teleological process, derived from God, is a necessary ingredient to science regarding both the mind and the cosmos, and does not appear to have been evoked in this process previously. It radically changes our cosmology regarding the

alleged virtually-infinite multiplicity of quantum potentials, each spawning its own universe, each with a virtually infinite number of human "clones." None of these multiple potentials is actualized, because there is no "mental process" to do so, as the metaphysics is purely physical. This multiplicity then creates a religion where one must believe that they are not actual, or that they survive after death, and potentially immortal in some universe.

The nature of the efficient cause that generates a virtually infinite number of possibilities and the final cause that engenders on actual outcome can be described by the well-known Zen Buddhist koan, "What is the sound of one hand clapping." The one hand represents the physical process of potentialities that have no actuality. In this metaphor, the "one-hand clapping" makes no sound. The other hand, clapped with the "one hand," makes a sound. The other hand is a metaphor for the observer, as subjective Mind. The meaning of the koan, as outlined here, is that physical process is potential that does not manifest as a sound or actuality. Observation, the introduction of mentality, is the other hand. Both hands are needed to manifest an actuality. The same applies to the relation of God with the World. There is another Zen Buddhist koan, which we will let the reader interpret. Two monks observed a flag flapping in the wind. One asks, "does the wind move, or does the flag move." It is obvious that both move, but the meaning is deeper than this.

Here we accept the underlying summation of all quantum indeterminacy in the brain within the duration of the becoming of conscious experience Within such duration, there is uncertainty of quantum stochastic processes. On this basis, the level of quantum uncertainty is such that the unfolding of dynamical, chaotic processes develops into a large number of virtual or potential mental states. The reliance on the individual, physical brain in the emergence of mentality is vastly underdetermined (we later introduce the "hidden time" in this context). Final causation is necessary to

supply the subjective aim, with God as the source, functioning on the basis of a Universal Knowledge. Without the action of a universal process, there is no solution to the binding problem. Binding allows the entire brain to be internally connected is such way as to constitute a single, living person. The action of neural processing, transmission, and integration is otherwise fragmented, and far too slow to provide a cohesive identity.

There are many examples of ways in which physical brain states are underdetermined. On is the phenomenon of the "near death experience" (*Ring*). People who have technically "died," and have been revived, have repeatedly reported a complete life review, complete in every detail, sometimes forward from birth or backward from "death," in a "flash" of no temporal duration. Such a life review is widely established, and cannot even remotely explained in the mechanisms of memory. Another area of a physically underdetermined process is the faculties of certain "autistic savants," which are beyond the scope of the individual brain. The late neurologist, Oliver Sacks, found that two mentally-retarded individuals (*Sacks* 197-204), who were incapable of performing basic arithmetic, would spontaneously vocalize six-digit numbers, taking turns and smiling to one another as each number was delivered. Sacks looked up these numbers from his book of prime numbers, which went up to ten digit prime numbers (integer numbers that are divisible only by themselves and two). He found that all the numbers that the twins produced were primes. Taking more time, the twins could consistently produce prime numbers up to ten digits, as well as numbers much greater than ten, which were likely prime, but which Sacks could not verify. This author would have to take a considerable time just to establish a three-digit prime, and only by dividing by lower primes. It would be absolutely impossible for anyone, even a mathematical genius, to figure out six to ten-digit primes with such rapidly. The brain, in of itself, is underdetermined to perform

such tasks. There are many other examples regarding such "savants" and their special abilities (*Treffert*), falsifying the hypothesis, and it is only a hypothesis, that the individual human brain is insular. The person, as insular, would be like an island, totally, internally separate from all other entities and the Universe.

The universal knowledge, which is needed for a realistic view of the functioning of the individual mind, has many references in process theory, which bring the role of the universe into the becoming of every actual occasion. This is summed up, in part, as follows (*PR* 165): "The concrescence is an individualization of the whole universe." The Universe spans billions of light years, such that in the participation of every item or event in the Universe does not seem possible in a physically-relativistic Universe. Rather than bringing in some physical process into the realm of subjectivity and Mind, we posit a Universal Mentality. The agency of One Mind includes the entire universe, as it is extended in both space and time. This follows from the doctrine of panentheism. The "individual person" is part of a society of occasions, which enters into a constitution that includes all occasions in the entire universe. The prehensions thereof enter into the consequent nature of God, in keeping with the One Mind Model. Science cannot endorse the impossible, or enter into fanciful theories of a holography based on what is purely physical. The mind is of such nature that it could not possibly work on the sole basis of localization of physical processes.

Most theories of mind and consciousness assume that they are emergent phenomena, yet there is no real evidence in theory or in experimental fact to guide us as to how they emerge. The processes in the brain are qualitatively different from what we experience. The processes in the brain involve chemical interactions and electrical activity, which, on a materialistic basis, do not translate into experience. Specific functions are associated with certain regions of the brain, and

neuroscientists are very busy identifying these regions, but the unity and quality of experience have escaped scientific explanation.

Conscious experience is taken up here as the leading edge of a progressive process that has its source in unconscious experience, which goes all the way down to the level of the most rudimentary experience. However, the theory of the unconscious has been abandoned by most of the larger scientific community. In the science of psychology, behaviorism is embraced progressively, making the person into a kind of non-entity, a "black box," that is ruled by conditioning. This doctrine causes suffering and discord, in the individual and society, as such psychology rejects the emotional underpinnings of mentality, leaving the isolated person in a nihilistic vacuum. Behaviorism involves what Whitehead called "sensationalism." The "black box" has sensations as its data as "input," and "behavior" as its output. Sensationalism has plagued psychology, in various forms, as a result of the classical model. In a classical sense, the mind/brain is a kind of prison within the cranium, and its only "input" is through the senses. Quantum theory opens up the mind to the Universal.

Understandably, Whitehead emphatically criticizes the "modern psychology," aptly referred to as "mythology." The mythology is the product of behaviorism, as, within our own "black box," we are isolated from all inter-subjective and other internal relations, with no other recourse but narcissism, where the individual ego becomes the center of mind and personality. Narcissism is and has been of epidemic proportions, engendering all manner of evils, including a looming human and environmental ecological crisis of world-wide proportions. John Watson (*Watson*) originated and launched the behaviorist movement in 1913, and it was in full swing by the time Whitehead gave the Gifford Lectures in 1927-28 (*PR*). Behaviorism became a kind of religion, superseding any formal religion with the "sensationalist mythology." It is in this context that Whitehead wrote (*PR* 141):

> One difficulty in appealing to modern psychology, for the purpose of a preliminary survey of the nature of experience, is that much of that science is based upon the presupposition of the
> sensationalist mythology.

The brain has been considered to have a virtual superposition of quantum wave functions. This idea has fallen from favor as a result of the decoherence model (*Zeh*). Decoherence would then transform quantum events in the brain into "classical" or "neo-classical" states of the brain by interaction of observation and measurement, which includes interaction with the physical environment (*Zeh*). However, such a process as not truly "classical," as it leads to a superposition of brain states, corresponding to the superposition of the decohered wave functions over a given interval of time (*Zeh*).

There are many quantum processes in the brain, each of which play a role in the and potentials of the brain state. Many theories involving these processes are based on emergence of mentality from physical processes. Mentality, in Whitehead (*PR*), does not entail such emergence. If we adopt the mental process in the achievement of subjective aim (*PR*), which begins at the mental pole, we find that the teleology of the final cause spans the duration of the process, and is thus entails all physical uncertainty. There is then no need to single out one process, but rather consider the uncertainty of the duration of process to be a summation of all uncertainty, producing all of the brain states that may be associated with such uncertainty as potential that, on a purely physical sense, would never become actual. To go back to our un-interpreted Zen Buddhist koan: the flag is flapping in the wind. The wind and the flag are the physical processes, but there is another factor, and that is the minds of the monks

observing the flag moving in the wind. Mentality is necessary to make the whole process actual, and not just some potential that is never observed.

The mental process involves a teleology or final cause, in which the many potential states become one, through the agency of God as the One Mind. This process is variously described by Whitehead (*PR*), as, for example (57)" "The creative action is the universe always becoming one in the particular unity of self-experience…" Our view is that there are many potentials of the "field" of superimposed states, but only one singular actuality brought about by self-experience, which is the "observer." The metaphysical relation of observed and observer was realized, respectively, as "the field and the knower of the field" in the *Bhagavad Gita* (65):

In an observer-created reality, what is potential becomes actual by observation. There is mounting evidence that reality is based on observation. *Henry* (29) writes, in the world's premier science journal, *Nature*:

> A fundamental conclusion of the new physics also acknowledges that the observer creates the reality. As observers, we a personally involved with the creation of our own reality. Physicists are being forced to admit that the universe is a "mental" construction.

However, the idea that we are creating reality leaves us with universe that could not have existed prior in its earlier stage of development of the universe, as, for example, before conditions that could not possibly have supported life. It seems that in the "earliest" history of the Universe did not occur in what we perceive as time, as per Hawking (*Lennox*). Does this mean it never happened? How about later, before the nucleation of stars. Only the very light elements, hydrogen, helium, perhaps lithium, existed. The basis of all life, as far as we know it, is carbon. Carbon was

produced in the depths of the first generation of stars, which then exploded as supernova, at which time carbon entered interstellar space. How was all this time observed? It clearly does not give us a "physical" observer. So, we have actuality without a "physical" observer, for billions of years. As written in *Verses* (3:4): "God is the one subject of reality. Take away the one subject and there is nothing real."

Time-lines vary, but the age of the Universe has been recently determined as 13.82 billion years. The advent of life on earth was about 4 billion years ago. Was this very early life conscious? Was this life capable of "observation" of the kind needed to actualize potential? In terms of the putative ancestors, the early hominins emerged about 7 million years ago, and Australopithecus about 2 million years ago (*First*). What might constitute observation or observers may have appeared or developed progressively during this timeline. Bohm and Hiley (24) state.

> Moreover quantum theory is currently applied to cosmology, and it is difficult to believe that the evolution of the universe before the appearance of human beings depended fundamentally on the human mind.... Of course *one could avoid this difficulty by assuming a universal mind*. But if we know little about the human mind, we know a great deal less about the universal mind. (italics added)

Bohm and Hiley were trying to discredit quantum theory's uncertainty in favor of their own approach. They were wrong, as history has showed, in that the uncertainty of quantum theory is now factual. The observer-created reality can only be resolved if there is a "Universal Mind," which we call the One Mind or God. The One Mind is one of the many names of God. This concept does not negate the individual mind, but it does qualify it. There is no mind outside of the agency of God, whether God is viewed as the society of Hartshorne or the actual entity of Whitehead.

This One Mind is everywhere present through all of time and space. It makes the multiplicity of the potential one actuality, whether it be in the genesis of the Universe out of all possible universes, the selection of a particular universe out of parallel universes, or in the reduction of quantum uncertainty in observation. The One Mind Model of quantum reality would thus entertain a variety of current theories.

Indeterminacy becomes determinate in the concrescence (PR 23). It is God who supplies the subjective aim for all actualities, which moves towards satisfaction of the subjective aim in an epochal or discontinuous manner. Once this is realized through the temporal process of transition, the actuality in completed and passes into objective immortality. It is thus that God is "the principle of concretion," which produces an actuality from the field of potentiality. Such a process demands a quantum explanation, as "potentia" do not exist in classical physics, but only in quantum physics. Beyond this, it demands a dynamical or mathematically chaotic system approach when applied to the human brain (*Freeman, Stapp. Abraham*), and to those creatures who partake of the "creativity."

Current quantum models of brain process all suffer from the same inadequacy, and that is that quantum uncertainty is, for all intents and purposes, limited to the microscopic realm. The brain, in and of itself, is not a quantum object, but the underlying process must be quantum to accommodate free-will. Thus the very existence of free-will has been denied, and consciousness is widely considered to be epiphenomenal, a by-product of the brain that his no function or volitional component. Assuming evolution by natural selection, one would have to question why consciousness would develop if it served no purpose.

The living brain is a dynamical system, meaning that it is far from equilibrium at all times, and dissipates energy. Such systems are called chaotic, not in the sense that they are disordered, but in mathematical parlance. Chaotic systems, or systems at the "edge of chaos and order," such as the brain, exhibit the property of self-

organization, or self-organizing criticality (*Freeman, Stapp. Abraham*). The criticality lies in the exquisite sensitivity of the state of the system to small changes in physical conditions.

As a dynamical system, the brain, as per current mainstream neuroscience, would produce unpredictable states, much as the weather cannot be predicted over a prolonged period of time, with all of our current technology. Given current conditions, the state of the system would become increasingly unpredictable with the passage of time. If one introduces quantum theory with all its uncertainties, the brain state would become even more unpredictable (*Salzstein*). This unpredictability would totally compromise the rational function of mental process, memory, and our sense of an abiding identity.

The only possible way out of this conundrum, without resorting to a mind/brain dualism, is to posit a non-temporal process which flows from the mental to the physical, where the final cause or teleology of the state of mind becomes the subjective aim, the reason for its own becoming according to the ontological principle (*PR*). In this case, the combination of self-organizing criticality and quantum variability, as applied globally over a period of time, with the sum of quantum events being amplified by chaotic dynamics, is distilled in the action of the subjective aim such as to bring about the final cause. Efficient causality in time would then be under the influence of final causality, operating outside of time, and essentially guiding mental process. The only possible agent of such an influence would be God, as described by Whitehead previously, or what we have called Self, God within us.

Metaphysics, in a relativistic Universe, requires the future to be real, albeit as potential. The potentials are reduced over time in that these potentials are contingent on the basis of relation between time and causality. Thus, for example, it might not be possible that I would be at a remote location five minutes from now, but it may have

been possible yesterday, but unlikely. If I had planned to be in this remote locality two weeks ago, it would become a potential that is likely to actualize as planned.

The knowledge of future potentials makes the subjective aim and final causality work, and requires God as the "ground" of mentality. A panentheistic approach allows this to be the case. In God and the World we have a mutual transcendence. The process works within the realm of possibility or potentiality. If we are to bring science and religion together, then on the side of science we must abandon the concept of the supernatural. If something happens, from the scientific point of view, it is possible. This does not make God impossible, or imply that a progressive mutual transcendence does not occur between God and the World.

Mind and Matter

Ervin Schrödinger, in his Tanner Lectures of 1956 (Schrödinger, 1992), brought the problem of mind and matter into focus with regard to what he calls the arithmetic paradox. He begins his analysis by saying that we cannot represent (28) "our sentient, percipient and thinking ego" in our "scientific world picture" because "it is itself that world picture." He then describes the basis of the arithmetic paradox (128): "There appears to be a great number of these conscious egos, the world however is only one." Schrödinger (128) describes "antimonies" which spring from the arithmetic paradox, which is that "the many conscious egos from whose mental experiences the one world is concocted." He goes on to state (129): *"There is obviously only one alternative, namely the unification of minds or consciousnesses. The multiplicities are only apparent, in truth there is only one mind."* (italics added).

Ervin Schrödinger formulated the equations of the quantum wave function, and as such was the founder of quantum theory, and would be considered one of the founders of modern science. However, his thoughts regarding One Mind, for all practical purposes, are generally ignored. The potentials of many minds, however, continues to exist in the future, and *the potentials are not lost in actualization*, even if they were to become manifest in the One Mind in the current actuality. *Mind does not destroy these potentials*, as such would be a violation of physics. The realm on Mind belongs to God, as Whitehead correctly apprehended, while Creation must be described with reference to the nature of this Mind. Time must be One, if we are to posit the existence of actuality. If Mind were divided, it would remain as potential. Furthermore, the actuality of God is beyond manifest time, in the eternity of the hidden time, as we will later elaborate. This is all written in Genesis (*Browne*). How did we forget? Is our science joined to some transcendental science, despite to all of the prohibitions for it going into such a realm?

It is now widely assumed that matter, through a complex system such as the brain, gives rise to mind. This assumption is problematic in that it makes mind, and by implication spirit, emergent from matter and not a fundamental actuality. This is the theory of emergence, which is currently the mainstream theory of mind in science. Whitehead attributes experience and subjectivity to the most fundamental actual entities. Actual entities can have intellectual operations and be conscious, as Whitehead states (*PR* 326):

> The complex of such intellectual operations is sometimes termed the 'mind' of the actual occasion; and the actual occasion is also termed 'conscious.' But the term conveys the suggestion of independent substance. This is not meant here: a better term is the 'consciousness' belonging to the actual occasion.

The ego is also considered by Whitehead to be an actual entity. Whitehead addresses this in his refutation of Cartesian substantial dualism (*PR* 75): "For each time he pronounces 'I am, I exist,' the actual occasion, which is the ego, is different; and the 'he' which is common to the two egos is an eternal object or, alternately, the nexus of successive occasions." Adopting the former alternative, that the 'he' that is shared by the two egos is an eternal object, we note that (*PR* 23) "eternal objects are the same for all actual entities," implying that this 'he' can have ingression in the becoming of occasions that are totally removed from the single individual. Furthermore, Whitehead defines the eternal object as follows: (*PR* 44) "Any entity whose conceptual recognition does not involve a necessary reference to any definite actual entities in the temporal world is called an 'eternal object.'" Whitehead created his metaphysics in preparation for his lectures, at the time of his lectures (1927-28). These divergent ideas became *Process and Reality*, which, consequently, entailed many internal inconsistencies, although it is fundamentally sound.

We call attention to Whitehead's error in describing the ego as an eternal object, which is apparent from passages of *PR*. The ego would have to be considered to be a kind of form of mentality that is not particular to any individual. However, the ego. as stated by Whitehead and generally conceived in psychology, has reference to the temporal world. From a psychological perspective, and deriving from metapsychology, the Self is the primordial and unqualified "eternal object." Egos vary, but Self, defined as the Universal, God within us, is always the same. On this meta-psychological basis, we would have to conclude that Self, as we just contextualized, is the center of individual and interpersonal mentality. In Whitehead (PR) the "ego," in assuming the role of Self, is a chimera, in the sense that it takes on the functions of both individual personality, which is variable, and of Self, the All in All, primordial, and unchanging.

The problem of the mind/matter duality arises as science grapples with the idea that mind arises out of matter. The importance of mind is trivialized as the physical functions of the brain are elaborated without reference to mind. There does not seem to be any empirical data explaining how consciousness arises in the brain, although, as far as we know empirically, the brain is the only system which manifests consciousness. Consciousness is seen as the end product of a process in the brain, through efficient causation, serving no known function. Conscious process must involve final causation in order for consciousness in the mind/brain to be intelligible.

Regarding potential, in the realm of the becoming and concrescence of the actual entity, we entertain this view of time in terms of Whitehead's concept of the extensive continuum, as a field of potentiality underlying all of space and all of time – past, present, and future.

> The extensive continuum is that general relational element in experience whereby the actual entities are experienced, and that unit experience itself, are united in the solidarity of one common world. The actual entities atomize it, and thereby make real what was antecedently merely potential. The atomization of the extensive continuum is also its temporalization; that is to say, the becoming of actuality into what in itself is merely potential.

Experience is what is real. Experience is involved in the genesis of actuality from potential. The extensive continuum would seem, conceptually, to be the precursor of time. In this sense, it could be a kind of "primitive" time, or relational time. The becoming of the actual entity, as we have discussed, "intensifies" over a such period of time. The extensive continuum, existing as potential, then would be the medium for this intensification and novelty to occur, through the process of

actualization. A similar species of time has been called the "hidden time" as mentioned in *The Verses* (Germine) in *The Book of Eli*, as follows (1:5-6):

5: Hear about the hidden time. Some think the hidden time is yet to come. The Kingdom of God

does not come by observation. It is hidden in the inner dimension.

6. The hidden time is an eternity that runs through every moment. It is all-time.

The "everlasting" has been interpreted as the "hidden time," in the context of Genesis, in the commentary of E. Harold Browne (1873). He begins with Genesis (21:33), as translated in the King James Bible: "And Abraham planted a grove in Beer-she-ba, and called there on the name of the LORD, the everlasting God." In his *Commentary* on this verse, he states that the "the LORD, the everlasting God" is correctly translated: "JEHOVAH, the God of eternity," adding that eternity "means probably 'the hidden time,' that whose beginning and ending are hidden in darkness, hence 'eternity.'"

As the spiritual time, the "hidden time" is often rendered as the eternal "*aionios*," We may thus expect that "hidden time" underlies all of time, in a spiritual sense, as well as the here and now. Thus the "hidden time" has the properties of another dimension of time, being endless within its own dimension, but like a mathematical point in the manifest time dimension. This is what makes the "hidden time" eternal. This is reflected, especially, in the life review, which we have described in the near-death experience, when one is technically dead during the experience and recalls their life "in a flash." This is reflected by the tendency to render "eternal" as spiritual, and, in particular, to the "eternal life," which is the life that Judeo-Christian theology ascribes to as "the eternally departed," or time after the

end of manifest time "after" death, in some sense. It is often said the immortality is "eternal life."

The "hidden time" has no extension, yet when one is in the "hidden time," time seems to pass. These are the "beads on the thread" with the beads having no extension on the thread, the manifest time (*Verses* 1:7). It can be experienced in certain states of mind, such as in the author's own experiences of God and Jesus. The hidden time is also the dream time (*Germine)* as well as the time enjoyed by primitive peoples and children. This is where Jesus tells us to live. The ego atomizes time, in the sense of Whitehead, from a timeless continuum. "Life" on "earth" then becomes a kind of death, but we hope to pass into the "eternal" after death. The message is clearly given in *Verses* (7,7): "There is nothing hidden in the hidden time. Know that this, the hidden time, is your everlasting, and live."

In Whitehead's process, there seem to be two worlds, and this is consistent through much of Whitehead's work (*RM* 103): "A mental occasion is an ultimate fact in the spiritual world, just as a physical occasion of blind perceptivity is an ultimate fact in the physical world. There is an essential reference from one world to the other." In order for mentality to exist in a "spiritual world," the "spiritual world" must underlie the substance of the brain, as implied by panentheism, while exerting causal influence including final causation over the evolving mental state. This is the "hidden time" that Whitehead had failed to appreciate, since he believed that when the moment of experience passes it becomes eternal and thus immortal.

Based on a quantum model, potentials exist in the field of actuality. These potentials are not temporal, and not subject to change over time, since time is an actuality. What is actual becomes through the non-temporal concrescense, or microscopic process. Time does not enter the picture until the until the concrescence achieves satisfaction, and only at this "time" does the transition, or macroscopic process, comes into the picture. The becoming of the actual entity is then completed,

and it passes into objective immortality. The actual entity, having passed on to objective immortality, is pure potential, as eternal object, and is the fundamental basis and lure of the consequent chain of becoming. This process is described as follows (*PR* 69):

> The conclusion is that in every act of becoming there is the becoming of something with temporal extension; but the act itself is not extensive, in the sense that it is divisible into earlier and later acts of becoming which correspond to the extensive divisibility of what has become.

Thus Whitehead's atomization of time is coming into existence, along with the process he is describing, making both unfathomable. This does not mean that our exegesis of Whitehead is completed. We are only bringing about flaws in what otherwise a treasure-trove of metaphysics. We have no expectation that the Whitehead scholars will accept any of these apparent flaws as such, and the expectation is that they will be regarded as indicating a lack of understanding, if they are addressed at all. These flaws do not, however, prevent our overall exegesis. Our use of Whitehead's ideas is purely instrumental with regard to our subject matter, as reflected in the title and elsewhere in this paper.

Recursion and Neural Network

Brain science has come a long way in recent years, and scientists have found that, by modeling connectivity after processes in the brain, important advances have been made in computation. The very notion of local connectivity, in the manner of

computation, fails to consider the agency of the person and the subjectivity to the mind, but connectivity does have some relevance here.

The notion of recurrent neural networks, RNNs, leads us to explore the notion of recursion in process metaphysics. The term "recursion" is used in the technical parlance (*Triscler*), but we will consider "recursion" to be equivalent to "reversion" in process terms, differing in nuance. First, we will to address the relationship between the "physical" and the "conceptual" processes involved in mentality as it is developed in the human brain.

There is a part of the cerebral cortex of the human brain called "Wernicke's" area. Its function is the comprehension of words (*Ardia* 340). Words are rich in concepts, which are mental in nature. If the substance of this area of the brain loses all function due to stroke, injury, or some other process, the individual will have a profound inability to recognize words (*Ardia* 342). Thus, this physical function of the brain precedes the conceptual function. Words and their meaning must be learned, such that the physical prehension acquires the data of the conceptual prehension, and vice-versa.

Applied to process, this combination of a physical prehension can, for example, in learning, acquire the data of a conceptual prehension, making it a hybrid prehension as follows (*Cobb* 42-43):

> Once Whitehead recognized that physical prehensions could have conceptual prehensions as their data, he had a new way of understanding cells and of persons as well as much else. The novelty introduced into one occasion by reversion can be transmitted to the next. The novel feeling of the past occasion becomes part of the physical prehension of the new occasion and can be

> transmitted to future occasions through pure physical prehensions. If novel feelings could not be felt thereafter by hybrid prehensions, they could have no continuing effect.

In other words, the physical prehension can engender a conceptual prehension, but, as such, the physical prehension becomes the source of a hybrid prehension, and the conceptual feeling continues in subsequent occasions as a hybrid feeling, "inheriting" its existential mentality as feeling in subsequent physical occasions for as long as the initial conception feeling is transmitted. This is a difficult doctrine, but is relevant with regard to final causality. The process of reversion brings the conceptual prehension to bear on an antecedent physical prehensions. This seems to be the way that concepts arise in the mind from the physical stratum beneath it in the brain.

Recurrent neural networks (RNNs) are often described in computational terms, with reference to the brain, from which they were developed. Dynamical systems theory, both continuous and discontinuous, has become linked with RNNs in a variety of ways. An important feature in terms of process is the concatenation of back-propagated and feed-forward processes, thereby creating feedback loops that have an important function in the memory processes of RNNs (*Triscler*). These short and long term processes allow the process of replication and contextualization in the antecedent and subsequent features in the neural network "step" of the current occasion of becoming (*Triscler*).

The combination of recursion of former actualities and progression into subsequent actualizations includes both physical and mental processes. This is a process of "binding" of the mental state in it function of short and long term memory. It is such binding, taking place globally in the brain, that allows the mind/brain states to enter into sequential integrations of a complex nature (*Triscler, Sadikhov*). In this sense of progression and reversion (*Trischler, Sadikhov*), we may consider the nature

of the concept of vibrational processes (*PR* 279), to take an important role of an enduring society of occasions (*PR* 34).

Whitehead seemed to cover his ideas by inventing new words ("neologisms"), and conferring idiosyncratic meanings to existing words, creating a kind of inheritance based on preferred access to his work, through word-of-mouth transmission of his metaphysics. My understanding of Whitehead went, over many years, from Whitehead to *Hartshorne* (author of the *Divine Relativity*), to John Cobb (*Cobb*), a most gracious man who is now very old, to the author, three degrees removed. Vibrations, as understood here, are simply fluctuations back and forth between progressions and reversions. In terms of the social order, the nexus of social and personal order takes on the feature of endurance, as "the nexus forms a single line of inheritance of its defining characteristic. Such a nexus is an 'enduring object.' It might have been termed a 'person,'…" (*PR* 34-35).

Various models of RNNs involve recurrent feedback loops with back-propagation and feed-forward actions in steps. Our description here involves one such model (*Trishler*), which synthesizes previous models. Briefly, regarding neural network theory and practice, recurrence involves loops in steps of connected neurons, which exhibit qualities of dynamical systems, including vector fields and chaotic attractors. This produces a feedback loop going backward and forward within the single time step ("vibrating"), which is then passed on to the next time step (*Trischler, Sadikhov*). There is progression and recurrence between network steps, which are intricately related in the concatenation of the progressive unfolding of concepts and thoughts, as applied to the brain. The recurrence or recursion of experience involves the partial replication of the antecedent step, with some difference evolving, and with some replication in the development of subsequent steps. The process may involve

multiple recurrences of the series of steps, with a progressive development (*Trischler*).

This sort of process is described in the context of process metaphysics (*Cobb* 37). What is described an example of being irritated by what someone says. The tendency is to reproduce the irritation in the next moment. If one is irritated to the point of intense anger, most people will remain angry for some time, thus the need to remove oneself from a situation to "cool down." Cobb goes on to write that one may later experience the irritation, but the irritation may be compounded by embarrassment or shame. This would then constitute a reversion to the former irritation, but not exactly of the same type. We find that recursion is a fundamental process of neural networks in recurrent networks. Such a process then could provide the steps of recurrence in a subsequent process involving the recurrent neural networks (RNN) which would create subsequent process in the repeated observation of the state of consciousness.

Evolution

The evolution of life on earth is a scientific fact, which would be futile to argue from any perspective. Natural selection is like a ticket to board the train. You need a ticket to get on the train, and the ticket determines where you must get off. The ticket does not make the train, drive the train, power the train, determine what path the train will take, or create as a passenger. The essence of this metaphor is our proposal that natural selection is a permissive process, and that, in fact, evolution is a process that involves final cause or teleology of novel living things. This proposition is consistent with a process view that mentality is progressively developed

as a result of forward increase in the intensity of experience and in novelty. The "mental office" is the dwelling place of God, in the creativity and in the subjective aim.

In his discussion of the defining characteristics of living things, Whitehead states (*PR* 104): "We require explanation by 'final cause.' Thus, the single occasion is alive when the subjective aim which determines its process of concrescence has introduced a novelty of definiteness not to be found in the inherited data of the primary phase." In Whitehead's cosmology God supplies the subjective aim, and (*PR* 67) "God is the organ of novelty, aiming at intensification." The novelty is in the becoming of experience through the final causation of the subjective aim, supplied by God. In relation to the World, God seeks a mutual transcendence, for novelty and for of increasing "intensities" of experience. *This is the underlying principle of evolution, since the intensity of experience progressively brings the potential into actuality. In this principle we bring back the agency of God in "creation."*

Stuart Kauffmann (*Investigations*) described self-organizing patterns and processes that seem to govern much of evolution. This self-organizing criticality makes evolutionary and ecological systems subject to final causality in the same way as the mind/brain system is. It seems that, in the course of evolution, features arise that are later co-opted for other purposes, or from features that seem to serve no purpose at all. These features are called preadaptations (Kauffmann, *Towards*). This term was later abandoned for the alternative, exaptation, to avoid the implication of final causality, although the term preadaptation is still sometimes used. The ancestors of birds, for example, are said to have developed feathers for thermal regulation, which were later critical to flight. The wings of birds are said to have developed gradually, again as a means of thermal regulation.

A well-known example of an exaptation is the rapid evolutionary growth of the human brain, leaving spaces or spandrels, which were thought to have been later co-

opted for language, art, commerce, war, and other functions (*Buss*). It should be noted that the large cranium of humans had a negative survival value. The pelvic orifice in the female had to be widened substantially to give birth, leading to death of the infant and/or mother in those that did not have a wide pelvic orifice. Notwithstanding, infant and maternal mortality in childbirth, as a result of delivery of a large cranium, would have remained high. In order for the enlarged cranium to be delivered through the pelvis, infants would have to be delivered at an early stage of development, making them unable to survive for a substantial period of time without protection and care, further increasing infant mortality. These changes would have to have co-evolved with the increasing size of the human brain. In terms of natural selection, there would have had to have been a clear survival and reproductive benefit of the enlarged brain, and brain size would have had to have been an adaptation offsetting these maladaptive features. This adaptive value would also have been sufficient to warrant co-evolution of other features.

However, the rapid growth of the human brain was recognized as a preadaptation by Steven J. Gould (*Buss*), one of the most highly regarded evolutionary scientists of the twentieth century. Intuitively, one might entertain the idea of final causality in human evolution. Such a view is prohibited, in principle. We might just as well have gone extinct, as we have had many close-calls in our brief history (*Germine*). Taking the view of final causation as forbidden, we must rely on pure physical efficient causation. This kind of thinking is maladaptive, as humanity stumbles in the dark while sinking into its own destruction.

The eye is another complex organ that had to have evolved in stages. Stuart Kauffman (*Towards*), noted that (5) "the eye, or even a red light sensitive cell in the progeny of an organism with no light sensitivity, is a 'blind teleology.'" Kauffman also states (2) that "no finite set of laws may suffice to describe by entailment the evolution of the physical universe." Kauffman describes the preadaptation as

fundamental to evolution, and goes on to say that (3) "the evolution of the biosphere by Darwinian exaption, or 'preadaptations,' is not describable by sufficient natural law." He argues that the opportunity for adaptation is a "blind final cause," which is the missing "why" of Darwinian evolutionary theory. He argues in favor of a partially lawless and creative universe, such the evolution of the biosphere and of species is inherently unpredictable. If is my own opinion that the evolution of humans, as well as the very special conditions that apply to our planet, could not possibly be "inherently unpredictable," because if they were, we wouldn't be here. This being the case, I make no apologies for the belief that God created us in His (or Her) own image, through the process of evolution, as final cause.

If we accept the notion that evolution occurs through preadaptations, which are unpredictable in both origin and outcomes, but are somehow propagated in the biosphere by blind teleology or blind final cause, not describable by natural law, we must inquire as to how the blind teleology is referred to some future actuality. If the phenomenon is not referable to some future actuality, or possibility of actuality, how can it possibly be called a final cause? If there is connection between the phenomenon and some future actuality, in what sense is it blind? God produces final causes from the realm of the possible future, and such final causality would help explain the difficulties that we have in explanation of preadaptation and other evolutionary problems.

In the Universe, as we know it, the highest expression of the Mind of God has been in humanity. However, the current atomization of time has forced into an ego-consciousness that lacks continuity into the future. The quantum observation that creates our reality is of the nature of experience, such that higher levels of experience over time is the motive force of evolution, moving forward in time. The movement of the subjective aim toward satisfaction of such high grades of experience is the formal cause of evolution, while natural selection is a mechanism serving that cause.

Unfortunately, this glorious evolution has experienced a descent, that now threatens our very survival, in large part because we choose such "natural selection" as our way of life, in total ignorance of the path of the teleology moving toward a sustainable future.

Conclusion

Harmony, not competition, is the predominant evolutionary force that God actualizes in nature (RM 156). The Self arises as a reality in the brain, fundamentally, as a place for God to realize that harmony. This Self, God within us, is described as the One Mind, which serves as the One Mind Model of quantum reality, as described by Schrödinger. Together with the evolving brain, life on earth has its highest purpose in unity with God, so that we may know Him or Her, and, in accordance with the singular Mind of God, realize the redemption of Self as opposed to the rule of ego. Based on the final cause of Self in actualizing what is potential, we have proposed that this is the origin of a singular mental process, in connection with the Universal. The same process underlies evolution, which actualizes the progressive development of higher and higher grades of experience and novelty as final cause. The efficient cause that underlies physical process is the datum of modern evolutionary theory, but it does not consider the subjective process, in evolution as well as mind.

We are a species early in our evolution, and our future is uncertain, but there is no way to stop this progressive higher order experience and harmonization, which is a final cause in the Mind of God, which we call the One Mind. The One Mind Model of quantum reality essentially holds that the One Mind manifests itself in nature as a

single, actual Universe evolving over time over a particular trajectory. Actual entities then would all belong to this Universal organism. Humankind is faced with challenges as well as opportunities. We manifest in groups as we manifest as individuals. Some 200 years ago, the scientist Pierre Simon Laplace famously said, regarding God, that there was no need for such a hypothesis. Scientists today have much the same attitude. God must be causal to be relevant to science. God is necessary at the scientific level of description as the agent of final causality. Both God and final causality are strictly forbidden by orthodox science. We have argued here that there now is a need for God in our hypotheses, and that, defining God's functions on the basis of Whitehead and others, the hypothesis of God has substantial explanatory power.

Quantum mechanisms for mind and consciousness are deficient in that the brain, although supporting a wealth of quantum processes on the level of the particle, and to a lesser degree on the atomic and molecular levels, cannot support the necessary level of quantum coherence, or even a relevant, sustained wave function. Quantum models must then resort to mind/brain interaction and mind/brain dualism, utilizing the hypothetical quantum theory of the observer. How can the observer be in the brain if the observer is the brain? The link between observation and actuality in quantum theory gives us a single Universe, honed out of the enormous realm of possibility, through the agency of a single God or One Mind.

If we look at the undetermined potentials of the Universe in the near-future, there are two kinds of possible universes now before us, corresponding to the overwhelmingly probable universes in which usury continues, which will lead to the demise of the human species, and unlikely ones in which usury is forsaken (*Verses* 5:5). This demise of humankind will follow quickly if we remain in the current universe, where usury is our master. This demise will be fueled by the wrath of God, which we discern in the actions of Jesus in the turning-over of the tables of the money

changers practicing usury at the temple, and the prohibitions of usury in the Judeo-Christian-Islamic texts, as well as in the now-obscure *Verses* of *The Book of Eli*. We have been warned so as to discern the dire consequences that usury has engendered, and of the exponential growth of the usurious world economy, which will soon create a collapse of this economy. We have not heeded these warnings, defying the Will of God.

Humankind is now taking the road to Hell, ignoring the clear warnings it has been given and the consequences of usury. This ignorance is a spiritual blindness that was engendered by the Fall, and which has now reached its breaking-point on the world stage, where humanity has developed the means of its own destruction and is very likely to manifest these means in the foreseeable future.

As opposed to the demise of humankind if it continues to practice usury, there are possible universes in which we will heed these warnings and abandon usury, the greatest of all sins. Although these universes are of very low probability, we pray to God, the Merciful Creator, that He may quickly bring an end to usury. This would not be a supernatural process, as it is within the realm of possibility. The evil one, however, will not rest, as he has taken the reigns of our future, as foretold, seeking to manifest in the end-times.

There will inevitably be a "Collision of the Universes," in which we will witness the collision of these potential future universes on the field of potentiality, as the usurious time will collide with the non-usurious time. Collision theory is described by *Prigogine*. There are two different types of time engendered by measurement/observation, which create the two times (156). When these two times come into contact, there is a collision (78). The collision creates a correlation between the two times. The correlations are destroyed as ternary and higher order correlations evolve, causing an "inverted collision," which destroys all of these correlations and brings us back to the initial separation of the times (80). This initial

separation the two types of time is then permanent, as the process is irreversible (125). In this sense, there will be "time no longer" (*KJB Revelation* 10:6). This is called "Crossing of the Rubicon," because there will be no turning back. The two kinds of times, with and without usury, one evil and one good, will engage in a battle, which will result in the demise of humankind. We must end usury in the near future to prevent this battle. Before it is too late, for the sake of our children, for the love of God, we must end usury, and get off the road to Hell. One can only hope. Amen.

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