

## A CREATIVE OVERTURE

### IN THE BEGINNING?

I decided to begin this reflection on creativity at the beginning. This decision seemed to make sense – because all of creation came from somewhere, didn't it?

As declared in the Book of Genesis (Chapter 1, Verse 1), by Moses the Israelite and former Prince of Egypt, God created the heavens and the earth. Since all truth is relative, I will not dispute this possibility. Although many would argue otherwise, this is a viable theory, albeit the how and why of it are still as of yet unproven.

There is much evidence supporting the theory that this universe came into being in a flash about 13.8 billion years ago when an infinitesimal singularity of almost infinite density suddenly decided to 'expand', or 'inflate'. The popular name for this expansion is the 'Big Bang'. What came before the 'Big Bang' is a question many continue to ponder, and like most theories, new theories pop up to challenge, revise and/or elaborate upon them.

Despite declarations to the contrary, there is much uncertainty about when it all began, or whether there was a beginning at all. The further one travels through the astronomical ideas that are permeating through cosmology and quantum physics, things get down-right spooky. When time and space evaporate, there is no beginning and no end. Current theories are now suggesting that the universe might have been created after all – not necessarily by 'God', but by us. I do believe that we create our own reality, but the idea that we actually create **ALL** of reality is mind-boggling indeed. As Shakespeare wrote, there certainly "are more things on heaven and earth [...] than are dreamt of in our philosophy."

Although the Big Bang is considered by many to be an accepted 'fact', it is simply a hypothesis with much evidence to support it (it has not been disproven – yet). According to the 'facts' of the Big Bang, and relatively recent observations, the universe is expanding at an

accelerating rate. For this to be true, 95% of the universe's energy and mass needs to be implied. To keep the Big Bang and Einstein's theory of gravity true, cosmologists and physicists have had to plug the holes with a cosmological constant and/or 'dark' matter and 'dark' energy (dark, meaning unseen and undetectable). The primary theory is that an unseen dark matter comprises 27% of the mass-energy of the universe, and dark energy, a repulsive force of some sort that counteracts gravity, comprises about 68% of the energy of the universe. Cosmologists are currently focussing much of their energy and attention in this area – and they remain optimistic that the foundational hypothesis of physical reality is still viable. One of the prevailing models that has emerged is 'string theory', the several versions of which propose the existence of a number of other dimensions.

### **Singular and Many**

Even if one accepts the 'truth' of the 'Big Bang', cosmology's greatest challenge, according to Niayesh Afshordi, Associate Professor of Physics and Astronomy at University of Waterloo, Robert B. Mann, Professor of Physics and Astronomy at University of Waterloo, and Razieh Pourhasan, Postdoctoral fellow at University of Iceland (holography) is understanding the big bang itself, the point immediately before inflation when all of space, time and matter violently emerged from an infinitely dense point called a singularity. They wonder how this somewhat ordered universe could emerge from something as bizarre as a singularity—"a point where space and time curve in on themselves, making it impossible to distinguish the future from the past", where all laws of physics breakdown, where there is no order or rules. "We would expect the emergence of a universe from a singularity to be unthinkably chaotic, marked by huge temperature fluctuations from point to point" (*The Black Hole at the Beginning of Time*, 2017, p. 9).

To explain how this probability was avoided, Afshordi, Mann, and Pourhasan pose a convincing theory that our "three-dimensional universe is merely the shadow of a world that has *four* spatial dimensions. Specifically, our entire universe came into being during a stellar

implosion in this supra-universe, an implosion that created a three-dimensional shell around a four-dimensional black hole. Our universe is that shell” (p. 6). Their theory “turns the big bang into a cosmic mirage”. Their picture “cloaks the singularity at the big bang just as an event horizon cloaks the singularity at the heart of a black hole. The cloaking protects us from the singularity’s mercurial and nefarious effects” (p. 10).

More importantly, their theory expands time and space into a supra-universe of four dimensions, thereby creating the possibility of an infinite cascade of universes popping into existence from other dimensions – a cosmos where there is no beginning and no end.

In his article, *The Quantum Multiverse*, Yasunori Nomura, Professor of Physics and Director of the Berkely Center for Theoretical Physics at the University of California writes, “Many cosmologists now accept the extraordinary idea that what seems to be the entire universe may actually be only a tiny part of a much larger structure called the multiverse” (2017, p. 32). Using the ‘many-worlds’ interpretation from quantum mechanics, physicists pose the possibility “that our universe is one of many that coexist in “probability space”, rather than in a single real space” (p. 32). At the quantum level it has been proven that sub-atomic particles are in a “superposition state of outcomes”, they are neither here nor there but are “located in a probabilistic haze” of ‘anywhere’. It is only when the particle is observed that it collapses into one particular location (p. 33). Expanding on Princeton University graduate Hugh Everett’s insight “that the state of a quantum system reflects the state of the *whole* universe around it” (p. 33), including the observer: “In this picture, the quantum state after the measurement is still a superposition”, but it is a superposition of entirely different worlds (p. 33).

A difficult concept to grasp, but essentially what this implies is that the “state of the entire world continuously branches into many possible parallel worlds that coexist as a superposition” (Nomura, p. 36). This includes the observer who also “keeps splitting into many observers living in many possible parallel worlds, and all are equally “real.” (p. 36). How this relates to the multiverse idea, Nomura explains, is that “the infinitely large space associated with eternal

inflation is a kind of “illusion”—the many bubble universes of inflation do not all exist in a single real space but represent the possible different branches on the probabilistic tree” (p. 36). “Eventually the state representing the whole multiverse will thus contain an enormous number of branches, each of which represents a possible world that may arise from the initial state” (p. 37).

In such a reality the observer also splits. If the observer splits, then so too must their consciousness and the observation of the possible ‘universes’ they exist in. Imagine if you can, what this means. If for some reason, I split into another universe right about now, the me who I am right now would exist in both universes – but each ‘me’ would be unaware that a split had occurred, and each ‘me’ would experience a continuity of time, although each ‘me’ is now on a different trajectory. From that point forward, I and my consciousness in both universes would evolve into someone else – different worlds, different experiences, different me. My consciousness that remains here, however, would be completely unaware of my consciousness in the other ‘world’, and vice versa. Over time there would be many ‘mes’ in many different worlds, all unaware of the other mes who at one time shared one consciousness and one ‘awareness’. It sounds like science fiction. Imagine those very difficult choices you made throughout your life. What if you actually made both choices, and ‘you’ are living out the consequences of each in different universes? My head spins when I imagine the possibilities.

Physicists have confirmed that a massive black hole exists at the centre of our galaxy (and most other galaxies too). Before I read about these theories, I had pondered what might lie on the other side of a black hole. What could there possibly be on the other side of a singularity? I imagined mini-universes popping into existence all over the place – on the other side of darkness. Perhaps this wasn’t my imagination? Many years ago, while thinking about the possibilities, and pondering a past personal trauma, I wrote the following:

### **Who am I?**

There is no wind. No light. Nothing to hold in this barren ergosphere. There’s a dead boy on the other side. At least I think he’s dead. Buckled under the weight of self-loathing and denial. Smothered out his light. He is a dark star.

In this dark event of my singular end, I remain forever suspended.

I invented this lonely space, between. I cannot go forward. I don't know who I am. And there is no road back to the light. There are some effects from which we cannot run.

Shiny knick-knacks hover, just beyond the horizon. They tantalize my margins. Others, less fortunate, cross the line. I cannot live on borrowed suns. The darkness takes them in.

Past and present tangle in this impossibility. I am unravelled. To thwart this continuum I must confront my reality. Could I cross the line? Embrace the me that was to be?

Perhaps, on the other side of darkness, there is another space, another time, a universe for me?

## **A Bio-Centric Universe**

This aptly brings me to the fascinating theory of *Biocentrism*. In their 2009 novel, *Biocentrism – How Life and Consciousness are the Keys to Understanding the True Nature of the Universe*, Biologist Robert Lanza and Astronomer Bob Berman surmise that life creates the universe instead of the other way around. Through *Biocentrism* they adeptly expand the principles of quantum physics into the universal realm. The substance of their theory is supported by three primary pillars:

- matter only dwells in a 'haze' of probability until it is observed;
- space and time are human constructs and/or senses – they are relative to the observer;
- reality is constructed within 'mind' - there is no separation between internal and external reality – they are co-existent.

The Fourth Principle of Biocentrism states: "Without consciousness, "matter" dwells in an undetermined state of probability. Any universe that could have preceded consciousness only existed in a probability state" (p. 81). In this bio-centric world where 'physical' reality does not

exist until it is observed (except in a quantum haze of probability), consciousness or ‘awareness’ is the foundation of all creation. Consciousness turns possibility into reality. In their follow up novel, *Beyond Biocentrism* (2016), Lanza and Berman explain that “the universe can be viewed as a blurry, probabilistic state of potential information, which the mind-system “collapses” into actual information and sensations when processed by the mind-system” (p. 147). This unitary process, according to Lanza and Berman, is what creates our sense of being or the feeling of ‘me’ (p. 147). Consciousness and the reality it creates are co-relative.

*Biocentrism* says there is no ‘in’ side or ‘out’ side, consciousness and physical reality exist together, and space and time do not exist independent of consciousness. Lanza and Berman support their theory with quantum physics (they simply interpret some of the results of the science with a different lens). Without getting too complicated, the fundamentals of quantum physics have proven that:

- Distance is irrelevant to entangled particles. Whether they reside in the same home, or at the other end of the universe, they communicate instantly with each other. They appear to break Einstein’s law that states that nothing can exceed the speed of light. This also implies that space and/or distance and/or time are irrelevant to their reality – or in their reality space and time do not exist.
- “Quantum theory tells us that everything in nature has a particle nature and a wave nature, and that the object’s behaviour exists only as probabilities, no small object actually assumes a particular place or motion until its wave-function collapses” (2009, p. 50). Any observation whatsoever causes the collapse. Through testing “it became obvious that *mere knowledge in the experimenter’s mind* is sufficient to cause the wave-function to collapse” (p. 51). If the observer plans to observe the particle in the future, that particle seems to know of this ‘plan’ and will behave accordingly. “The presence and methodology of the experimenter is hopelessly entangled with whatever he is attempting to observe and what results he gets” (p. 49).

- “Modern knowledge of the brain shows that what appears “out there” is actually occurring within our own minds” (p. 39). Benjamin Libet’s research and subsequent experiments show that the ‘brain’ makes decisions before we are consciously aware of them; “the brain makes its own decisions on a subconscious level” (p. 39). Lanza and Berman conclude that “there is no true disconnect between external and internal. Instead, we can label all cognition as an amalgam of our experiential selves and whatever energy field may pervade the cosmos” (p. 39).
- Einstein proved that time and space are relative to the observer.

Lanza and Berman argue that “nothing exists outside of consciousness”; that it is only the perceptions themselves that we perceive (p. 36). They say that visual and tactile experiences are not located “in some external disconnected location that we have grown accustomed to regarding as being distant from ourselves” (p. 39). Physical states do not exist before they are measured (p.53). They reiterate: “*Nothing happens* until the event is actually observed” (p. 55); it is the observer who “determines physical behaviour of “external” objects” (p. 78). Quantum theory “implies that consciousness must exist” and “it tacitly shows that only an act of observation can confer shape and form to reality” (p. 81).

They support the probability that everything in the universe is connected, or entangled. Since “everything was in contact, and born together, at the Big Bang”, Lanza and Berman surmise that “it may even make sense that everything is in some sense an entangled relative of every other, and in direct contact with everything else, despite the seeming emptiness between them” (2009, p. 125). If ‘mind’ and/or consciousness are correlative to reality, “then *of course* everything is connected with everything else” (p. 126). They acknowledge “nagging hints that “All is One” peek from cracks in every discipline”, that “we have occasional subjective experience, reports of mystical revelation, unity of physical constants and laws, entangled particle phenomena, and a certain appealing esthetics [...] that serve as little hints of this potential Oneness” (p. 161).

Lanza and Berman assert that if there were no observers, the cosmos would not exist in any way (p. 178). This doesn't mean that nature is unreal, it just means that nature and the mind are correlative – that together they are real (p. 159). In Lanza and Berman, Physicist Andrei Linde of Stanford University says: “The universe and the observer exist as a pair. I cannot imagine a consistent theory of the universe that ignores consciousness. I do not know any sense in which I could claim that the universe is here in the absence of observers” (p. 178). Everything we observe, according to Lanza and Berman, “is the direct interaction of energy and mind. Anything that we do not observe directly exists only as potential—or more mathematically speaking—as a haze of probability” (p. 181). In a universe “filled with “huge clouds of uncertainty” that have not yet interacted either with a conscious observer”..., according to Princeton Physicist John Wheeler, “the cosmos is “a vast arena containing realms where the past is not yet the past” (in Lanza and Berman, p. 179).

The central concept of Biocentrism is that ‘mind’ and ‘universe’ are co-relative; “the ‘universe’ is simply the complete spatio-temporal logic of the self” (p. 93). Lanza (2016) explained, on the CBC Radio program *Ideas*, with CBC Broadcaster Paul Kennedy, that everything we experience is in ‘mind’, and it is in ‘mind’ where algorithms create space and where events are organized based on an intuitive sense of ‘time’. Echoing 18<sup>th</sup> Century philosopher Immanuel Kant, he explains that time is ‘inner’ intuition, and space is ‘outer’ intuition. According to Kant, we are born with an internal intuitive sense of time – an essential tool to organize experience. We are also born with an outer sense of space – the faculty by which we represent and locate objects, outside of us. Both space and time do not exist separately from ‘mind’. Lanza explains that space and time are tools of consciousness, and that they do not exist separately from consciousness. Kent Baldner (2018), Associate Professor of Philosophy at Western Michigan University, quotes directly from Kant:

Time is the *a priori* formal condition of all appearances in general. Space, as the pure form of all outer intuitions, is limited as *a priori* condition merely to outer



intuitions. But since, on the contrary, all representations, whether or not they have outer things as their object, nevertheless as determinations of the mind themselves belong to the inner state, ... this inner state belongs under the formal condition of inner intuition, and thus of time....

Balder summarizes: “So, while we experience our own inner states as temporally but not spatially ordered, we experience things outside ourselves as occupying a determinate location in both space and time.” Baldner concludes:

Kant has argued that space is merely the form of outer intuition, and not a property of nor a system of relations between independently real things in themselves. Likewise, time is merely the form of inner intuition. But, as the necessary *a priori* forms of intuitions, they are thereby the forms of *all* intuition, and so, of all cognition. That is, everything we will ever perceive will be perceived as being in time, and every outer thing we will ever perceive will be perceived as being in space and time.

By cobbling together the theory of biocentrism with Kant’s thoughts on time and space, I can summarize these mind numbing ideas in my own words. All matter exists in a hazy state of probability. ‘Awareness’, which is the ability of life to sense enough of its environment (with all of its ‘senses’), react to it and survive, collapses the haze of probability into that ‘life’s reality. Or, in other words, awareness creates the reality where it can make rules that enable it to function with a ‘maximized’ level of predictability in order for it to act, react and maximize its survivability within the reality it has created (for living things that communicate with each other a significant portion of this reality will be collective). For humans, with an imbedded sense of space and time, mind lays out the scaffolding of ‘reality’ based on time and space. ‘Awareness’ can be as simple as a plant feeling the light of the sun – a light it needs to live – and so it leans

toward the sun to capture this light. What the plant perceives the sun to be forms a major part of its reality. And I would guess that this reality bears little resemblance to ours.

I don't know if *Biocentrism* is consistent with Nomura's theory that 'many worlds' exist in a probabilistic haze until they are 'observed', but if it was, it could mean that our consciousness that exists in this reality is what has made this universe real, and our separated consciousness in all other universes makes those universes real as well, but only in those realities.

Lanza and Berman admit that: "Currently, the disciplines of biology, physics, cosmology, and all their sub-branches are generally practiced by those with little knowledge of the others". They suggest that it "may take a multidisciplinary approach to achieve tangible results that incorporate biocentrism" (2009, p. 197). I agree, but I would add that the disciplines of philosophy and psychology also need to be included. The main premise of *Biocentrism* is that the 'consciousness' of life creates the universe. More specifically, it is the 'One Who Observes' who creates reality. *Biocentrism*, therefore, could benefit from a clearer definition or understanding of the 'One Who Observes'. The primary terms used by Lanza and Berman are 'consciousness', 'awareness' and or 'mind'; but these are relatively nebulous terms with several different meanings, depending on the context. Is the consciousness they refer to the 'I' that gives life a feeling of continuity, separate existence and 'self'? What is mind? Is it singular, or plural, or collective? Is it the part of life that makes conscious decisions? Does it include the 'sub' part of consciousness? What is the catalysing force of the 'One Who Observes'? Is it 'conscious'? The discipline of psychology has spent much effort, thought and time on 'mind', and much support and clarity of *Biocentrism*, I believe, can be found through a reflection on its depths.

The human mind creates universes. Fantasy and science fiction novels spring from the imagination of possibilities. In our minds the Lord of the Rings and its Middle Earth, and the Game of Thrones and its kingdoms, are as real as the land we walk on. Similarly, I believe that our ability to imagine alternate futures gives us choice, and when we act 'toward' a desired future, we step into this future. When we step forward a future is created, probabilities adjust,

and the past that best conforms to this ‘reality’ also becomes. Over a century ago, philosopher and psychologist William James proposed that the human mind “possesses a “simultaneous theater of possibilities,” which will be made to conform to the truth that the willful mind declares” (Bankart, 1997, p. 217). If we can imagine a future, we can create it. Like biocentrism, for William James, the mind turns a haze of probability (simultaneous theatre of possibility) into reality.

Recognized by many as the first transpersonal psychologist, William James also believed in a ‘oneness’ found within the depths of the human ‘sub’ conscious. Professor and psychologist Peter Bankart (1997) says that James believed we were “...at best only tangentially aware of and part of the wider realities of life” (p. 219). James believed that “Other realms of human experience at different levels of the person also existed simultaneously alongside waking consciousness” (R. Wozniak, *Biological consciousness and the experience of the transcendent*, 1995, p. 3). At the end of his life William James “...enjoined psychologists to keep an open mind and to study the fall of the threshold of consciousness. In the subliminal extension of the horizons of awareness, we find alterations that point to the very core of life and identity” (Wozniak, p. 5).

There may very well be a ‘Oneness of Awareness’, of which we are only tangentially aware, that by virtue of its existence has created this universe. Or, we, and the life on this earth, may be the only ‘awareness’ there is. Nevertheless, according to *Biocentrism*, and also from a relativist perspective, it is the ‘One Who Observes’ who creates reality. When the ‘One Who Observes’ looked upon itself and declared, “I AM!”, out from the probabilistic haze of the simultaneous theatre of possibility emerged a perfect universe created by and for life.

### **Summum Bonum – The Highest Good**

When all of these complicated and confusing and difficult to grasp thoughts and ideas splashed around in my head, some of the waves connected, and the concept of ‘eternal recurrence’ popped into my conscious awareness.

‘Eternal recurrence’ was a term coined by philosopher, composer, poet and philologist Friedrich Wilhelm Nietzsche (1844-1900). Eternal recurrence “is a hypothetical concept that posits that the universe has been recurring, and will continue to recur, in a self-similar form for an infinite number of times across infinite time or space” (Wikipedia, *Friedrich Nietzsche - Eternal Return*). Nietzsche asked us to contemplate the possibility that we would live our exact same lives, including all the joy and all the suffering, over and over and over again, ad-infinitum. If such a possibility existed, then what would or should one do with one’s life? He implored us to take life by the throat – to take this life and make it the best that it could possibly be – a life that you would choose to live over and over and over again; a life where you would not accept your ‘lot’ in life, or the ‘lot’ of others with the hope of a better afterlife. If you knew you had an infinitely repeating life, you would create the best possible life in the here and now.

Nietzsche based this philosophy on an assumption that the universe was infinite, that infinity was a very long time and hence, the universe would repeat itself an infinite number of times. What is truly extraordinary to me is that he posited this hypothetical thought experiment decades before the mind, time and space bending ideas of relativity and quantum physics emerged. With a few tweaks, is it possible to contemplate an infinite number of realities that give us an infinite opportunity to learn from the consequences of an infinite number of different choices in an infinite number of different ‘universes’, into which our consciousness has split? What would be the ‘summum bonum’ of such a possibility?

Nonetheless, today’s leading physicists, cosmologists, biologists, psychologists and philosophers are raising the distinct possibility that everything is connected, that ‘creation’ is infinite and eternal, and that the ‘One who observes’ plays a critical role in the creation of

reality.