

# Personal Thoughts on the “Universe from Nothing” Construct

Nathaniel Bates

There is a trend among physicists to explain away philosophical questions about the nature of existence by appealing to a kind of umbrella scientism that seeks to co-opt philosophy. In one instance, there is an attempt to address the question of how physical constants seem fine-tuned for the evolution of carbon-based life by appealing to the concept of a multi-verse. Their argument is very reasonable on the surface of things, appealing to an astonishing discovery in modern quantum physics that empty space is not really empty but actually has an energy state to it. Their argument then further appeals to a possibility that exists in M-theory that our universe might only be one of an infinite number of universes. The claim is that we might be in one of an infinite number of universes emerging out of nothing that may differ in certain physical constants. Some would be fine-tuned for life, while others would not be. In such a scenario, there would be some universes bound to have life that would then evolve consciousness. Our universe seems fine-tuned for the evolution of consciousness because our particular universe is indeed fine-tuned for the very forms of life that can then question why the universe is fine-tuned for life. Yet, the total multi-verse is not particularly fine-tuned for life. We are then stuck in an illusion of meaning that deceives us in to believing in a biocentric teleology when in fact the multi-verse truly is itself bound by no particular requirement to evolve life. This particular counter-claim to the Anthropic argument has been popularized by physicists Lawrence Krauss and Leonard Susskind and is often used as arguments against biocentrism, theism, pantheism, religion, the New Age, and even more secular notions of teleology advocated by such philosophers as Thomas Nagel.

For the record, let me state that my intuition tends to accept the strong probability that we are indeed one of an infinite number of universes. The idea excites within me a sense of awe and wonder. Frankly, I prefer this scenario to having just one universe. However, I also believe that probability arguments based on infinity are deeply problematic. The idea that a universe like ours is *bound* to exist because an infinite number of universes would somehow be bound to cover every single possible physical constant, each of them infinitesimally probable in themselves, relies on an argument similar to the idea that “infinity divided by infinity equals

one.” Mathematicians do not use probability arguments based on infinity. It *may* be that an infinite number of universes would give birth to every single possible physical constant, those permitting life as well as those not permitting life. However, such a scenario is not a mathematical certainty and might even clash with a central concept of set theory, namely the Axiom of the Power Set.<sup>1</sup> I suppose that the theory proposed might be testable if we did make some kind of contact with another universe (or “brane”). If we discovered such a universe and found that its physical constants were completely incompatible with life, then it would be powerful evidence against biocentrism, as would a failure to discover life on any other planets in our own universe. The failure to discover non-Earth life either in our own brane or in another would be powerful evidence that the construct known as “life” is not embedded in the fabric of existence. However, if we did discover that life is not only plentiful in our cosmos but also plentiful in another one we might discover, then we might have powerful evidence for the idea that “life” is less an isolated property of some forms of matter but actually a state that energy would tend to evolve toward. The discovery of intelligent life would give even more ammunition to the idea that consciousness is a key player in the multi-verse. Alternate types of life may not be carbon-based, or even based on the current Periodic Table of Elements, but they might still be a complex form of organization capable of replication and intelligence.

I also believe that Krauss and other modern physicists have fallen in to a central error of Western philosophy, both religious and secular, that of dualism. Indeed, quantum physics does posit that seemingly empty space is not empty, and that matter-antimatter pairs can emerge from seemingly empty space. Furthermore, spacetime itself can emerge from what might be called “Nothing.” This is all scientific, even if it departs from the scientism of the nineteenth century, which would have looked askance at such concepts. Indeed, I agree with them that “Nothing” is creative according to modern physics and that it is an area of study to be looked at. Where I

---

<sup>1</sup> If the number of physical constants is infinite in a manner corresponding to the real numbers while the number of possible universes is infinite in a manner corresponding to the natural numbers, then the number of possible physical constants would still be uncountable with respect to the number of universes, just as the real numbers are uncountable with respect to the natural numbers. If indeed this is the case, then it would still not address the probability argument raised by the advocates of biocentrism or the Anthropic Principle. Furthermore, there is a more basic objection to arguments of certainty based on infinities. Given the set of natural numbers, and given a set constructed from a random pick of the set of natural numbers (using the Axiom of Choice), we do not know if our chosen set will contain the number five or not. The reason is that the measure of the counting set of natural numbers beginning with one corresponds to the same counting set beginning at six, or ten or a thousand. If the sets can pair, as the set of natural numbers would pair with other counting sets, then their infinities are of the same cardinality. This makes arguments of certainty based on infinities problematic mathematically.

depart from the skeptics is in their unquestioned embrace of the central Western construct that non-being implies non-existence. In other words, they embrace the central delusion of both Western science and Western religion that non-being is the dialectical opposite of being instead of its complement. Such concepts are foreign to the East, and also foreign to Western forms of mysticism found within certain corners of the Jewish, Christian and Islamic traditions which view “Nothing” as actually implying “No Thing” as opposed to non-existence. In other words, for mystics of all stripes, *Nothing* is the absence of what we can conceive of, not the absence of existence. Mystical approaches to God have often relied on the concept of a creative Void, of an iconoclast denial of categories within which the human mind must deconstruct its own idols and actually approach the Source that is beyond “Thing,” the realm of separation. There is nothing in Quantum Physics to argue against such a notion.

Let me stop here with a caveat. I do not want to replace the secular scientism of Krauss with a New Age scientism that suggests that Quantum Physics “proves” mysticism. This was a popular fad in the twentieth century, and can still be found in paranormal circles. I claim nothing of the kind. I am simply suggesting that science weigh the evidence and not seek an “umbrella” over philosophy that it cannot sustain. Modern secular scientists should remember that many of the original philosophers to conceive of either the multi-verse or a universe from the Void were mystical sages and not secular materialists. What is confusing is the fact that mystics were often as much repressed by various religious establishments as scientists themselves were. They were not generally part of the religious establishment. Thus, an argument against religion that fails to take into account the institutional abuses of power within the religious sphere against its own marginalized elements is similar to nineteenth century imperialistic arguments that were made against whole cultures premised simply on the abuses of their leaders. Indeed, there is no one monolithic institution called “Religion” any more than there is one monolithic institution called “Politics.” An argument against dogmatism and fundamentalism does not argue against all spirituality. It extends no further than the range of the argument itself.

Allow me an aside for a minute. There is actually a bit of fun we could have with the multi-verse theory if we were to rely on the premise that potentialities translate in to actualities. Let us assume that it is correct that an infinite number of universes would mandate that every probability becomes an actuality. In other words, assume for the sake of argument that Krauss is right, that an infinite number of universes means that all possible physical constants are covered.

Extend this further and say that one universe might evolve along something akin to that posited by Frank Tipler, evolving a super-consciousness that continues on to infinity. That super-consciousness would become progressively more powerful. It could extend in to infinity and become omniscient as well as omnipotent. This possibility would then hold that time travel becomes possible for this consciousness. It could even extend its reach to all branes, and all time periods within those branes. It could then engineer the physical constants of all other universes. Eventually, all universes become “biocentric,” or at least those destined to be such by the will of an infinite mind. If multiple such intelligences arise, then all forms of this consciousness merge in to one because infinite consciousness would also be infinitely peaceful. Infinities do not war with infinities because to do so would create mathematical paradoxes and no infinite consciousness would want that, and so they merge.

Now, here is the fun part. If there are an infinite number of universes now---“now” being a problematic concept in this context, but one that seems to be accepted by physicists----then one or more are bound to be infinitely old. This argument derives from the argument of probability from infinity, so it cannot be denied if indeed we are to hold probability arguments from infinity. Holding to the given premise, there are Big Bangs would have happened in the infinite past. Of course, it could also be that “past” is not a relevant concept outside of a given universe. Hence, if such a consciousness could arise then its reach would already be here, now, at this time. Indeed, even if such a universe will not emerge until the infinite future, its reach is here now since time would have no meaning for an infinite consciousness. Its reach would even extend infinitely in to the past. There would never be a time in which this consciousness would not reach. What this would mean is that out of the supposition of a purely random universe you then have a consciousness that is infinitely ordered, and that this happened infinitely long ago. Indeed, even if we extended our reach to an infinite past, we would posit that the consciousness described would still be infinitely old since the infinite past would still have an infinite past and that past in turn has an infinite past, ad infinitum. The infinite past would be enough to have already evolved our infinite consciousness since it already exists with an infinite past. Out of the multi-verse argument one then has a design argument of sorts, one that is not traditional theism but which would still be interesting.

I do not favor a theism based on scientism any more than I favor an atheism based on scientism. Such a concept of the Divine is not one that I would necessarily prefer. My own

objection to it would be that it would be a theist form of “umbrella scientism,” and thus subject to the criticism that Stephen Jay Gould and other humanists have given to such endeavors. In addition, my scenario would be a probability argument based on infinity, and thus subject to the same objections that mathematicians would give to other probability arguments based on infinity. Finally, the notion of an “infinite” consciousness that evolves over time is undefined in that it does not address the question of which cardinality of infinity we are referring to.<sup>2</sup> As a concept, it is mathematically imprecise. However, it should still be noted that an evolved infinite consciousness appears to be a possible outgrowth of the multi-verse construct. It might really be an argument that works to falsify the assumption of a random multi-verse through logical contradiction, or perhaps anything similar to Tipler’s scenario is impossible under the Second Law of Thermodynamics. If my scenario were true, it certainly would make science fiction fans happy even if traditional theologians and atheistic scientists might both be remiss. More broadly, the hypothetical construct of an infinite intelligence which is both beyond time and yet which is paradoxically an evolved reality might re-open questions within theological circles about Being and Becoming, Eternity and Time, Transcendence and Immanence. Even if our line of thought begins with scientism and all of its fallacies, it may have implications for questions that lead beyond scientism.

I want to end by stating that I certainly respect Krauss and Susskind as scientific thinkers. I particularly like the tenacity with which Krauss and Susskind have at least approached the question of human existence with a love of truth and would certainly love to hear how they would address this potential paradox within their own conjecture.

---

<sup>2</sup> Cantor proved that not all infinities are equal. The infinity that defines the measure of the set of rational numbers is not the same as the infinity that defines the measure of the real numbers. Hence, the idea of an infinite amount of space or an infinite amount of time begs the question of what “infinity” we are referring to. For most religious believers, an infinite God would transcend mere mathematical notions of infinity. The idea of an intelligence evolved over an infinite amount of time would not satisfy the idea of an infinity transcending all of Cantor’s cardinalities, leaving religious believers potentially as unsatisfied as atheists.