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Just Thinking, 10/13/03:

The Physics of the Antichrist, a Theory of Everything, III of VI:

The Dual Salvation of the Third Person

by Justin Katz

The Boundary of the Spirit

In *The Physics of Immortality,* Frank Tipler proposes a two-person God, involving what Christians would call the Father and the Holy Spirit. The Father, in this case, would be the Omega Point itself — the purpose of history and the central person of God. The Holy Spirit represents the Omega Point's "living properties," which generate "the laws of physics and every entity that exists physically" — that is, it "gives being to all being... life to all living things" (183).

The definition of these "living properties" relates to the idea that many worlds exist simultaneously, branching out at every moment. Each branch can be seen as a path that a given world follows; the *most likely* path — that which adheres to a set of consistent rules, such as the laws of physics — is called the "phase path." The Holy Spirit, in this context, would be a "universal wave function," a sort of formula that defines all possible paths. The universal wave function also defines the "probability" that the state of the universe at one moment will move on to another particular state at the next moment — essentially the probability that a potential path will actually be followed.

Applying this to the Many Worlds Interpretation described by Tipler makes the model unnecessarily complex. According to this view, proceeding from each moment is every possible next moment, even every *impossible* next moment, depending on how one defines possibility. Furthermore, every momentary state of the universe can be reached by every possible or impossible history, a point that Tipler explains thus:

There are also real histories leading to our presently observed state of the universe... in which real historical characters — for instance Julius Caesar — never existed. What happens in such a history is that the physical fields rearrange themselves over time (more accurately, over the path corresponding to this strange history) to create false memories, including not only human memories but also the "memories" in a huge number of written records and in massive monuments. (176)

This model is inefficient because it posits completely speculative mechanisms to account for continuous experience. Some mysterious force would shift fields to cause a person living in the Julius Caesar-free reality to witness monuments appearing and to gradually have his memories reformed to coincide with the monuments. Yet, in laying out the Many Worlds thus, continuous experience becomes an arbitrarily true phenomenon — our memories of yesterday could simply be the result of "rearranged" fields.

Turning toward the future brings into view another instance of unnecessary complexity. Tipler says that "there is an infinity of really existing futures which evolve from the present state" (176). But if each exists, then the probability of a given point reaching another given point is always one hundred percent on some path. To have any meaning, "probability" would have to be seen as just another way of describing the path that we observe ourselves to be on. From our perspective, it is improbable that tomorrow gravity will work in reverse, even though in some universe that currently mirrors ours, it is virtually certain.

At issue, here, is that scientists have de-privileged human experience. In the model of Many Worlds that Tipler describes, each entire universe moves along a path of experience. Each

is continually diverging, yet never converges, even when they are exact replicas. Every you whom you could possibly have become within the boundaries of this world was, at one point, united in the embryonic you, yet you experience only one of those histories, and every other you believes his or her history to be the actual one. Once again, "probability" seems to be merely just another way of declaring which turns your experience has taken.

Much of this complexity clears up if we envision reality as a connected mesh of snapshots of the universe and consider ourselves — meaning our continuous awareness — to be the "paths." Our experience, in this model, is not an illusion growing out of the reality that we happen to be following, but an indication of our souls, which operate at a level of reality independent from the physical world. "Probability" becomes a more meaningful term, indicating the ease with which we can make certain moves along the playing board of life.

Narrowing in on the universe that we currently inhabit, Tipler defines the Omega Point Boundary Condition, which says that the wave function for *our* universe includes all realities in which life "evolves all the way into the Omega Point" (181). Thus, this path is defined by the Holy Spirit, which is the force or set of rules that guides *our* reality along the correct history for God.

It would seem that this God is somewhat limited in that there are realities in which He doesn't exist; the boundary condition is less of a margin for the infinite universe than a guide that we hope it will follow. Nonetheless, what matters, here, is that Tipler has admitted purpose into science in such a way as to undermine objections based on probability:

With the Omega Point Boundary Condition, the existence of life-bearing phase paths is fundamental to the boundary condition itself; the evolution and continued existence of life are logically prior. If a phase path did not exist at our current [position] in which life could continue, the Omega Point would not exist. (182)

No matter how improbable an event might be, if the Omega Point requires it, it must — by definition — be absolutely certain to occur. In this construction, one can say that God *is* physical

reality, at least that in which we exist. However, if the Many Worlds are seen as points, not continuous realities, then God — as with our souls — is *apart from* physical reality, engulfing even those universe-stepping-stones that do not lead to the Omega Point. The Omega Point Boundary Condition, the universal wave function, and the Holy Spirit just define the static worlds that align with the underlying God, the Father, in some meaningful way.

The Salvation of Christ's Message

In his book, even though he explains how Christ's Resurrection might be *possible*, Tipler rejects it as *improbable*. He has subsequently found a material reason that Christ must have been the Son of God, which I'll address in the next section. However, even if there were no such reason, Christ can be seen as logically necessary for the Omega Point.

If we humans ultimately determine our own "phase paths," then existential probability is determined not only by the qualities of the physical world in which we live, but also by the ways in which we act. Just as gravity is not likely to shift tomorrow, it is unlikely that everybody will wake up using "dog" to mean "cat." It is also unlikely that economics will suddenly shift such that people pay money to clients for the privilege of rendering services.

If we consider human activity, behavior, and tendencies to be, in essence, forces acting on the universe, then we must also consider those systems that guide us — psychology, sociology, politics, ethics, theology — to be necessary "laws of physics" that lead to the Omega Point. In this reading, Christ, His Resurrection, and His message enabled certain social conditions leading up to our current state. Included in these social conditions could be such human "constructs" as ethics that enable free inquiry, economic principles that generate necessary wealth, or a defined belief that there is truth to find via scientific investigation of the universe.

It may seem contrary to the concept of free will that the boundary conditions that lead to God should have a social component, an ethics. However, just as the laws of physics do not define all possible worlds, but only those that tend toward the Omega Point, the ethics of social systems do not define all possible behaviors. We can choose to live outside of the Holy Spirit's conditions, but because conscious choice is involved in this breach of conditions, it represents a repudiation of God — an emotional, spiritual rejection of true reality.

The Salvation of Jesus' Body

Among the physical requirements for the Omega Point to be reached is that the universe is designed in such a way as to collapse, with life finding a way to guide this ending. Unfortunately, evidence suggests that the universe is currently accelerating. Since we are in the expansion phase of the universe, acceleration would continue as density decreased, and life would eventually be snuffed out as all matter dispersed into the void.

In a recent paper titled "The Omega Point and Christianity," Tipler explains that the collapse requires two forces to become balanced during expansion. A Cosmological Constant pushes the universe outward; the Higgs field permeates space and, in a way related to energy density, is pulling inward as if toward a vacuum. If these two forces are not in a natural balance, then something must happen to bring them to one. Since the only variable would be the degree to which the Higgs field has reached an "absolute vacuum," which cancels the Cosmological Constant, the change must be in the energy density of the universe.

As it happens, a law of physics became understood in the 1970s and '80s that may address this problem. "Electroweak baryogenesis" is the process whereby energy transforms into baryons ("heavy" particles like neutrons and protons) and leptons (particles like electrons and neutrinos). "Quantum tunneling" provides the massive energy required for this process by drawing from the

many worlds that exist. Tipler suggests that "electroweak quantum tunneling" created all of the existing baryons toward the beginning of the universe. Since the Higgs field is lacking in energy density, annihilating baryons would move it toward absolute vacuum.

Tipler finds potential answers to this problem in Christianity by defining "miracle" in scientific terms. Describing the Christian view of a miracle as "a very improbable event which has religious significance," Tipler changes wording so that a miracle is "very improbable according to standard past-to-future causation from the data in our multiverse neighborhood, but is seen to be inevitable from knowledge that the multiverse will evolve into the Omega Point" and that it "never violates any physical law." This means that a miraculous event is always physically possible but is not likely except in cases in which God requires it to happen.

One example would be a male child born of a virgin. Some geneticists believe that virgin births of girls who are natural clones of their mothers might be as common as the births of twins. A male child born in this way, by contrast, would be so improbable as to happen only once throughout human history. This unique DNA would represent one of two genetic signatures of the man Jesus, the other being somehow related to the Immaculate Conception and Jesus and Mary's shared lack of original sin.

According to Tipler, these markers become important, as does the gory method of Jesus' death, because they will enable us to identify Him as the man pictured on the Shroud of Turin (which, interestingly, is only one letter removed from "Turing," the name of a test that Tipler uses for intellectual personality). The blood and flesh that Jesus' wounds left on the shroud not only contain information about His physical makeup, but they also caused the shroud to adhere to Jesus' body in spots when He was resurrected, thus enabling the image to form on the linen. And Tipler suggests that this image indicates that the process whereby Jesus was resurrected — indeed,

the process that enabled all of His physical miracles — was baryon annihilation through quantum tunneling.

At the moment of the Resurrection, the particles that made up the versions of Jesus in trillions of worlds contributed energy to the body existing in *our* world. By this method, Jesus disappeared and reappeared. By similar methods, He created bread and fish, converted water to wine, walked on water, and ascended into Heaven. And by studying the shroud and Jesus' DNA, humanity could develop a technology of extraordinary power, enabling miraculous techniques, not the least of which would be one to cause the universe to collapse just right so as to reach the Omega Point.

If Tipler's scenario is correct, then it is difficult even to imagine how non-gods could draw on the resources of worlds that we can detect only mathematically. However, translating quantum tunneling into the mesh model of Many Worlds might be a first step in harnessing this potential wellspring of energy because it makes Tipler's declaration that the Resurrection "had to happen" less a statement of probability and more a statement of physical mechanism.

If the many universes are static, with our souls moving fluidly from one to the next, it is clear that they are so close as to overlap. At the next moment in time, there is a you in every position to which you could move in that moment — say an inch in every direction, to make things easy. Likewise, in the moment that just passed, there is a you in every direction one inch away from the position that you now inhabit. This means that, at this moment, there are stationary versions of you two inches away in every direction to which you could have moved. In fact, there are versions of you in every position throughout the planet Earth that you could possibly have reached by now given the laws of physics, society, and the circumstances into which you were born.

Given the complexity of our bodies, our society, the movement of the Earth, the galaxy, and the universe, it seems extremely unlikely that many sets of choices could have placed every particle in your body in the same physical state and location at this precise moment. But what if Jesus' Resurrection "had to happen" in the sense that every potential path of the universe placed every particle of His body in exactly the same place at that moment? In other words, what if there is a sort of absolute location grid in spacetime on which Jesus could have represented a point in every world, no matter the state of any given universe surrounding Him?

It would seem, then, that there might be some way in which to construct a situation in which a particle could move in trillions of possible directions, but end up on exactly the same absolute point at exactly the same time. However, even if this suggestion can be shown to have a basis in science (which is something that I cannot prove), I don't believe that this is the entire story. It may be the mechanism that makes the miracle possible, but the equation still requires the factor of "significance."

Timing and Technique Are Everything

Tipler suggests that the technology that could potentially derive from studies of the Shroud of Turin would be so powerful that human society must reach a highly evolved state of civilization before it would be advisable for us to wield it. Delays throughout the history of the shroud have assisted in this, whether they were tangents in its travels or false starts in determining its authenticity. In the meantime, the teachings of Jesus have led us toward a social structure through which we could reach a degree of advancement to discover and harness the power necessary to "save the universe." Simultaneously, Jesus' ethical teachings put us on the path to become the sort of people we need to become.

But do these two "gifts" positively correspond? I've already argued that I believe that they will inevitably come into conflict. Even were science to unlock the key to free us from Original Sin, a feat that is certainly not theologically guaranteed in this world, there would be those who

would refuse the change. Furthermore, with technology of that magnitude, accidents during development would be catastrophic, and the temptation to co-opt the effort for personal gain would be like an absolute vacuum of covetousness.

Indeed, even if a capitalist and free society is optimal for the generation of wealth and knowledge, the universal goal suggests that many would gravitate toward socialism. In such a system, which filters all of the society's wealth through a single entity, the reins are easily seized; evil will gravitate toward the center and the degree of power will amplify sin. By contrast, broad personal interaction of individuals is maximally open to the guidance of God working in each of us because His method is to guide rather than trick, corrupt, or control. The hope and the danger of these two strategies are both apparent in this from St. Paul (Romans 12:4-6):

Just as each of us has one body with many members, and these members do not all have the same function, so in Christ we who are many form one body, and each member belongs to all the others. We have different gifts, according to the grace given us.

Sadly, I'm inclined to believe that Original Sin will not prove curable, and I don't think the Omega Point will require it. Most scientists are currently atheists. In its lack of "soul," the Omega Point is an atheistic God, and the anti-individualism and centralized planning of socialism seems a natural social system to be tapped for its achievement. The philosophies of the socialists were formed with the understanding that the universe would either expand into Heat Death or contract into the Eternal Return, and if the fate of reality is up to humanity, as Tipler describes, both of these outcomes are feasible.

Perhaps all such thinkers were looking down the wrong potential path through reality — a Godless path — like a rough draft of a masterpiece. Whatever the case, I will later show this conflict between the salvation of the spirit and the salvation of the body to be a "meaningful contradiction."

For now, suffice to say that Christ is said to have given the Holy Spirit to the Apostles. In this sense, something in His coming aligned humanity with the boundary conditions of Tipler's universal wave function. Perhaps Christ's coming was important, more than anything else, because it enabled us to tap into the intuition necessary to discern the Holy Spirit's requirements. In this way, science, philosophy, ethics, logic, art, music, literature, and all forms of thinking are divinely inspired, and surely the answer will draw from them all.

Tipler, Frank J. The Physics of Immortality (Anchor Books, 1994)