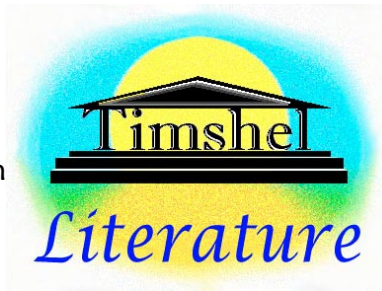


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Just Thinking, 10/20/03:

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

In Essence, God

by Justin Katz

What We Must Believe

Obviously, anybody who is comfortable with a worldview that derives entirely from faith does not require a theory that integrates religion with science. Next, at the basic level of integration of faith and rationality, it is only necessary to believe that humankind has some purpose that is crucial to reality – even if it is only to be loved by God, or perhaps if it is to progress toward the Omega Point. Whatever one's beliefs and conclusions, the truth of these statements ought to be capable of broad acknowledgement.

Moving to more-specific endeavors, the larger claims that this series of essays is meant to introduce require only that the spiritual side of experienced reality be significant, that technological and ethical imperatives ultimately conflict, and that a modified Many Worlds model might resolve this conflict. In other words, although his ideas are interesting, it isn't *necessary* that Frank Tipler's vision of the future be proven true – or even, really, be proven possible. Similarly, it isn't necessary that Christ's coming had the scientific implications that Tipler has suggested.

Even taking the most skeptical view of Tipler's ideas, they can be seen as enabling a scenario within which to apply real ontological conclusions. An extraordinary proposal about what

could happen in the future contrasts with the everyday world in such a way as to enable the development of a model capturing something essential about the universe. This something is what applies to both the extraordinary reality and the reality that we currently experience. Once developed, the model can still be true – or at least useful – even if the proposal that acted as its catalyst proves to have been a wrong turn.

The Miracle Marionette

Of course, in some respects, the theories expressed through these essays are, as atheists like to say, “non-falsifiable,” but that is what makes them useful. What I am seeking to capture is the socket at which the measurable, physical world plugs into the unseen (which is not to be confused with the “unsensed”). This point of connection may be approached from two directions, and all arguments between believers and unbelievers seem ultimately to come down to their contrary paths.

In his paper, “The Omega Point and Christianity,” Tipler proves himself to have become much more credulous of Christian assertions than he had been when he published *The Physics of Immortality*. He now suspects that Christ’s Resurrection could have been real and has come up with an interesting idea – which would have far-reaching implications if true – about how the event could have accorded with the laws of physics.

To reach his conclusion, Tipler defines miracles as improbable – but possible – events that happen at significant times. It is not necessarily a miracle when a poor person finds a winning lottery ticket in the gutter, but it might be a miracle if he had been just about to kill himself over his debt or if he saves a local shelter that was just about to lose its funding. Thus, the two relevant measures are long odds and miraculous timing.

A person's response to this definition of miracles is likely to correspond to that person's approach to life, specifically to knowledge and conclusions about the world. The empirically minded could trace God's hand all the way to the point at which a miracle begins to occur in reality — whether it involves the action of quarks, a mysterious temperature change, or any other physical mechanism — and then conclude that the measurement itself proves that God isn't necessary to have wrought the occurrence. Such people will believe only in that which is "proven" to exist.

A marionette appears to move, even though it is obviously not alive. First we notice the strings and then the handles, showing how the movement is accomplished. We look further and discover the puppeteer's hand and then the whole puppeteer. Further, we can investigate the muscles and bones and cells and nerves and synapse patterns that ultimately result in the moving wooden doll. However, this form of investigation, no matter how thoroughly it manages to describe the mechanics involved, will never fully explain what it is that the puppeteer is doing.

In contrast, those who move toward their worldviews in the opposing direction need not even know that rehearsed finger movements move the puppet in order to understand the show. The danger for them is that, if they take insufficient interest in the mechanism, they might miss significant changes in the production that imply different meaning. Another danger is that they will extend their credulity far beyond the limited sphere of the amusement.

These approaches to thinking — to life — are contrary only because they head toward each other, and it has been a major failing for those on both ends that they dread the connection. Those who seek merely to be entertained by the puppets fear that too much knowledge will drain the performance of its pleasant mystery. Those who amass explanations fear that the mystery will always exist, or else that their investigations might prove to have been but so much inconsequential puzzle solving.

The solution is similar for all groups: they must admit that there will always be mystery. For believers, this admission ought to be proof against despair about progress. For unbelievers, it ought to be taken as indication of an infinity of challenges. And those who enjoy the questions, or are driven to ask and answer them, ought to go forward only after acknowledging to themselves that they will never find any knowledge that makes them better than people who are satisfied with less specificity.

Bread and the Body of God

The questioners, nonetheless, can fill a crucial role in assisting the thinking of others, and religion suffers when it seeks to bar inquiry. There is no worse answer to doubt than “don’t ask,” particularly when it is so obviously true that there will always be room for God in reality for those with real faith. Those who require codification take a different approach to topics of interest and ought not be discouraged from applying their type of thinking to matters of religion.

Although he had just been emerging from his skepticism when he wrote it, even in his book, Tipler thought it important to explore how certain miracles *could be* true. A particularly meaningful example is transubstantiation of the Eucharist, whereby a priest transforms bread and wine into the Body and Blood of Jesus, respectively.

Tipler phrases this process in the same language of computer science that he uses for his discussion of our high-tech resurrection. As he puts it, the universal resurrection of mankind will actually occur at a “higher” level of reality – a “virtual” reality. The lowest level is ultimate reality, which Tipler takes to be the one in which we currently live and the one in which the Omega Point computer will run. In this hierarchy, one can observe activity on all higher levels than that inhabited by one’s self, but on no lower levels.

In summarizing the Catholic view of transubstantiation, Tipler quotes Jacques Maritain that, “an *accident* is a nature or essence whose property is to exist in something else... substance is a thing or nature whose property is to exist by itself (*per se*) not in another thing... substance is *invisible*, imperceptible by the senses” (318, emphasis in original). Tipler translates this into his more scientific language thus:

...it is *possible* that the portion of our universe which corresponds to the bread and wine of the Mass ceases to be run on the same computer as the rest of the universe at the instant the priest says the magic words. (320, emphasis in original)

What this description adds is the way of envisioning the *accident* and the *substance* as existing on two different levels of reality. Where that shift goes too far is in presenting the two levels as significantly similar. To simplify, a computer processes information as ones and zeros (on and off). A virtual computer utilizes the same strategy, but as a self-contained program. In the case of the Eucharist, the Body and Blood could be represented by another program embedded in reality at the location of the bread and wine. Picture a Microsoft Excel chart embedded in a Word document or a picture embedded on a Web page that is actually stored on a separate server.

However, the computer analogy is a model, not reality. There is no reason that the “lower level computer” couldn’t be constitutionally different. Such a perspective would fall between Tipler and Maritain. There are two aspects to the Eucharist that we can tease apart in an abstract analysis, but both essentially exist in ultimate reality. The lower level is the essence of God – the Body and Blood of the Risen Jesus. In the computer analogy, perhaps it could be taken as the hardware components, which don’t, of themselves, represent the programs or the computations, but which are, in the most tangible sense, the computer.

This quality of having two aspects in one person is exactly parallel to our own experience of having body and soul, while *being* both. Indeed, perhaps our souls are “written” in the ultimate reality of God’s essence. In this construction, the world that we experience as ultimate reality is in

fact a manifestation of God. Perhaps it can be said that we exist “in God” spiritually on one level and physically on another.

If the Omega Point Theory is true, it could be argued that reality is just the process of spiritual God creating Himself on the physical level of implementation. In this case, Tipler would be wrong to suggest that “the problem of evil reappears” (320) on the grounds that the existence of a lower level removes the logical necessity of evil on our level. Evil must exist as a component of what God seeks to create. Indeed, Tipler believes that the purpose of our implementation is to create the Omega Point, which I’ve already suggested could be taken to be the Antichrist.

It is important to note that the “problem of evil” is almost a non sequitur if reality consists of every step that could logically exist between the beginning and end of time. On a playing board of possible realities across which our souls move, evil components would be pure *accident*, only acquiring *substance* when we choose those spaces.

Communion of Essences

I propose that the importance of the Eucharist and the doctrine of transubstantiation is to highlight this subtle lesson of two-natured reality, even if it does not represent an explicit conclusion for most who take communion. In a very limited sense it is symbolic, but it cannot be thought of as *merely* symbolic because, on the level of God and soul, symbolism and faith in the symbols are *real*. Moreover, one needn’t understand the mechanics of the representation in order to capture the essential knowledge; the essence of God has more to do with feeling than with deduction.

That “comprehending” and “sensing” are two different forms of knowledge shouldn’t be a controversial statement. The suggestion that they are equally valid might require some qualifications, specifying that validity be determined from the perspective of the individual.

However, if the actions of humankind *matter* in a cosmic sense, toward some purpose, then what we feel to be true matters as much as what we comprehend.

“Feeling,” in this sense, can be more specific than vague emotionality. In fact, the specificity of felt knowledge could theoretically be as detailed as that of the most intricate scientific understanding, the distinction being that the former represents something that we “just know.” This knowledge, in my schemata, derives from the “essence of God” level of reality, from our souls. Revelation, inspiration, and intuition tap into that source.

It is important to note that the idea that revelation comes directly from emotion rooted in God’s ultimate nature does not necessarily give specific claims made on the basis of revelation any more weight than those made on the basis of empirical data. Translating intuitive knowledge into comprehensible language is a much more difficult process, because it must, by its nature, be accomplished indirectly, through inference.

In the other direction, it ought to be obvious that how human beings feel about an issue generally tends to overrule what they *think* about it. This truth is somewhat blurred in our times, for the reason that large swaths of people are far along in an effort to align what they feel entirely with what they think. Rather, it might be more accurate to say that they have disconnected the two forms of knowledge, such that they begin with the assumption that our deep technical understanding has proven that emotion is an illusion, and thus the emotions may be indulged in ways benign and, increasingly, destructive.

A realization that can unite these two forms of knowledge is that both are “divine,” respective to their levels of reality. Tipler’s assessment of the Holy Spirit as the person of God who defined the parameters of the universe at the beginning of time and the Father as the ultimate outcome of the universe provides a useful framework for considering the two ways of understanding reality. Intuition is accomplished through the Holy Spirit, involving a natural

understanding of the larger tendencies of the universe and having a sense of its direction. Rational comprehension involves the contemplation of those tendencies and their significance – of the physical nature of God, which is to say, of the Father.

In my view, each of these forms of thinking represents a type of prayer. Academic contemplation about matters of reality is prayer of the Father. Meditation evoking images and the sense of God is prayer of the Holy Spirit. One would expect there to be a third form of prayer to align with the Son, and indeed there is. Once again, reference to the last component of Tipler’s model of the Trinity proves helpful.

Tipler realized after publishing his book that the Son appears in his figures as the line that connects the Holy Spirit and the Father – the line representing the life span of the universe. Similarly, prayer of the Son would be prayer for action, whether involving requests for something to happen or guidance concerning how we should act. Either way, we are praying that we will find the path that brings us to the world – in the mesh model of Many Worlds – in which the desired thing happens. In other words, prayer of the Son would be that form of internal dialogue that the general public often refers to as “prayer.”

Learning to Follow the Paths

Given two forms of knowledge deriving from different sources, it follows that there would be two forms of learning. At bottom, people who are “naturals,” or prodigies, at a given skill intuit the underlying truths of that skill – what it means, how it should feel – and merely extend that intuition over the mechanical processes. Those who are not naturals must learn in the reverse direction, dissecting and rehearsing the steps.

Music involves a high degree of feel, but requires dedicated practice and technical understanding, so it makes for a good example. The hardest single skill that I’ve learned as a

pianist has been to play, essentially, different meters in each hand — for example, three notes in the right hand and two or four notes in the left hand. In order to play such passages fluently, it is necessary to get the rhythm “in the ear,” which entails figuring out the mathematical distribution of the beats and playing the notes slowly. At some point, the feel of the rhythm “clicks,” and the best strategy to improve its performance is “to stop thinking about it.” One way to think of this transfer of one type of knowledge to another is to consider it the process of writing the rhythm into our souls. Or we can see it as figuring out the skill as it exists in the “essence of God” and then applying that piece to intuit the mechanical process.

Once again, “essential knowledge” is something that can truly exist even if humanity discovers the point at which it manifests as technical knowledge. This is a difficult point to convey across the divide between people who privilege different types of knowledge. The conclusion relates directly to the assumptions, as reactions to the Turing Test illustrate. To argue that artificial intelligence will never enable a computer to “know” anything, philosopher John Searle proposed the Chinese Room Experiment, which Tipler spends six pages rebutting, without really responding to the fundamental point (38–43).

As mentioned in the discussion of soul and personhood, the Turing Test is premised on the suggestion that, if a computer could interact with a person in such a way that the person could not tell that it was a computer, then that computer is “intelligent.” Searle attempts to convey the idea of soul and essential, felt knowledge by inserting a human being into the computer. Imagine that you are in a room full of reference books that contain all of the calculations that would enable a computer to pass a Turing Test in the Chinese language. Somebody passes a note under the door and, using the reference books, you compute and write the appropriate response. Without having any idea what the marks mean, you have passed the Turing Test.

Tipler responds with calculations showing that a human being couldn't physically or mentally perform this task based on the sheer amount of data and, in turn, number of books required. Searle expands his image to posit a large number of people working together to solve the problem, but that unnecessarily opens him up to further technical arguments from Tipler. The important element over which Tipler glosses is that there is *something* different in the type of knowledge. As with soul, an expansion of the test for this *something* would be creativity. If you were put in a room with a computer that could pass the Chinese Turing Test, *you* could pass the test without knowing Chinese, but you couldn't compose a meaningful poem or even just a meaningful statement that isn't a response to something else.

With language, we are accessing God in the way that the dual nature of the Eucharist suggests. As metaphorically suggested in Ben Franklin's epitaph, our words are both the *accident* created in letters and the *substance* of the ideas that they convey. What this means is that knowledge is a palpable force in the universe. The knowledge that we gain in life is not some action-enabling illusion; it exists of itself — at another level of implementation.

All of these components come into play in the miracle of the Eucharist. In a meaningful sense, perhaps it is the learning and frequent prayer that enables a priest to transubstantiate by leading him to internalize the process and its meaning. For the laity, Tradition and faith lead those who receive communion to receive the Body of Christ because they believe it to be so. The priest sings certain lines in the ceremony, and music is played as the parishioners approach him, to reinforce the level of sense.

Objection could be made that, according to doctrine, the Eucharist is the Body of God regardless of the recipient's faith, and that is certainly a complication. However, if we acknowledge that the purpose of the Mass is to bring a person closer to God, then we can put it in terms of distance rather than acceptance or rejection. In the mesh of the many worlds, the Eucharist pulls

the recipient closer to the path that aligns with God, and the more removed that path is, the less the pull will seem to be. Nonetheless, it works some change in the recipient's psyche and in his or her un-measurable soul.

With similar emphasis to that granted Tipler's more-specific claims, it is possible, but not necessary, that when we eat the Eucharist, we absorb actual particles that are linked to God's essence. However, just as science cannot test for the lower level implementation of the Eucharist, it cannot measure bodily attachment to the lower level. Nonetheless, a material component to transubstantiation would offer room for further thought when put in the context of Tipler's argument that a person is his pattern, specifically with reference to the suggestion that our bodies are continually replacing cells without our becoming different people.

Whether it is partly physical or entirely spiritual, religious traditions that lack the doctrine of transubstantiation therefore lack the reminder of this aspect of reality. If knowledge and understanding matter in reality, then those adhering to the other traditions *literally* do not receive Christ's body, while Catholics do. Catholic Tradition fundamentally remembers that words and ideas are as real as things.

Before the world was created, the Word already existed; he was with God, and he was the same as God. From the very beginning the Word was with God. Through him God made all things; not one thing in all creation was made without him. The Word was the source of life, and this life brought light to mankind. The light shines in the darkness, and the darkness has never been put out. (John 1:1-5)

Divine Word is more than human words. Divine Expression is the totality of experience, and reality is like a poem: It can only be analyzed at the expense of feeling and felt at the expense of useful analysis. But as the lesson of the Eucharist shows, there are ways to bridge the gap. The Bible is another bridge.