Book Symposium: The Physics of Immortality *by Frank Tipler*

BREAKING A TABOO: FRANK TIPLER'S *THE PHYSICS OF IMMORTALITY*

by Wolfhart Pannenberg

Abstract. In his book *The Physics of Immortality*, Frank Tipler has broken a longstanding intellectual taboo by dealing as a physicist with the theological themes of God and immortality, as well by arguing that theology can provide material for concept formation in the field of physics. His work on the anthropic principle convinced Tipler that, since the emergence of intelligent life is of the essence of the universe as a whole, the future of life is of fundamental significance. His Omega Point theory takes theological theories of the future's significance seriously from a scientific point of view. Theories of computers play a central role in Tipler's theory of immortality, and even though many critics have misunderstood his thrust in these theories, they are worthy of further exploration. Perhaps Tipler's most important contribution is his insistence that the world as described by physics is more open to interaction with biblical and theological perspectives than is often believed.

Keywords: anthropic theory; computers; immortality; information; Omega Point; physics; resurrection; theology.

It is quite unusual for a world-renowned physicist to deliver himself on such themes as God and immortality. It is even more unusual when he makes these themes the subject of theory formation in physics and furthermore invokes the work of a theologian as stimulation for the theory. Such behavior approximates the breaking of a taboo and brings with it quite predictable consequences for the

Wolfhart Pannenberg is Professor of Theology Emeritus, University of Munich. His address is: Department of Protestant Theology, University of Munich, Schellingstrasse 3/III Vgb., 80799 Munich, Germany. This article appeared in the *Rheinische Merkur (Christ und Welt)* no. 28 (15 July 1994), p. 25.

author. The taboo in question here is the belief in the strict separation of physics and theology. The dominant opinion holds that these two disciplines have nothing to do with each other. The consequence of this opinion is that God counts only as the object of subjective belief rather than as reality that is independent of all human opinion, as is the nature that science describes. Any physicist who challenges this accepted dogma will very quickly be termed a charlatan. In the case of Frank Tipler, however, we have to do with a respected world-class specialist in relativity theory and physical cosmology, and his new book, *The Physics of Immortality* (1994), cannot simply be dismissed as a half-baked scientific product.

With his 1986 book *The Anthropic Cosmological Principle*, written with John D. Barrow, Professor Tipler became well known beyond the boundaries of his scientific peer group. The anthropic principle has been discussed rather intensively in recent years, and of all the discussions of the principle, the Barrow-Tipler book is the most comprehensive and fundamental. This principle deals with the noteworthy fact that, from the beginning, the universal constants have been so arranged that intelligent human life is a possibility. Even minimal deviations in the values of these constants would have ruled out the emergence of life. What does this fact tell us about the universe as a whole? Tipler believes that if the emergence of intelligent life is of the essence of the universe as a whole, then the disappearance of that same life from the universe—which has more than half of its total duration still in the future—could not be without consequence.

Tipler holds that the universe will not expand limitlessly but, rather, will enter a phase of contraction and, as a result of gravitation, finally collapse in upon itself at an endpoint of its trajectory that is comparable to its beginning point in the Big Bang. Even though this is currently a controverted question, there are empirical data that support Tipler's option. The future course of the universe is such that life as an information process cannot continue in the long run in the form that we know, that is, in carbon-based organisms. Specifically, in light of our knowledge about the foreseeable end of the existence of planet earth, if life as an information process that can sustain communication is to continue at all, it will have to be on some other basis. This is the starting point for Tipler's interest in the development of computers that in the not too distant future will possess the capability for autonomous information processing and communication (the two elements of Tipler's definition of "person") and finally even the capability of reproducing themselves. At first glance, most readers are alienated by the portrayal in Tipler's new book of a continuation of "life" on the basis of computers. However, in order to evaluate

this model correctly, we must first take account that Tipler very seriously defines life as an information process, and, second, we must take his broadly conceived notion of the computer as an information-processing entity far beyond the machines that we currently call computers and use every day.

According to Tipler, the emergence and course of life within the history of the universe reveal a trajectory of continuous information growth. As a consequence, the concept of the future end of the universe, which Tipler (recalling Pierre Teilhard de Chardin) calls an "Omega Point," entails the concept of the maximum of information. It is on this ground that Tipler conceives the Omega Point as all-knowing and all-powerful and therefore considers it to be factually identical with the Creator God of religion. As the locus of maximum information, the endpoint of the universe cannot be conceptualized simply as a product of cosmic process; rather, it is much more to be thought of as the creative origin of the universe, and the history of the universe is to be conceived from the perspective of this origin. This insight presupposes that the Omega Point is distinct from the processes of the universe, which are in fact dependent upon the Omega Point for their continuation. It is precisely with respect to this view of the reality of the world that Tipler has permitted himself to be stimulated and encouraged by Christian theology, which conceptualizes the Creator God of the universe as a God whose existence is bound up with the future of his kingdom. In Tipler's view, the future is more important than origins for our understanding of the universe. The origins of the universe must be understood within the perspective of its final future, and they must be conceptualized as grounded in that future.

This "eschatological" perspective for understanding the universe in light of its future is the most important point of contact between Tipler's proposed model of the world and Christian theology, but it is not the only one. Beyond this, there is also the point that the omnipotence that is associated with a maximum of information at the end of the universe's history also contains the possibility of an identical retrieval of the life forms that have emerged in that universal history—that is, the possibility of the resurrection of the dead. Furthermore, since the entire universe is involved in bringing forth intelligent life, Tipler sees that this resurrection is not only a possibility but an expectation of the future that is grounded in the distinctive character of our universe. It is not fully clear how the identical retrieval of life forms that emerged far in the past is compatible with the absence, at the end of the universe's history, of the conditions that are required for life that exists on the basis of a

carbon-based body. However, Christian eschatology has a parallel problem: According to the Christian expectation, the dead will be raised with the same identity they possessed in life; yet they will be fully transformed.

Tipler's exposition of a future resurrection of the dead is particularly worthy of note in a time when the Christian expectations concerning the future are most often judged to be irreconcilable with the modern scientific worldview. Theologians, who have frequently thought that they must abandon the Christian hope for the resurrection of the dead in order to accommodate traditional Christian doctrine to the worldview of secular culture, have also been inclined to give up the Christian Easter message of Jesus' resurrection. In the future, these theologians will have to ask whether they have not obligated themselves overly much to an obsolete physical worldview. Regardless of how one might assess Tipler's argumentation in its details, this one salient feature emerges: The fact that a physicist who describes himself (somewhat ironically) as an "atheist" sees greater possibilities in the framework of a modern understanding of nature than many theologians—this should shame the guild of theologians who display such widespread cowardice when it comes to the biblical promise concerning the future.

Many theologians, and also some philosophers—those who have so self-confidently proclaimed the end of metaphysics—will promptly reject Frank Tipler's argumentations on the grounds that they perceive in his presentation a disregard for the distinctions between the disciplines of philosophy, theology, and physics. In this regard, we may be permitted to observe that, for its part, the sacrality of human disciplinary boundaries need not be granted unrestricted validity. The distinctions between scientific disciplines turn all too easily into an excuse for failing to perceive the unity of the reality that is explored by the different disciplines in their different ways. There are points where the research findings of the individual sciences lead to insights that, if we are to gain the fullest understanding, require the context provided by the contributions of other disciplines. The insights of physicist Frank Tipler provide an example of such an interdisciplinary situation. When he on occasion says that, in the future, theology will be assimilated into physics, as chemistry and, more recently, biology have been referred back to their physical bases, that is no reason for theologians and philosophers to be anxious about losing their turf. For the foreseeable future, we need not worry about the methodological autonomy of these disciplines. From this methodological perspective, some of Tipler's formulations might benefit from making more careful distinctions. We should be

encouraged, however, that a thinker finds in the data themselves points of contact between the disciplines, rather than find cause for defensiveness, as all too frequently happens when Tipler is charged with reducing life to our present state of computer technology.

Frank Tipler freely emphasizes that the methodological starting point of his cosmological work is atheistic. In his defense of his Omega Point theory and in his hope for its empirical confirmation, however, he is a theist. Nevertheless, he expressly clarifies that he is not a Christian. His reason is that he cannot (yet) persuade himself of the fact of the resurrection of Jesus Christ. That is an honorable reason; for Tipler correctly recalls that, according to Paul, the Christian faith is utterly dependent on the fact of Jesus' Resurrection. "If Christ has not been raised, your faith is futile . . ." (1 Cor. 15 : 17). As a physicist, Tipler sees this point more clearly than some contemporary theologians. In distinction to some of the doubts expressed by theologians concerning the Christian Easter message, Tipler's doubt is at least not grounded in an alleged irreconcilability of the assertion of the Resurrection of Jesus with our scientific worldview. Tipler considers himself compelled to the expectation that the dead will rise at the end of time. Thus, it is no longer ruled out for him on the basis of physics that an individual instance of the resurrection of the dead could happen or could already have happened as a specific event in our history, since the universe should be determined in the course of its history by its future endpoint. Tipler's doubt has to do with the historical trustworthiness of the biblical accounts of the Easter traditions. At this point, however, Tipler's judgments could have been formed in too great a dependence upon authors who have studied the historical foundations of the Christian Easter faith from the presupposition that the resurrection of a dead person is impossible on scientific grounds, leading them to suppose that the emergence of the belief in Jesus' Resurrection must be explained in other ways. Since Tipler does not share this presupposition, from his perspective it should be possible to give historical validation to the New Testament tradition in an impartial manner.

When we presuppose the fact of Jesus' Resurrection, then indeed for Christians many of Tipler's elaborations appear in a different light. Whether now in the judgment of physics one could say that, since the universe as such is involved in the emergence of intelligent life, it is the case, as Tipler believes, that life cannot disappear, or whether one is forced to greet with skepticism any attempt at grounding this assertion on the basis of physics, we must say that theology in any case has its own reasons for believing that, in creating human life, God also holds fast against the power of death and at the end of

history will acknowledge his creation ultimately through the resurrection of the dead. The Christian is already linked to this future contemporaneously through faith in the resurrected Christ, with whom our lives are bound in baptism. The Christian hope in the future is thus not dependent on the portrayal of this earthly corporeality being transferred to another form of life that is based on different kinds of processes. Indeed, as I have already said, the Christian hope for sharing in the everlasting life, through the resurrection of the dead, which has already been manifested in Jesus Christ, entails a transformation of our earthly corporeality. This hope does not rule out that God's power of life, which has been manifested in Jesus Christ, does govern the universe in ways that are as yet not known to us. We are not prohibited from making such surmises, even if we do so by means of physics.

REFERENCE

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