BOOK REVIEW

John Wren-Lewis University of Sydney, Sydney, Australia

The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead, by Frank J. Tipler. New York, NY: Macmillan, 1994, \$39.95 hb; New York, NY: Anchor/Doubleday, 1995, 528 pp + xxvi, \$14.95 pb.

If you want to know what a real "new paradigm" scientific worldview might look like, as contrasted to the old-hat pseudoscientific worldviews that often sail under the "new paradigm" flag, read this book by Frank Tipler, a Professor of Physics at Tulane University. I do not mean read it as something to be believed; nothing scientific ever asks that. Only time and experiment can show whether or not Tipler's specific ideas are viable, as he himself repeatedly insists. Toward that end, this book includes a 120-page Appendix for Scientists, with the equations to be examined and tested.

I mean rather read this book to have your horizons expanded and some age-old prejudices blown apart, particularly prejudices about the supposedly necessary oppositions between materialism and spirit, technology and "small is beautiful," economic rationality and social altruism, progress and the here-and-now, and perhaps most important of all, reductionism and holism. Whereas most contemporary spiritual, ecological, and New Age thinkers start out by deploring scientific reductionism and end up calling for loyalty to Planet Earth, Tipler takes the reductionist bull by the horns and rides it all the way to the heaven of eternal life, in which infinite love has "put all things under Its feet."

He makes this intention clear right from his very first paragraph, which should win some kind of prize for audacity, even if he does not get

John Wren-Lewis, a retired mathematical physicist and industrial scientist, is Honorary Associate of the School of Studies in Religion at the University of Sydney. Reprint requests should be addressed to Mr. Wren-Lewis at 1/22 Cliffbrooke Parade, Clovelly, NSW 2031, Australia.

the Nobel Prize, as he well might, for his coauthorship with John Barrow of the so-called Strong Anthropic Principle in relativistic cosmology. Tipler begins daringly:

This book is a description of the Omega Point Theory, which is a testable physical theory for an omnipresent, omniscient, omnipotent God who will ... resurrect every single one of us to live forever in an abode which is in all essentials the Judeo-Christian Heaven.... I shall make no appeal, anywhere, to revelation. I shall appeal instead to the solid results of modern physical science.... I shall show exactly how physics will permit the resurrection to eternal life of everyone who has ever lived, is living, or will live. I shall show exactly why this power to resurrect which modern physics allows ... will in fact be used. (p. 1)

Tipler is completely serious about all these claims, and gives detailed calculations to back them up. Yet he is not trying to square science with any prior Christian belief, for he himself is not a Christian. He gives cogent reasons towards the end of the book why he cannot personally accept formal Christianity, boiling down to the fact that Christianity is too exclusive to encompass the sheer generosity, power, and wonder of the Omega Point Theory. Rather, he draws on top scholarly authorities on African and Native American shamanism, Hinduism, Taoism, Buddhism, Judaism, Christianity, and Islam to argue that all these religions are humanity's prescientific intuitions of a potential in the phys*ical* universe that science is at long last beginning to recognize: namely, the potential for eternal conscious life; that is, conscious life not subject to "the thousand natural shocks the flesh is heir to" in organic life as it has evolved so far on Planet Earth. He takes his term "Omega Point" from Pierre Teilhard de Chardin, but considers Teilhard's attempts to reconcile Christianity with evolutionary science flawed by the fact that Teilhard's mid-20th-century science was a very primitive affair in the light of subsequent advances.

And here, speaking as a former scientist and, since my near-death experience in 1983, a born-again mystic, I would say that both the weakness and the strength of Tipler's book are that he takes no account of the fact, and indeed seems largely unaware, that mystics through the ages, including Teilhard, have actually experienced a timeless "dimension" of aliveness in and through the transience of organic human life, and have thereby been able to experience that transience without suffering. But I think the strength outweighs the weakness as far as the book's value is concerned, because my own extensive studies since being reborn into eternity-consciousness have led me to the conclusion that almost all of what is taught about mysticism is pie-in-the-sky fantasy, which does more injustice than justice to what mystical consciousness is really about.

Why is that? Because the whole structure of the human mind is "incarnational," that is, oriented to expressing eternity in finite or spacetime terms. So unless we are by some "act of grace" already experiencing eternity-consciousness, our ideas about it are likely to be more false than true. Probably the only way to get any remotely realistic imagination, as distinct from escapist fantasy, of eternity-consciousness is to start by thinking seriously what the universe would look like if finite consciousness could survive *physically* without being subject to the organic limitations of decay and death. This, as Tipler points out, was what the ancient religious ideas of "spiritual bodies" were trying to do, but they were only vague imaginings, because humanity's notions of the real potentialities of matter were then so limited.

For the same reason, purely philosophical arguments purporting to show that consciousness includes matter, rather than the reverse, from Plato and Nagarjuna to Georg Hegel, Aurobindo, and Teilhard, never really carry existential conviction, and therefore never really convince skeptics, because in our daily practical experience matter is so much bigger and more powerful than consciousness as we experience it. The strength of Tipler's book is that it shows how modern science brings these ideas down from the realm of vague imagination to possibilities of practical realization; so even if Tipler is wrong in his specifics, he takes a major step forward in giving "a local habitation and a name" to what otherwise risk being "airy nothings."

Well, perhaps the habitation is not local in the ordinary sense, nor in the sense in which our contemporary ecologists want to recover a sense of locality in Planet Earth. Yes, we are children of the earth along the lines of time past, and technologies that render the planet unfit for human habitation must surely be curbed; yet there is something in the human soul that knows it is not just "of the earth, earthy," and philosophies that deny that impulse do so at a psychological and spiritual peril every bit as great as the dangers of fouling our current ecological nest. And this is where Tipler, the self-styled unrepentant reductionist, speaks like a true mystic who knows there is more to matter than evolution has yet uncovered; but true to his scientific brief, he makes no appeal to magic or the supernatural. He appeals to what science and technology are already uncovering right here in our present earthly backyard about the potential for matter to support intelligence in nonorganic forms, in machines such as the one on which I am writing this review right now.

Flesh and blood, said St. Paul, cannot inherit the kingdom of God, and it is pretty unlikely, even with the greatest possible advances in space travel, that they will ever inherit much beyond our own solar system. But Tipler, who goes well beyond doctoral level in computer complexity theory, gives ground for thinking that well before the end of the next century we shall have been able to transfer our whole minds with the full sensuous enjoyment-capacity and feeling-capacity of our biological inheritance inside self-replicating nanotechnological computers weighing no more than 100 grams each. And since they need experience no time-lapse while traveling, it will be a piece of cake to colonize the entire galaxy with them, or, more accurately, as them. With that much ecological space to play with, to say nothing of the fact that energy requirements of individual personal existence in that form are minimal, there is no question of scarcity. And scarcity, Tipler argues, again drawing on some pretty formidable authorities, is the root of all so-called evil impulses. So these science-fiction fantasies about technologically advanced civilizations breeding inhuman creatures or carrying on interstellar soap operas are just that: fantasies based on our still limited experience of finite consciousness.

Colonizing the rest of the universe will take a little longer, on the order of several million million years; but Tipler argues that because the most basic of all life-drives at the root of consciousness is survival, colonization will surely happen, well before the point at which the expansion of the universe goes into reverse towards the "big crunch." And at that stage, the vastly expanded collective intelligence of the colonized universe, the Omega consciousness, will have at Its disposal the unimaginable energy of gravity-shear, which will give It the power to stop the contraction and create a stable cosmic paradise of truly eternal finite life. I was reminded at this point of the science fiction notion of a day in some undefined future when a vast number of planetary supercomputers are linked up across the galaxy; and when the resultant supersupercomputer is asked humanity's age-old question, "Is there a God?" the reply comes back: "Yes, there is ... now!"

In that story, this answer was clearly meant to have ambiguous and sinister overtimes, but Tipler argues that these too reflect only our present limited view of consciousness. He establishes, by appeal to game theory, that Omega consciousness must of Its very nature be utterly generous towards every sentient life-form that has contributed to Its own vast evolutionary struggle; so It will have both the power *and the imperative* to resurrect all who have every lived, good and bad alike, into Its own blissful time-transcendence. And in that condition, there will be absolutely no problems of overcrowding or denial of space for individuality, nor any pressure of time for doing whatever each one wants to do, and therefore neither constraints on freedom nor boredom.

Moreover, if any readers feel that these events squillions of millennia in the future are too far off to be real, Tipler argues that that attitude also is simply lack of imagination based on our present limited experience; for we shall not have been "hanging around" in any limbo during the interim. When Tipler writes of resurrection, he *means* resurrection, and not immortality, which once again conforms completely to my own mystical experience. When I experienced the stoppage of time in my near-death experience. I most emphatically had no experience of an immaterial soul existing apart from my body, but rather of a literal rebirth or resurrection; that is, of "Omega's" John Wren-Lewising starting up entirely afresh, with all its former memories, when the body was resuscitated before brain decay set it. For the ultimate resurrection, Tipler argues in great detail that personal identity can be reconstructed exactly by "unpacking" of memory data progressively through history, using advanced versions of techniques already known in computer theory for "fleshing out" imperfectly recalled data, a deliberate employment of the processes that already happen when genes produce bodies and brains produce the memories that make up "experience."

In the book's concluding chapters, Tipler actually shows how his theory might be compatible with mysticism, although I do not think that was his intention. At several points he remarks how in modern physical cosmology, the Omega state validly can be said to "reach back through time" to influence events leading up to its own evolution. Although Tipler does not use the term, I was reminded of the "strange attractor" idea in Chaos Theory. This could indeed be one way to understanding the "beyond that is within" or *everpresent* Omega experienced by mystics.

At first sight, it is something of a puzzle that this book has not gone off like a bomb in spiritual and religious circles, considering the popularity of other books linking modern science with spiritual issues. It is true that Tipler sometimes overestimates the general reader's capacity for grasping relativistic cosmology; even I, who earned a degree in that subject, am still quite unable to say whether or not his assertions about the Bekenstein Bound or the Higgs Boson make sense. But that kind of difficulty applied equally to other popular books that have a far more negative conclusion than Tipler's and yet became bestsellers. So why is *The Physics of Immortality* still known only to a few? I think Tipler himself put his finger on the answer in the very last sentence of his main text: "Religion is now part of science" (p. 339). This is implied by his whole argument, and I think he does not realize that the psychological effect is to leave the great majority of people feeling left out, because it means that there is no *significant* contribution they can make to humanity's "salvation." Since being born again as a mystic, I have come to recognize that the urge for personal significance is as fundamental to human consciousness as the urge for survival, and not to be dismissed as mere "ego." So I can see that it is not just clergy who might be less than wildly enthusiastic about Tipler's book because it could make them redundant. He may not intend his Omega Point to seem too distant from our lives to matter, but that is how it comes across if the evolution leading to it from here is mainly a matter of high science and technology.

But do read this book all the same, for even if his peers eventually declare his conclusions doubtful or invalid, it is still very important indeed in showing how even the most reductionistic science today implies the spiritual perspective. And it should force us all to think again about whether current "green" attempts to curb scientific and technological advances in the name of love for Planet Earth may not be in fact theologically shortsighted underestimates of humanity's spiritual destiny. According to both Tipler and St. Paul, that destiny may be the only means whereby our undeniably spectacular home planet, necessarily perishable in the long term, could be resurrected to share God's eternity. Amidst the current timely outbreak of ecoprophecy, Tipler has given us an equally timely reminder of another and surely more basic aspect of the religious story, a statement that conservative religionists are just not equipped to make.