Chapter One

A TIME TO RETHINK ETERNITY

Science

Nothing in the ancient speculations about eternity and time is as wild and improbable to common sense as the current speculation of scientific physical cosmologists. How can the ancient Indian theories of kalpas or world cycles compare with recent theories of the Big Bang or of the possible return of presently expanding matter to an infinitely dense atom? The Mahayana Buddhist theory of worlds within worlds within worlds looks like a child's analogy compared to contemporary depictions of galaxies, molecules, atoms, photons, and quarks. Hellenistic theories of eons arching over eons is nothing compared to current speculations about antimatter, dark matter, black holes, and the fifth dimension.

At the time of this writing, scientists have claimed to have found nearly persuasive evidence of a Big Bang origin of the universe some 15 to 20 billion years ago.[1] Time began, the theory asserts, when a mass so small as not to have a right side and a left side, so dense as not to have an inside relative to an outside, began to expand. Time thus began with movement, and space was created by the internal trajectory of the expanding mass's internally differentiating parts. Traces of this expansion, according to one interpretation of the observations, have been identified as early as within 300,000 years of the Bang, when background microwave radiation shows differential massing of what before had been an undifferentiated soup of matter and radiation.

At the beginning of the twentieth century, and for most people up until the last twenty years, this situation of unpicturable speculations would have been incomprehensible. After the first shocks of the "modern" cosmology of the European renaissance to the medieval worldview, the representation of the physical world has been resolutely tame. From Galileo, Descartes, and Newton down to the startling upsets of Clerk Maxwell in the nineteenth century, physical reality had been modeled on physical objects of common sense, such as billiard balls, behaving in ways that could be described and illustrated, such as movement, direction, attraction, weight, and force (see the accounts of Burtt 1932 and d'Abro 1950, as well as Silk 1989). Nothing physical could fail to have right and left sides. In a comparative sense, biological sciences, even more than physics, have been oriented to the themes, metaphors, and models of the ordinary world of experience. Although contemporary biology is based on genetics and the chemical components of genetics, its intellectual and technical popularity rests in large part on the fact that its basic elements, for instance the double helix, can be pictured.

The reasons for this domesticated imagination have included many things, but central was a penchant for reductionism. Whereas Aristotelian science had thought that classes should be multiplied to match all possible discriminations, renaissance science thought that explanation was best with the fewest considerations. This was the result of the Occamist principle that one should not multiply entities beyond necessity. What does *the fewest considerations* mean? For a long time it meant the simplest things that conform to imaginable common sense. Descartes gave the classic modern statement of this principle in his theory of understanding as analysis: analyze things down to the simplest parts that can be understood each completely in itself and then imaginatively reassemble the whole, noting what you do to put the parts back together. The Cartesian project is reflected in our practice of building theoretical models, with the exception that the parts of the models do not have to be intuitively comprehensible simples.[2] The American scientist and philosopher Charles Peirce reinterpreted Occam's principle to mean the things in which we most naturally or easily believe, especially those things belief in which comes easily

with sophisticated mathematical understanding.[3] Recent physical speculations have moved into the realm of the "unbelievable" to make sense of data that do not themselves make sense without wild interpretation. The wildest of contemporary speculations seek to be tamed by observations, of course, if not by conformity to old images. But with the twentieth century's abandonment of modernity's preference for physics within the limits of the picturable, science once again joins with religion to articulate ultimate realities.

Religion

Religion in the West has had a hard time since the European renaissance because its treatments of ultimate limits and meanings are really a little silly if they have to be mapped onto a literal picturable frame. Modern physics until the twentieth century has said that time and space constitute an infinitely extended container within which events take place, as Fenway Park constitutes a playing field for baseball games (though with the exception that all the stands are infinitely far from the pitcher's mound). On the modern container theory, the creation of the world as theologically articulated would have to be represented as an event within time. What did God do before creation? Nothing? Love the divine essense? Twiddle thumbs without moving? Silly! What can eternal life (or Enlightenment or Nirvana) mean if everything is an event within the playing field and yet these events are not within the horizon of our observation? Eternal life would have to be more time later, or elsewhere, again something a bit silly and not to the religious point. If contemporary science has broken the stranglehold of the insistence that ultimate things must be picturable in terms that apply *within* the world, then perhaps religion can recover a voice of its own.

If religion does not seek its own voice in the current situation, then physics will give it to her. In his extraordinarily popular book, *A Brief History of Time* (1988), Stephen Hawking, the Lucasian Professor of Mathematics at Cambridge University, repeatedly raises the question of whether the new physics calls for or excludes a divine creator. Are the laws of the universe arbitrary, or can there be only one consistent set? If arbitrary, then there must be a creator to select them, according to Hawking. Is there an arbitrary set of

initial conditions for the world? If so, he sees the need for a creator God. He presses his theological speculation:

> Even if there is only one possible unified theory, it is just a set of rules and equations. What is it that breathes fire into the equations and makes a universe for them to describe? The usual approach of science of constructing a mathematical model cannot answer the questions of why there should be a universe for the model to describe. Why does the universe go to all the bother of existing? Is the unified theory so compelling that it brings about its own existence? Or does it need a Creator, and, if so, does he have any other effect on the universe? And who created him? (1988, p. 174)

Fred Hoyle and Chandra Wickramasinghe conclude their *Cosmic Life-Force* with a chapter entitled "The Concept of a Creator" whose last paragraph reads as follows:

> The Creator has been given many shapes and names in the diverse cultures throughout the world. He has been called Jehovah, Brahma, Allah, Father in Heaven, God, in different religions, but the underlying concept has been the same. The general belief that is common to all religions is that the Universe, particularly the world of life, was created by a 'being' of incomprehensibly magnified human-type intelligence. It would be fair to say that the overwhelming majority of humans who have ever lived on this planet would have instinctively accepted this point of view in some form, totally and without reservation. In view of the thesis of this book, it would seem to be almost in the nature of our genes to be able to evolve a consciousness of precisely this kind, almost as if we are creatures destined to perceive the truth relating to our origins in an instinctive way. (1988, p. 144)

Many critical questions might be raised about both of these statements from the standpoint of the contemporary study of religion. There is far greater diversity among the world's religious conceptions of the ultimate than these scientists acknowledge. Nevertheless, the questions to which the theistic religions offer the conception of a creator God as an answer are questions that science now demands to be answered. If Buddhism and Confucianism, for instance, offer answers that at least appear to be different, they still have addressed the questions science presses, and perhaps the

theistic approach has its own merits. The discussion in this book develops a model with theistic language.

Also critical questions are to be raised about the conception of God to which Hawking, Hoyle, and Wickramasinghe refer. That Hoyle and Wickramasinghe claim that God is a 'being,' and put *being* in scare quotes, signals a problem in the conception of the divine. It is the same problem that causes Hawking to ask who created God. God can no more be pictured as a 'being' within the world than ultimate origins and destiny can be depicted as events within the space-time playing field.

Metaphysics

The proper critical study of ultimate notions such as eternity, time, and God includes a moment that is more abstract than either the cosmological theories of science or the conceptions used in religious practice, direction, and meditation. Ultimate notions have a metaphysical dimension that requires clarification on its own and that is presupposed in discussions of lesser generality.

Although certain metaphysical notions will be introduced in Chapter 5 with a more elaborate discussion of metaphysics as such, a crucial relation between metaphysics on the one hand and religion and science on the other should be introduced here. Not only are metaphysical notions more abstract than those of religion and science, they are also vague with respect to them. Vagueness is not fuzziness but rather tolerance of ambiguity, confusion, and contradiction among the less abstract notions that might specify the vague ideas.[4] A metaphysical theory of selfhood, for instance, is vague with respect to whether a Freudian or Skinnerian specification of it is true, tolerating either (and maybe both if they are in fact complementary). A metaphysical theory of space-time is vague with respect to whether our world is bounded or unbounded. A metaphysical theory of divine creation is vague with respect to whether there is a Big Bang first moment or rather an infinite Steady State.

There are some important asymmetrical truth relations among a vague metaphysical theory and the less vague theories that might specify it. That a less vague theory, such as the Big Bang, is true entails that any vaguer metaphysical theory must allow for the

truth of the less vague theory; if the metaphysical theory does not allow for that truth, as Aristotle's does not, then the metaphysical theory is false. Furthermore, so long as an alternative theory to the less vague one, say the Steady State theory, has any reasonable plausibility, then the vaguer metaphysical theory ought to allow for its truth as well as that of the Big Bang. The metaphysical theory is vague precisely to allow for the truth of either. The same holds with respect to theological ideas of the divine. If the theistic hypothesis about God is true, the vaguer metaphysical hypothesis needs to allow for the possibility of that truth. But if there is plausibility in nontheistic Buddhism, then the metaphysics of the divine must allow for that as well. Obviously, the range of less-vague hypotheses to which a metaphysical theory ought to be tolerant changes with time and the conditions of plausibility.

On the other hand, if a metaphysical theory is true, or is presumed to be true, that does not entail the truth of any of the less vague theories that might make it more specific. No metaphysics can prove the Big Bang or Christian theism. Rather, the service metaphysics can render to the less vague theories is to show how they are possible, especially how they are possible in relation to something to which the less vague theories do not readily connect. For instance, a metaphysical theory of divine creation can show how something can come from nothing, whether the something is a Big Bang or a Steady State; it can address Hawking's question about why the universe exists so that physics can model it. Or a metaphysics can show how a Christian conception of God or a Buddhist conception of the Unconditioned is compatible with scientific conceptions.

Given the rapidity with which scientific conceptions are changing and the vast diversity of possibly competing or overlapping religious conceptions, wisdom stresses their status as theories. Better yet, we should conceive them as hypotheses, remembering Charles Peirce's theory of hypotheses.[5] An hypothesis, he said, is a leading principle for thought or action, and it resides in communities as an actual or potential habit for thought or action. As such, most hypotheses are assumed, not questioned, and simply acted upon. This may be especially true in religion; indeed religion often both questions and voluntarily affirms its hypotheses. Other

hypotheses are held in various modes of tentativeness, sometimes being explicitly doubted or tested or held in equilibrium with alternatives. The equilibrium with which many physicists of a generation ago held the Big Bang and Steady State theories now has tilted to the greater plausibility of the former.[6]

Peirce's main point is that, as actual or potential habits of engaging the world, hypotheses are always undergoing correction, being reinforced, modified, or threatened. The advantage of science is that, by means of practised observation and controlled experiments, it puts certain habits directly in position for correction, testing them as hypotheses. Religion's habits, too, are tested by the slow evolution of the human heart and community, said Peirce, and although slower than scientific testing, religious hypotheses are far surer and more deeply corrected than scientific ones. Peirce agreed with Hoyle and Wickramasinghe that speculation in all times and cultures has led instinctively to the idea of God as creator.[7]

The inquiry here into eternity and time proceeds with a tentativeness appropriate to the preceding observations. The current theory of the Big Bang will surely be developed beyond its present state. But its successor theories must include it as a primitive statement, or at least must account better for that for which the Big Bang theory accounts. Religious conceptions are tentative in a somewhat different sense, although they too evolve in conjunction with scientific conceptions. Because religious conceptions are so tied to the specific histories of practising faith communities, it is extremely difficult to tell how the apparent parallels in different traditions relate. Some thinkers believe that all religions must be saying the same thing underneath the languages that differ for historical reasons. Other thinkers believe that religious histories are so specific as to be incomparable. Neither position is an empirical belief, however, and the question is surely an empirical one. We simply are at too primitive a stage of religious studies to suggest more than plausible hypotheses about comparative matters.[8] Perhaps it is safe to assume that there is some profound truth in all the major religious traditions, otherwise their conceptions would have been corrected in the heart long ago. Yet the formulation of those conceptions to be dialectically comprehensible and

comparable has yet to be done in most cases. Finally, the metaphysical speculations to be advanced here are themselves surely to be treated as hypotheses whose plausibility depends in part on how much sense they make of eternity and time's flow.

The Argument

This book has four main theses. The first is that "time and eternity make one topic, not two," to use Peter Manchester's words (see Chapter 2 for the full quotation). The modern world has distorted or neglected this truth by an obsession with time alone, which in turn has led to a diminished theory of time compared with that of the ancients (Chapter 2). Not only popular culture, science, and religion have participated in this obsession—Western philosophers have too (Chapter 3). Yet basic cultural assumptions, such as that personal identity has a moral character and that moral responsibility requires a togetherness of the temporal modes of present, past, and future, entail that time be understood in terms of eternity (Chapter 4).

The second thesis concerns time itself: time can be understood to flow only as contained within the ontological context of eternity. Without eternity, time can be conceived only as a static dimension like space, or as form, or as a series of "presents" that bump from one to another outside of time, but not as flowing. To show how the temporal modes of past, present, and future relate, it is necessary to discuss some metaphysical conceptions of connection and distinction (Chapter 5). Then it can be seen how the temporal modes are really different from one another and yet connected so as necessarily to be interconnected (Chapter 6); a prevailing fault of most modern approaches to time is that they take one mode or another to be paradigmatic for all. The shifting date of the present can be understood in connection with the temporal modes to represent time's flow (Chapter 7). The togetherness of the temporal modes, such that time flows, is the true meaning of eternity (Chapter 8).

The third thesis concerns God: as the context for time's flow, eternity is to be understood according to a theory of divine creation. That is, the togetherness of the temporal modes in which time's flow consists is created *ex nihilo* by an eternal ontological act. Because of a confusing and contentious theological history, partic-

ularly in light of the developments of science, several false or inadequate conceptions and images of eternity and God need to be criticized (Chapter 9). Divine eternity is itself to be conceived always in conjunction with conceptions of the created temporal world, and several representations of this conjunction need to be examined (Chapter 10). Then it is possible to indicate how eternal creation stands with regard to each of the temporal modes and with regard to them all together (Chapter 11). Finally, the contextualizing of time's flow within eternity can be represented as the internal dynamic of the divine life; God is the living dynamism of the eternal act creating time's flow (Chapter 12).

The fourth thesis, of most practical interest for the human religious sensibility, is that personal identity is eternal and participates in the divine life. But if this eternal life is natural, what difference does it make to religion? In those periods in which eternal life was conceived as more life somewhere else, the practical religious question was how to get to a comfortable place and avoid the worst options. But if eternal life is the true reality of time's flow in our historical life, in what does the religious difference consist? Personal identity is first of all to be understood to be under judgment in its eternal dimension (Chapter 13). As eternal, persons are also divine, and in this sense salvation is to be understood as redeeming the time of the person's life and community (Chapter 14). As divine and yet failing under judgment, however, persons are alienated from God the eternal creator in some sense, and creation contains within it the bridging elements that Christianity calls *grace* (Chapter 15). Finally, personal eternal life can be understood as resurrection within the glory of the divine eternal life; resurrection overcomes death as the cutoff of ultimate meaning, death both as temporal finitude and fragmentation and as sin, ignorance, and disharmony (Chapter 16). The argument thus attempts to give new meaning to the ancient representations constructed to address questions of ultimate grounds and meaning.

To use the language of science in summary, this book has four main "findings":

1. Our culture places an unbalanced, almost exclusive, emphasis on time without an appropriately rich correlative

notion of eternity. Thus its assumptions tend to undermine important cultural principles, such as moral responsibility.

2. Time can indeed be understood as flowing, with future events coming to present realization and slipping into a past that becomes ever more distant; yet this understanding is possible only when the past, present, and future are seen to be set within the context of creative eternity. Thus temporal things are caught up in time's flow, and time's flow is eternal.
3. An improved theological understanding of divinity can be attained by developing a theory of creation *ex nihilo* according to which temporal things are created, and hence time with them, to constitute an inner dynamic life of God. This conception both enriches and reconstructs ancient notions of divinity that acknowledge both "transcendent agent" and "transcendent principle" models of the ultimate.
4. Because time is in eternity, everything temporal has an eternal dimension, which is one of the things often sought in religion. But if things are "naturally" eternal, what is the religious problem? Judgment, salvation, providence, and divine glory in the finite—and the counterparts of these theological and practical religious problematics in other traditions—find new formulations in the categories of eternity and time's flow.

The discussion in this book is far too historically particular for its topic. If its second thesis is right, the only perspective for understanding time's flow is *sub specie eternitatis*. Yet this discussion takes place within a rapidly shifting situation of scientific understanding and betrays the historical roots of the author's religious thought within Christianity. So let the reader beware. Nevertheless, there is no nonhistorical standpoint from which human beings can address these or any other topics, and these are too interesting to put down.

"The Garden of Eden, a glimpse of early Agricultural Civilization"
Neville 1993