

a window to the divine

CREATION THEOLOGY

ZACHARY HAYES, O.F.M.

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Foreword

It is an honor to write a foreword for this publication of *A Window to the Divine*, authored by Fr. Zachary Hayes, OFM, a fellow Franciscan and former faculty colleague. First published in 1980, this introduction to the theology of creation became a standard reference in theology courses across North America for a decade and a half, until it went out of print. Revised, updated, and reissued in 1997, it again made its way onto the reading lists of courses dealing with the theology of creation where it still can be found. Under the imprint of Saint Mary's Press, it is now being made available for the third time, clearly a testimony to the enduring value it offers those engaged in the study of theology.

Father Hayes is widely knowledgeable in both theology and the sciences; he has been a long-time presenter and panelist for an interdisciplinary graduate seminar on the topic of creation. Readers will quickly discover the author's deep conviction threaded throughout this book. Science and religion, he insists, are truly able to enter into fruitful dialogue; they are not doomed to be adversaries. That dialogue requires a critical reading of both biblical texts and traditional teachings, to discern the theological vision embedded in the language and thought patterns of their time. It requires an openness to the scientific vision of the world advancing so rapidly today and in such amazing ways. (Think only of the spate of programs and publications on the history of planet earth and on the human genome project, on ecology and the future of our planet.) It requires a willingness to search for ways to express the theological vision of Scripture and Christian tradition in the language of today's scientific vision of the world.

The author's passion to integrate the worlds of religion and science, inherited from his own teachers and faithful to traditional Franciscan appreciation of theology and science, is woven into the

fabric of his chapters on creation and human origins, on original sin, on creation and the future completion of the world. From his own Franciscan tradition, he also brings to these topics a vision of the central role of Christ in relation to creation, a cosmic Christology. Father Hayes makes only a modest claim for his book—he simply aims to sketch the outlines of a synthesis that might now be possible in light of the advances both in biblical-theological studies and in what science is now discovering about the world in which we live. He does not offer concrete solutions to the concerns being voiced ever more frequently and forcefully about a threatened ecology and the sustainability of life on planet earth. What he does offer is a framework, a theological vision that can anchor us as we seek ways to address these concerns, to give voice and witness to a Christian vision of the world in words that speak to people today. My fond hope is that readers will catch some of the author's passion to see, in an image he draws from Saint Bonaventure, that the world is a window to the divine.

Gilbert Ostdiek, OFM
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Feast of St. Bonaventure

Preface

Questions related to creation theology were the object of considerable study and research in the 1950s and early 1960s. Individual problems were subjected to extensive study, and many valid insights were gained. A number of provocative studies suggested the shape that a general recasting of creation theology might take. Things seemed well on the way to a significant reformulation. However, with the close of the Second Vatican Council, most theological effort was understandably focused on the doctrine of the Church, which had played such an important role in the council. Then in the late 1960s and early 1970s, theological concern shifted to the problem of God in response to the growing sense of secularity and the appearance of various forms of the death-of-God theology. Subsequently the state of biblical studies and work on the history of doctrine brought about a shift in the area of Christology. It is in this area that the most creative work is being done now.

As a result, the development of creation theology was aborted in the early 1960s. In the meantime, the experience of environmental problems has served only to underscore the need for a solid, contemporary theology of creation; for it is in this area that theology can offer some significant insights to help define the relation of humanity to the physical world in which it is situated in the light of the wisdom of a major religious tradition.

This recent history of shifting theological concerns might help to explain why a sort of black hole exists in the area of contemporary studies on creation theology in the years following the council. Yet there is good reason to present a statement of the significant steps that have been taken in creation theology and to make them available to a wider audience. Our intention is to present a summary of developments on a number of basic questions pertaining to creation theology. This will be followed by the barest sketch of what a synthesis might

look like at the present time. It is here above all that my personal roots in the tradition of Franciscan theology become obvious. I believe that this tradition contains a number of precious insights that can be developed to enrich the consciousness of the Church today.

Before taking up the questions that form the body of our presentation, we will point out two of the most basic factors that seem to undergird what may otherwise appear as a bewildering multiplicity of questions and problems. The first is a matter of methodology; the second is a matter of theological content.

The most significant changes in modern theology are at the level of methodology, for methodology determines how we approach theological content. If this is true of theology in general, it is clearly the case in the area of creation theology. The most significant change of method has to do with how we go about reading the texts of the tradition.

Most would agree that we should read these texts intelligently. But opinions may differ as to what constitutes an intelligent reading. The immense amount of work done on all levels, from the scientific to the popular, has familiarized many with the idea of approaching Scripture with some form of historical-critical method. Whatever one believes concerning inspiration, the fact remains that the actual texts of the Bible are human writings that have a long, complicated history. Though the idea of the historical-critical method has become familiar enough, it takes considerable time for the theological implications to emerge. This can be seen in the evaluation of the text of Genesis, chapter 13, which has played a pivotal role in the Church's doctrine of creation, anthropology, and sin over many centuries. Contemporary theology differs from our more familiar theology in terms of the instruments by which it attempts to unlock the meaning of the Bible.

Although historical-critical methods have become familiar in the context of Scripture, the application of similar methods to the texts of the councils and later theological works have been slower in arriving. We are seeing the impact of the historical-critical method more and more in recent years. It is the principal issue in reading the great Scholastic theology of creation in its religious, metaphysical, and physical dimensions. Likewise, it is the primary problem in reading the canons of the Council of Trent on original sin. If we keep in mind

that the theologians treated in this book quite commonly share the conviction that the intelligent way of reading these texts involves not a simple repetition of the verbal formulas of the past but an attempt to determine what their authors intended to communicate with these formulas and to interpret the intended meaning for the vastly changed situation of the contemporary world, the major change in the new theological thought patterns will become clearer.

Concerning the shift in theological content, a quick glance at our familiar catechetical material will show that the doctrine of creation was presented for years with no reference to Christ. There are historical reasons for this, but it would take us too far afield to go into them. The extensive reading of both the Bible and the later tradition provides serious grounds for arguing that a specifically Christian theological understanding of creation must view the creation of the world in terms of its relation to Christ. Those familiar with the systems of Bonaventure and John Duns Scotus will readily recognize this as deriving from the medieval Franciscan tradition. Not only is Christ the revelation of God but also the revelation of the meaning of humanity and of the cosmos as well. Many theologians today are convinced that this traditional belief can be of great significance for theology as it attempts to address itself to the environmental issues that plague human society now.

The same Christocentric view of reality plays a significant role in some recent reformulations of the doctrine of sin. To speak of sin is to speak of a deficiency. But we cannot speak of a deficiency without assuming some norm or ideal. Since the norm of what humanity is called to become is embodied in Christ, the meaning of sin is seen in terms of our relation to Christ. This also comes from the tradition and is appropriated in a new way through efforts to deal with evolutionary thought patterns.

Because there is a great need for some sort of synthesis, I close my treatment with a sketchy description of what such a synthesis might look like if it were to be worked out in terms of the modern experience of the historicity of the world and of the human race. Such a sketch must leave many questions untouched. At most, it can hope to describe the framework within which particular questions must be treated. In my opinion, the suggestions for such a synthesis are solidly rooted in the tradition of theology and reflect the conviction that the

deeper religious concerns of the tradition remain valid concerns for humanity in the complex world of the twentieth century. The significance of such concerns will become clear only if we can say that fidelity to a tradition does not require that the Christian be an antiquarian who denies the basic qualities of the modern experience of the world and of ourselves as human beings within the world.

If we read the work of the great Saint Augustine, it will become obvious that in his view, the entire cosmos is a vast symbolic language system the content of which is the eternal, divine Word. Using another sort of metaphor, he refers to the universe as a *carmen Dei*—a song of God, and he is profoundly impressed by the *splendor ordinis*—the splendor of order—to be discovered in the world of creation. Centuries later, the great medieval theologian and mystic Saint Bonaventure compared the world of creation to a splendid stained-glass window. The light of divine truth, goodness, and beauty is refracted through the fabric of the universe as physical light is refracted in a rich fabric of shapes and colors by the windows of the great Gothic cathedrals under construction even as Bonaventure wrote. Or again, for Bonaventure as for Augustine, the world may be seen as a book containing the very revelation of the mystery of God. The problem for many, he mused, is that the glorious book of the universe had become virtually illegible. It had become like a foreign language. The meaning of this primal book of divine revelation in nature needed to be opened by another book; that book is “written within and without” in the mystery of Jesus Christ, the incarnate Word of God through whom all things are created and brought to completion.

Today the insights of the sciences have opened our minds to a cosmos immensely vaster in space and time than anyone before the modern period of history could have imagined. Many today feel that the *carmen Dei* of which Augustine spoke may be more like a Mahler symphony in complexity, density, and extent. With an eye on the vision of our past, one is tempted to ask whether it is still possible for believers who are literate in the modern sciences to hear a divinely inspired song or symphony, or whether the mysterious universe held out to us by the work of the sciences can still be seen, in Bonaventure’s terms, as a window to the divine.

This book springs from the conviction that it is indeed possible for contemporary believers to sense a remarkably rich communication

of the divine mystery precisely through the insights of the sciences. For those with a sense of the depth and richness of the Christian tradition, there is no reason to assume that there must be an adversarial relationship between faith and science. There is every reason, on the other hand, to expect that the exciting insights of the sciences may open even richer and more challenging possibilities to the understanding of our tradition. Our tradition is rooted in the belief that however the universe may look empirically, it is precisely this universe described to us at the empirical level by the sciences that our faith holds to be the fruit of God's creative knowledge and love. It is my hope that these reflections may help us discover in what sense this universe may truly be seen as a window to the mystery of the divine.

Science and Theology

Recent History of the Question

The doctrinal treatment of creation has long been the area in which Christians have most emphatically posed the question of the relation between science and theology. This is particularly clear in modern times because of the apparent conflicts between the long-familiar worldview reflected in the ordinary presentation of the theology of creation on the one hand and the gradually emerging new worldview implied in the post-Renaissance sciences on the other hand. The threat of disorientation stemming from the collapse of a worldview was eloquently expressed as early as the seventeenth century in the poetry of John Donne, who wrote in reference to the views of Copernicus and Galileo:

And new Philosophy calls all in doubt,
The Element of fire is quite put out;
The Sun is lost, and th' earth, and no man's wit
Can well direct him, where to looke for it. . . .
'Tis all in pieces, all coherence gone;
All just supply, and all Relation. . . .
For the world's beauty is decayed, or gone,
Beauty, that's color, and proportion.¹

¹ *The Complete Poetry of John Donne*, ed. J. T. Shawcross, with introduction, notes, and variants. The Anchor-Seventeenth Century series (NY, 1967) pp. 271–286, esp. pp. 277–278.

That the problem of the relation between science and theology should be posed so clearly in the question of creation is not surprising if the matter is viewed with an eye to the broader tradition of Western Christian theology. Two of the major concerns of theology traditionally have been (1) to provide a relatively coherent understanding of faith for the community of believers, and (2) to mediate religious meaning and values to the culture at large. In as far as the experience of the believers is deeply conditioned by the categories of the culture in which they live, the implementation of both tasks is possible only to the degree that the world of faith is willing to speak in terms of the world of meaning present in the culture. Thus, at some level, theology must take up the task of speaking about faith issues in terms of the concrete world of ordinary and scientific experience in a given cultural situation. It is largely, though not exclusively, in the area of creation theology that this has been done. In the past, the willingness to take up this task has led to the creation of theologies that incorporated elements of the Platonic or the Aristotelian worldview into the very fabric of theology. That form of theology most familiar to Christians of the twentieth century is the style created by the Scholastic incorporation of Aristotelian physics and metaphysics as structural elements of Christian theology.

The awareness of these Aristotelian influences on Christian theology sheds light on the history of the attempts to deal with science and theology in recent times. If scientific or prescientific views of the world enter into the structure of a theology in some way, and if believers forget where a style of theology has come from and what elements have entered into its structure, what would one expect to happen when the scientific vision of the world begins to change?

Though this is certainly not the only factor in the famous Galileo case, it is certainly a major concern in understanding what happened in this instance.² The major theological vision of reality received from the medieval theologians reflected a geocentric vision of the physical universe. The change suggested by Copernicus and Galileo from a geocentric to a heliocentric view was a challenge to the entire worldview in which theology had been constructed. This

2 See J. J. Langford, *Galileo, Science, and the Church* (NY, 1966) for a competent treatment of this complex case.

is precisely what the poem of John Donne refers to. Just as Aristotle had appeared to threaten the familiar theology of the early Scholastics, so the unfamiliar world suggested by Galileo appeared to threaten the familiar theology of the sixteenth and seventeenth centuries with its Aristotelian underpinnings. It is understandable that the new scientific view would appear as the enemy. One of the significant effects of the Galileo case may be seen in the separation between science and theology. Effective dialogue became impossible, and theology continued its work in the familiar categories of the late Middle Ages while science went on its own way independently of any theological concern.

The sciences continued to develop. In the nineteenth century, Darwin's theory of evolution raised questions concerning the origin of the human race and the extent of human history. Again a scientific theory appeared as the opponent of long-familiar theological views. In the twentieth century, the development of atomic physics and astrophysics has led us to a worldview that seems foreign not only to the world of theology but also to the world of commonsensical experience. Indeterminism (Heisenberg) and the relativity theory (Einstein) have changed our experience of the world profoundly. The vision of an expanding universe characterized by the qualities reflected in the realm of chaos theory and complexification theory have created a vision of the cosmos unprecedented in human history. The immensity of the universe in terms of space and time has become familiar to anyone who has received even minimal exposure to courses in science and has become grist for the mill of science fiction in literature as well as in movies and television.

The world of science has developed with giant strides. Some say that the modern world is standing on the brink of a new cosmology. Be that as it may, the worldview mediated to both believer and unbeliever alike by our modern culture is radically different from that which provided some key structural elements for our familiar theological vision and language. Though it is not possible at the present to speak of a universally accepted scientific vision of the universe, a number of basic concerns can be singled out.

First, the question of the relation between science and theology is not simply the question of whether Christians may accept the theory of biological evolution. It is a much more fundamental question than

that. It is the question of the possibility of theologizing in reference to a fundamentally changed worldview within which the question of biological evolution is only one question among many. Second, while we cannot speak of a universally accepted scientific view, it is possible to single out some specific elements commonly present in the contemporary mood. In a basic sense, there has been a shift from a finished and stable universe to a universe in constant change and flux. Whereas our familiar theology, following Parmenides and Aristotle, placed primary emphasis on stability and situated change within a metaphysics of being, the modern experience is more akin to that of Heraclitus, placing primary emphasis on change and treating stability within a metaphysics of becoming. In essence, this reflects a deep sense of the historicity of the world and of humanity that must be dealt with in a Christian theology, above all in the theology of creation.

Science has continued to develop, and its vision is mediated to us culturally in many ways. But what has happened to the world of theology? By and large, the reaction of modern theology has been considerably less courageous than was that of Aquinas in the thirteenth century. We can distinguish a number of stages of reaction. Beginning with the Galileo case, we can speak of a relation of open warfare between science and theology. While many of the great names among the scientists were believers in their personal lives, still for many simple believers as well as for many theologians, science was the enemy, and the task of theology was to prove the enemy wrong. A similar type of reaction to Darwin is reflected in the abundant antievolutionary literature of the late nineteenth and early twentieth centuries.³ Generally, today such open hostility has cooled off and remains only in the cases of religious fundamentalism or in an uncritical approach to the sciences.

The nineteenth century saw the emergence of certain forms of concordism that sought to create more positive relations between what had been seen as warring parties. Concordism reflected the conviction that either certain claims of theology could be proven by science, or that the limitations of scientific knowledge could be filled out with information from the world of religion. Thus, as an example,

3 See E. Ruffini, *The Theory of Evolution Judged by Reason and Faith* (NY, 1959).

it was hoped that the historicity of the Flood could be proven by geological evidence. Or, as another example, once it was recognized that the Hebrew word for *day* does not necessarily refer to a period of twenty-four hours but can mean an indefinite period of time, the six days of creation in Genesis might possibly coincide with geological ages in the history of our planet. For various reasons, concordism was found wanting, and one scarcely finds it around today except in certain forms of biblical fundamentalism.

We enter the twenty-first century with an unresolved question. Not only is it unresolved, but a number of new factors enter into the picture. A new cultural factor can be seen in the emergence of various forms of existential and personalist philosophy in Europe between the two world wars. A new theological factor is the neo-orthodox reaction to Protestant liberalism, a reaction initiated largely by Karl Barth. The combination of these two factors has led to a variety of positions reflecting the conviction that science and theology are two unrelated disciplines and ought to remain such. Since they deal with such fundamentally different concerns, there can be neither conflict nor mutual support. Theology will be largely existential in tone, and the doctrine of creation will be seen as having no bearing on our understanding of the physical world that is the concern of science.

While such an existential style has much to commend itself, it is felt by many to be inadequate since it removes from theology the most obvious point of contact with the important ideas that shape modern consciousness. Theologians as well as critical scientists have become increasingly aware that such an approach does not solve the basic questions but merely bypasses them. Such a radical separation between science and theology fails to take into account the cognitive claims of the Christian religious tradition. Furthermore, it provides no framework for discussing the relation between God and the processes of the world of nature.

Some of the basic philosophical assumptions operative in the theoretical understanding of the sciences have been subjected to a significant critique by Michael Polanyi.⁴ In his discussion of the extreme positivist understanding of science, Polanyi concentrates on the methodological separation of science and religion. Science, it was

4 Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago, 1958).

assumed, is a discipline of objectivity, whereas religion implies the personal involvement and commitment of the believer to the object of faith. Ideally, the scientist is the neutral, uninvolved observer of the facts and processes of the physical world. But the theologian, whose task it is to reflect on religion, is unavoidably enmeshed in the problems of involvement, commitment, and subjectivity. In response to this view, Polanyi demonstrates persuasively that the presumed objectivity of the scientist in fact reflects a good deal of personal involvement and commitment that had been seen as characteristic of the theologian. A complete dichotomy between involvement and objectivity does not exist; there are only varying degrees of involvement and commitment to the pursuit of truth in the two disciplines. Thus Polanyi and others like him give reason to reject any absolute dichotomy between science and theology at the most fundamental levels that concern the nature of method and epistemology.

Quite independently of Polanyi and his analysis, theologians operating largely from the centuries-long Roman Catholic tradition have attempted to create a theological vision, however tentative, that employs major insights from the modern, scientific worldview (Rahner, Hulsbosch, Schoonenberg, Pendergast). Their work reflects the inspiration of Teilhard de Chardin in varying degrees. A number of Protestant theologians have tended to make express use of the process philosophy of Whitehead and Hartshorne to create a theology with a distinctively modern shape (Cobb, Ogden, Overmann).

Pope John Paul II spoke on the question of the relation between science and faith on a number of occasions. He saw some form of conversation between the two as crucial for the future of life on this planet. Both, he argued, ought to be taken up in the common human enterprise of investing human life with meaning in the world as we now perceive it. He insisted on the autonomy of the two disciplines and did not look to some form of reduction of one to the other. The papal statements did not take up particular areas or themes of theology. On the contrary, they were largely programmatic in character and pointed to the importance of dialogue with the sciences as a direction for the future of theology.⁵

5 Z. Hayes, "God and Theology in an Age of Scientific Culture," in *New Theology Review* (August 1995) pp. 5–18.

Models for Relating Theology and Science

Thus, we arrive at the present with no universally accepted resolution to the question of the relation between science and theology. If the nature of theology is understood in a certain way, some findings of science appear to have a direct relevance for theology. Thus, in Roman Catholic circles, scientific views on the polygenetic origins of the human race are commonly understood to have a direct theological relevance, specifically with respect to the Church's doctrine concerning original sin. It is possible to speak also of an indirect relevance of science for theology. For example, recent attempts to define the relation between science and theology have contributed to a new understanding of some basic theological categories such as revelation and religious truth. It would be quite incomplete to try to account for these changes solely in terms of the internal development of biblical exegesis. This itself is part of the larger emergence of historical consciousness in which many other nontheological disciplines have played a significant role and have influenced theology at least indirectly. No convincing argument can be produced to demonstrate that science is in no way relevant to theology. On the contrary, the major Western theological tradition operates on assumptions that imply that science has some relevance for theology. The major attempts to formulate the relation between the two can be summarized in the following way.

Either there is no relation between them, or there is some relation that is difficult to define exactly. Those who hold that there is no relation may represent one of two basic positions. The first position tends to think that science and religious faith necessarily stand in an adversarial relation to each other. Thus, a religious believer may be convinced that the world of faith and theology simply possesses the truth, including much significant truth about the nature and history of the physical world. Theology, conceived in this way, has no real need of science. And if science should conflict with the world of theology in any way, it is clear that science is wrong. This view is characteristic of various forms of fundamentalism and of the so-called scientific creationism for which the Bible contains divinely revealed scientific information. Since this information is divinely inspired, it has the strongest possible legitimation. But then, on the contrary, a person who is thoroughly convinced of the importance and the adequacy of

science may think that religion is hopelessly mired in ignorance and fear of reality. All one really needs to make one's way through life is the best knowledge that science can provide. All else is fantasy. From either perspective, religion and science are unavoidably enemies of each other.

A second position holds that theology and science have their own truths and their appropriate methods. The two are simply mutually exclusive realms of human thought and discourse. They can neither affirm nor contradict each other. They simply deal with different realities. Such an approach has the advantage of liberating theology from the constantly changing insights and theories of science even as it allows for the legitimacy of science in its own proper concerns. It has the disadvantage, however, of removing theology from effective communication with many of the important ideas that shape human life.

Aside from these two strongly polarized positions, there are those who, for a variety of reasons, are convinced that there ought to be some form of relation between theology and the sciences. But there is no unanimity as to precisely how one ought to define this relation. One can look to science to provide proofs for certain claims of religion, or one can look to revelation for the completion of our scientific knowledge of the world as in the case of concordism. Or one can adopt the view that recognizes the proper methodological autonomy of science and theology but holds that religious faith must express itself in relation to the secular categories by which human people give some shape to their world. Faith, one might argue, must be seen in relation to the way we perceive the world physically and conceive of it metaphysically; religion mediates its concerns and values through a theology that speaks in terms of a scientific and philosophical worldview. Therefore, we will not expect science to prove faith claims, nor will we expect theology to prove the claims of science. But we will attempt to allow religious faith to express itself in terms relevant to its cultural context, which, at least in the Western world of the present, is strongly conditioned by scientific insights.

By pursuing such an approach, we can eventually find some degree of coherence between faith and our secular cultural experience. And the values of faith can be mediated in an intelligible way to people deeply impressed by scientific culture. If such a policy were carried out, it might overcome the sort of spiritual schizophrenia so

common in the modern believer; a state in which believers see the world through one pair of glasses religiously and through another pair in terms of the rest of their life experiences. It would be possible also to provide a framework for creative discussion between religion and culture. In principle, it would become possible to formulate a positive answer to the question as to whether the Christian religious ideal coincides in any way with the human ideal of responsibility for the world. Thus we could expect theology to say something significant concerning the problems raised by modern science and technology.

While such an approach does have many appealing qualities about it, unless theologians remain conscious of the inner dynamic of this thought process, it can also lead to the same sort of problems that were experienced in the Galileo case; a familiar scientific view of the world can become so closely identified with faith that any change will again appear as a threat to faith. Yet it is this model that best corresponds to the major Western Christian tradition as it was known before the Galileo case, and it offers the most fruitful possibility for Christianity in the modern Western world.

Questions of Origins

The history of this problem leads to the possibility of a more careful reading of the texts of the theological tradition concerning creation. What appear to the uncritical eye as straight-forward eyewitness descriptions of the creation of the world can be seen to involve various levels of questions which may be legitimately distinguished in interpreting the texts of the tradition. What at first seems to be a clear description of God's work in creating the world can be seen as a basically religious statement clothed in language and images drawn from scientific or pre-scientific images of the world, the latter serving as the vehicle of the former. The concrete image of the world is not to be taken as the content of the divine revelation but as the means whereby a religious insight is communicated.

In reading the texts of the theological tradition that bear specifically on the issue of creation, L. Gilkey distinguishes three types of questions that appear as questions of origin.⁶

⁶ *Maker of Heaven and Earth: The Christian Doctrine of Creation in the Light of Modern Knowledge* (Garden City, 1959, 1965 pbk.) pp. 15–40.

The first is the sort of question which is the concern of the physical sciences. Such questions are principally concerned with the causes in the world of nature; they enquire about those factors in a particular situation which bring about another situation. Briefly, they are questions of physical cause and effect in relation to our space-time experience. When the scientist asks about the origins of the universe, this is a question of tracing the chain of cause-effect as far back as possible and making conjectures concerning the original space-time situation. This is a legitimate sort of question about the concrete conditions that have brought us to where we find ourselves in the history of the cosmos. This is the type of question involved when we speak of the Big-Bang theory, the Nebular hypothesis, the Steady-State theory, etc. All of these theories are scientific attempts to provide a coherent account of the chain of cause and effect that has brought the universe to its present condition. Such questions correspond to what Scholastic theology called secondary causality. In Scholastic thought, secondary causality must be distinguished from primary causality, which is proper to God alone.

This sort of question must be distinguished from another kind that may be called the philosophical question of origins. The philosophical question is perhaps best understood in terms of that sort of primordial wonder at the fact that there is anything that exists at all. Why is there something rather than nothing? It can be seen immediately that this is a different sort of question altogether. In dealing with this type of question, philosophy will develop its own understanding of the fundamental structures of being; it will develop metaphysics in some form. Again, this is a legitimate sort of human question in response to the world in which we find ourselves. It is clearly distinct from the sort of scientific question referred to earlier. What counts as a significant answer to such a question will be judged by criteria different from those of the positive sciences.

While both the scientific question and the philosophical question can be seen as questions of origin, they are not to be confused with the religious question which, according to Gilkey, is first of all a question of existential meaning. It is the question of the meaning of human life. It seeks to determine how such meaning is ultimately grounded. What ultimately conditions my life? Why do I exist? What must I do with my life? What can I hope for in my life? In

general, the religious question articulates itself eventually in the form of theology; and more specifically as a question of origins, it takes the form of the doctrine of creation.

Aware of these distinctions, we can see how these varied levels of concern are fused in the texts of the theological tradition. Failure to distinguish them will lead to inevitable confusion concerning modern science and philosophy. On the other hand, when these are recognized as legitimately distinct levels of question, the possibility of distinguishing the content from the form of the religious issue is opened up; and with this opening we are challenged further to the task of creatively interpreting that religions concern in a new scientific situation. Rather than fearing the ongoing discoveries of science, we can work with the conviction that scientific knowledge can enlarge and enrich not only our understanding of the world, but our view of God and of God's way of acting as well.