

“THE END OF ALL OUR EXPLORING” IN SCIENCE AND THEOLOGY

by Arthur Peacocke

Abstract. The present malaise of religion—and of theology, its intellectual formulation—in Western society is analyzed, with some personal references, especially with respect to its history in the United Kingdom and the United States. The need for a more open theology that takes account of scientific perspectives is urged. An indication of the understandings of God and of God’s relation to the world which result from an exploration starting from scientific perspectives is expounded together with their fruitful relation to some traditional themes. The implications of this for the future of theology are suggested, not least in relation to the new phase, beginning in 2003, of the development of the Zygon Center for Religion and Science. In a concluding reflection the hope is expressed that the shared global experience and perspectives generated by the sciences might form a more common and acceptable starting point than hitherto for the exploration towards God of the seekers of many religious traditions and of none.

Keywords: Ian Barbour; Ralph Burhoe; co-creating creatures/created co-creators; T. S. Eliot; energies of God; evolutionary epic; Genesis for the third millennium; Philip Hefner; immanence; inference to the best explanation; Antje Jackelén; New Testament scholarship; open theology; panentheism; postmodernism; sociological surveys; special divine action; theistic naturalism; Ultimate Reality; Wisdom of God; Word (*Logos*) of God.

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[*Zygon*, vol. 39, no. 2 (June 2004).]

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Little Gidding is a small village in Huntingdonshire, England, to which Nicholas Ferrar, a politically well-connected doctor, retired with his family in 1626 to lead an ordered life of prayer and good works (medical, book binding, etc.) in a lay community—the first one in England, lay or ordained, since the English Reformation. It lasted for twenty-one years before being broken up by Puritan Protestants. In May, 1936, T. S. Eliot visited its seventeenth-century chapel, which still exists, and later he composed the last of his influential *Four Quartets*. The poem, titled “Little Gidding,” is a profound reflection on the significance of time in the divine purpose, and four of its lines provide the *leit-motif* of this lecture:

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

—T. S. Eliot, “Little Gidding”

Ferrar had been a Fellow of Clare College, Cambridge, where I was for eleven years Dean. Among my great experiences at that college was when, once a year, we used to go with students to Little Gidding. There we worshipped in its dignified small seventeenth-century chapel with the light of the setting sun streaming through its west door. The words of Eliot’s poem thereby acquired a new power as he spoke of “the intersection of the timeless moment” in that place “where prayer had been valid,” which was “England and nowhere. Never and always.” That experience grounds my hope for one of the tracks I shall be following here, for science is one of the major spurs goading believers in God into new paths for expressing their beliefs and commitments. In the exploration from the world of science towards God, although the ride may be bumpy (for not all Christians will necessarily concur with what emerges), the goal is in itself unchanged. It is simply that, as at Little Gidding, to God’s own self. If indeed God exists, *is*, at all, the honest pursuit of truth cannot but lead to God. It will not be God who has changed in our quest but we in our perception and experience of the Divine.

THE PRESENT STATE OF RELIGIOUS BELIEFS (AND SO THEOLOGY) IN RELATION TO SCIENCE

That time when I was Dean of Clare College proved to be a very fruitful one for my own thinking—not least because, while I was preparing my 1978 Bampton Lectures on *Creation and the World of Science*, Philip Hefner was a visiting scholar in Cambridge. We had previously met at a conference at Renssalaerville in October, 1972—and the Lutheran theologian (hotfoot from Germany) and the Anglican priest-scientist (still then at Oxford) soon found that they were on the same wavelength! Phil’s later

stay in Cambridge could not have been more propitious, because in preparing those lectures I at last had a theologian to engage with who took seriously the challenge of science to theology. Our dialogues shaped that work of mine and, I hope and suspect, were subsequently not uninfluential upon his thinking. Certainly we later, during one of my happy and repeated visits to the Chicago Center, had a great tussle about whether, with the same intentional meaning, he should expound humanity as “created co-creators” or, my suggestion, “co-creating creatures.” (He won, you will not be surprised to hear!)

Although those Bampton Lectures, when published (Peacocke [1979] 2004), were my first major work on the interaction of science with theology, they were not actually my first. While still struggling as a full-time scientist and university teacher to maintain my research group, working on the physical chemistry of DNA and proteins, I had acquired a training in theology. I exercised my newly acquired theological expertise, such as it was, by writing a book, *Science and the Christian Experiment* (1971), which was the result of the stimulus I had received from a number of authors (most of them scientists or mathematicians, including two professional theologians with a background in these disciplines) in the U.K., and some in Germany, who after World War II had in the 1950s actively addressed issues in science and religion—C. A. Coulson, D. Lack, E. Mascall, C. E. Raven, A. F. Smethurst, E. Whittaker, J. Wren-Lewis, G. D. Yarnold, and (in Germany) K. Heim. This interaction was real but spasmodic, and it was certainly true by the early 1960s, at least in Britain, as John Habgood noted in *Soundings* (1963, 21–41), that the public and academic relation between science and theology had lapsed into a kind of “uneasy truce.” Across the Atlantic, the dialogue appears to have been inhibited in the United States after the 1925 Scopes trial, on the teaching of evolutionary theory in schools. The truce was even more uneasy than in Britain, it would seem, until Ralph Burhoe, at first in Boston and then in Chicago, began, as a unique and lonely figure, single-handedly nurturing the debate from the early 1950s—in CASIRAS (Center for Advanced Study in Religion and Science) and in the predecessor to the present Zygon Center, who together published *Zygon*, and in the Star Island gatherings of IRAS (Institute on Religion in an Age of Science). Then, while I was in Oxford writing in the later 1960s that first book of mine in this field, there appeared in 1966, seemingly out of the blue, Ian Barbour’s significant overview, *Issues in Science and Religion*. He tells me that he, too, had read the British authors of the 1950s whom I have already mentioned and later, as I had also done, Pierre Teilhard de Chardin and (from the U.S.) W. Pollard and H. Schilling, both physicists, and the process theologian D. Williams.

In the last thirty years, the momentum has gathered pace, and we all are aware of the burgeoning activity in this field of which this symposium is the latest manifestation—though whether its impact on theology and public

religious belief has had the hoped-for enlightening effects we shall have to consider later. There are nevertheless some encouraging signs in the world of science itself. In 1997 and 2001, widely and sympathetically publicized conferences in Berkeley (Richardson et al. 2002) and Boston brought to the platform two dozen leading scientists to talk about their spiritual quests as Muslims, Jews, and Christians, and even as seeking agnostics. There was a striking shared sense of wonder in their attitudes toward the natural world which itself fired their individual spiritual paths. The quests for intelligibility, in science, and for meaning, in religion, can apparently work together, even though this has not been the popular perception for the last one hundred fifty years. Many felt what Carl Sagan had so well expressed in his 1995 book *Pale Blue Dot*:

How is it that hardly any major religion has looked at science and concluded, "This is better than we thought! The Universe is much bigger than our prophets said, grander, more subtle, more elegant"? Instead they say, "No, no, no! My god is a little god, and I want him to stay that way." A religion, old or new, that stressed the magnificence of the Universe as revealed by modern science might be able to draw forth reserves of reverence and awe hardly tapped by the conventional faiths. (quoted in Dawkins 1999, 114)

In spite of the attempted corrosions of postmodernist relativities, scientists and religious believers share a common conviction that they are dealing with reality in their respective enterprises. (Recall the Alan Sokal hoax!) Scientists would leave their laboratories and believers their churches, or mosques, or synagogues, for good if they did not think that they were dealing with the realities of nature or of God, respectively.

Yet what I have to say is, in fact, not naively but critically realistic with respect to both science and theology. Both disciplines aim to depict reality; both use metaphorical languages and models that are revisable in the light of experiments and of experiences. The aim of both is to tell as true a story as possible. Only thus, be it noted, can the religious quest have intellectual integrity, a quality that also demands recognition of the blinders to our perceptions resulting from the social milieu in which we are embedded. Such a quest for truth about God has acute problems today, because our perception of the world differs radically from the perception that shaped, two to three millennia ago, the language of the Abrahamic religions in the Judeo-Christian literature of the Bible and of the Koran.

So how might a contemporary "Bible" begin? Here is one possibility:

Genesis for the Third Millennium (or at least the twenty-first century)

There was God. And God Was All-That-Was. God's Love overflowed, and God said: "Let Other be. And let it have the capacity to become what it might be, making it make itself. And let it explore its potentialities."

And there was Other in God, a field of energy, vibrating energy—but no matter, space, time, or form. Obeying its given laws and with one intensely hot

surge of energy, a hot big bang, this Other exploded as the Universe from a point twelve or so billion years ago in our time, thereby making space.

Vibrating fundamental particles appeared, expanded and expanded, and cooled into clouds of gas, bathed in radiant light. Still the universe went on expanding and condensing into swirling whirlpools of matter and light—a billion galaxies.

Five billion years ago, one star in one galaxy—our Sun—attracted round it matter as planets. One of them was our Earth. On Earth, the assembly of atoms and the temperature became just right to allow water and solid rock to form. Continents and mountains grew, and in some deep, wet crevice or pool, or deep in the sea, just over 3 billion years ago, some molecules became large and complex enough to make copies of themselves and became the first specks of life.

Life multiplied in the seas, diversifying and becoming more and more complex. 500 million years ago, creatures with solid skeletons, the vertebrates, appeared. Algae in the sea and green plants on land changed the atmosphere by making oxygen. 300 million years ago, certain fish learned to crawl from the sea and live on the edge of land, breathing that oxygen from the air.

Now life burst into many forms: reptiles, mammals, and dinosaurs on land, reptiles and birds in the air. Over millions of years the mammals began to develop complex brains that enabled them to learn. Among these were creatures who lived in trees. From these our first ancestors derived.

And then, 40,000 years ago, the first men and women appeared. They began to know about themselves and what they were doing; they were not only conscious but also self-conscious. The first word, the first laugh, was heard. The first paintings were made. The first sense of a destiny beyond—with the first signs of hope, for they buried their dead with ritual. The first prayers were made to the One who made All-That-Is and All-That-Is-Becoming. The first experiences of goodness, beauty and truth—but also of their opposites, for human beings were free.

I have given (being me) this “epic of evolution” a theistic perspective on cosmic and biological evolution—the “epic of evolution” has become an “epic of creation”—but however much *private* revelations of God may be important to individuals, they are of no use, being incommunicable, to anyone else. Now science has found a reliable method for establishing *public* knowledge about nature that is adequate for its practical and conceptual purposes. Hence, the key question is: Can thinking hard about religious beliefs (theology) exercise a method or procedure of comparable reliability that can carry conviction and be heard above the cacophony of siren calls from other sources today?

All of the social barometers indicate that in the formerly predominantly Christian Western world the Christian church is failing to convince more and more people of the validity of its traditional beliefs. Sociological surveys of Western Europe (Britain, Germany, the Netherlands, Sweden),

Canada, and Australia record a steady decline in participation in religious (mainly Christian) institutions, and this is beginning to happen also in the supposedly very religious United States, at least in most of the mainline churches and certainly in the universities. For example, in Britain in the 1990s, two-thirds of those in the 18–24 age group said that they had no religion, and less than a third reported themselves as having been “brought up religiously at home,” compared with over four-fifths of those over 64 years old. In two generations those younger ones will be the elderly, and those of the younger age group who will have been “brought up religiously” will have dropped to a tenth, if the trend continues (Gill 2001, 279–91). This decline in religious influence is, not surprisingly, accompanied by a marked increase in scepticism about particular traditional beliefs—for example, in a personal God, in the divinity of Christ, and in life after death. (Oddly, belief in reincarnation and in horoscopes has remained steady at about a quarter of the population for three decades.)

I know best my own English scene, and I find I have to concur with the diagnoses even of journalists: John Lloyd, Associate Editor of the *New Statesman*, writes, “It [the church] has not been able to develop a working model of a faith in which rational people could wholeheartedly believe” (Lloyd 1997). Wistful agnostics abound in educated circles.

Now Christianity seems to matter only at the margins. The past 150 years have witnessed a slow but ceaseless decline. A. N. Wilson’s erudite survey, *God’s Funeral*, charts the loss of faith among nineteenth-century European intellectuals, Carlyle, Eliot, Spencer, Marx, Darwin: these were the precursors of a great discarding that has gone on ever since, as science effaced belief and rationalism the irreplaceable notion of mystery. (Young 2000)

Western society is returning a negative answer to my question. The Western intellectual world has yet to be convinced that theology can be done with the kind of intellectual honesty and integrity that are the hallmarks of scientific thought. In religious circles, some have rejoiced that a recent survey in the United States has shown that 40 percent of general scientists believe in a personal God (which means 60 percent do not) but have overlooked the other finding, namely, that 93 percent of “top scientists” do not do so (Larson and Witham 1997, 435–36; 1998, 313).

Among less exalted circles, I detect an increasingly alarming dissonance between the language of devotion, doctrine, and liturgy and the way people really perceive themselves to be in the modern world—a world they now see in the light of the sciences, especially of that “epic of creation.” Intellectual, educated, thinking people, if they are still attached in any way to the Christian churches of the West, are, as it were, hanging on by their fingertips as they increasingly bracket off large sections of the liturgies in which they participate as either unintelligible or, if intelligible, unbelievable in their classical form—and in the end they vote with their feet, certainly in Europe; I suspect that they will increasingly do so in the United

States as well. Our world is full of wistful agnostics who want to believe with integrity and respect the person and life of Jesus of Nazareth but are unable to buy into the traditional ontology and images.

This deep alienation from religious belief, especially among key formulators of our Western culture, is becoming almost lethal, for such belief has nearly always been based on some sort of authority: “The Bible says,” “The Church says,” even “Theologians say”! Educated people have come to know that such authoritarian claims are circular and cannot be justified because they fail to meet the demand for validation by an external, universally accepted standard.

I am convinced that that standard can only be reason based on experience—reasonableness for short. A strong case can be made that the natural and human sciences have done just that and have achieved their goal of depicting, provisionally and metaphorically, the realities of the natural world by *inferring to the best explanation*. This method employs criteria such as *comprehensiveness*, giving a unified explanation of a diverse range of facts not previously connected; *general plausibility*, giving the best fit with previously established knowledge; *internal coherence and consistency*, avoiding self-contradictions; and *simplicity* of explanation.

A theology based on these principles would be one that has been characterized by my colleague at Oxford, Regius Professor of Divinity Keith Ward, as follows:

- It will seek a convergence of common core beliefs.
- It will seek to learn from complementary beliefs in other traditions.
- It will be prepared to reinterpret its beliefs in the light of new, well-established factual and moral beliefs (science and philosophy).
- It will encourage a dialogue with conflicting and dissentient views.
- It will try to develop a sensitivity to the historical and cultural contexts of the formulation of its own beliefs [so, science again], with a preparedness to continue developing new insights in new cultural situations (Ward 1994, 339–40).

Such an open theology, I propose, by inferring to the best explanation, could enter the fray of contemporary intellectual exchange and, I am convinced, have a chance of surviving in its own right.

Unfortunately, this is not how theology is currently practiced, even in *academe*. Looking at the field today, we find a variety of theological procedures that do not meet those criteria, involving, as they do, excessive reliance on an authoritative book and/or excessive reliance on an authoritative community, including that of the academic theological community.

These and other a priori practices make it difficult for theology to come to terms with the world, particularly with realities discovered by the sciences. The resources of theology are the inheritance of claimed classical

revelatory experiences (including sacred books, liturgies, aesthetic experiences, music, and architecture) leading to received orthodoxies. But now the data should include the realities of the world and of humanity discovered by the sciences and should lead, in my view of specifically Christian theology, to a radically revised theology. To these will very soon have to be added the perceptions and traditions of the other world religions, leading perhaps one day to a global theology. But for our present purposes, in relation to concerns of the Zygon Center, let us focus on the positive enrichment of theology by science.

EXPLORING FROM SCIENCE TOWARDS GOD

Exploring from science towards God means seeking an open theology that takes account of the world of science. The world as perceived by the natural sciences provides vistas and raises challenges and questions, most of which are entirely new, though some go back to the days when the Ionian Greeks first woke up to the world around them, some to the discussions between Christian, Jewish, and Muslim philosophers in twelfth-century Cordoba, and some to the philosophical reflections provoked by the rise of science since the seventeenth century.

Let me try to give you some inkling of the issues and, in somewhat staccato fashion and ludicrously briefly, outline at least the beginnings of those tracks towards God, as it were through the jungle, beginning from the world as it is—a kind of “still shot” of its moving panorama.

Oddly, we start with a question that science significantly cannot answer: *Why is there anything at all?*

Whatever the physical milieu (fluctuating quantum field, superstring, whatever) from which the universe expanded twelve or so billion years ago, there is no specific explanation in science of its existence as such nor of the laws and regularities it manifests.

We infer that: *There is a self-existent Ground of Being (X) giving existence to and sustaining in existence all-that-is.* This ultimate reality, X, must in principle have a nature beyond the capabilities of language to state explicitly; hence the need to resort to metaphor, model, analogy, and extrapolation. An exploration starting from the realities of the world as perceived by the sciences has led me to infer—and I present these only as a possible set of inferences to encourage others to undertake a similar exercise—that the best explanation of all-that-is and all-that-is-becoming is an:

Ultimate Reality (X)

“God”

Who

- is the self-existent Ground of Being, giving existence to and sustaining in existence all-that-is

- is One
- is a diversity-in-unity, a Being of unfathomable richness
- includes and penetrates all-that-is, but whose Being is more than, is not exhausted by it (panentheism)
- is supremely and unsurpassedly rational
- is omniscient (knowing all that it is logically possible to know)
- is omnipotent (able to do all that it is logically possible to do)
- is omnipresent and eternal
- is (at least) personal or suprapersonal—yet also has impersonal features
- gives existence to each segment of time for all-that-is-becoming (but does not know the future which does not exist to know)
- has a self-limited omniscience
- has a self-limited omnipotence
- is the immanent Creator *creating* in and through the processes of the natural order
- is the ultimate ground and source of both law (“necessity”) and “chance”—an Improvisor of unsurpassed ingenuity
- has something akin to “joy” and “delight” in creation
- suffers in, with and under the creative processes of the world
- took a risk in creation (Peacocke 2001, chap. 7)

“ARRIVING WHERE WE STARTED” AND “KNOWING THE PLACE
FOR THE FIRST TIME”

I am not claiming to have proved from my reflections on what we now know of the world from the sciences that there is an Ultimate Reality, *God*, with just these attributes—only that I infer that this is the *best* explanation. These reflections are together cumulative in their effect and make a more convincing case, in my view, than any of the rival explanations, especially that of atheism (often under the guise of agnosticism). As a scientist, I cannot help going on asking “Why?”—and this does not stop when science runs out of answers.

What I have inferred, however, is too abstract to be accessible to personal and communal life. We need to develop concepts, images, notions, and metaphors that represent God’s purposes and implanted meanings for the world as we actually find it to be through the sciences. Transition to such an enriched (what some call a “thick”) theology is, in my view, unavoidable if believers in God are not to degenerate into esoteric societies communing only internally, among themselves. A rebirth of images is desperately needed to satisfy the spiritual hunger of our times.

Let me, again ludicrously briefly, draw on resources known to me as a Christian. I would invite those of other faiths to share with us their resources for enriching this current impasse in our understanding of the divine. I mention a few that I think can help us at this stage of our exploring as we arrive closer to the place “where we started,” namely, God, and to illustrate the more positive aspects of an exploration towards God from the world of science.

Immanence: A Theistic Naturalism. One of the positive affects of Darwin’s eventually accepted proposal of a plausible mechanism for the changes in living organisms was that it led to the ultimate demise of the external, deistic notion of God’s creative actions. For example, we find Aubrey Moore, an Anglican high churchman, saying already in 1889 that “*Darwinism appeared, and, under the disguise of a foe, did the work of a friend.* It has conferred upon philosophy and religion an inestimable benefit, by showing us that we must choose between two alternatives. *Either God is everywhere present in nature, or He is nowhere*” (Moore [1889] 1891, 73; emphasis added).

Such an emphasis on the immanence of God as Creator ‘in, with and under’ the processes of the world unveiled by the sciences is certainly in accord with all that the sciences have revealed since those debates of the nineteenth century. These processes have the seamless character of an interconnecting web that has been spun on the loom of time: the process appears as continuous from its cosmic “beginning” in the “hot big bang” to the present, and at no point do modern natural scientists have to invoke any nonnatural causes to explain their observations and inferences about the past.

The traditional notion of God sustaining the world in its general order and structure now has to be enriched by a dynamic and creative dimension. The processes are not themselves God but the *action* of God-as-Creator. God gives existence in divinely created time to a process that itself brings forth the new: thereby God is *creat-ing*. This means we do not have to look for any extra supposed gaps in which God might be acting as Creator in the living world.

A musical analogy may help to convey what I have in mind. While one is listening to music, say, to a Beethoven piano sonata, if one were to ask “Where is Beethoven the composer now?” one would have to reply that he is in the music, and you are experiencing him, as composer, in the very music itself. The music, as appreciated, is itself the musical action of Beethoven. Correspondingly, the processes of the natural world, explicated by the sciences, are themselves the very creative action of God’s own self. This perspective can properly be called a *theistic naturalism* to encapsulate where our explorations have so far led.

Panentheism. This is “belief that the Being of God includes and penetrates the whole universe, so that every part of it exists in God but (as against pantheism) that God’s Being is more than, and is not exhausted by, the universe” (Oxford Dictionary of the Christian Church). Recall Paul’s address at Athens, when he is reported to have said of God, quoting with approval a local poet, that “In him we live and move and have our being” (Acts 17:28). This notion is also deeply embedded in the Eastern Christian tradition. The whole concept is surveyed constructively in *In Whom We Live and Move and Have Our Being* (Clayton and Peacocke 2004).

For classical philosophical theism there was a “space” *outside* God “in” which the realm of created substances existed. This way of speaking has become inadequate, for it has become increasingly difficult to express the way in which God is present to the world in terms of substances, which by definition cannot be internally present to one other. In such a model God can only “intervene” in the world. Yet, we have just seen, natural processes in the world need to be regarded *as such* as God’s creative action. In other words, the world is to God rather as our bodies are to us as personal agents—with the necessary qualification that God as Creator is distinct from the world (pan*en*theism, not pantheism). Interestingly, this personal model represents better how we are now impelled to understand God’s perennial action in the world as coming, as it were, from the inside, and the need for feminine models of divine creativity: God creates the world within *herself*, we may find ourselves saying.

The Wisdom (Sophia) and the Word (Logos) of God. Biblical scholars have in recent decades come to emphasize the significance of the central themes of the so-called Wisdom literature (Job, Proverbs, Ecclesiastes, Ecclesiasticus, and Wisdom). In this broad corpus of writings the feminine figure of Wisdom/*Sophia* is a “convenient way of speaking about God acting in creation, revelation and salvation; Wisdom never becomes more than a personification of God’s activity” (Dunn 1980, 210). This Wisdom endows some human beings, at least, with a personal wisdom that is rooted in their concrete experiences and in their systematic and ordinary observations of the natural world—what we would call science. All such wisdom, imprinted as a pattern on the natural world and in the mind of the sage, is but a pale image of divine Wisdom, that activity distinctive of God’s relation to the world.

Wisdom as an attribute of God, personified as female, has been of special significance to women theologians. Celia Deane-Drummond argues, on the basis of a wide range of biblical sources, that the feminine in God refers to all “persons” of the Christian Triune God, so that Wisdom (*Sophia*) becomes “the feminine face of God as expressed in all persons of the Trinity” (Deane-Drummond 1999, 55). One cannot help recalling that the greatest church ever built in Christendom was, in Constantinople in the

sixth century C.E., dedicated to *Hagia Sophia* (Holy Wisdom). This important concept of Wisdom/*Sophia* unites intimately the divine activity of creation, human experience, and the processes of the natural world.

So also does the closely related concept of the Word/*Logos* of God, which is regarded in John 1 as existing eternally as a mode of God's own being, as active in creation, and as a self-expression of God's own being, becoming imprinted in the very warp and woof of the created order. (It seems to be a conflation of the largely Hebraic concept of the "Word of the Lord" as the will of God in creative activity with the Stoic divine principle of rationality that is manifest in the cosmos and in human reason.) It is, needless to say, significant for Christians that this Word/*Logos* was regarded as "made flesh" in the person of Jesus the Christ (John 1:1–14), who is also seen in the New Testament as the very Wisdom of God's own self.

A Sacramental Universe. The "epic of evolution" recounts in its sweep and continuity how over aeons of time the mental and spiritual potentialities of matter have been supremely actualized in the evolved complex of the human brain in the human body. In persons, matter manifests a unique combination of physical, mental, and spiritual capacities. God, it appears, is using matter in that process as an *instrument* of God's purposes and as a *symbol* of the divine nature, the means of conveying insight into these purposes.

In the Christian tradition, however, this is precisely what its sacraments do. They are valued for what God is effecting *instrumentally* and for what God is conveying *symbolically* through them. Just as William Temple ([1934] 1964) came to speak of the "sacramental universe," we can come to see nature as sacrament, or, at least, as sacramental.

For Christians, this could be developed further in relation to the doctrine of the Incarnation and to the new valuation on the very stuff of the world that ensues from these significant words of Jesus at the Last Supper: "This: my body" and "This: my blood"—referring, in the words of a well-known prayer, to the bread "which earth has given and human hands have made" and to wine as "fruit of the vine and work of human hands."

The Uncreated Energies of God. The Eastern (Orthodox) Christian Church has long maintained a distinction, which today still has potential for expressing the continuing, dynamic, creative activity of God, between God's *essence* and God's *uncreated energies*. God's essence (Gk. *ousia*) is hidden, infinitely transcendent, and beyond all understanding, yet it is regarded as made known in God's uncreated energies (Gk. *energiai*)—that is, in God's work, the outcomes of the divine creative activity. These uncreated energies are the manifestation of God in the general realm of the structures, patterns, and organization of activities of the world. The divine energies are God's own self in action. This is an essentially panenthe-

istic perception of God's relation to the world, for God is seen in everything and everything is seen in God.

I find this profound emphasis of Eastern Christians more congenial to my scientific presuppositions than much Western traditional religious talk of the supernatural as the milieu of God's activity. Indeed, we find V. Lossky eschewing this term: "Eastern [Christian] tradition knows no such supernatural order between God and the created world. . . . That which western theology calls by the name of the *supernatural* signifies for the East the *uncreated*—the divine energies ineffably distinct from the essence of God" (1991, 88).

The "place" we have arrived at is indeed richly furnished from the past.

THE FUTURE OF THEOLOGY

Up to this point I have been positive and (I hope) constructive in developing theological insights enriched by reflection upon the best knowledge, possessed through the sciences, that we have today of the world. However, this is only one aspect of the current situation, and I cannot conceal my anxiety about the present state of Christian theology, specifically, and indeed others in which I am not involved enough to speak.

There are two main sources for this gloomy diagnosis in my own thinking. The first is not unfamiliar and has been with us for nearly one hundred fifty years, namely, the way in which systematic theology seems to ignore the challenges of biblical scholarship to the historicity of both Old Testament and New Testament narratives. This is an enormous issue that is far beyond my professional competence to address satisfactorily, so I speak only as a layperson in this context. Leaving aside the doubtful historicity of great swathes of the Old Testament on which the presumed historical action of God in a supposedly chosen people has been based, studies on the New Testament cast doubt on many assumptions both of ordinary Christians and of systematic theologians.¹ New Testament scholars widely contend, for example, that the birth narratives are nonhistorical (Jesus was born and lived in Nazareth, with Joseph as his likely father); that the virginal birth cannot be attested historically (and is also paradoxical biologically, for Jesus should, on that hypothesis, have been female, lacking a Y-chromosome); that the historical Jesus had no sense of being divine and that his knowledge and understanding was limited to what would have been available to a first-century Jew in ancient Palestine; that he was possibly mistaken about the immediate, historical advent of the Kingdom (certainly enough to mislead his followers into expecting his imminent return); and that his tomb was possibly, even probably, not empty (the early witness of his followers was that they experienced that he was "risen"—not the same thing)—and so on and on.

Some of this leaks through to the general public, generating scepticism,² and one has to ask when theology will stop building unstable, inverted

pyramids of metaphysical speculation on inadequate biblical evidence. As Leslie Houlden has recently documented (2002), the formative church councils formulated their classical doctrinal statements, many now enshrined in the creeds to which church members are expected to assent, neglecting the Gospels and with little knowledge of and reference to the life and teaching of Jesus. As my resort to the concepts of the *Logos* and *Sophia* and their applicability to the historical Jesus indicates, such reservations do not, in my perception, in the end undermine the universal significance of what Jesus was and is, as the Christ. But for honesty's sake, let theology not go on pretending that there is no problem here.³

Enough of my nonprofessional reflections on the significance of biblical studies—reflections, it must be said, that will and ought to be shared by any thoughtful inquirer into the validity of Christian beliefs. Let me address now my second major concern, namely, some of the challenges to received Christian theology posed by our broad understanding of the world that the sciences now afford.

Our current perception of the world as a closed nexus of events renders the idea of God “intervening” in the world to rupture its God-given regularities incoherent. “Miracles” as breakings of the regularities of the divinely created natural world are inconsistent with the nature of the God who is creating the world through its natural processes. If we are going to postulate them, we must have overwhelming historical evidence, and that, in most cases, is not forthcoming. But this is only one aspect of the immense problem of how to conceive consistently of God's action in the world over and beyond the divine sustaining in existence of all-that-is and all-that-is-becoming (God's “general providence”). This is the problem of “special divine action” (SDA) in the world. After a magisterial survey of the attempts to tackle this problem in intensive and extensive cooperative investigations by scientist-theologians and philosopher-theologians undertaken over more than a decade, Nicholas Saunders, in the final chapter of his *Divine Action and Modern Science* (2003) titled “Is SDA really tenable?” asks, “Would it be correct to argue on the basis of the foregoing critique that the prospects for supporting anything like the ‘traditional understanding’ of God's activity on the world are extremely bleak?” and he responds, “To a large extent the answer to this question must be yes. *In fact it is no exaggeration to state that contemporary theology is in crisis.* As we have seen, such a wide range of doctrine is dependent on a coherent account of God's action in the world, and we simply do not have anything other than bold assertions and a belief that SDA takes place” (p. 215).

Other issues have been with us longer: the demise of all kinds of dualisms in a monistic world with its inappropriateness of talk of the “supernatural” and the ambiguity of many uses of the term *spiritual*; the relation of “original sin” to those aspects of human behavior (about a half) under the leash of the genes; the evolutionary evidence of humanity as “rising

beasts” gradually emerging into self-consciousness and the apprehension of values and the notion of a historical Fall from which humanity needs redemption; the role of chance in divine creation; the possibility of life on other planets and their relation to God and the claimed uniqueness of Jesus as Savior; the biological role of physical death of the individual in evolution and the rupture of its claimed relation to human sin (“the wages of sin” as death); and the relation of God to time in the light of relativity. (For a fuller exposition see Peacocke 2000.)

There is little doubt in my mind that the major responsibility for developing the dialogue between science and theology that has been increasingly fruitful over the last thirty years now lies with theologians. They must become truly open in the sense I expounded and, frankly, infer to the best explanation of their own special (and not unwarranted) data rather than invoking any other source of authority that claims to express a revelation from God that is perennially binding. I get the impression from the current literature that very few Christian theologians have been engaged in this urgent task—with the notable exception of Philip Hefner. He has been, on my reckoning, almost unique among systematic theologians in actually listening carefully to what the sciences are delivering before rethinking his theology. That is why the Zygon Center has made such a significant contribution to that dialogue and, even more significantly, why its future is so vital to us all.

Insofar as an Anglican blessing can be effectual in a Lutheran setting, I wish it Godspeed now with Antje Jackelén at its helm. I first met Antje (and I think gave her a reading list?) in late 1987, at the beginning of her career in science and theology, at an ecumenical conference in Cyprus sponsored by the Lutheran World Federation that convened “forty-five men and women still young enough to work the concern of faith/science/ethics/technology into their life agendas,” in the words of John M. Mangum (1989, vii), who had the farsightedness to initiate that exercise and to persuade his church to back him! I genuinely believe that a new truly catholic, evangelical, and liberal Christian theology can be and is in the process of being forged in the heat generated in the furnace of science, which in the culture of our time could well be the divine agent of regeneration of theology, as were Greek philosophy in the early centuries of the church and Aristotelian learning in the eleventh and twelfth centuries.

Earlier I prescinded from any attempt at developing a global theology. But let me now share a concluding reflection on what I have been attempting, namely, to start from the world as we best understand it and to find paths leading towards God.

The paths we have been following from our knowledge of the world as described today by the sciences towards an understanding of God and of God’s relation to that world have led towards various kinds of insight. From this point, the seeker has to ask him- or herself what the general

significance is of Jesus the Christ who was successively designated “Son of Man” (possibly by himself), “Son of God” (in the New Testament), and “God the Son” (by the church). He came to be seen as the incarnation in some sense of God as Word/Wisdom in a human person. The way our understanding of God’s relation to the world that I have been developing here now allows, I would suggest, an *inclusive* interpretation of this central theme in Christian belief that may be amenable to those of other faiths. For Christians Jesus continues to be the unique, historical embodiment of God as Word/Wisdom, but this does not preclude God as Word/Wisdom being expressed in other peoples, cultures, and times. And who would dare affirm that God was *not* at work expressing Godself, as Word/Wisdom, through the great founders of other religions and in the continued experience of their disciples and followers? So Christians, indeed everyone, should be ready with humility to hear and to be open to the Word/Wisdom as it is manifested in other religions as not at all derogating from their own distinctive insights.

I therefore hope that the place at which we have arrived in this exploration may turn out to be one from which the seekers of many religions have started, and that we all might be prepared to know it “for the first time.”

Science is a truly global, cognitive resource accepted across all cultures; might not these inferences from the scientific perspective constitute a common pool of resources for the exploration towards God of the seekers of many religious traditions, or of none? For to “arrive where we started” by that route signposted by the sciences and to “know the place for the first time” is an opportunity to establish a new, surer, more widely accepted base from which the long pilgrimage of humanity towards God might set out. In that pilgrimage our resources will certainly be richly diverse and often other than scientific—historical, aesthetic, symbolic, mystical, experiential, philosophical—but at least we might, with the help of our new scientifically informed insights, then share a starting point for it more common than in the past.

Then it would indeed be true that we should not be ceasing from exploration, and the end of all our exploring would then indeed be to arrive where we started and know the place for the first time.

NOTES

For a fuller exposition of some of the themes of this essay see Peacocke 2001.

1. Look, for example, at the summary “Retrospect: A Short Life of Jesus,” which concludes the didactic survey of Gerd Theissen and Annette Merz on what is known of the historical Jesus (1998, 569–72).

2. Richard Holloway, who recently retired as the Primus of the Episcopal Church of Scotland, has warned, “By depriving our people of insight into the different approaches to biblical interpretation, because we are afraid of upsetting them, we are driving others out of the Church who mistakenly believe that naïve realism [not *critical* realism] is the only approach on offer” (Holloway 2000).

3. Sophisticated theologians often claim that historicity is not the point, though “ordinary” people and seekers who hear dogmatic statements assuming the historical veracity of the Bible may be excused for not being aware of this. Thus, Anthony Phillips, an Old Testament scholar: “While faith cannot be divorced from history, both evolving within it and being formed by it, the historicity of the traditions nonetheless remains theologically irrelevant. It is in the words which the community of faith used to express their faith that the revelation is to be found” (1986). Clearly, the less historicity is emphasized, the less any special divine action (SDA) needs to be postulated as operative in any particular historical event.

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