

8 - Exploration Towards God in a Scientific Age

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Exploration Towards God in a Scientific Age¹ Arthur Peacocke MBE, DD, DSc, SOSc

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Little Gidding is a small village in Huntingdonshire, England, to which Nicholas Ferrar, a doctor well-connected politically, 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 21 years before being broken up by Puritan Protestants. In May 1936, T.S. Eliot visited its 17th-century chapel, which still exists, and later he composed the last of his influential *Four Quartets*. The poem, entitled *Little Gidding*, is a profound reflection on the significance of time in the divine purpose and four 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)

Nicholas Ferrar had been a Fellow of Clare College, Cambridge, where I was for 11 years Dean (of Chapel). One of my great experiences at that college was, once a year, to go with students to Little Gidding. There we conferred in the adjacent farm house and then celebrated the Eucharist, Holy Communion, the Mass, in its unforgettable, evocative and dignified small 17th-century chapel with the light of the setting sun streaming through its west door. The words of T.S. 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." There and then we learnt

¹ Based on *Paths from Science Towards God: The End of all our Exploring* (Oxford, One World, 2001). Other works by Arthur Peacocke in the field of science and religion include: *Science and the Christian Experiment* (Oxford University Press, London, 1971); *Creation and the World of Science* (Clarendon Press, Oxford, 1979); *Intimations of Reality: Critical Realism in Science and Religion* (University of Notre Dame Press, Notre Dame, 1984); *Theology for a Scientific Age: Being and Becoming – Natural, Human and Divine* (Fortress Press, Minneapolis, SCM Press, London, 1993); *God and the New Biology* (Dent, London, 1986; reprinted Peter Smith, Gloucester, Mass., 1994); *From DNA to DEAN – Reflections and Explorations of a Priest-Scientist* (Canterbury Press, Norwich, 1996); *God and Science – A Quest for Christian Credibility* (SCM Press, London, 1996).



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that the vortex of our discussions had a still centre to which we, with our many hang-ups, were drawn from many directions. That experience grounds my hope for the track 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. We shall be exploring from the world of science towards God – although the ride may be bumpy, 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.

I. THE CONTEMPORARY CHALLENGE OF SCIENCE TO RELIGIOUS BELIEFS

In 1999 a widely and sympathetically publicised conference in Berkeley brought to the platform two dozen leading scientists to talk about their spiritual quests as Muslims, Jews and Christians – and even seeking-agnostics. There was a striking shared sense of wonder in their attitudes to 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 150 years.

In spite of the attempted corrosions of "post-modernist relativities", scientists and religious believers share a common conviction that they are dealing with reality in their respective enterprises. Scientists would leave their laboratories, and believers their churches, or mosques, or synagogues, for good if they did not think they were dealing with the realities of nature or of God, respectively.

Yet what I have to say will be *critically* realist with respect to both science and theology. Both *aim* to depict reality, both use metaphorical languages and models which 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. However, such a quest has its problems today since the world is perceived totally differently from that which 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 third millennium 'Bible' begin? Let us speculate on:

Genesis for the 21st 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 12 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



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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. Then 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, only 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 naturally given this Genesis, this Epic of Evolution, a theistic perspective on cosmic and biological evolution. Yet, however private revelations of God may be important to individuals, they are no use to anyone else.

Now science has found a reliable method for establishing *public* knowledge about nature, adequate for its practical and conceptual purposes. Hence the key question is: Can theology, which is thinking hard about religious beliefs, exercise a method of proceeding of comparable reliability?

II. SCIENCE AND THE FUTURE OF THEOLOGY

The Western intellectual world has yet to be convinced that theology can be done with the kind of intellectual honesty and integrity which is the hallmark of scientific thought. There is 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 that "epic of evolution".

This deep alienation from religious belief among the key formulators of 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 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.

That standard can only be reason based on experience, or reasonableness for short.

A strong case can be made that the *natural* and human sciences have done that and achieved their goal of depicting – provisionally and metaphorically – the realities of the natural world by *inference to the best explanation* (or IBE, for short). IBE employs criteria such as *comprehensiveness* – giving a unified explanation of a diverse range of facts not



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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, as Hans Küng has put it, "truthful, free, critical and ecumenical" – an *open* theology, which deals with and interprets the realities of all that constitutes the world, especially human beings and their inner lives. Can theology, using IBE, enter the fray of contemporary intellectual exchange and survive in its own right?

Unfortunately, this is not how theology is actually practised. Looking at the field today, we find a variety of theological procedures that do not meet the criteria of IBE – reliance on an authoritative book – reliance on an authoritative community.

These and other (e.g. *a priori*) practices make it difficult for theology to come to terms with the world whose realities are discovered by the sciences. The resources of theology are, of course: the Judeo-Christian communal inheritance of claimed *classical revelatory experiences* (including the Scriptures, liturgies, aesthetic experiences, music, architecture, etc.) and now the realities of the world and of humanity discovered by *science* – leading in combination to a radically revised theology. To these will very soon have to be added the perceptions and traditions of other *world religions* – leading, one day, to a global theology.

III. EXPLORING FROM SCIENCE TOWARDS GOD

The world as perceived by the natural sciences provides vistas, constitutes challenges and raises questions most of which are entirely new, though some go back to the days when the Greeks first woke up to the world around and some to the philosophical reflections provoked by the rise of science since the 17th century.

But let me try to give you some inkling of the issues and, in somewhat staccato fashion, outline at least the beginnings of those tracks 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, or ?) from which the universe expanded 12 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.

IBE: There is a self-existent Ground of Being (X) giving existence to and sustaining in existence all-that-is

This ultimate reality, X, must by definition have a nature beyond the capabilities of language to state explicitly; hence the need to resort to metaphor, model, analogy and extrapolation.

Now, the world is one – scientific laws and regularities are universal in their application and the world (= all-that-is) is an interlocking web of intelligible relationships.

IBE: X must be one in ultimate nature

Nevertheless, the world displays a remarkable diversity, fecundity and many levels of complexity.



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IBE: X is some kind of diversity-in-unity, one Being but of unfathomable richness

To hold even these propositions together (to be coherent in our IBE) we must note that

IBE: X must be an Ultimate Reality that includes and penetrates all-that-is, but whose Being is more than, and is not exhausted by it ("pantheism", see later)

The world of science embodies an inbuilt rationality – indeed science only works at all because it does. In science, we *assume* there is an underlying mechanism and rationale in natural events – and science goes on validating this. As Einstein said: "The eternal mystery of the world is its comprehensibility."

IBE: X must be supremely and unsurpassedly rational

to give existence to such a world. All-that-is must in some sense be *known* by its Originator that must have the *power* and ability to bring it into existence. Hence

IBE: X is omniscient, knowing all that it is logically possible to know

and

IBE: X is omnipotent, can do all that it is logically possible to do

20th century physics showed that the realities to which the concepts of matter, energy, space and time refer are all interlocked – they are all aspects of the created order. Hence God is other than time, in particular, and present to all times.

IBE: X is omnipresent and eternal

The world of science displays a hierarchy of complexity: particles-atoms-molecules-living organisms-persons. The human person knows the world and knows-that-it-knows. X must have at least this capacity to transcend what it has originated.

IBE: X is at least personal or supra-personal – yet also has impersonal features

In English the existent X, the Ultimate Reality is called "God" – a Creator God. This is what I shall call the Ultimate Reality from here on.

If God is more than personal and can enter into personal relationships, then there must be something like succession in God. We cannot avoid using verbs about God and these have tenses. Time is created, each moment is given existence by God thinking it into being (recall the Red King's sleep in *Alice through the Looking Glass*).



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So

IBE: God gives existence to each segment of time for all-that-is

BUT: Does God *know* the future? – a question much debated. Traditionally (since Boethius in the 5th–6th centuries, CE), God's eternity is "the total, complete, simultaneous possession of eternal life". This assumes too readily that the future already exists *for* God to know. However, many of us refuse to make the 4-dimensional block model of the universe, useful in problems in relativity theory, into the actual world. The future does not exist for God to know so God does not *know* what the future contains, even if God more than any other existent, knows what it *will probably* (and even, sometimes, certainly) contain. [N.B. This makes human free will *real*.] God made the world thus,

IBE: God has a self-limited omniscience

This proposal is very significant in the light of 20th century science. For it came to the conclusion that, when attempts were made to make measurements on small systems at the quantum level, it is possible to predict only the probable outcome. Since this is the only possible knowledge of the outcome, God too knows it only probabilistically.

Because God has endowed entities with certain inherent properties related by divinely established regularities, God has self-limited God's own possible interactions with the world. Any God, belief in whom is to be credible, would be acting against God's own nature to alter arbitrarily these God-created regularities, once they have been given existence.

IBE: God has a self-limited omnipotence

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 as incoherent. "Miracles" as a breaking 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 which is often not forthcoming.

So far we have been thinking about the world-as-it-is in a still snapshot. But as our "Genesis for the 21st Century" expressed, one of the most significant features of the world of science today is that we perceive ourselves to be part of a cosmic and biological process.

The World in Process

The epic of evolution describes a universe in process by means made intelligible by the cosmological and physical sciences, from the original "quark soup", or whatever at the "hot big bang" some 12 billion years ago to living organisms. "Nothing in biology makes sense except in the light of evolution," declared the great geneticist Theodore Dobzhansky (himself an Orthodox Christian). The original quantum fluctuation in the "quark soup" has evolved into Mozart, Shakespeare, Dante, Jesus of Nazareth – and you and me!

The whole process itself inherently produces cosmically not only matter, but on Earth matter capable of selforganising into the intricate complexities of biological life and that of human beings, whose brains constitute the



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most complex form of matter in the observed universe. The process of creating is continuous. Creation is therefore not just a past event, at 4004 BCE or even at 12 billion BCE! It is still going on.

IBE: God is the immanent Creator creating in and through the processes of the natural order (to which God continuously gives existence)

Note especially that everything began simply with matter-energy-space-time and all else – atoms, molecules, galaxies, amoeba, insects, dinosaurs, Neanderthals, Chinese, Africans, yes and the British and Americans (!) – are *all* assemblies of the basic stuff of the world (currently physicists describe them as "quarks").

We are star dust – every iron atom in the haemoglobin taking oxygen to your brains and (I hope) keeping you awake was made in a supernova explosion before the Sun and the Earth were formed. Of course, to paraphrase Pascal, we may be just quarks, but we are thinking assemblies of quarks and we know the universe – and it does not know us. The divinely inbuilt creativity of the world has produced thinking persons from insentient units. This does not mean we have to say we are "nothing but" quarks or atoms. The world is monist, made up of one set, apparently, of basic physical units, but it is also emergent and so creative. This is the way we can now see that God has been and is creating in and through the processes the natural sciences reveal.

In the processes of evolution, the emergence of new forms of living matter, organisms, the dominant mechanism is that discovered by Darwin, natural selection. Now this process involves a chance element that daunted Darwin and led many 19th century thinkers into agnosticism. For the processes of mutation at the DNA level, which cause changes in the structure, are entirely random (being purely chemical) in relation to the needs of the organism. The environment conditions which random DNA mutants survive – namely those which facilitate the production of most progeny in their particular situation.

We now realize that if all events were the result only of chance, then all would be inchoate and nothing stable could exist; that if all were conditional only by laws, such a clockwork universe would be immobile and static; and that it is only the combination of "chance" and "law" that makes for a universe of structures that can change – that is, for a creative universe in which the new can replace the old.

IBE: God is the ultimate source of both law ("necessity") and "chance" – an Improviser of unsurpassed ingenuity

Such a process can, in fact, display purpose. For in the process there are *propensities* – situations affecting the outcome of random events that make certain developments possible and even probable. Thus, under certain circumstances, it will become probable that organisms should progressively increase in complexity, in information-processing and -storage, in consciousness, sensitivity to pain and even to self-consciousness (to enable social cooperation and transmission of knowledge).

Hence, the spectre of it being a meaningless process (and so of a meaningless universe) can at last be exorcised from our judgment on evolution. Indeed the fact that life is possible at all is closely related to the physical parameters of the universe itself (the "anthropic principle") and is consistent with the whole process manifesting the intentions of a



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creator God. The whole process manifests the inherent inbuilt creativity of the stuff of the world and at no point needs any divine intervention to push or pull it on its way.

The productive fecundity of the non-human living world is remarkable – some 10 (+/-5) million species. The 100s (? 1000s) of millions of extinct species cannot be seen as there simply to lead to us!

IBE: God has something akin to "joy" and "delight" in Creation – stretching analogical language almost to breaking point

However, there is a dark side to the biological evolutionary process – the ubiquity of pain, suffering and death. All of these can be given purely biological interpretations that show they are necessary for the formation of new forms of life. And even in human experience, we are aware that the exercise of creativity always involves a cost and sometimes suffering. Yet theists cannot duck this one and, unless God is to become a kind of moral monster (and living creatures merely God's playthings), we are bound to conclude – along with many modern theologians evoking other considerations –

IBE: God suffers in, with and under the creative processes of the world

Creation is costly to God:

IBE: God took a risk in creation

That is why many Christian thinkers have seen God's creating acts as acts of self-offering, vulnerable Love. God creates, at a cost, with self-limitation, to bring into existence beings freely capable of instantiating the values of truth, beauty and goodness and of being incorporated into the divine life – BUT also capable of their contraries by the egocentric exercise of their freedom.

IV. "ARRIVING WHERE WE STARTED" AND "KNOWING THE PLACE FOR THE FIRST TIME"

It is time to take stock. Our exploration starting from the realities of the world as perceived by the sciences has led us so far to infer that the best explanation of all-that-is and all-that-is becoming is an:

"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;



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- 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 supra-personal 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.

I am not affirming that I have *proved* from our 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 this is the *best* explanation. They are together cumulative in their effect and make a more convincing case 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 it doesn't stop when science runs out of answers.

But to be accessible to personal and communal life they are too abstract and 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 be through the sciences. Transition to such a theology is, in my view, *unavoidable* if Christians (and other theists) in the West are not to degenerate into an esoteric society internally communing only with itself. A rebirth of images is desperately needed to satisfy the spiritual hunger of our times.

Let me, ludicrously briefly, mention a few which I think can help us at this stage of our exploring as we arrive closer to the place "where we started", namely "God".

Immanence: A Theistic Naturalism

One of the positive effects 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 already, an Anglican High Churchman, in *Lux Mundi* (1889), saying that

The one absolutely impossible conception of God, in the present day, is that which represents him as an occasional visitor. Science has pushed the deist's God further and further away, and at the moment when it seemed as if he would be thrust out altogether *Darwinism appeared*, and, under the disguise of a foe, did the work of a friend. It has conferred upon philosophy and religion an



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inestimable benefit, by showing us that we must choose between two alternatives. *Either God is everywhere present in nature, or He is nowhere.*

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 19th 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 non-natural 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 creating. This means we do not have to look for any *extra*-supposed gaps in which God might be supposed to 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 – to, say, a Beethoven piano sonata – if one were to ask "Where is Beethoven the composer now?", one would have to reply that he was in the music and you were 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

Panentheism is "the 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" (after the definition in the Oxford Dictionary of the Christian Church). More familiarly, recall Paul's address at Athens when he is reported to have said of God, quoting a local poet, that "In him we live and move and have our being" (Acts 17, v.28). This notion is in fact also deeply embedded in the Eastern Christian tradition.

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 each other. God can only "intervene" in the world in such a model. 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 that of the world (panentheism, 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.

We are beginning to "arrive where we started" for God the Creator's outgoing activity towards and dwelling in the created world has been expressed in a rich variety of images in the Judeo-Christian tradition. We must therefore delve, however briefly, into these rich mines of insights from the past to discover what, in a way, we already knew.



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The Wisdom (Sophia) and the Word (Logos) of God

Biblical scholars have, in recent decades come to emphasise 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" (J.G. Dunn). 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 the divine Wisdom — that activity distinctive of God's relation to the world.

Wisdom as an attribute of God, personified as female, has been of especial significance to feminist theologians, one of whom has argued on the basis of a wider 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 expressed in *all* persons of the Trinity"². 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 and 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 which is manifest in the cosmos and in the 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, v.1-14)

A Sacramental Universe

The "evolutionary epic", as I have called it, 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. So matter manifests personal qualities, that 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, that is as the means of conveying insight into these purposes.

But, in the Christian tradition, 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. Thus William Temple came to speak of the "Sacramental Universe", and 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 which ensues from those significant words of Jesus at the Last Supper: "This: my body" and "This; my blood" – referring 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".

³ In his *Nature, Man and God* (Macmillan, London, 1934, repr. 1964).

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² Celia Deane-Drummond, *Heythrope J.* XL (1999) 41-59.



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The Uncreated Energies of God

The Eastern Christian Church (Orthodoxy) has long maintained – ever since the Cappadocian Fathers in the 4th century – a distinction which today still has potential for expressing the continuing, dynamic, creative activity of God. God's essence (Gk., *ousia*) is hidden, infinitely transcendent, beyond all understanding, yet 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 panentheistic perception of God's relation to the world: for God is seen in everything and everything is seen in God.

I myself 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 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.⁴

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

V. VISTAS OF THE END OF ALL OUR EXPLORING?

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 is the general significance 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 in a human person; and God as somehow a Trinity-in-unity

The way our understanding of God's relation to the world I have been developing here now allows an *inclusive* interpretation of such a central theme in Christian belief, which may be amenable to those of other faiths. What Jesus the Christ manifested is what is universal and perennial. It existed long before the historical Jesus and continues to exist eternally. Although for Christians, Jesus is the unique, historical embodiment of God as Word/*Logos*, this does not preclude God as Word/*Logos* being expressed in other peoples, cultures and times. And who dare affirm that God was not at work expressing Godself, as Word/*Logos*, 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/*Logos* as it is manifested in other non-Christian religions as not at all derogating from the Christian revelation.

⁴ V. Lossky, *The Mystical Theology of the Eastern Church* (1991, English edit.) p. 88



8 - Exploration Towards God in a Scientific Age

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".

A concluding reflection:

Since science is a truly, global, cognitive resource accepted across all cultures, might not these inferences 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, 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 we be true that –

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