

## Book Reviews

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### Essay Review

A review of five works in the series:

***Theology and Science at the Frontiers of Knowledge***

**General Editor: T. F. Torrance**

Edinburgh: Scottish Academic Press

1. **T. F. Torrance**  
*Reality and Scientific Theology*  
Edinburgh: Scottish Academic Press, 1985  
xvi+206pp., £10.00
2. **H. P. Nebelsick**  
*Circles of God: Theology and Science from the Greeks to Copernicus*  
Edinburgh: Scottish Academic Press, 1985  
xxviii+284pp., £16.
3. **Iain Paul**  
*Science and Theology in Einstein's Perspective*  
Edinburgh: Scottish Academic Press, 1986  
xiv+107pp., £10.50.
4. **Alexander Thomson**  
*Tradition and Authority in Science and Theology*  
Edinburgh: Scottish Academic Press, 1987  
vii+116pp., £10.50.
5. **R. G. Mitchell**  
*Einstein and Christ: A New Approach to the Defence of the Christian Religion*  
Edinburgh: Scottish Academic Press, 1987  
xxi+231 pp., £13.50

This series of books co-sponsored by the Center of Theological Inquiry, Princeton, New Jersey, and The Templeton Foundation, is predicated on the assumption that 'a vast shift in the perspective of human knowledge is tak-

ing place, as a unified view of the one created world presses for realization in our understanding' (General Foreword). This historical claim of a fundamental change in the foundations of knowledge is also visionary. It ultimately calls for the 'reconstruction of the very foundations of modern thought and culture, similar to that which took place in the early centuries of the Christian era, when the unitary outlook of Judeo-Christian thought transformed that of the ancient world, and made possible the eventual rise of modern empirico-theoretic science.'

The first volume, written by Thomas F. Thomas, former Professor of Christian Dogmatics at the University of Edinburgh, adumbrates the general framework and themes in which the other four works under review find their place. The books, as in many a series, are of uneven quality, and I will therefore concentrate on the ones that best attempt to substantiate the historical claims and develop their scope.

Can we learn from history, recent history of science as well, and (re)capture a classical frame of mind? Can we re-establish healthy, mutually modifying relationships between natural and theological science? Torrance's answers are an unqualified yes—provided we take the approaches extant in the physical and natural science of James Clerk Maxwell, Albert Einstein, and Michael Polanyi to heart. As science presses into every corner of the universe—in fact, engages the very boundaries of being—an astonishing traffic pattern between theology and scientific ideas is revealed. Not only does Torrance wish to identify this traffic, but an understanding of this fact, he insists, will reduce or bridge the gaps and dualisms so omnipresent

in everyday life between faith and reason, religion and life, theology and science.

The initial move by Torrance in this project is to propose the development of an authentically scientific theology as a 'first-order activity' of inquiry. This inquiry is 'a form of intense intellectual communion with God.' Knowledge of God is considered to be the basic act of the human mind; faith, in its intellectual aspect, is our reason responding/adapting to God's claims made known in his Word. This first-order activity of intellectual 'indwelling' is prior to the second-order theological activity of reflection on the content of God's self-revelation. Although Torrance details both of these activities, it is patently clear that the intellectual side of faith and theological science is dominant since the central project is to relate 'our knowledge of God through his self-revelation and knowledge of the universe gained as its inherent rational order becomes disclosed through natural scientific inquiries.'

The first chapter of *Reality and Scientific Theology* contrasts a classical and modern attitude of mind. The classical mind, best displayed by Origen, Athanasius, and other Alexandrian church fathers of the third and fourth centuries, acknowledge a universe with an 'inherent intelligibility' and maintains that proper 'knowledge is to be attained only as we are able to penetrate into the inner connections and reasons of things in virtue of which they are what they are, that is, into their ontic structures and necessities.' The truth of being, the inner relation between logos and being, provides the ground or foundation upon which the inseparable relation of knower and known can be established. Torrance opts for a Parmenidean formulation: 'Thus the knowing of being is to be acknowledged as an operation of being itself, for it is through being known that the structure of the universe manifests itself.' This knowing of being and being of knowing must not be viewed statically since the integration of logos and

being can be discerned in a transcendent way in the living and active God and in a creaturely and contingent way in created reality.

By contrast, the modern attitude of mind arrogates inherent intelligibility exclusively to the knower. Thus meaning, rather than being found, is created. Historically a progressive shift from 'truth of being' to 'cognitive truth' has occurred in which humans create meaning for themselves by the imposition of thought forms of their own making or construction. Knowledge becomes increasingly instrumentalized.

But, *mirabile dictu*, circumstances are not as bad as they could be. Modern exact science, in the hands of James Clerk Maxwell and especially Albert Einstein, still adopts the classical attitude of mind. Correlated to a scientific theology we are allowed to see and understand 'created being as correlated to the unlimited Reality and Freedom of God.' Our universe stands in a created correspondence with God's 'inexhaustible Rationality.' We need, once again, to learn to look through the universe to its transcendent ground in the uncreated Rationality of God. The intrinsic intelligibility of the universe reaches beyond formalized science, art, and religion into God Himself. The task at hand is to construct a rigorous scientific theology under the dual restraints of the reality and rationality of God and the reality of the world of space and time. Thanks to Einstein, space and time are recognized as dynamical and relational concepts which are the 'bearers of rational order in the created universe.'

Natural theology—in a revised form—is also allowed to play a role in Torrance's system. Natural theology nests within positive or revealed theology and is integrated with it in the interface between Christian theology and natural science. This integration or correlation is modelled on the relation between four-dimensional geometries and relativity theory. Theology has to be a science—a rigorous enterprise—a science of God.' In this enterprise we

can again take our cue from modern science which recognizes a dynamic and open-structured understanding of the universe which is congenial to the Christian understanding of God's relation to the world of space and time. Theology needs to work with flexible and revisable formulations much like any science in search of concepts which simplify and unify knowledge.

Torrance wishes to establish the need for Christian theology to appreciate and learn from intense epistemological struggles which have occurred in recent modern science's efforts to understand reality in a really deep sense. Only then will a scientific theology continue to develop in a dynamic open-ended way and give genuine expression to the Gospel. This is indeed a grand bold project and Torrance's book requires close and repeated reading of the dense prose before one can tease out the various strands of the argument.

The very boldness of the project, however, also invites a question or two. Allow me to briefly mention a few: the nature of rationality, the focus of theology, and the force of Einstein's epistemology.

There appears to be a dialectic at work in Torrance's position. The goal or intention of his project is to save and honour the 'truth of being', its oneness and universality. Dialectic, frequently, makes its appearance as a typical form of thinking where logical thought is recognized as a special kind of activity, and is at the same time accredited with grasping true being. This usually implies that it opposes the claims of other sources of knowledge, as sources which only attain an illusion of the truth.

True, one can accept the fact that no human knowledge is possible without rationality, that is, that rational procedures are fundamental to all knowledge. But although rational knowledge may be dominated by rationality it has many other characteristics besides rational ones. As recent historiography of science has emphasized, social class,

political allegiances, human interests, and many other factors enter in willy-nilly into the 'production' of scientific knowledge. Does Torrance's repeated insistence on the intelligibility (rational structures) of reality as correlated to God's Rationality (mind) not downplay, or at least stand in tension, with other legitimate constitutive elements of knowledge such as love, faith, commitment and passion?

The focus of theology—that is, what it investigates—and how it relates to other disciplines has been a contentious point of discussion since time immemorial. Viewing theology as the 'science of God', God as an object of investigation, comes close to eradicating the Creator/creature distinction. Does this approach not support the idea that God is subject to logical laws (conditions of intelligibility) that must necessarily hold for Him as well as His creatures? How can God then be considered as Sovereign? Equating theology with a study of God's revelation easily leads to an hegemony in which theology is called to Christianize all other sciences by somehow relating them to God as Creator and Redeemer. Rather, the over-powering nature of God's revelation in creation is the basis for all science and historical study. Each discipline is confronted with the same revelation.

Torrance, and other authors in this series, place a major emphasis on an Einsteinian perspective or epistemology. They wish to wed their views to the resurgence of the realist position advanced by J. C. Maxwell and A. Einstein. Einstein speaks of the real world which physics aims to describe as the real external world, and he does so by suggesting that the independence of the real, its not being dependent on ourselves as observers, is based on this externality. Objective knowledge of a real external world, therefore, requires a conceptual grasp or a conceptual scheme, which is the product not of the senses but a free creation of the mind. Observation is consequently theory-laden. The content of experience may

derive from the senses but its form derives from the mind. The rationality of reality thereby functions as an explanatory concept, an idea which we create in order to make sense of our experience. This intimate interrelation of the theoretical and empirical Torrance sees exemplified in Einstein's theory of general relativity (among others) in which the space-time continuum is integrated with energy-mass structures (matter). As he has expressed it elsewhere: 'Space tells matter how to move: matter tells space how to curve (thus deterring matter's motion).'

By employing basic concepts of space and time acquired via an 'intuitive relation', Einstein was able to display the inner simplicity and intelligibility of reality. A plethora of physical phenomena could be reformulated in such a manner that displayed their fundamental unity. In accomplishing the task of constructing a scientific theology theologians, Torrance argues, must take the work of natural scientists to heart. Their arduous intellectual activity should be the model for a similar reconstruction of the foundations of theology. The more economical and natural our basic concepts are the wider the range of their applicability turns out to be.

Without denigrating Einstein's work, a word of caution should be mentioned. Despite the existence of a range of general, universal laws (laws of motion, special and general theory of relativity, laws of classical thermodynamics, conservation laws) and some more restricted ones (laws of classical electromagnetism) none are capable either singly or jointly of explaining or giving an adequate account of the structure and stability of an atom or molecule. By emphasizing only the more general relationships in reality (the more intelligible ones?), insufficient recognition is given to the fact that physical entities are generally individuals of a certain kind. As integral wholes with their own typical structure they are often irreducible to their constituents. Such instances of intrinsic

diversity must not mean that we declare the classical, more general theories to be involved, but should rather encourage us to develop an understanding of reality in which the mutual dependence of theories (both classical and quantum) is highlighted and honoured in our scientific work. It is imperative that we do not conflate or equate logical (intelligible) order with physical order. They are in my view inter-related but orders of a different kind.

Iain Paul's contribution, the third in this series, seeks to convince the reader of the fact that modern science and theology have much more in common than general perception holds. By stressing commonalities, the desire for and success of informed dialogue should be greatly enhanced. Science and theology are not in a state of hostility (nature) but in a state of grace since behind the hostile appearances is a 'hospitable reality'. This essay is a work of parallelisms, similarities, and analogies, some more forced than others, suggested by an Einsteinian perspective. Sketches of the similarities between scientific and theological communication, the universe and God, universal and divine unity, universal and divine authority, the rationality of the universe and of Jesus Christ, the intuitive relation (in science, read Einstein) and the Holy Spirit, and the scientific community and the Church are made in Chapters 2-9. The last chapter serves as summary and as motivation for the task for reconciliation between science and Christian theology. 'Having so much in common, modern science could reasonably be described as Christian theology operating in a different gear' (p. 105).

One gets the distinct impression one lives in a mirror-image world, or perhaps more accurately a step-laddered world. For every authentic scientific event or act there is a corresponding correlative in God's disclosure as recounted in theology.

One example, of many possible ones, will have to suffice. Does, we may

ask, Paul's analysis penetrate deeply enough to find a common touchstone for theology and science? In a word it is rationality: 'The rationality of the universe is, so to speak, the covenant between man and the world.' (p. 53) That, in brief, describes a basis for science. On the other hand, 'Theological activity is centered on the word incarnate from whom rationality radiates to order and to harmonize the whole of the creation.' (p. 38) Or again: 'When scientific believers assert that the rationality of the universe is the scientific way, they are not presenting science as one possible response to the natural order. For them it is the way, just as for theologians Jesus is the way is grounded in the acknowledgement of reality, its independence and its rationality.' (p. 33).

Indeed we have an extremely high view of science presented in this account, since modern science is described as 'the medium in and through which the rationality of the universe communicates with man.' Can this 'foundationalist' view of rationality serve as a framework for dialogue? The book assumes that it can, but there are many questions left unanswered. That the structures of reality are in some sense understandable or intelligible may be the case, but that these same structures have to bear the mark of rationality correlated to a rational mind or Intelligence seems forced and certainly not just self-evident. It appears, in short, to reflect a commitment or faith in reason. Nowhere in these five volumes under review is there an in-depth analysis of the present post-modern 'rage against reason' and what may have occasioned this reaction.

*Circles of God*, the second book in the series, is the most historical in scope. Harold P. Nebelsick, Professor of Doctoral Theology, at Louisville Presbyterian Theological Seminary, traces the interaction of theology and science from the Greeks to Copernicus. Cosmological issues in particular reveal the intermingling of theology and science, so much so, that they are

frequently impossible to sort out. If theology and science indeed interacted this period of history should be optimal for an investigation of the nature of this interaction. The thesis advanced is this: 'the motivating force behind the pursuit of natural knowledge—was theological rather than scientific.' The search for divinity and for certainty in the constancy, regularity, and harmony of the heavens was primarily done for religious reasons. The author also signals a countervailing motif present, in among others, the *Hermetic Corpus*. Here capricious divine forces were allowed to compromise cosmic dependability. Clearly our theology, 'thought about God', affects our science, 'thought about the world.' Each discipline, though different in knowledge and method, must learn to speak to each other and complement each other. That is the lesson Nebelsick wishes us to learn.

But the argument for this position is by way of a scholarly historical analysis complete with extensive footnotes. Nebelsick argues that theological ideas and scientific explanations were so intertwined that science could not properly develop until these were separated in the seventeenth century. The theological input is identified with the concept of the perfection of the circle and the insistence that all celestial motions be treated in terms of uniform circular motions. However, the historical account of these 'circles of God' and their influence on astronomy is told in an extremely presentist or Whiggish manner. The concluding paragraph of the *Introduction* makes this clear:

Thus in a backhanded sort of way the *Circles of God*, false as they were, had a positive effect upon science. Because the beauty, harmony and regularity they were thought to display represented eternity and even divinity itself, they enticed the human mind to contemplate the heavens. Out of such contemplation the rudiments of science arose. However, because the circles

were false and the 'scientists' continued to insist that they were true, in the end they had a debilitating influence on astronomy in particular and on science in general. The Copernican theory was 'saved' only when Kepler proved it false by squashing its circles into the ellipses which, according to our present knowledge, represent the true shape of the orbits of the planets around the sun.

The historical trajectory is far more complex than this paragraph would allow. What saved the Copernican heliocentric theory in the sixteenth century was the fact that the system, although having more circles together under a heliocentric umbrella proved to be extremely convincing. Copernicus was the first to admit that he did not possess observations of sufficient precision to aid the Church with its proposed calendar reform. The ones at his disposal would not have allowed him to mathematically distinguish between an ellipse and a circle. Within a few years after acquiring more precise observations Kepler was able to postulate an elliptical path for the motion of Mars. As another reviewer, Owen Gingerich, of this book has commented: 'we can easily argue that the concept of the perfection of the circle had no discernible impairment for the advance of astronomy, and on the contrary, it may have furthered its development.'

That theological (or philosophical) positions influence scientific developments is amply demonstrated by this book. How it 'actually happened' historically is unfortunately more hidden than revealed in this book.

The fifth work under review is authored by Fr. Ralph G. Mitchell, a convert to Catholicism, and presently serving as a Roman Catholic priest. This is quite frankly an apologetic work—one 'seeking scientific confirmation for Christian convictions'—and written from an explicit Thomist perspective. In my judgment this book

should not have been published in its present form. It is a menagerie of arguments, apodictic statements, lists, and diagrams in support of a 'classic' view of man ('man is a psychosomatic creation, body/soul, and therefore immortal' p. 198); God is described as pure act (p. 14); theology is presented as the Queen of the sciences (p. 5). The second chapter, 'Clearing Terms and Concepts', for example is an eclectic arrangement of scientific and theological topics—eternity, infinity, love, relativity, salvation, the cosmos. Page 105 lists 45 men in twelve lines of space who were part of a 'long list of (19th century) greats.' One gets the impression of being in a curio shop with items pulled off the shelf at whim. In no way, that is clear to me, do I see it advance the arguments detailed in the other books in the series though it does give us a conservative Catholic perspective—one which still has some influence.

The book by Alexander Thomson, a parish minister of the Church of Scotland, presents an elegant and illuminating introduction to Michael Polanyi's thought on the role of tradition and authority in science. Polanyi's view of science can be most radically described as holding that 'science is a system of beliefs' to which one is committed. This emphasis on commitment must be understood as a reaction to the positivistic ideal of impersonal, explicit, and empiricistically based knowledge. For Polanyi, scientific knowledge is personal, tacit, and fiduciary. Although knowledge is personal it is shared by a community which has its own authority and tradition. In fact, as apprentices, we have to become schooled in a particular scientific tradition by trusting ourselves to the authority and example of a master-scientist. This process of education, of acquiring a vision of the order inherent in nature, will in turn lead us to question and modify the very tradition in which we stand.

The purpose of the author in the

greater part of the book (Chapters 2–6) is to identify parallels between the process of education in science and education in the Church particularly with respect to questions of authority of both the Bible and the Church, and the interrelation of authority and tradition. The dominant thrust of the writer is to fuse Polanyi's views of science with Karl Barth's views of the Biblical witness to God's self-revelation in Christ. For example, the multi-layered reality of a machine, as interpreted by Polanyi, is employed to help us understand two level of reality contained in Barth's reading of the Apostolic witness: 'The first of these levels is the Incarnation and Revelation of God in Jesus Christ. This level organizes and gives distinctive shape, form and meaning to the lower level, that of the Apostolic witness; a witness which can only be understood as it is correlated with the higher level' (p. 107). The success of this project will depend in large part on how comfortable one is with this characterization of Scripture, and with Barth's epistemological Christocentrism and corresponding ontological Christocentrism.

In this essay review it has obviously been impossible to detail the positions taken on many crucial theological matters: theology as faith, church as context for theology and faith, Scripture as witness in relation to Christian faith, tension between Gospel as God's word in Christ and law as order of creation. Deep issues are also left unresolved in many historical and philosophical matters—particularly the correlation of rationality, commitment, and the order of creation (reality). But, all in all, these volumes present us with a challenge—namely, to offer our scholarship in science and theology as part of our obedient service.

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**Donald Hay**  
***Economics Today—A Christian Critique***

Apollos Press, 1989  
336pp., Paperback, £10.95.

The author is a Fellow and Tutor in Economics at Jesus College, Oxford. His book is one of the least-biased Christian critiques of economic theory, political systems and the international order which has appeared for a long time. To compress such a wide scope into 300 pages does not make for light reading, but the book is refreshingly free from jargon. A deep background knowledge of politics, philosophy, economics or theology is not needed to follow the discussion.

The method used is to start from the religious traditions of Jewish and Christian thought and from these to postulate a set of derivative social principles. The principles are then applied to the reality of the contemporary world. The partial and provisional nature of all these aspects is constantly stressed, as is the need for their re-interpretation in the light of new insights and knowledge. He then tackles the question of how, within these limitations of time and knowledge, should a Christian respond to the gap, which in a sinful world is inevitable, between the principles and the reality.

Emphasis is constantly placed on the sinfulness of man, the corruptibility of systems, both political and theological. Exercising moral judgement is more an art than a science. This is both stimulating and humbling. Small wonder if the fundamentalist politico-economic theologians of both right and left, nationalist and internationalist, find their entrenched positions threatened by some extremely telling intellectual shellfire. To quote '... few economic issues can be settled by direct appeal to scripture. Bringing a Christian mind to bear on them will require disciplined thought, spiritual sensitivity and intellectual humility.

... A willingness to listen to other Christians and openness to the guidance of the Holy Spirit are required.'

The main basic principles which he derives from scripture are the relationship between stewardship and freedom, responsibilities and rights, justice and the law, the need and the responsibility to work and the role of government. In the light of these he makes his critique of various political and economic theories. He dismisses both the extreme right and left positions of unfettered freedom and totally planned economies as being unchristian both in concept and in application. The first because, for a Christian, freedom can never be an end in itself since it ignores the concept of stewardship and justice, and the second because it takes away from the individual and passes to the state both responsibility for them and the opportunity to exercise them.

Throughout the book he warns of the inherent tendency of large and powerful institutions to corruption where the survival of the institution becomes more important than the values which it was ostensibly established to promote. This tendency to misuse power is the justification for democracy. In Niebuhr's words 'Man's capacity for justice makes democracy possible. Man's inclination to injustice makes democracy necessary.'

The utilitarian assumptions which underlie so much economic theory are strongly questioned. Put crudely, welfare economics assumes that there is some method by which individual satisfactions can be measured. Provided that the sum total of satisfactions can be increased without anyone being worse off than the sum total of welfare in a community has been increased. He dismisses this approach on several grounds. First, that such measurement is not in fact possible. Second, that even if it were, the calculus would have to quantify beforehand the probable level of satisfactions after a particular action had been taken. Third,

that it lacks a satisfactory theory of the state. For the Christian the primary role of the state is not to determine what people should want in the way of satisfactions—and which by inference they would choose if they were as wise as the authorities—but to promote justice between citizens.

In this attack on welfare economics he perhaps underestimates the value of some of its concepts. Provided that both the practitioners and the users are aware of all the assumptions, the degree of abstraction of the model, and the uncertainty of the input data the analysis can provide useful guidelines which will cut down the margins of error within which authorities have to make decisions. But he is quite correct in stressing that the economic analysis cannot produce a 'right' answer which takes away from the authorities the responsibility for their actions.

This dissertation is followed by a critique of the capitalist market economy and the planned economy. Neither comes out with very high marks, particularly in their extreme forms which were discussed above. Capitalism, he argues, can only survive without state intervention so long as it is based on firm moral and religious principles—which after all were the basis of its early success. As these principles became eroded more state intervention was required for the regulation of contracts, the promotion of justice and the restraint of physical and economic violence. On the other hand democratic socialism cannot function without many of the attributes of the free market. Regimes of detailed central planning have produced systems which are neither efficient, nor likely to promote justice. The impossibility of allowing man to exercise his responsibilities under such rigid systems makes them unacceptable to the Christian.

This makes the contemporary political 'slanging-match' between Christians of our major political parties



not only a massive irrelevance, but also a direct contradiction of the Christian ideals of humility and tolerance. If we believe in the provisional nature of all of our judgements in a rapidly changing society we would all do well, whatever our political persuasions, to listen a little more and to recognise not only that we have to make our judgements on more than one criterion but that the balance of the tensions between those criteria will change.

In dealing with the rich-poor divide, the argument is no less forthright. The New International Economic Order (proposals from the 1974 Assembly of the UN) '... encourages the Southern Governments to believe that they are victims of an international system and therefore not responsible for their circumstances. ... so they fail to face the realities of sensible economic policies. ... problems arising from landholding, negative cultural elements inappropriate economic systems and corrupt administration can only be dealt with in the economy concerned ... if donors of aid have good reason to believe that aid will be wasted or diverted by a corrupt administration and that little will reach those who actually need it then wisdom dictates that the aid should be withheld'.

Having fired this broadside he then fires another at the hypocritical attitudes of developed countries who encourage free trade between each other, yet hinder it when it comes to competitive imports from the south. He mentions particularly the highly protected agriculture, clothing and footwear industries. Free trade in these would undoubtedly cause loss of jobs in the prosperous north, but it is estimated that for every job lost here up to forty new ones would be created in the poorer south. Further, as a consequence of this more efficient allocation of resources, the overall standards of living in both areas would increase.

This conclusion is a good example

of the benefits and limitations of 'welfare' economic analysis which the author criticises so strongly. Most Christians would probably support the idea of this freer trade, on the grounds that a relatively minor sacrifice by an affluent society would bring much greater benefits to the poor. This is a laudable sentiment, unless you happen to be a Pakistani immigrant working in a British clothing factory, without much chance of getting another job.

Some thirty years ago, in 'A Christian Commentary on Communism' Edward Rogers wrote '... the Christian has to walk the razor edge between waiting on God and serving the present age ... he is a realist who does not expect too much of sinful men. He is aware of the urgent necessity of social reform, is not thrown off balance by disappointment and is more clearly aware of the situation. He knows that to work for the second best whilst proclaiming with equal conviction the attainable reality of the best demands a well informed loving kindness. ... he will learn to sympathise with the politician who cannot wait until all are redeemed but must work now with the materials, good or bad, that lie to hand.'

That too is the message of this stimulating book by Donald Hay. It is a book which challenges the open mind to prayerful thought and action and gives scant comfort to the fundamentalist.

**Colin Hill**

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**James W. Sire**  
*The Universe Next Door: A Guide Book to World-views*

Inter-Varsity Press, 1988  
246pp., Paperback, £5.95.

James Sire, English professor and editor, has provided us with a valuable

hand-book on what he calls world-views. These are Christian Theism, Deism, Naturalism, Nihilism, Existentialism, Eastern Pantheistic Monism and the New Age. The book is a revised version of the original (1976), now containing a sub-section on Marxism and several other expansions.

Sire subjects each world-view to exposition and critique, first trying to see it from the viewpoint of its exponents, then suggesting where its weaknesses lie, from a Christian perspective. The book is written in a clear and accessible style, for a broad rather than a narrowly technical audience, although it does invoke authorities in philosophy and the history of science and of ideas.

Writing a systematic assessment of such a book is a little beside the point, given the breadth of material covered. Should Marxism really be seen as a sub-type of naturalism? Is literary form the best vehicle for comprehending world-views? Or should we look, more sociologically, at the actual routines of everyday life in order to discern underlying world-views? All manner of questions could be asked, but this would be to miss the book's purpose. Suffice it to say that the ground is economically but sufficiently covered for basic apologetic purposes, and the plausibility of Christian theism is attractively and convincingly displayed.

If, as I believe, we are likely to experience further cultural fragmentation of which multiplying world-views would be evidence—then this kind of book is invaluable for those attempting to make sense of that splintering process. And not only to make sense of it but to discover a cogent alternative in Christianity.

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**Hugh Montefiore**  
***Communicating the Gospel in a Scientific Age***

The Saint Andrews Press, Edinburgh, 1988  
66pp., Paperback, £3.95.

The communication of the Gospel into new cultures has been both an exciting and dangerous process for Christianity. The excitement is to see how the good news of Jesus can be made relevant in terms of the language and symbols of the new culture, while the danger exists that in such a task the Gospel may be compromised or distorted. Many would argue, including Hugh Montefiore, the former Bishop of Birmingham, that such a risk is necessary if the Gospel is going to be communicated in the present culture of the 'scientific age'. Montefiore's aim is to remain loyal to the message of the Gospel while exploring the implications of science for its communication. It is an attempt to 'recapture the intellectual high-ground' for Christianity in order that the Gospel be better communicated in the present age. His three chapters comprise the 1988 Barclay Lectures and are printed as they were to be delivered. This makes the style very readable but at times the exposition of ideas is frustratingly brief.

The first lecture examines how the sciences have been used against religious claims and Montefiore's counter-claim that in fact they make it easier to communicate the gospel in a scientific age. The present Western difficulty of belief in God is seen as primarily due to advances in scientific knowledge and technology which make God remote and religion a minority interest. Such belief is necessary for the communication of the Gospel and so science needs to be shown not to be against religion but actually to help us in understanding the work of God within the Universe. Montefiore attempts to do this in two main ways. Firstly, relying on Torr-

ance and Jaki, he argues that the Judaeo-Christian tradition was of utmost importance for the growth of the sciences. Secondly, he points to anthropic coincidences which he suggests show that science requires religion. These instances of fine-tuning in the circumstance and law of the Universe necessary for the existence of carbon-based life do not prove the existence of God but increases the 'probability'. This section summarises his fuller work, *'The Probability of God'*, and ranges from neutrino mass in cosmology to salt concentration in oceans. The coupling of the anthropic principle with a theory of many Universes is briefly discussed and rejected. Instead these coincidences lead us towards God making 'it entirely reasonable to take the leap of faith which enables us to believe in him' (p. 12). Montefiore then examines the role of uncertainty within the physical process with the conclusion that nature is not a mechanism and there is 'room' for the working of a Divine Creator. This could have been profitably developed to discuss chaos as well as quantum theory, to make clear what is exactly meant by uncertainty and what this exactly means for providence. Brief mention is also made of the contribution of the philosophy of science and the social sciences with the claim that both the human and natural sciences point beyond themselves to God.

The second lecture is more controversial for those who hold a conservative evangelical view of the Bible. It concerns how the sciences when brought to bear on the Christian Gospel can help us to understand it better. Montefiore is surely right to advocate the need to be rigorous in the way we read the Bible and the need to 'sit under' the Bible to find the power, promises and presence of God. However, many will question his conclusions on a number of ways in which the sciences and the Gospel interact. On creation, he sees Genesis

1-2 to be a poetic rather than scientific account of the relation between God and his creation. Although the conclusion may be broadly correct, the argument suffers from too brief an exposition. For example, can Old Testament criticism really claim with certainty that 'in one of these accounts the writer used the Babylonian creation story' (p. 29)? On the end of the Universe, the heat death or big crunch predictions of science are described, while the Scriptures are seen to give insights about our relationship with God rather than a literal Second Advent. The virgin birth as an historical event is questioned but the empty tomb is vigorously defended. On this latter issue of resurrection, Montefiore states that, God 'should, if he so desired, have abrogated his own laws in order to show that the ignoble death of Christ was indeed the means by which he reconciled the world to himself' (p. 40). This interesting theological statement however does not seem to be followed through in a very cautious section about miracles in general. Social, economic and psychological insights into the biblical material are rightly valued, although some readers may not be convinced by such examples that the man's name was 'Legion' because he suffered violence at the hands of the Romans.

The final lecture examines how the sciences can help in communicating the Gospel in areas such as religious education and the media. In addition he stresses the importance of personal witnessing, and commenting on the work of Tillich and Robinson he advocates 're-mythologisation' rather than 'de-mythologisation'. So the symbolism of today replaces the symbolism of the past. For example, the penal symbol in justification by faith can be replaced by Tillich's 'acceptance' from the language of psychology.

Montefiore explicitly states that he has no pretence of being a scientist. In

that lies the book's strength and weakness. Its strength is the refreshing example of a theologian attempting to communicate the Gospel while taking contemporary science seriously. He shows a wide knowledge from particle physics to psychology and especially in cosmology a knowledge which is reasonably up to date. He is to be applauded in seeing that Christianity must pursue truth wherever it is found, must rebut false arguments that provide barriers to belief, use scientific ideas in communication and accept the value of natural theology. However, professional scientists will see weaknesses. In places the terminology is loose, for example neutrino 'weight' and what does it mean to term literary criticism as 'scientific'? The ideas of the fine tuning of the explosive and gravitational forces in the Big Bang and the second law of thermodynamics are given in a confused manner. I am not sure how 'it can be shown that it is extremely improbable that there is an infinite number of universes' (p. 11). Although the lectures are short the treatment of cosmology could have valuably engaged in dialogue with writers such as Atkins and Hawking who reach very different metaphysical conclusions. While such omissions are understandable, they remind us that the 'scientific age' changes rapidly and the need for professional scientists to continually interact with theologians in the task of communicating the Gospel.

Montefiore acknowledges that the

challenge of communicating the Gospel lies ahead of us. He certainly raises some of the questions involved. His defence of natural theology in evangelism is welcome, although some will question whether he lays too much stress upon it. Do anthropic coincidences increase the probability of the existence of God, or are they better seen as consistent with a loving Creator who has revealed himself in experience and history? Is the way of evangelism to convince people of belief in God before they can accept the good news of Jesus, or does the good news of Jesus represent the strongest evidence of the existence of God? Also it is not clear to me that Montefiore successfully distinguishes the 'essence' from the 'wrappings' of the Gospel in the way he sees the sciences interpreting the Gospel and in his programme of remythologisation. In the excitement of making Jesus relevant many will fear that he has strayed into the danger of compromising the Gospel.

Finally, it is to be regretted that a book of 66 pages which can be read in a very short time should be priced so highly. It is difficult not to draw comparisons with recent books by Polkinghorne and Houghton, which represent better value and deal with the physical sciences in particular in more detail.

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