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THE VICTORIA INSTITUTE

OR

THE PHILOSOPHICAL SOCIETY OF GREAT BRITAIN

FOUNDED 1865

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FAITH AND THOUGHT

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A Journal devoted to the study of the inter-relation of the Christian Revelation and modern research

GENERAL EDITOR: Dr. A. B. Robins

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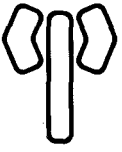

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Editorial

This issue, the second for 1985, contains the four papers which were presented at the 1985 Annual Conference of the Victoria Institute in May. The proceedings of the Annual General Meeting, which preceded the Conference are also published. I would like to echo the remarks of the Chairman when he welcomed our new President, Dr. David Ingram, and also to thank our retiring President, Sir Norman Anderson.

Some of the Chairman's report is concerned with this journal and its financial situation. Much of the problem could be alleviated by an increased membership, and so we appeal to all our readers to evangelise for us, and to obtain new subscribers. Please see what can be done and spread the word.

Readers will have noticed the proposal to publish a special issue of *Faith and Thought*, hopefully next year, in honour of our late Editor Dr. R. E. D. Clark. This will probably be the second issue of 1986, that is, Volume 112, (2). Next year is a particularly appropriate time since it will be 50 years since Robert Clark published his first paper in *Faith and Thought* (Volume 68, 172, 1936) 'The Present Position with regard to the Origin of Species'. We are again appealing to all readers to send any contributions they have to this special issue — any remembrances, anecdotes, and so on, concerning Robert's life and work.

We are not publishing an issue of the News-Letter at this time. Some of Robert Clark's 'News and Views' still remain, and will appear shortly. The success of the News-Letter as an extra publication depends on you, the readers. Very few comments have been sent in so far, and publication will be delayed until the quantity justifies another issue.

In December last, some of the Victoria Institute committee met David Winter, the head of Religious Programmes for BBC Radio. This meeting has been summarised by David Winter, and is published here in the form of a challenge to our organisation by a representative of the media. Any comments on David's suggestions would be very welcome at the Editor's address.

A Challenge from the Media!

There is an obvious need for a point of reference by the media for speakers of orthodox Christian beliefs in the area of science and religion/morals. The Victoria Institute should be in a position to be such a point of reference, because it includes in its constituency many people

who would be able to make an important contribution to these debates *if the media knew they existed, and where they could be contacted.*

To achieve that, there seems no sensible alternative to the appointment of a press or media officer by the Institute. Such a person would have a directory of contacts on a wide variety of topics — theology, science, medicine, ethics and so on. These people should be willing to make themselves available for interview by press, TV or radio at short notice. That means that the media officer must have both work and home phone numbers.

These potential interviewees or contributors should not only be expert in their own area (that goes without saying), but also experienced or trained in the use of the media. There are several places where good, simple, short courses in radio and television techniques are taught — even a one-day course can be invaluable.

Speed of response is essential. We may find it deplorable, but topics rapidly go 'off the boil', and often the orthodox cause goes unreported because its proponents take so long to get their act together. For the same reason, letters to the press, radio or television need to be written and posted immediately an issue gets raised — not weeks later, when we have gathered a more impressive list of signatories!

I hope for the day when we shall have several Christian broadcasters who are natural communicators, have a pleasant and winning manner, and know their subjects inside out. Perhaps the Institute is the body to find some of these paragons!

David Winter
Head of Religious Programmes, Radio, BBC

Annual General Meeting, 1985

The Annual General Meeting of the Institute for 1985 was held at the London Institute for Contemporary Christianity, St. Paul's Church, Vere St., London, W.I., at 10 a.m. on Saturday, 18th May. The Chairman of Council presided.

Apologies for absence were received from Sir Norman Anderson, who was retiring from the Presidency, and from Mr. P. T. Keymer.

The Minutes of the AGM held on the 19th May, 1984, which had been published in *Faith and Thought*, were taken as read, and adopted.

Dr. D. J. E. Ingram, M.A., D.Phil., D.Sc. (Oxon), F.Inst.P., who had been nominated by Council, was elected to the Presidency of the Institute.

On the nomination of Council, the Vice-Presidents and the Honorary Treasurer were re-elected for further periods of office.

The appointment of Mr. D. A. Burgess, Meetings Secretary, previously co-opted to fill a vacancy on the Council, was formally ratified.

Dr. Michael Collis, Mr. Terence Mitchell, and Mr. Michael Poole, who formally retired from the Council, were re-elected for a further period of service.

The Treasurer presented the Annual Accounts and the Auditors' Report for the year ended 30th September, 1984, and these were adopted *nem. con.*

Messrs. Benson, Catt & Co. were re-appointed as Auditors.

The Chairman of Council gave a brief informal report.

Chairman's Report

The Chairman reported that an important development during the year under review was the negotiation of the arrangement whereby the Paternoster Press undertook the production and distribution of *Faith and Thought* on behalf of the Institute. It was confidently expected that this would not only achieve economies in the cost of production, but would also reduce the work load in the Assistant Secretary's office, ensure a more regular issue of the volumes, and afford the Institute and its Journal the advantage of the world-wide publicity of the Paternoster Press. The latter had been appointed selling agents for the Journal, to the general public, to libraries, and through the bookselling trade. It was believed that this would lead to a fairly rapid rise in the demand for the Journal, and this, in turn, would help to hold down production costs, and also increase the Institute's membership. To facilitate the new arrangements, it was decided to issue the Journal in two parts *per annum*, instead of three, but each with increased content, so that the total amount of material published would be approximately the same as under the former arrangement. In addition, an occasional News Letter would be issued (to members only) carrying short notes, announcements, correspondence, and other material of interest too ephemeral to justify its inclusion in the Journal. The value of the News Letter would be assured if members kept the Editor supplied with short contributions, notices, queries, and, in fact, anything publishable of relevance to the Institute's interests.

Members would already have learned with sadness of the great loss that the Institute had sustained in the death of Dr. Robert Clark, a former Editor and Council member, and recently a Vice-President. The Council had decided that, as soon as possible, a special memorial number of *Faith and Thought* should be published. If members or others would like to share in the extra cost of this number, they are invited to send their gifts to the Assistant Secretary.

The Chairman reported that during the year there had been no significant change in the size of the membership. This was disappointing

after the encouraging increase reported at the previous AGM and which he attributed to the Institute's publicity campaign. The Council hoped that what had been achieved by a single recruiting drive by the Institute would become an annual event through the Paternoster Press's regular advertising. He nevertheless still urged upon members the desirability of personal recommendation to friends and colleagues.

He reported that a substantial saving in auditors' fees had been made by the fact that the Treasurer had undertaken much of the work previously performed by the Accountants in preparing the Annual Accounts. He expressed appreciation both to the Treasurer, for undertaking the work, and to the Auditors, for agreeing to the new procedure.

The Chairman announced that the Prize Competition for 1985 was under the terms of the Gunning Memorial Trust, which specified the field of Natural Science. (For details see below.)

He reported that Sir Norman Anderson wished, because of advancing age, to retire from the Presidency, and he expressed the Institute's appreciation of Sir Norman's service over the last nine years. The Council was grateful to Dr. David Ingram for his willingness to stand for election to the Presidency. Dr. Ingram, after a period of research at Oxford, had been appointed, successively, Professor of Physics at the University of Keele, Principal of Chelsea College, University of London, and Vice-Chancellor of the University of Kent.

Gunning Prize, 1985

The Council is offering, for competition, a prize of £40 for an original essay on the subject:

ETHICS OF SCIENTIFIC RESEARCH

It is intended that the essay should deal with biblical and philosophical principles as they apply to a particular field of research (e.g., genetic engineering, the human foetus, space research) where ethical opinions are divided.

Essays, which should not exceed 7000 words excluding documentation, should be addressed to the Honorary Secretary at the Institute's office, to reach him by the 31st March, 1986. They should be typewritten, with double spacing and 2 cm. margins, and should be undersigned with a motto only. They should be accompanied by a sealed envelope with the motto on the outside and the Author's name and address within.

The Council wishes to encourage young writers, and therefore invites authors up to 30 years of age to include with the name and address their date of birth. This will be taken into account in judging the entries.

Each essay should be furnished with a brief synopsis, of not more than

200 words, which should specify those parts, if any, of the essay that are claimed as original.

The copyright of the winning essay is to belong to the Institute, although the Council will normally permit an author to embody his or her essay in any more comprehensive work embarked upon later.

The name of the successful candidate will be announced as soon as possible after the Council has reached its decision. In all cases the decision of the Council is final: and it reserves the right to withhold the prize if no entry is deemed to be of sufficient merit.

Candidates will be assumed to have assented to these rules by the submission of an essay for the competition.

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Our Contributors

R. J. Thompson Tutor in Biblical and Historical Theology, Spurgeon's College, formerly Principal of New Zealand Baptist Theological College.

The Theology of Nature in the light of Creation, Fall and Redemption

G. E. Barnes Chairman of Council, the Victoria Institute

God's Revelation in Nature

R. Russell Widcombe vicarage, Bath

Natural Theology: is it scriptural?

M. H. MacCrae Parish of Torosay and Kinlochspelve, Craignure, Mull.

Natural Theology: are the philosophical arguments valid?

R. J. Thompson

The Theology of Nature in the Light of Creation, Fall and Redemption

In venturing into the mine-field of the relations of science and theology, I am encouraged by the words of T. F. Torrance in a work dedicated to John Marks Templeton in gratitude for the award of the Templeton Prize for Progress in Religion in 1978.

> At no time for nearly a millenium and a half has the opportunity for genuine theology been greater, since the ground has been cleared in the most remarkable way of the old dualist and atomistic modes of thought that have plagued theology for centuries.[1]

The subject of nature, in particular, and its future, if any, has brought theologians and scientists around the conference table — most strikingly in the Boston Conference of 1979 on 'Faith and Science in an Unjust World'. This was preceded in 1978 by the Zürich preparatory conference on 'Faith, Science and the Future' which in the words of its report 'sought to shape a "unifying vision" of reality'.

> 'It looked at all nature as creatures of a God who is transcendent but never remote.
> It related the human dominion of part of creation to human stewardship.
> It looked again at the Biblical promises of a redemption for all creation, and asking what these might mean for Christians today'.[2]

This is not unlike my agenda in this paper.

The ensuing Boston Conference in its section *Humanity, Nature and God* claimed that the 'creation stories in Genesis 1–2 answer not simply the question of the origin of the world but the question of its continuing existence'. In particular 'the Flood was seen as the centre of the Primal history',[3] as had been pointed out in Gerhard Liedke's address[4]

> Genesis 1 shows how God really meant his creation to be, while Genesis 9 shows what in fact became of it after the eruption of deeds of violence into the

1. T. F. Torrance, *The Ground and Grammar of Theology* (1980) p.178.
2. C. Birch (ed.) *Faith, Science and the Future* (1978) p.19.
3. P. Abrecht (ed.) *Faith and Science in an Unjust World* II. Reports and Recommendations (1980) p.30.
4. G. Liedke in R. L. Smith (ed.) *Faith and Science in an Unjust World* I Plenary Presentations (1980) p.75.

> world (p.75) . . . The world in which we live is the world 'after' the Fall of Man (Gen. 3), 'after' the fraticide and the revenge (Gen. 4), 'after' the Flood (Gen. 6–9) and 'after' the dispersion of the peoples (Gen. 11 [p.76]).

Relating this to environmental problems, Liedke claims that Genesis 1 'is less a document of rudimentary natural science than an assignment of the creatures to their places in the habitats created for them by God'. Let us look at this suggestion, before moving on to more philosophical matters.

A. Creation

One of the well known theories of the structure of Genesis 1 called the 'framework' hypothesis, but which would be better described as the 'recapitulation' hypothesis,[5] draws attention to the parallelism between Days 4–6, and Days 1–3 as God 'fills' what He has 'formed'. In Liedke's terms this becomes 'the habitats' and their 'creatures'. As set out by James Houston, limiting himself to six stages and retaining the cumulative order:[6]

	GOD 'FORMS' in the midst of formlessness (tohu)	GOD 'FILLS' in the midst of emptiness (bohu)
DAY 1	Division of light from darkness (1:4)	
DAY 2	Division of lower waters from upper waters (1:7)	
DAY 3	Division of lower waters from dry land (1:9); creation of vegetation (1:11)	
DAY 4		Creation of lights in the sky (1:16)
DAY 5		Creation of water, animals and birds (1:21)
DAY 6		Creation of land, animals, man and the provision of food (1:29)

GOD FINISHES CREATION
on the Seventh Day (2:1–3)

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5. 'Recapitulation' as in the parallel visions of seven seals, trumpets and bowls in the Book of Revelation.

6. J. Houston, *I Believe in the Creator* (1979) p.60.

A more exact parallel representation which indicates that eight works have been compressed into six is offered by J. A. Thompson in his *New Bible Dictionary* article.[7]

CREATIVE ACTS (God said)	DAY No.	ELEMENTS	CREATIVE ACTS (God said)	DAY No.	ELEMENTS
1. verse 3	1	Light	5. verse 14	4	Luminaries
2. verse 6	2	Firmament	6. verse 20	5	Birds
3. verse 9	3	Seas	7. verse 24	6	Fishes
4. verse 11		Land and Vegetation	8. verse 26		Animals and Man

Liedke notes that unlike the preceding works of creation, man and animals have to share the same habitat and resources. While both eat vegetable food in Genesis 1, a distinction is made between 'every green plant' — presumably that which grows of itself — assigned to animals (v.30), and 'plant yielding seed' — presumably 'corn' — and 'trees yielding fruit' (v.31) into which man's labour must enter to cultivate and tend — 'assigned to man'. At this stage there is no conflict between man and the animals, but this changes after the Flood, when man becomes meat-eating (Gen. 9:3ff.), and beasts go in fear of man (Gen. 9:1–2).

Leaving aside that subject until later, we look now at four questions — Was the world created? When was the world created? How was the world created? Why was the world created?

Was the world created? The books of both Scripture and Nature answer in the affirmative. The Scriptural answer is not confined to Genesis 1 in its two halves, but recurs in Genesis 2, and in passages in the Psalms, like Psalm 104, the Prophets, like Isaiah 40, Wisdom writings, like Job 38–41, the Gospels, like John 1, and the Epistles, like Hebrews 1 and 11. The answer of nature is in its design and purpose in 'the large', even if not in all the details once put forward by Bishop Paley.

The large canvas now had to embrace vast vistas of time, which were pictured by one scientist (and not a recent one, who might want to triple the figures), as a clock of twelve hours with every minute representing seven million years. On this time-scale animal life had begun at 6.30, mammals at 11.50, man at 10 seconds to 12.00 and homo sapiens fifty thousand years ago (i.e. half a second since!)

F. R. Tennant in his *Philosophical Theology* of 1930 sought to come to terms with the new scientific chronology by arguing

7. J. A. Thompson, 'Creation', *New Bible Dictionary* (1962) p.271.

'that the inorganic environment is as much adapted to life . . . as living creatures are to their environment',[8]

without necessarily accepting the view that

'our ordered world is due to some evolutionary process within the whole universe analogous to that secured within organic Nature by natural selection out of random variations'.[9]

William Temple also has reminded us that design may be seen in retrospect, where once it would not have been dreamed of:

'if anyone studied the world, before there was life on it, he could never have predicted life; if anyone had studied vegetation he would never have predicted animal life; if anyone could have studied the animal world, he would never have predicted human civilization, and the arts . . .'[10]

Even if purpose must be given up there is still the argument ascribed to Aquinas 'There must be a God, because the world exists, not because the world shows signs of having been planned, but because it is contingent'.[11] On this view, the argument from the existence of the world to the existence of God still stood, even if the world had not had a beginning. It was not the beginning of the world, but its dependence on God, that creation was about. Only by revelation does man know that there was a beginning.

But what do we mean by beginning? Here we move back from Aquinas to Augustine.

When was the world created? It has been traditional to believe that God and time preceded creation, but Augustine returning for the second time to the question 'what was God doing before he made heaven and earth?' to which he could find no answer in *Confessions* XI.xii after intense thought comes in XI.xxx to challenge the use of time-words like 'never' — and we might add 'before', and 'after' — as inappropriate to an Eternal Being. 'God did not create the world in time or before time, but with time (i.e. the world and time were created together'). Similar sounding as this may be to Alexander's 'space-time deity' and Einstein's fourth dimension, it could go back to Plato's Timaeus.[12]

Modern theologians of the Process School have mercilessly pilloried

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8. F. R. Tennant, *Philosophical Theology* II (1930) p.86.
9. *Ibid*, p.80.
10. W. Temple, *Christian Faith and Life* (1931) pp.29–30. The quotation continues 'if he had studied the selfishness of mankind he could never have predicted a life of perfect and selfless love'.
11. Aquinas, quoted by E. L. Mascall, *Christian Theology and Natural Science* (1956) p.264.
12. Tennant, *op. cit.*, p.132.

traditional theology for taking over this Greek 'Changeless Absolute' into their doctrine of God in place of the passionate and compassionate God of Scripture, who suffers with His people. A distinction made between the appearance and its reality, as e.g. by Anselm that 'God was compassionate in terms of our experience but not compassionate in terms of His being' seemed a sleight of hand. The Thomist, Mascall, however, defends the older view and replies to the question 'If God is transcendent, why does he need to be timeless' by answering that time is 'one of the characteristics of finite beings which, when we pass from finite beings to God, needs to be transcended'.[13]

It is not only with creation in the beginning that modern thinkers have a problem, but also with it being regarded as once for all, rather than continuous. Both the temporality of God and continuous creation have been appealed to on the basis of the present tense of texts like John 5:17 'my Father works and I work' and Genesis 8:22 and Matthew 5:45, but Houston has come down firmly on the side of a 'finished work' quoting the past tense of texts like Psalm 102:25, 93:1; Isaiah 45:12, and the New Testament formula 'from the beginning of Creation',[14] not to forget Genesis 2:1–3! The concern of the advocates of 'continuous creation' is to avoid any suggestion of a deistical God aloof from His world, but for their opponents this is achieved by a doctrine of providence following creation e.g. the 'upholding of all things' in Hebrews 1:3 in addition to the 'creating of' in Hebrews 1:2. A middle position favoured by Nels Ferré might be more satisfactory. 'Creation is continual not continuous, because God is not the slave but the Lord of time . . . God works and rests. God is and works'.[15]

How was the world created? is a related question which finds some surprising changes of side as some conservative scholars like Houston, who had insisted on a cut-off point for creation, are less concerned to deny the use of pre-existing material as the *ex nihilo* formula traditionally required.[16] While appeal is usually made to the lack of a clear Biblical base for the teaching, there is probably an unconfessed recognition, from the scientific side, of the magnitude of the universe and the mass of it which had to be reduced to order, as Professor Boyd reminded this Institute recently that 'the Genesis record does not suggest creation from nothing but says rather "let the seas bring forth

13. E. L. Mascall, *Openness of Being* (1971) p.168. He sees it as an additional advantage that if God is timeless questions of foreknowledge and predestination do not arise (p.172).
14. Houston, *op. cit.*, pp.106–7.
15. N. Ferré, *The Christian Understanding of God* (1951) pp.128–29.
16. Houston, *op. cit.*, pp.51ff., 275ff.

. . .", "let the earth bring forth" and Adam is singled out as formed from the dust of the ground like the creatures of Psalm 104'.[17]

From the side of those who would defend the doctrine come both Biblical and theological arguments. While the first explicit use of the term 'out of nothing' is not found until the late Apocryphal book, 2 Maccabees 7:28, it is implicit in texts like Romans 4:17 (He) 'calls into existence the things that do not exist' and Hebrews 11:3 'made out of things which do not appear'. The fact that the doctrine was particularly developed by the Early Church Fathers to refute the Manichaean doctrine of the evil of matter, and its eternity, does not make it less relevant today, as such ideas continue to emerge from time to time — as perhaps in the doctrine of the finite God in the writings of J. S. Mill, H. G. Wells and E. S. Brightman.

Whether Process theology should come under this stricture is a larger question than we can handle here. It would be ironical if a protest movement against the borrowing of the idea of a changeless, a-pathetic Absolute from Greek philosophy in general, and Plato's Timaeus in particular, should now itself be accused of substituting for Almighty God the dualistic Demi-urge, who lacked the power to control his creation, derived from the same source![18]

On the other hand to say 'omnipotence must prevail' does not explain 'why there is anything for him to prevail against' (A. M. Farrer).[19] Like the name 'Almighty', it is probably an unfortunate way of looking at a father God, who is better described with the Greek as 'Pantokrator' — *ruler* over all! Some would feel that if a choice has to be made between omnipotence and love in God omnipotence must go.

Why was the world created? The traditional answer to this is spelt out in terms of love, and the desire to bless. Hendry speaks of God's goodness overflowing, and quotes Plato that God is good, and the good is always generous — it seeks to give and impart itself to others — and Peter Brunner 'they receive His divine glory, and as in a mirror reflect it back to Him', which is reminiscent of the poet Schiller's lines

'Created spirits, blessed mirrors of His blessedness'.[20]

The problem of this, however, is in Schiller's preceding lines

'Friendless was the mighty Lord of worlds,
Felt defect — therefore created spirits . . .'

17. R. Boyd, 'Creation of the Cosmos' *Faith and Thought* 109, 2 (1982) p.123. On the analogy of Genesis 2:4, and the Babylonian *Enuma Elish*, a number of translators have also read Genesis 1:1 as a 'when' clause, rather than an absolute beginning.
18. Cf. F. Sontag in S. Davis (ed.) *Encountering Evil* (1981) pp.123–25.
19. A. M. Farrer, *Love Almighty and Ills Unlimited* (1962) p.36.
20. G. S. Hendry, *Theology of Nature* (1980) pp.120–21.

Does this mean then that God lacked something? The theologians W. N. Clarke and W. R. Matthews answer respectively 'not that he must have a universe to be God, but that because He is God, He will have a universe', and 'it was a necessity of His nature to create, but what He created is the result of a free act',[21] but this requires them to side with those Fathers, who said God was eternally Creator, and so never without some creation or other (Clarke pp.285–6), or that God always had a universe, because personality requires a 'not-self', although not necessarily a physical one (Matthews p.208).

B. The Fall

Closely related to the problem of God's omnipotence is the problem of evil. If God is omnipotent how can he allow evil in any of its forms? Years ago a toddler that was you reached out to pull a purple flower, and got a finger full of prickles, or to pluck a rose and was speared by the thorns, and learnt the hard way that this was not a perfect world. As we have grown older we have become even more aware of nature's ambiguity. The most beautiful sounds we can hear — the bell-like tones of a boy soprano — are a bitter sweet, which not only delights us but fills us with an aching pain. The most beautiful sights we see, when nature is at her most perfect, waken in us, not only contentment, but also nostalgia, as if 'nature herself is mourning a lost good'.

The Old Testament similarly both affirms nature, and yet describes its discord. We have on the one hand the magnificent creation psalm, Psalm 104 which speaks of God's control of the elements, and of His provision for each species in air, sea and land, and ascribes this to the continuing, creative power of the breath of God. Yet we also have Jeremiah's 'creation in reverse' (Jeremiah 4:23-26). (See overleaf).

Already in Genesis, with the stories of the Flood and the destruction of Sodom and Gomorrah, this darker side is shadowed forth. The flood is the reversal of the Creation, as the fountains of the great deep are broken open, and the primeval chaos, briefly tamed by the Creator, returns again. The sin of Sodom and Gomorrah transforms the 'Garden of the Lord' of the Jordan Valley into a wilderness of brimstone and salt, and threatens a like doom on the land of any nation that will turn away from God. The use of the story in this way in Deuteronomy 29:23ff. conjures up a vision of disaster second only to 'the day after' of a nuclear holocaust.

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21. W. N. Clarke, *The Christian Doctrine of God* (1909) p.287. W. R. Matthews, *God in Christian Thought and Experience* (1939) pp.206, 208.

Psalm 104:27–30
These all look to thee,
To give them their food in
due season.
When thou givest to them,
they gather it up;
when thou openest thy hand,
they are filled with good things.
When thou hidest thy face,
they are dismayed;
when thou takest away
their breath, they die
and return to their dust.
When thou sendest forth thy
Spirit, they are created;
and thou renewest the face
of the ground.

Jeremiah 4:23–26
I looked on the earth, and
lo, it was waste and void;
and to the heavens, and
they had no light.
I looked on the mountains,
and lo, they were
quaking, and all the
hills moved to and fro.
I looked, and lo, there was
no man,
and all the birds of the
air had fled.
I looked, and lo, the
fruitful land was a
desert, and all its cities
were laid in ruins before
the Lord, before his
fierce anger.

Types of Evil

Moral Evil. It is usual to distinguish physical evil from moral evil, but these categories are no longer enough. The editor of a recent symposium *Encountering Evil*[22] notes that whereas for two hundred years the paradigm for evil has been the Lisbon earthquake of 1755, which took 80,000 lives — a physical (he says 'natural') evil, the paradigm appealed to by his contributors is the Holocaust in this century which claimed the lives of six million Jews (a moral evil). If there are to be future generations — and we shall have to be much meeker than we are at present if there are to be, seeing that it is only 'the meek who will inherit the earth'[23] — the paradigm will surely be nuclear warfare, for which we shall need a new category — 'cosmic evil' — not that it is any less moral and physical!

Physical Evil. Of course 'cosmic evil' has always been with us, although not always recognized in earlier generations, as it is today with 'space war' plans. I refer to the doctrine of the Fall in its effects on nature, to which lip-service has always been given, as well as on man. With their limited universe, ancient theologians were content to concentrate on the moral evil of Adam, which spilled over on to the animals, so that these in turn perished, along with man, in the Flood, and were provided for in the

22. S. Davis, *op. cit.*, p.6.
23. A remark ascribed by Charles Birch to Sloane Coffin during the SALT talks.

deliverance of the ark and in the following reconstitution. Even so orthodox a believer as Calvin, who in the *Institutes* II.i.v. says that the sin of Adam 'perverted the whole order of nature in heaven and earth', is quoted by Hendry for the position that 'despite his drastic view of the effects of the Fall on human nature (he) saw none in the world of nature, which he regarded as a theatre in which the glory of God is abundantly displayed'.[24]

Cosmic Evil. It is hard for us to realize that the resistance to the new science of Copernicus, Bruno and Galileo in the Renaissance centred at first around the ascription of less than perfection to space — that the sun was defiled by sun-spots, the moon by valleys, and Jupiter by satellites not to mention Bruno's claim, for which among other things, he was burnt at the stake, that space was infinite. All these were in contradiction of the tidy world-view inherited from the Greeks that earth's contamination did not extend beyond the moon. Many may 'mark the earth with ruin', but his control 'stopped with the shore' of space![25]

How different things are today, when added to the enormous wastage of earth, in seed of all kinds which does not come to fruition, of which Huxley's metaphor of a scatter of grapeshot of which only one hits the mark, does not tell a thousandth part, we now have the dreary waste of the space wilderness with its incomprehensible distances and mind-blowing numbers of worlds beyond worlds, for which the Creator's sole purpose seems to have been, in the poet's jibe 'to make dirt cheap'. Our teleologies, and theodicies may work for the former, but what of the latter?

Concerning the former A. M. Farrer wrote:

> 'The world is not like God, though it reveals his power and glory. Nature is infinitely wasteful, but God wastes nothing. She is unfeeling; he is compassionate. She is blind; he is wise. For at the beginning and bottom of nature, there is a withdrawal, we may almost say a banishment, of God'.[26]

Concerning the latter he asked 'in all the thousand million years when there was a universe, and nothing lived, what are we to say of its good and what of its evil? If a star exploded, was it good or bad?'[27] It is to the question of explanations that we must next turn.

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24. Hendry, *op. cit.*, p.56.
25. J. S. Habgood, *Religion and Science* (1964) pp.27–30 and C. A. Russell's chart in *Cross-Currents* (1985) p.28.
26. A. M. Farrer, *A Celebration of Faith* (1972) p.72, quoted by E. L. Mascall, *Nature and Supernature* (1976) p.80.
27. A. M. Farrer, *Love Almighty and Ills Unlimited* (1962) p.32.

Explanations

The Adamic Fall. The traditional view as stated by Mascall as 'almost universally held until recent years' is 'that all evils, both moral and physical, which afflict this earth are in some way or another derived from the first act by which a bodily creature endowed with reason deliberately sets itself against what it knew to be the will of God.'[28] Despite its base in Genesis 3, the doctrine is not much referred to in the rest of the Old Testament, but emerges in the Rabbinical Judaism of St. Paul (Romans 5), although not by the name of 'the Fall' until a century or two later.[29]. In addition to Romans 5, which speaks of how death passed on human kind, Romans 8 describes a world 'subjected to futility' — a possible echo of Ecclesiastes — and of it having been subjected 'not of its own will, but by the will of him who subjected it in hope'. While 'the will of him who subjected it' might describe Adam, or even Satan, 'in hope' is parallel to the 'in hope' of v.24, and can best describe the polarity of the actions of God in both cases, one of judgement and one of redemption. The cause may still have been Adam's transgression, but this is not explicitly stated.

Other passages of St. Paul of still wider significance are those that speak of 'the powers', which had to be overcome by Christ (Colossians 2:15 and probably 1 Corinthians 2:8), the hostile heavens that had to be reconciled among the 'all things' of Colossians 1:15–20, and the rifted universe, fallen apart, which had to be re-united in Ephesians 1:10 (cf. 2:14). Hendrikus Berkhof has warned us against interpreting the *ta panta* of 'planets and galaxies of outer space', when the apostle's horizon is much more limited,[30] but at least they are extra-terrestrial. The real problem of the Adamic solution is not the spatial one, but the temporal one, as J. D. Dana put it long ago 'it is funny that the sin of Adam killed those old trilobites! The blunderbuss must have kicked back into time at a tremendous rate to have hit those poor innocents!'[31]

A Pre-mundane Fall was therefore suggested in a curious psychological theory put forward by the devout Anglican, who was described as 'the greatest parish priest in England', Canon Peter Green.[32] Arguing from the unity of all believers in the corporate humanity of Christ, and the

28. E. L. Mascall, *Christian Theology and Natural Science* (1956) p.32.

29. N. P. Williams, *Ideas of the Fall and Original Sin* (1927). Paul's word *parabasis* has a different meaning (pp.252–53).

30. H. Berkhof, *God in Nature and History* (WCC 1965) p.8.

31. J. D. Dana quoted in A. H. Strong, *Systematic Theology* (1906) p.403.

32. P. Green, evangelist, saint and thinker — a lover of nature as the son of a naturalist, he chose to spend his entire ministry in industrialized urban areas *The Problem of Evil* (1920). Ch.7 and *Pre-Mundane Evil* (1944).

unity of Christ, Spirit, Father in the corporate deity of the Trinity he posited a pre-existent Adam-Humanity soul, shattered in its unity by the assertion of the ego — an idea not dissimilar to that put forward by N. P. Williams in his Bampton lectures of 1927, 'of the collective fall of the race-soul of humanity in an indefinitely remote past',[33] although Green seems to have had the priority, as he claims to have been working on the idea since 1896 and published in 1920. However, his view of the non-egotistic nature of the members of the Trinity — the Son not seeking His own glory, the Spirit not speaking of his own but of Christ etc., may owe something to the following passage of Illingworth

> 'When we recall how in the days of our Lord's ministry on earth, Father, Son and Holy Spirit bore witness to each other, but no one of the Holy Persons ever to Himself, we are led on to wonder whether "in the light that no man can approach unto", where the Three are one, some higher analogue of what we call sacrifice does not forever flame; whose radiant reflection on the universe only becomes a shadow when it falls on a world of sin'.[34]

Green's answer to the question as to where 'man' was, in the distant ages when 'great reptiles were fighting in the slime', was that the spiritual nature of man was prior to the physical development — 'where is the soul while the foetus develops in the womb?' While rebutting the charge of reincarnation by the answer that he was not talking of previous bodies or real existences, such a 'creationist' understanding of 'souls' seems to owe more to Origen, than it does to the Bible.

A Pre-cosmic Fall. In the above quoted passage from Mascall, he continues 'that in so rebelling, man was giving way to the prompting of an incorporeal being, who had already revolted against God in the spiritual realm'. Similarly an article on the Fall just published says 'Man is engaged in a web of evil which goes far beyond himself . . . The Fall is a reality which has introduced into human experience the spiritual rebellion of the fallen angels. We did not start this rebellion: we have been tempted into sharing it'.[35]

It has the advantage of 'coherence' in that another free-willed being resisting God is a coherent explanation[36] (K. Ward); it is far enough back to obviate the necessity of further regress, and to meet William Temple's criterion that 'when in causal regress we arrive at a will, the regress is at an end',[37] it has the colour of Biblical support in passages about fallen angels in late epistles, but less probably in Isaiah 14 where

33. N. P. Williams, *op. cit.*, p.513. Another forerunner of the field was Origen.
34. J. R. Illingworth, 'The Problem of Pain' in *Lux Mundi* (^{5}1890) p.126.
35. G. Bray, 'The Fall', *Evangel* 3, 1 (Spring 1985) p.14.
36. K. Ward, *Rational Theology and the Creativity of God* (1982) pp.205–6.
37. W. Temple in P. Green, *The Pre-Mundane Fall*, p.34.

the subject is the King of Babylon, or Luke 10:18 and Revelation 12, which are not pre-cosmic. It, at least, is rightly described as a 'Fall', for such it was — a precipitate descent from height to depth.

Some problems are solved, but new ones are introduced. The sin of man, the compound of dust and deity — under his special situation of moral probation, which distanced him from God, is one thing, but the sin of pure, spiritual beings in God's living presence beggars thought, as does the alleged punishment of no forgiveness for them under any circumstances for ever. Such a towering opponent of God as Milton's Satan, smacks of a dualism, which is perhaps a greater threat than the alternative of racalcitrant matter. It has been suggested by Hendry quoting Basil Willey, that the growth of science was retarded for centuries by the doctrine of Satan's sway over nature, and that the 'rehabilitation of nature' was only achieved when Francis Bacon restated the doctrine of the Fall by limiting its effects to the moral order.[38]

For the rest of the universe one alternative would be not to talk of *dis*order, as if it was a departure from order, but of *un*order. It is chaos not yet overcome. It might be argued then that man came on the scene too soon, but the decision of God in His wisdom was that it was better that man come too soon than that the world should go on too long without him.[39] Man can co-operate with God in 'subduing the earth' for the world is not perfect, but perfectable (Moltmann).[40] If we still feel bound to retain a Fall doctrine we could perhaps follow Williams' suggestion and speak of sin and disorder not as cause and effect but of a more remote 'ground' and 'consequent',[41] as Aquinas did for the relation of God to the created order. An element of mystery may be necessary if we are to develop, for as Tennant has said

> 'God must not be too knowable to us, or too active upon us', for 'an excess of motivation would defeat ethical freedom, and an excess of light preclude the necessary groping after God . . .' Human freewill means that 'God stands a hand-breath off, and gives his creatures room to act and grow "into" the glorious liberty of the children of God' (Tennant).

C. Redemption

I use this word for the third and final phase of our story instead of the word 'restoration', which in some respects would be better, for two reasons.

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38. Hendry, *op. cit.*, pp.54–56.
39. J. B. Cobb *God and the World* (1969) p.93.
40. J. Moltmann, *The Future of Creation* (1979) p.120.
41. Williams, *op. cit.*, p.496.

i. Redemption inevitably conjures up the figure of Christ, whose role in the future of the world is foundational. Christian eschatology is often identified with Jewish in that both speak of judgment, resurrection, millenium etc., but the central role of Jesus, not only as instigator, but as the foundation of each of these, lifts Christian eschatology into a different sphere altogether — the stratosphere of redemption.

ii. Where 'restoration' suggests a return of what was before — 'the end as at the beginning' — ('Paradise Restored' for 'Paradise Lost') — the Biblical view is of 'something better than before' — 'a better covenant' that is inward and spiritual (Hebrews), and a new heaven and a new earth that is city more than garden (Revelation 21–22), a second Adam, who comes from heaven, and is a life-giving Spirit, who far surpasses the first Adam from the dust, who had to be breathed on, to become a living soul (1 Corinthians 15).

We limit ourselves in our survey of the New Testament to the teaching of Jesus and Paul, and some insights from Peter and the Book of Revelation.

The Teaching of Jesus. All the world knows that the teaching of Jesus is redolent with nature illustrations drawn from 'the wonder and bloom of the world', but it is not always realized, as C. H. Dodd has pointed out, that they invoked not just the *analogy* of nature by way of illustrating spiritual principles, as is done in Henry Drummond's famous book *Natural Law in the Spiritual World*[42] although there is something of this in John's Gospel. They stress rather the *affinity* of God with nature (Hendry), as in T. W. Manson's inimitable words 'the picture of God making clothes for the flowers and preparing meals for the sparrows, is a picture of a God, who is Lord of Creation by being the Servant in love of all his creatures'.[43]

Nor can the teaching be separated from His work as a whole, for as T. F. Torrance says 'Nowhere does the New Testament present us with a naked Christ, but only with a Christ who is clothed with His message and robed in His promises. There is no Christ apart from his teaching or saving acts'.[44] Among these, nature is again prominent, from the star over Bethlehem to the supernatural darkening of the sun at the time of the Crucifixion. Between 'He is seen and confessed as the New Man who had nature with its threatening powers under His control.' He was 'with the wild beasts (Mark 1:13); He walks on the waters, signs of chaos; He heals the sick and casts out demons' (Berkhof p.14).

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42. Henry Drummond, *Natural Law in the Spiritual World* (1883) quoted by Hendry, *op. cit.*, p.73. It is good to know the centenary of this attractive Scot is being commemorated by the commencement of a lectureship.

43. T. W. Manson, *The Teaching of Jesus* (^{2}1935) p.163.

44. T. F.Torrance, *Space, Time and Resurrection* (1976) p.48.

The Teaching of Paul is best represented by the Romans 8 passage already referred to. In the New English Bible it reads:

> Up to the present, we know, the whole created universe groans in all its parts as if in the pangs of childbirth.
> For the created universe waits with eager expectation for God's sons to be revealed.
> It was made the victim of frustration, not by its own choice, but because of him who made it so; yet always there was hope, because the universe itself is to be freed from the shackles of mortality and enter upon the liberty and splendour of the children of God.

To whom does the redemption of the passage apply? Suggestions range all the way from believers only (they are certainly the subject of v.19, and in v.23 are groaning also as they await bodily redemption) to the rest of mankind, to the animal creation (they are said to groan in Old Testament passages like Joel 1:18), to inanimate nature (*pthora* in v.21 means 'decay', rather than 'mortality' — could it describe entropy?), to the *ta panta* of Ephesians and Colossians, perhaps suggested by the translation of *ktisis* as 'universe', to the Deity itself (the Spirit also groans in v.26). The Greek compound *sun* 'together' on the verbs to 'groan' and 'travail' raises the interesting question whether it is 'together with one another', or 'together with God'.

The Teaching of Peter and Revelation of the new heaven and the new earth might seem to stand in contradiction to Romans by teaching the destruction rather than the continuation of the present earth, but this is not necessarily the case. Berkhof argues that the MSS evidence in favour of the words 'burnt up' in 2 Peter 3:12 is inferior to that for 'found' or 'laid bare', so that a purification of the earth's surface by fire, as once by water in the Flood, rather than destruction, is what is envisaged.[45] He claims that not even the most apocalyptic passages like Mark 13 and its parallels, 1 Corinthians 15; 2 Thessalonians 2 and Revelation 18–22 speak of the end of the old cosmos. In Revelation 21 the new heaven and new earth seem to be superimposed on the existing ones as the cultural achievements of earth are brought into the City of God (Revelation 21:24, 26).

The question as to *when* and *how* this will be fulfilled remains a mystery in the mind of God, but what is clear is that Man does not bring it about, but only God. It is the voice from the throne that says 'Behold I make all things new' (Revelation 21:5). As indicated above Christ is the agent of each eschatological activity, and for this He returns in His Second Coming. We join then in the affirmation:

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45. H. Berkhof, *God in Nature and History*, pp.18–19, now also in his *Christian Faith* (1979) pp.519–20. Note his §53 heading 'The Sanctification of the World'.

'Earth, thou grain of sand, on the shore of the universe of God, thou Bethlehem among the princely cities of the heavens, thou art and remainest, the loved one among ten thousand worlds and suns, the chosen of God. Thee He will again visit, and then thou wilt prepare Him a throne, as once thou gavest Him a cradle. In His radiant glory wilt thou rejoice, as once thou didst drink His blood and tears, and mourn His death. On thee hast the Lord a great work to complete'.

I began this paper with the introductory statements of the Boston conference of scientists and theologians, and I would like to finish with the concluding meditation of the conference given by Paulus Gregorios, formerly known as Paul Verghese, now Metropolitan of the Mar Thoma Church.[46].

The Great Symbol

And a great symbol was seen in heaven!	
A woman, wrapped around in the sun	Clothed with the sun
The Moon beneath her feet	Feet on the moon
And on her hand (sic) a crown of twelve stars,	Crown of twelve stars
Pregnant, in labour pains, in agony to give birth!	
And behold, yet another symbol in heaven!	
A great dragon of fire appears,	Threat of fire dragon
With seven heads, each head with a crown,	
The tail sweeping away a third of the stars of heaven	Destruction of stars
And hurling them down on the face of the earth!	
The dragon confronted the woman about to give birth,	
In order to devour the child as soon as it was born.	
She gave birth to a son	Birth of a man child
Who was to reign over all with a sceptre of iron	
Her child was snatched away to God and to his throne	
While the woman fled into the wilderness.	Earth helps the woman
Book of Revelation, 12: 1–6	v. 16

Among other things the woman crowned with the sun represents the Church persecuted, and the human race in its labour pains to bring forth the new humanity. Relevant applications could be as follows —

'clothed with the sun'	—a future humanity sustained by solar energy
'her feet on the moon'	—already fulfilled-man has set foot on the moon
'a crown of twelve stars'	—by next century man may go beyond the solar system to the stars

46. R. L. Shinn (ed.) *op. cit.*, pp.378–89.

Despite all this the new humanity is not yet born, but the travail pains have come, as has the threat to stifle its birth.

'the great fire dragon'	—nuclear warfare
'power in its tail to sweep away a third of the stars of heaven'	—star wars
'the earth helps the woman' (v.16)	—this by swallowing the flood from the dragon's mouth that would engulf her (surely the acme of nature's contribution to human destiny!)
'the Man Child, Christ'	—as the new humanity survives to destroy the dragon. His people share the victory.

> 'A woman, when she is in travail hath sorrow, because her hour is come, but when she is delivered of the child, she remembereth no more her anguish, for the joy that A Man Child is born into the world'.
>
> John 16:21

Gordon Barnes

God's Revelation in Nature

Introduction

'Few words have been the source of so much confusion in theology as the word *nature*, for few words have been employed, as this has been, for a long period in two or three distinct, though related, senses'. Thus J. H. Bernard commences his article on 'Nature' in Hasting's *Dictionary of the Bible*.[1] In it he outlines three usages of the word, none of which coincides with the meaning of the N.T. Greek word φύσις (*physis*) translated 'nature' in the Authorised Version of the Bible, or with my use of the word in this paper. Furthermore, it is probably unrealistic to suppose that all the speakers in today's symposium, with their different backgrounds, will use the word uniformly. If this paper, therefore, is not to add to the confusion it must start with an explanation of the concept of nature that I, as a scientist, find most appropriate.

I use the word 'nature' here to designate the whole of the material universe as perceived by the senses, and therefore, in principle, open to investigation by the methods of natural science. It therefore comprises the whole inanimate creation as well as plants, animals, and man. It includes human activities and artifacts, and therefore events and objects that are sometimes regarded as *un*natural. It includes all historic events, including miracles,and therefore events that are often described as *super*natural. It includes historic documents, among them the Christian scriptures.

In defining 'nature' as the whole of that which, in principle, is open to scientific investigation, I am not implying that the scientific method is the only, or even the most important, way of investigating and describing the objects and events that nature comprises. In fact, to view a human being solely as a cluster of physiological mechanisms would be to demean him by reducing him to an experimental animal, and thus denying him the status of a being 'in God's image'.[2] Similarly, to investigate a letter by examining only the structure of the paper and the composition of the ink, and failing to read the message that it contains, would be to miss whatever revelation the writer intended to convey. Nevertheless, in both of these examples, a scientific knowledge might,

1. J. Hastings, *Dictionary of the Bible*, Vol.3, Edinburgh, T. & T. Clark, 1906.
2. Gen. 1:26f.

in subtle ways, throw additional light on the more important aspects of the man and the letter. Thus, if a scientific investigation of the man revealed extensive brain damage, it might be easier to understand behaviour that at first sight appears totally incompatible with the character of God, whose image, though marred, he bears. If the analysis of the letter showed it to be on very expensive hand-made paper, this might reveal something about the writer in addition to what he actually revealed in words.

This brings me to another definition, that of the word 'revelation', which has also been used in more than one sense. An effectual revelation involves (a) a mind capable of transmitting information, (b) some information actually transmitted, and (c) a receiver of the information otherwise unknown to him. On this basis some theologians have argued, quite logically, that until the potential recipient has received and understood the message there is no revelation. This emphasis on the subjective response of the potential recipient has opened up the way for some to assert that God's word, whether in creation or in the scriptures or in Christ, has no objective truth but becomes true for each individual however he understands it. Now it is, of course, true that the purpose of revelation is to elicit a subjective response on the part of the recipient, but this in no way detracts from the necessity and importance of the medium by which the message is transmitted. There must be an objective embodiment of the message in the medium, whether the recipient acknowledges it or not. Thus a letter may contain a revelation even if the addressee refuses to open the envelope. The New Testament uses the verb 'αποκαλύπτω (*apokalypto*) in both the subjective[3] and the objective[4] senses, but it recognizes that the objective revelation does not inevitably lead to the subjective revelation, because men may 'stifle the truth'[5] contained in that objective revelation. For the sake of clarity in this paper I shall restrict the use of the term 'revelation' to the objective disclosure of God, and refer to the subjective response by some such term as 'acceptance' or 'reception' of the revelation.

It follows from these definitions of 'nature' and 'revelation' that almost the whole of God's revelation is in and through nature, for it is normally through the operation of the senses that man gains information.[6] Christian orthodoxy, on the basis of scriptural statements, has always

3. E.g., Mt. 11:25; Mt. 16:17; Phil. 3:15.
4. E.g., Rom. 1:17; Gal. 1:16; 1 Pet. 5:1.
5. Rom. 1:18–20, NEB.
6. There are certain exceptions. The Bible records some divine revelations through dreams and visions. Another possible exception is the experience given to the mystic. Whether this is ever a true revelation from God, or merely a function of the mystic's

held that that revelation is in two parts: there is firstly a revelation available to all mankind in the creation, and known as general revelation; and secondly, a much fuller revelation given, historically through the prophets and through the Word made flesh, and at the present time through the scriptures and through the proclamation of the gospel. This is known as special revelation. The central topic of today's conference, and the main concern of this paper, is general revelation; but I have not entitled the paper 'God's general revelation' because I shall have something to say about special revelation as well. I shall argue that the two are mutually dependent, and that one can be fully understood only in the light of the other.

The role of general revelation has been the subject of a major debate, more philosophical than theological, centring on the question of whether, and to what extent, the natural universe, interpreted by reason unaided by special revelation, can teach man anything about God, His attributes, and His moral demands. It is not my task to tackle this complex philosophical question of the validity of natural theology, as other speakers are examining it. I have the simpler task of asking what the Bible indicates concerning the impact of God's general revelation on mankind generally and on those who have received His special revelation. This therefore is essentially a theological paper.

The Biblical Basis of the Concept of General Revelation

Five passages of scripture have commonly been recognized as teaching that there is a self-disclosure of God in the physical universe; they are Ps. 19:1–6; Mt. 5:44–45; Ac. 14:15–17; Ac. 17:24–31; and Rom. 1:18–23. Now although these passages all speak of the natural order as pointing to different *attributes* of God, not one of them implies that it indicates the *existence* of a Creator-God. The writers or speakers do not argue God's existence; they either assume it or else proclaim it; and then from the features of His creation they infer something about His character.

Thus, it is obvious from the second half[7] of Ps. 19 that the author had a personal relationship with Jehovah ('thy servant', 'my rock and my redeemer') based upon a special revelation ('the law', 'the statutes', 'the testimony', 'the commandment' of the Lord); and if his words were intended for public liturgical use he could, in an Israelite setting, assume that his readers also would know of God's existence and His creation.

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personality, I am not competent to judge. If such experience is a revelation, it still takes place in nature but not through it. Some objective feature of nature may trigger the experience, but the mystical experience itself appears to be purely subjective and not determined by the senses.

7. Ps. 19:7–14.

Similarly, Jesus in instructing his disciples could assume a knowledge of God's creation, although he does remind them that it is their Father who sends the rain and makes the sun rise.[8]

When the gospel goes to the heathen, a recognition of God as Creator cannot be assumed: it has to be proclaimed. In Acts 14 Barnabas and Paul are reported as telling the crowd in Lystra that they were bringing good news about 'the living God who made heaven and earth and sea and everything in them'.[9] According to Acts 17, Paul proclaimed to the Areopagites 'the God who created the world and everything in it, and who is Lord of heaven and earth'.[10] The trouble with the heathen, according to Paul, was not that they did not know God — they did, but the truth was suppressed'.[11]

All of the biblical arguments for a general revelation of God start from the premise that nature is God's creation; and without that premise the arguments would fail. They are all of the same type — not 'look around and learn that there is a God', but rather 'look around at God's creation and discover something of His character'. So before the natural order can become a natural revelation a missing stage in the argument has to be supplied, namely, that nature is the work of a Creator.

What supplies the missing premise? As for those who have received a special revelation, the Bible makes it quite clear that it is 'by faith we perceive that the universe was fashioned by the word of God'.[12] But what about the heathen of Rom. 1, who, Paul tells us, 'knew God although they glorified him not as God'?[13] Scripture does not answer that question, and we can only guess. Is it a universal inner conviction that is a relic of the *imago dei*? Is it a universal tradition handed down in Adam's race? Or is it some individually-generated belief — a hunch, an intuition, a product of the imagination, something begotten of a sense of awe, an invention to allay a feeling of insecurity? I do not know. But whatever its origin, an awareness of the fact of creation turns the universe into a revelation of the Creator.

But what does it reveal about God? In Ps. 19:1–6 the heavens are said to declare the glory of God: the regular alternation of day and night, and the majestic transit of the sun across the sky, speak, without words, to all the world. So, from the heavens all men might be expected to learn something of the greatness, the power, the majesty, and the reliability, of the Creator.

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8. Mt. 5:45.
9. Acts 14:15, RSV.
10. Acts 17:24, NEB.
11. Rom. 1:18, RSV.
12. Heb. 11:3, NEB.
13. Rom. 1:21, KJV.

Barnabas and Paul, as recorded in Acts 14:17, told the Lycaonians that God had given a witness to Himself in that the regular provision of rain and harvests showed His concern that man should enjoy a pleasant life. Thus nature testifies to God's love.

In Acts 17:29 we find Paul pointing out to the Areopagites that the God who created human personality cannot Himself be anything less than personal, as are the idols of gold, silver, and stone.

Jesus in the Sermon on the Mount[14] indicates that God's love to man is impartial, as evidenced by His provision of sunshine and rain for the benefit of good and evil alike.

And lastly, Paul writes in Rom. 1:18–21 that even the heathen world, with its idolatry and immorality, has no excuse for its pagan philosophy, because the visible features of the creation bear witness to the eternal power and divinity of the Creator.

Thus nature is viewed as testifying to the glory, the reliability, the love, the caring providence, the impartiality, the personality, and the eternal power and divinity of its Creator.

What effect can such a revelation be expected to have on man? This obviously depends upon the human will. The man of good will (i.e., one who has not 'suppressed the truth') ought to be able to grasp something of these attributes of the Creator. But there is very little in this knowledge that involves his responsibility. He could appreciate most of these attributes of his Creator and still ask 'So what?' The fact that the Creator is glorious, loving, impartial, and provident, has no necessary implications for man. There is no logical reason why man should be obliged to be in any way like his Creator. In fact, he might justifiably argue that if he is selfish, uncaring, and partial, that is because he has been created thus: in any case, how could an omnipotent and glorious Creator expect weak man to resemble Him in any way? Furthermore, why should man differ from the animals, which are equally God's creatures? These aspects of general revelation in themselves impose no moral obligation on man.

The only aspects that do have implications for him are those that demonstrate the Creator's eternal power and personality. For if a man grasps these facts, he will not 'think that the Deity is like gold, or silver, or stone, a representation by the art and imagination of man',[15] and he will not 'exchange the glory of the immortal God for images resembling mortal man or birds or animals or reptiles'.[16] In other words, general revelation condemns idolatry; and it is no doubt significant that this is the

14. Mt. 5:45.
15. Acts 17:29, RSV.
16. Rom. 1:23, RSV.

only point on which the Bible, on the basis of general revelation, judges man to be 'without excuse'.[17]

The Rejection of General Revelation

General revelation, then, apart from special revelation, is of very limited value, even to men of good will. It shows them some of God's attributes and indicates that they are wrong to practise idolatry. Unlike special revelation, it is of no redemptive value: it can only condemn.

But Rom. 1 asserts that mankind in general, and the contemporary Roman world in particular, was not composed of men of good will. Rather, it consisted of those who in their wickedness suppressed the truth. The basic problem, therefore, was not an intellectual one but a moral and spiritual one. The intellect was nevertheless involved in the darkness of the pagan mind, but whether sin produced an intellectual blind spot or a deliberate closing of the eyes Paul does not say clearly; his wording appears to favour the latter interpretation.

In our own culture, where a corresponding intellectual darkness is prevalent, it is not difficult to recognize that one important factor in this is a popular logical fallacy that makes it easy to close one's eyes to the truth. The logical processes of the scientific method have proved to be so successful in answering certain questions about nature that many who 'profess to be wise'[18] have insisted that the same rational processes be brought to bear upon other questions, to which they are not applicable. Thus the question 'Has nature a creator?' cannot, in principle, be answered by the scientific method. For this reason, it is deemed by many to be intellectually respectable to deny that there is a Creator, or at least to assert that we cannot know that there is one.

Not everybody is so impressed by the scientific method. Others with a more artistic bent might adopt a more intuitive or imaginative approach to this question. During a recent *Songs of Praise* television programme the interviewer asked a lady why she believed so firmly that there is a God. Her reply went something like this: 'When I see all this beauty around me I cannot believe that it is all a matter of chance: there must be a God who created it.' This clearly is not a logical inference, and, no matter how convincing the conclusion is to the lady who drew it, it is unlikely to convince others influenced by a Western culture that emphasizes (overemphasizes?) the importance of logic.

To Paul the Apostle, this is all for the best. God in His wisdom has seen fit that human wisdom unaided should be unable to reach up to Him.[19]

17. Rom. 1:20, RSV.
18. Rom. 1:22, KJV.
19. 1 Cor. 1:21.

The only secure faith for man is that based upon special revelation and mediated through the work of the Holy Spirit.[20]. We learn from Rom. 1 that Paul's remedy for heathen darkness is not better natural theology but the gospel.[21]

The Relation between General and Special Revelation

It has been argued that the objects and events of nature, viewed objectively, do not in themselves constitute a revelation. They become a revelation, however, when they are accepted as a creation. They then tell us something about the attributes of the Creator, but with very little moral implication for mankind.

Special revelation, on the other hand, not only tells us that nature is a creation of God, but it also makes clear that it is a theistic creation. God did not just create the universe in the beginning in such a way that it would continue to exist automatically under the control of impersonal natural laws, but He holds all things together and sustains all things continuously by the word of His power.[22] Furthermore, the creation is teleological; i.e., it is so under His control that it achieves His sovereign purposes in every detail.[23] It follows therefore that the events in the world of nature have significance.

To understand the significance of many events is not easy, even for the man of faith who accepts special revelation. At the most he may be able to form an opinion on the significance of some major event, such as a war, a national spiritual revival; or the migration of a large number of Jews to Israel: but he would be a bold (or, more probably, naïve) man if he were to claim that the event was a divine revelation to him.

But there is a time when the man of faith would be justified in recognizing a revelation in the events surrounding him; that is, when he is seeking God's guidance. For many of the practical decisions of life, special revelation in the scriptures is inadequate by itself: it deals with general principles of behaviour but specifies no details. Thus it says 'Do good to all men';[24] but it is only when the Christian comes across a particular need that he realizes what good he must do. He is exhorted to work for his living,[25] but it is his circumstances that guide him to the right employment. Thus it is through nature that God reveals the details of the Christian's pathway. Although this is a natural revelation, it cannot be

20. 1 Cor. 1:17–2:16.
21. Rom. 1:14–16.
22. Col. 1:17; Heb. 1:3.
23. E.g., Eph. 1:3–14.
24. Gal. 6:10, RSV.
25. 2 Thess. 3:10–12.

regarded as a general revelation as it speaks only to the man of faith concerned.

Special revelation utilizes nature in another way, and converts it into a revelation. Scripture frequently makes use of analogies between natural phenomena and God's person and activities. When the Bible speaks of His word, His hearing, His seeing, His love, His hand, His wrath, His son, it is drawing upon human analogies. When it tells us that He is a consuming fire or a rock or speaks of His throne or His footstool, it is utilizing analogies of inanimate objects. Poetry and apocalyptic literature are full of imagery based upon natural analogies. Many of the resulting metaphors are highly expressive. To say that God cares is true: but to say 'The Lord is my shepherd'[26] is far richer in meaning and of much greater impact. The oriental shepherd thus becomes a vehicle of revelation. It is reasonable therefore to suggest that one reason why He who created the universe made it as it is was that it might include symbols of His own person and activity, and thus facilitate special revelation.

It appears, then, that special and general revelation are interdependent. General revelation, to be effectual, requires the concept of creation, usually suppressed by unbelievers but supplied by special revelation. On the other hand, special revelation depends upon the use of words primarily referring to natural symbols of spiritual things. General revelation thus becomes a vehicle of special revelation.

In fact, the two are so intimately linked that it may be questioned whether the distinction is justified. Are we being too arbitrary in dividing revelation into two parts? Ought we rather to think in terms of a single unfolding revelation, pervading the universe, and having verbal and physical aspects? An analogy would be an illustrated textbook, in which the text explains the pictures while the pictures illustrate the text. Would not such a model accord well with scriptural thought? The Word by whom all things (and therefore the general revelation) were created was also the Word that became flesh and dwelt among us as the supreme special revelation.[27] The Son who was God's agent in creating the worlds was also the one through whom His special revelation through the prophets was completed.[28]

Use of General Revelation in Christian Witness

If we accept that there is a biblical basis for a general revelation of God in nature, we may now enquire into the sort of use that can validly be

26. Ps. 23:1.
27. Jn. 1:3 & 14.
28. Heb. 1:1f.

made of this in Christian evangelism. The commission of Jesus to his disciples was threefold. They were to herald (κηρύσσω, *kērysso*[29]) the gospel; they were to teach (διδάσκω, *didasko*) and make disciples (μαθητεύω, *mathēteuo*[30]); and they were to be witnesses (μάρτυρες, *martures*[31]) to Christ. These three forms of evangelism involve different methods of approach. A herald is one who makes a public proclamation, and he cannot assume that his hearers understand his message as he does, or that they are sympathetic. The teacher is one who addresses disciples, and he can assume a measure of understanding and sympathy. A witness is a person who, in public or private, recounts his own experience to those prepared to listen, whether sympathetic or not. In the New Testament there are examples of all three types of communication in which natural events are called in evidence.

In the two Acts passages[32] already referred to, we find Paul *heralding* the gospel to pagan audiences. He could not assume a knowledge of the Creator, for such knowledge had been suppressed, but neither did he argue the fact of creation from nature. Instead, he proclaimed the fact. Then, having told his audiences that God had made the heaven and the earth, he utilized his hearers' experience of nature to argue to the character of God.

In the Mt. 5 account Jesus was *teaching* his disciples. There was no need for him to tell them of the creation, for they were well aware that God had created the world, so he argues directly from their experience of the weather, and its testimony to the impartial love of God, to their responsibility to love friend and foe alike.[14]

In four passages in Acts[33] there are records of the Apostles Peter and Paul *witnessing* to their experience of God in natural events that made very deep impressions on them. They simply recounted the events to their audiences, whether sympathetic or unsympathetic, gave their personal interpretation of the significance of those events, and then left their hearers to form their own judgement.

I suggest that these incidents are patterns for the use of natural revelation today. In our evangelistic task of heralding to the world we cannot expect to convince our hearers of the existence of God by drawing inferences from nature, for, logically, natural phenomena are equally capable of bearing a materialistic interpretation as they are a theistic one. Rather we must proclaim (on the grounds of special

29. Mark 16:15.
30. Mt. 28:19–20.
31. Acts 1:8.
32. Acts 14: 15–17; 17:24–31.
33. Acts 11:4–18; 15:6–9; 22:6–22; 26:12–18.
34. Rom. 8:28, RSV.

revelation) the fact that God exists and that he has created and upholds the universe. Following such proclamation, we can go on to invite our audience to see His wisdom and glory in nature.

In the work of teaching (from the pulpit or in the Bible class) those who are aware of God, His creation, and His teleological activity in nature, we may point to historical or contemporary events and, with caution, draw inferences that illustrate or emphasize the character of God or man's responsibility to Him.

And lastly, if we as individuals take seriously the fact that 'in everything God works for good with those that love Him', we shall see in our multifarious circumstances plenty of evidence of the wisdom and love of God, and this should emerge quite naturally in our conversation with others if and when it becomes relevant. We may recount the events, with our appreciation of them, and leave our hearers to form their own opinions. These may or may not coincide with our own: our hearers may even think us mad (which was Festus's estimate of Paul on such an occasion), but at least we shall have witnessed to God's providence in nature.

In making these suggestions for the use of general revelation today, I am not, of course, implying that this should be our chief method of evangelization. It can be only ancillary to our main task of proclaiming God's special revelation.

Richard Russell

Natural Theology: Is it Scriptural?

Natural Theology I take to mean the type of exercise pursued by Christian thinkers such as Aquinas, Anselm and Charles Hodge which sought to demonstrate rationally the existence and some of the attributes of God. The intention of the exercise was rationally to confirm the faith of Christians and also to serve as pre-evangelism with respect to unbelievers. The Biblical faith presupposes the existence of God. If reason could demonstrate this central and vital presupposition what could be more basic to the Churches' mission than to develop and refine the most powerful rational arguments for the existence of God? The thought behind this programme was simple. If Christianity is true then unbiased natural reason will support it — at least to the extent of demonstrating the reality of God, natural law and the immortality of the soul. In this way Natural Theology, while being completely a branch of Philosophy (i.e. relying exclusively on natural reason rather than faith), would also serve as a handmaid to Revealed Theology. While the *method* of natural theology was to be that of Philosophy the *conclusions* were to be those of Theism. The disciplinary paradigm of Natural Theology required the *demonstration of Theism.* Within the medieval worldview such a research programme for Natural Theology was virtually inevitable.

However the Enlightenment baulked at the idea of having theistic conclusions prescribed in advance. The complete autonomy of reason was demanded. Philosophy must be able to follow the arguments to whatever conclusions they led without the constraint of the dogmas of Revealed Theology. David Hume makes clear his own commitment to autonomous human thought when he writes:

> 'Tis certainly a kind of indignity to philosophy, whose *sovereign authority* ought everywhere to be acknowledged, to oblige her on every occasion to make apologies for her conclusions, and to justify herself to every particular art and science which may be offended at her. *This puts one in mind of a king being arraigned for high treason against his subjects.*

In short the Enlightenment transformed the research programme of Natural Theology into that of the Philosophy of Religion, the name of which appeared in the latter years of the eighteenth century. The subservience of Philosophy to Theology had been reversed. Reason

was to determine what could count as revelation, which tended to mean (following the Deists) that whatever could not be demonstrated by reason about God, man and the world should be rejected as unnecessary at best, and absurd and superstitious dogma at worst.

Having sketched in this background I think the intrinsic instability of the research programme of natural theology is apparent. The Enlightenment embraced the *method* of Natural Theology and maintained that that required the complete rejection of theistic conclusions stipulated in advance. Agnostic or atheistic conclusions were not to be ruled out in advance. The sovereign authority of the method of philosophy — autonomous rationality — must reign supreme. One can recognise in this development a certain consistency as one moves from the semi-autonomous reason of medieval scholasticism to the fully autonomous reason of the Enlightenment.

At this point we can return to our initial question 'Natural Theology: Is it Scriptural?' We can now ask in reply — which pole do you mean? The pole of its purported *method* or the requirement of consistency with a Biblical theism in its *conclusions*? With respect to the latter there is a question as to whether the God of classical philosophy (First Mover, Necessary Being, etc) can rightly be identified with the God who reveals himself in the Scriptures. However there is no doubt that the Scriptural revelation of God — as far as reason could reach — was the normative conclusion of Natural Theology. The real issue as far as I can see concerns the *method* which Natural Theology shares with its offspring Philosophy of Religion.

Is that method, and what it presupposes, Scriptural? (In this context there is not time to deal with the Biblical materials which bear on the issue of Natural Theology. I simply refer you to G. C. Berkouwer's brilliant study *General Revelation* Eerdmans, Grand Rapids, 1955, now IVP). Shortly I wish to argue that the method in question is precisely the one underlying contemporary liberal academic theology which has its roots in the Enlightenment rationalism which in turn derived from the method side of Natural Theology. But first let us consider the structure of Natural Theology as an academic discipline so that its components come into clearer view.

In my view every academic discipline is constituted by the synthesis of (1) a disciplinary *ontology*, a defined field of investigation, and (2) a disciplinary *epistemology and methodology* deemed to be most suitable for gaining reliable and systematic knowledge of the field. In other words every possible discipline is constituted by philosophical presuppositions which both *transcend* and *structure* the discipline.

In the light of this let us briefly consider the Natural Theology of Thomas Aquinas. On the side of ontology he assumes an Aristotelian

world of nature — hierarchical, teleological and hylomorphic. On the side of epistemology he maintains that all knowledge begins with the senses, intellectual abstraction from what is sensed, followed by deductive inferences. Consequently this whole ontology and epistemology — virtually a whole worldview — needs to be *assumed* before Aquinas can begin to formulate his theistic proofs. In short the proofs are going to be strictly relative to the assumptions made, as are all proofs. Moreover, even when these assumptions are granted it is highly doubtful whether it is possible to deduce the existence and attributes of God in the Christian sense.

While natural theology (like philosophy of religion) may try to describe itself as an unbiased exercise of 'pure reason' it cannot proceed without wide-ranging philosophical assumptions about man and the world — which is the common situation of every discipline. If you begin without God in your assumptions, you will not find Him in your conclusions — unless you cheat. The central problem with natural theology is that it takes certain conceptions of man and the world as *given* and *intelligible* without reference to God and then asks — does God exist too? This is diametrically opposed to the Biblical view that the revelation of God is *given* rather than inferred, pervading the whole of creation and therefore leaving mankind 'without excuse' for its ingratitude and idolatry and culpable ignorance. Not only so, but man's self-knowledge and understanding of his place in the world depends upon a true knowledge of God. Without it he struggles and wanders in darkness. We have already quoted Hume's proud words concerning the autonomy of reason. Where did it lead him and what light did (empiricist) reason throw upon reality for him? These are his own words:

> The *intense* view of these manifold contradictions and imperfections in human reason has so wrought upon me, and heated my brain, that I am ready to reject all belief and reasoning, and can look upon no opinion even as more probable or likely than another. Where am I, or what? From what causes do I derive my existence, and to what condition shall I return? Whose favour shall I court, and whose anger must I dread? What beings surround me? and on whom have I any influence, or who have any influence on me? I am confounded with all these questions and begin to fancy myself in the most deplorable condition imaginable, environed with the deepest darkness, and utterly deprived of the use of every member and faculty.

Hume realised that he could not live with such conclusions. However, instead of questioning the assumptions — especially that of the autonomy of reason — that led him inexorably to them, he simply announces that having reimmersed himself in the distractions of everyday life when he returns to his speculations later 'they appear so cold, and strained and ridiculous, that I cannot find it in my heart to enter

into them any further'. Nor is the situation substantially different if we move from Enlightenment epistemology to the contemporary academic world for they are both moved by the same secular and empiricist spirit of humanistic philosophy. Today we find a massive fragmentation of knowledge both between and within disciplines; e.g. reductionistic monisms and unco-ordinated pluralisms, dogmatism and scepticism, and formalistic abstractness. These infect the academic world with meaninglessness and restlessness — an infection which is rapidly transmitted to every part of human life through the educational (mal)formation of its leadership.

Having sketched out something of the fallout of the principle of rationalism which underlies the method of Natural Theology — showing it to be un-Scriptural and therefore culturally disastrous — I want to conclude as I have promised with a few remarks which could be headed 'Theology: is it Scriptural?' This is a serious and not rhetorical question to ask about the main schools of contemporary academic theology — for there is a real sense in which the method of 'natural reason' which was formerly restricted to Natural Theology (as part of Philosophy) has now been extended to Theology proper. The rot has spread — so to speak — from Philosophy to Theology. If we consider theology as an academic discipline, then there are the two related sides of its *field* of investigation and its *method*, as we have discussed previously. With respect to method, how should its field of investigation (Christ, the Scriptures, Christian history and experience, etc) be rightly approached? To put the matter even more concretely 'Should the Bible be approached like any other book?' Yes, says the secularist. No, says the dualistic Christian. In my opinion the proper answer lies at a deeper level. The Bible and every other book should be approached within a perspective illuminated by the Bible. We want not only a Christian theology but Christian linguistics, literary criticism, etc, etc. Indeed, without these latter developments Christian theology itself will be seriously defective. Our scholarly calling in every field of knowledge is to make every thought, concept, theory, paradigm and research programme subject to the lordship of Christ.

Malcolm MacRae

Natural Theology: Are the Philosophical Arguments Valid?

The question posed in the title of this paper cannot, in my view, be answered with a direct 'yes' or 'no', because it can be posited in at least two quite different ways. (1) 'Were the philosophical arguments which the Scholastic theologians used, valid'? (2) 'Are the philosophical arguments which have been employed in the defence of any system of Natural Theology valid'? If we take the philosophical arguments which were used by the Scholastics, then, as will be seen later, we must conclude that they were not always valid. But, if we take the arguments used by later theologians including Reformed, there is good reason for concluding that they were valid and still have a certain validity. That is the position which Dr. F. H. Cleobury defended at a previous Victoria Institute day-conference as well as in his book — *A Return to Natural Theology* (published by James Clark in 1967) and it is the position which I am going to attempt to defend today.

Broadly speaking, early Protestantism set its face fairly resolutely against the Scholastic system of Natural Theology, both because this system was thought to elevate reason above revelation as well as because of its influence over the entire Scholastic edifice of belief. Luther's rejection of the system was uncompromising, so much so that it has been argued that he left very little room for the use of reason to appeal to any 'common ground' with the unbeliever. It is noticeable that numerous theologians and philosophers in the Lutheran tradition have shown themselves hostile to Natural Theology. In his *Metaphysical Works* Kant was critical of Scholastic methodology, and retained only the Moral Argument for God's existence in his ethical framework. Professor John Ballie, in *Our Knowledge of God* concludes from Barth's writings:-

> 'It is (with Dr. Barth) a fundamental premiss that no knowledge of God exists in the world, save in the hearts of regenerate Christian believers. He stands as did Ritschl and Herrman in previous generations in the tradition of that Lutheran christocentrism which made Christ the Mediator no less of knowledge than of salvation; the christocentrism which denies that except in His Incarnation in Jesus of Nazareth, God has ever spoken to man at all . . .'[1]

1. *Our Knowledge of God* by John Ballie, D. Litt., D.D. S.T.D., Professor of Divinity at the University of Edinburgh. Published by the Oxford University Press in 1941 (page 17).

Central to Barth's theology is the Lutheran doctrine of God which sees Him as totally transcendent.

Yet, within the Reformed community other Reformers such as Calvin attached much greater importance to the value of human reason, and consequently came early to the conclusion that there would have to be an accommodation with Natural Theology, explaining why within most Reformed and even Protestant communions 'scholastic' tendencies have appeared.

Taking the question posed in our title in the first sense — that of the validity of the arguments which were used by the Scholastic theologians — it has to be stated that Thomas Aquinas's 'Five Ways' were in no sense a system which he invented in the 13th century. What came to be known as the 'theistic proofs' had been crystalizing in Christian centres of learning over many centuries. Anselm, for example, who is associated by evangelicals with one of the finest expositions of the biblical doctrine of the Atonement, is equally known by theologians generally for his challenging defence of the Ontological Argument and is often referred to as the 'father of Scholasticism'. So that the strident objection to a reasoned defence of the faith which sometimes comes through in that branch of evangelicalism which is closest to Lutheranism, not only does damage to a sound Christian apologetic but is a departure from mainstream Christian thinking.

Kant's weakness on the theistic proofs which led him into Deism is one clear example of where Lutheran thinking was moving. In his *Metaphysical Works* Kant failed to anticipate that his difficulties with four of the theistic proofs could be raised against the Moral Argument as well, because what he was attacking too often was the essential framework of Christian belief.

The Scholastics were merely applying the arguments which they had inherited from earlier theologians to the issues which had come to the forefront in the debates of their day. It would not even be true to say that the challenge of Aristotelianism to the Christian faith was new, because some of Aristotle's writings had been known to Christian scholars right back to the first century AD. What had happened was that with the discovery of a more representative range of Aristotle's works the nature of the Aristotelian challenge to long-held Christian attitudes was being appreciated for the first time. These lengthy quotations from Dr. W. Moeller's *The History of the Church* will serve to fill in the historical background:-

> 'The Philosophy of Aristotle, strongly admixed with Neoplatonic elements from the Greek Church and science, had reached the Arabs and had developed among them a philosophy which at first came into acute discord with the orthodox faith of Islam. The Arabian free-thinkers (Mutazilites), from

> as early as the 8th century practised unlimited rationalistic criticism of the positive principle of religion, but were afterwards more repressed by a less radical philosophy. Alfarabia (950) attempted to place Aristotle, understood in a Neoplatonic (emanational) sense, on a harmonious relationship with the religious elements of the Koran. . . . To this were linked the Arabian philosophers of Spain, Avempaze, Abubazer, and especially Averroes, with the last, for whom philosophy appeared as the higher explanation of religion; religion, which is indispensable for the many, gives the highest truths a pictoral husk, philosophy gives them in the pure rational form. . . . It was the Jews also who, by commission of the Emperor Frederick II, under the guidance of Michael Scotus and Hermanus Alemannus translated commentaries of Averroes or Aristotle and Aristotelian writings. Soon thereafter the Greek Aristotle became known to a greater extent through Robert Capito, Thomas Cantipratina and others. Even before the opening up of these purer sources, the Arabian philosophy and a few Pseudo-Aristotelian productions sprang from Neoplatonism, such as the Theologia of Aristotle and the De Caussis, which was drawn from Proclus, and began their influence in the West.'[2]

To understand why Natural Theology took the form it did under Thomas Aquinas (1225–1274), we have to appreciate that it was a time of crisis for the Church in Europe, as it still is for the Church in Africa today. Central beliefs were under attack through the advances which had been made not only by a new civilization but a new intellectualism.

It is only as we hear of the discouragements which are being experienced by Christian missionaries working in Islamic countries that we begin to appreciate the magnitude of the challenge facing the European Church in Aquinas's day. An Islamic crusade had ignited along the Mediterranean coast and was sweeping Northwards. The scenes of religious fervour brought to us by television from Iran illustrate the hold Islam can take on the masses. It has the capacity to fire the imagination. And, alongside the imperialistic advance by a great Monotheistic religion, there came a second, even greater threat. Avery Dulles, in *Theological Resources: A History of Apologetics*, spells it out for us:-

> 'The penetration of Averroes into European universities precipitated a major spiritual crisis. The leading theologians of the 13th century were compelled to spend much of their time and energy in efforts to resist the Averroist tide.'[3]

Where Islamic fervour was capturing the popular imagination, Aristotelianism was winning converts among the intellectuals in the universities. The Church's European thinkers, more at home with Plato

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2. *History of the Christian Church* by Dr. W. Moeller, Professor of Church History at the University of Kiel. Published by Swan and Sonneschein and Co., in 1893 (page 422).

3. *Theological Resources: a History of Apologetics* by Avery Dulles. Published by Hutchison and Corpus in 1971.

and the Fathers, found it difficult to come to grips with this new empirical, all-embracing system. Much stood to be lost if convincing counter-arguments were not forthcoming.

Is there anything really so very new in this? In every period of the Church's history Christian scholars have been called upon to 'give a reason for their hope'. The source of attack has shifted radically from one period to another, and consequently the issues under dispute have changed. The debate of one age is not the debate of another. But the task of the Christian scholar has always remained the same — to maintain the credibility of the Christian faith from every attack, whatever its source. In the heat of the battle Christian scholars have made mistakes. They have made errors of judgment which have been quite serious. But is that any reason for condemning their efforts; is it not better to fight badly than not to fight at all?

Thomas Aquinas devoted himself to the Herculean task of coming to terms with the Aristotelian challenge. So much so that it is impossible for us to think of this system without being reminded of Aquinas's work. The challenge stretched him to the limit and beyond, for, simply 'breaking the system' affected his religious outlook so much that there were times when he felt completely disoriented. Then he had to bring forward arguments to demonstrate the superiority of the Christian faith. This is where he was exposed to the danger of casting his defence in an Aristotelian mould. That is why at times he succeeded in making himself appear a disciple of Aristotle! His intention was otherwise. That can be seen from the effects of his influence, for, as a matter of history, Aquinas's victories on the intellectual battle-field signalled the turning-point for the Church in Europe in its stand against Islam. The day may yet come when, in surveying the whole course of Church history, Christians will be drawn to conclude that Aquinas took part in one of the most important rear-guard actions in defence of historic Christianity. Etienne Gilson, Director of the Pontifical Institute of Mediaeval Studies in Toronto, Canada, defends Aquinas's defence of the Christian faith in this way:-

> 'If we grant that a philosophy is not to be defined from the elements it borrows but from the spirit which quickens it, we shall see here neither Platonism nor Aristotelianism but, above all, Christianity.'[4]

In many respects the crisis in the Church which was precipitated by the Scholastic movement is now behind us. In Aquinas's day Aristotelianism posed what was considered to be the most serious threat to the Christian message. Few would argue that that is still true today. The scientific

4. *The Christian Philosophy of St. Thomas Aquinas* by Etienne Gilson, Director of Studies, the Pontifical Institute of Mediaeval Studies, Toronto. Published by Victor Gollancz Ltd. in 1957 (page 378).

community certainly no longer feels any obligation to follow Aristotle's really rather 'unempirical' hunches. As soon as the sciences were able to find their feet through the gathering of data which could be verified, they developed a momentum of their own and distanced themselves from philosophy. That is not to say that they succeeded in freeing themselves from philosophical systems, for the way science is used is an expression of a system of ideas, but free to the extent that scientists no longer felt an obligation to refer automatically to one philosophical system, and least of all the Aristotelian system.

Even within the Roman Catholic Church where Aquinas's influence has been so strong and so much revered, it would appear that scholars are resigned to the abandonment of the Aristotelian system. Because the system itself is fascinating it is likely that it will continue to be studied by scholars with a passion for the unusual. But the system itself is no longer at the forefront of the debate in Christian apologetics. Quite a number of Aristotle's insights and distinctions have established themselves as both valid and profound, but several of the presuppositions on which the system was built have not survived scientific investigation.

In the light of this we have to conclude that Scholastics were guilty of a serious error of judgement in attaching so much importance to Aristotle's system. For later generations of Christians the lesson here is to avoid exploiting philosophical fashion to make the Gospel acceptable to secular thought. The debate in every generation must always be within the context of the existing framework of ideas. What the Christian says must make sense to the people he is addressing. It must be relevant. But because there is much about the Gospel which will always be unacceptable to the 'natural man' and in that it is seen to be the correct 'remedy for sin' — the attempt to explain the Gospel in terms that will satisfy the spirit of the age will always fail. To re-interpret the Gospel to fit in with the ethos of philosophical theory in vogue at a given time can only serve to rob it of its power and glory.

The application of Gospel truths to what is going on in the philosophical workshop is a different matter. The Gospel has much to say to the philosopher as he goes about his vital work. He will find it impossible to avoid contact with its eternal truths, make of them what he will. A sensitive philosopher will learn much from the Gospel! And for the theologian, the moral is clear. He can make no greater mistake than to forsake the light of the Gospel for the light created by the latest philosophical luminary. If a general objection to the approach taken by the Scholastics can be established, it is that they were too much enamoured with one philosophical system.

Whether we are right in going beyond that objection to associate the Scholastics with the Arabian philosophers of Spain such as Avempaze,

Abubazer and especially Averroes, to whom '. . . philosophy appeared as the higher explanation of religion . . .', because, '. . . religion, which is indispensable to the many, gives the highest truths a pictoral husk, philosophy gives them in the pure rational form,'[2] is much more doubtful. There was indeed the danger that the Scholastics would follow the Arab philosophers down that path and in one or two instances they probably did, but were they aware of the danger and did they take measures to counteract it? Here is how Etienne Gilson meets this objection:-

> (Aquinas's) aim was to, '. . . integregate a science of reason with a science of revelation without at the same time corrupting both the purity of reason and the purity of revelation.'[5]

Whether we can speak too glibly about the 'purity of reason' in the light of the Fall is a question which many evangelicals would want to debate. Kant also strove to protect the purity of reason. Still we must ask — 'is the concept valid or helpful?' It is true that:-

> '. . . God has not revealed about creatures many things which they are capable of learning by themselves, and the knowledge of which is not necessary for salvation.'[6]

And, Christians of all persuasions must explain how the 'natural man' has acquired the knowledge which he possesses and demonstrates so impressively. There then we have the crux of the problem in the debate between the Scholastics and the Lutherans. To what extent can we appeal to the purity of reason and the purity of revelation and place them side-by-side in that way? Must the one exclude the other? It would seem that the Lutherans have been insisting that the 'light of reason' must eventually displace the 'light of revelation', whereas the Scholastics have been insisting that that need not be the case.

To sum up our difficulties with how the Scholastics handled the questions involved, the concentration during the 13th century on Aristotelian ideas was so intense that all the main questions on theology and philosophy tended to be referred to the touchstone of Aristotelianism, not uncritically of course, but regularly and systematically all the same. The fate of Christian apologetics was becoming too much bound up with the fortunes of the Aristotelian system. It would share in its triumphs, but equally, suffer on account of its defeats, and this was dangerous. The initiative was slipping away from the Christian scholar to the pagan philosopher. And, in addition to conceding too much to the Aristotelian system, or over-estimating the soundness of its every argument, Christian thought was being cast in an Aristotelian mould.

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5. Etienne Gilson *op. cit.*, (page 10).
6. Etienne Gilson *op. cit.*, (page 21).

Out of respect for Thomas Aquinas, the Doctor of the Church, (a title which some Roman scholars appear to be willing now to confer on John Calvin) the Roman Church at the Council of Trent committed itself quite considerably to the Aristotelian view of the physical order. After a while it had the problem of defending that view in the face of contrary evidence which was being uncovered through empirical research. Much of Aristotelianism was now seen not to be based on empirical research at all. The authority of the Church was being undermined. At the same time, we should be careful not to over-state the damage inflicted on the Roman Church by this discovery, because the Aristotelian philosophical system had helped to pioneer empirical research into the workings of the physical order, even if Aristotle was wrong about the principles which underlie its workings. Much of Aristotelian philosophy was thoroughly sound, as Protestant and Reformed scholars were to discover when they too saw that they had to give a prominent place to the study of Aristotle.

Turning then to the second way of reading the question in our title, that of deciding whether or not the philosophical arguments which have been used in other systems of Natural Theology are valid; I am now going to attempt to show why they are.

The first major argument in support of that view is that, until the Reformation, the study of Natural Theology was an essential part of a complete theological training. The 'theistic proofs' were not thought up by the Scholastics but were part of Christian apologetics from an early period in the Church's history. Luther's attack on Natural Theology would have made little sense to Augustine or any of the other great Christian thinkers.

The second major argument is that evangelical and Reformed theological text-books on theology, although sometimes critical of Natural Theology, very often have an introductory section which is Natural Theology under a different name. The better text-books do not even attempt to conceal the fact that they cannot maintain their position consistently. In E. J. Cannell's scholarly — *An Introduction to Christian Apologetics* (published by Eerdmans in 1964) — the carefully constructed attack on Natural Theology is drastically undermined by the admission on page 251 'Therefore, properly conceived, natural theology is possible, for the heavens genuinely show the handiwork of God by crying out continually that God is responsible for their beauty, grandeur, and order.'

The third major argument is that Theology proper is indebted to Natural Theology for some of its concepts. We cannot begin to understand the theological debate which burst into life at the Reformation,

and what really bothered Luther, unless we have a clear understanding of the history of dogma.

As every student of theology must, sooner or later, come to a conclusion about the place of the light of nature in Christian belief, we are now going to pursue discussion of this question further under two headings:-

1. Knowledge by Investigation; and, 2. Knowledge by Intuition.

1. *Knowledge by Investigation* (Objective reasoning)

A key question in this discussion is: 'How much can we find out about God through our own investigation?' Supposing that we had never heard the Gospel or read the Bible. How much could our own observations and investigations tell us about God? Two biblical passages have a direct bearing on this question.

> 'How clearly the sky reveals God's glory!
> How plainly it shows what he has done!
> Each day announces it to the following day;
> each night repeats it to the next.
> No speech or words are used,
> no sound is heard;
> Yet their voice goes out to all the world
> and is heard to the ends of the earth.
>
> (Ps. 19:1–4 NEB)

Does the Psalmist mean that we can find out something valid about God through our own investigation? It would be hard to conclude otherwise. Is this conviction repeated in the New Testament? If anything, Paul goes beyond what is stated in Ps.19, because not only does he argue that 'Ever since God created the world, his invisible qualities, both his eternal power and his divine nature, have been clearly seen; they are perceived in the things that God has made . . .' but, he goes on, 'So these people have no excuse at all . . .' (Romans 1:20 GNB) The story in man's quest for God does not of course end there, but for our present purposes it is the 'story so far' that is important.

What we call scientific investigation is very much a part of modern life. The Victoria Institute itself bears testimony to the evangelical conviction that science, when rightly used, can confer many blessings on mankind. And yet scientific investigation very often leads directly to conflict with the Christian faith. Because of the influence of science many in our world are coming to the view that all the workings of the universe can be explained on the basis of a closed system of cause and effect. There is then very little room left for God as our Creator and Sustainer.

Certainly, scientific investigation will not lead us inevitably to the God

of the Scriptures. In Communist countries armies of scientists go about their work fully convinced that the atheistic ethos which is propagated by the State can hold up under every form of scrutiny. For that matter, armies of scientists in the West go about their work without reference to the Creator's glory in Nature. And yet, we know that it would be far from the truth to suggest that all scientists react in that way. If anything, the picture conveyed from Communist countries belies the reality, because, not only are some of the best scientists in Communist countries believers, but many of them are willing to endure persecution for the sake of their beliefs. What the remainder really think is impossible to know under a system which has such little respect for the freedom of the individual.

What is important is that numerous Christians can trace their conversion to conclusions which had been arrived at, initially, through an observation of the natural order. These observations can range from the profound to the bizarre, but what matters is that they all count! Even the mistakes can lead to deeper insights, as can be seen from the accounts of several conversions recorded in the New Testament.

Calvin insisted that the reason why we can find belief in a god or gods among communities which have never heard the Gospel, can be found on the basis of what man can discover on his own. And that is not all; over a period of time, Animism can be seen to give way to Polytheism and Polytheism to Monotheism. Monotheism, in spite of the interest shown by Westerners in Pantheism, has proved to be the most durable and satisfying of all the religious systems.

The New Testament illustrates how enquirers who through their own striving after God arrived at Monotheism and found in the God of the Scriptures the God for whom they had been searching. The writer of the Epistle to the Hebrews was probably a '. . . philonian converted to Christianity.' (Menagoz)

Granted, the light of nature is weak. It is certainly not sufficient for salvation. It can never be used as an argument for neglecting evangelism. And yet, although the light may be weak, it does exist and serves a useful purpose. Even if it can never be regarded as a substitute for evangelism, it is always a factor in pre-evangelism. Seldom do we speak to someone about the Gospel without finding out what the light of nature has taught him or her already. Even primitive tribes know 'something'.

2. *Knowledge by Subjective Conviction*

The other side of the coin in the way Christians approach Natural Theology, is to observe that we look for the marks of God's handiwork in

the Creation because we are made in His image. To a greater or lesser extent, most can concur with the Psalmist when he confesses:-

> 'As a deer longs for a stream of cool water,
> so I long for you, O God.
> I thirst for you, the living God;
> when can I go and worship in your presence?'
>
> (Ps. 42:1–2 GNB)

But this spiritual dimension in man which leads him to seek religious experience raises serious problems. Many Christians defend their beliefs by appealing to subjective conviction. Here they are following Luther, who tended to put the light of nature and the light of revelation against each other. Some Christians would go as far as to say — 'nature tells us nothing'. But the atheist can object that subjectivism is unreliable because there is no way of checking what Christians claim to be true, against what we can establish or verify from thorough, scientific investigation. The Logical Positivists gave a clear expression of this difficulty, and found out at the same time that through scientific investigation we can formally prove only so much. But in a world where the scientific method plays such a major part in every facet of life, the Christian cannot ignore what scientific enquiry is saying to us. Out-and-out subjectivism is of limited value. Members of all religious groups use the subjective argument.

So that, however fragmentary, information about the Creator gleaned from an objective study of the natural order is worth its weight in gold, because it takes us to a court of appeal which is independent of our all too fallible private subjectivism. Christian critics of Natural Theology protest that the study of the natural order will never provide us with the evidence we require if we are to prove the existence of the God of the Scriptures. In his *Metaphysical Writings* Kant maintains a sustained attack on the 'theistic proofs', concluding that these so-called proofs are not proofs at all, in the strict sense of the word. Many evangelical scholars have been content to take Kant's word for it.

Van Til urges that we argue in a circle. This can be made to look very neat and tidy philosophically. In any case, everyone argues in a circle, so why not the Christian? When he has finished stating his case the Christian will be seen to have presented the world-view which makes most sense. Carnell rejects 'Christian empiricism' for 'Christian rationalism', which he defines by the formula '. . . that which is horizontally self-consistent and vertically fits the facts.'

But it should always be regarded an unhappy development when we feel our faith threatened by objective investigation into the workings of the Creation. The greater danger, rather, is to keep investigation of the

natural order and faith separate, until we can see no connection between them and it becomes a question of — faith or science. It is to be feared that a radical dichotomy between faith and science is what circular reasoning has led to, in communities which have placed science out of bounds to religious investigation. That is the danger implicit in all the systems built on circular reasoning. Faith for the Christian must be for real life in the real world.

Admittedly, the Bible stresses the importance of the work of the Holy Spirit in conversion, but this is never in isolation from mental assent to the propositions of objective revelation.

Conclusion

It would be a gross over-simplification to suppose that Luther's protest at the Reformation was mainly directed against the Scholastic view of Natural Theology. He was far too much of a theologian and a philosopher for that to be possible. The Reformation was not about one question but about a whole range of questions. Some had to do with theology and others with philosophy, and still others with politics and the power-struggle between the most powerful nations in Europe. It is true that Luther detected and rightly condemned the drift in Scholastic thinking into Aristotelianism. The Church was being taken too much out on a limb. Luther was sounding an alarm.

But in doing so, it is almost certain that he over-reacted. The Reform movement in almost every country had to distance itself from Luther's rather extreme view. Gradually Natural Theology was rehabilitated in Christian centres of learning, returning to the old view that Special Revelation is always of greater value than General Revelation.

On the charge that the Scholastics opened the way for an unbelieving study and use of science, the evidence is less conclusive. If anything, Liberal Protestantism has been the chief culprit in the deification of the scientific method. The god of science has found his way into some of the most secure bastions of Protestant orthodoxy.

Contemporary Moral Philosophy has in any case shown that the scientific method can only be carried so far. It cannot speak to the whole of life. Through science we can 'formally prove' only so much. Scientists themselves have moved away from what were once thought to be the 'iron clad laws of physics'. Reality, even for the scientist, is now known to be much more complex.

And this brings us to a much more serviceable definition of knowledge. We make decisions in life on the basis of a wide range of considerations. Seldom is it possible to make a big decision on the basis of 'one proven fact' alone. It is through our experience of life that we

build up the information necessary to arrive at conclusions with confidence. We want to check up that this 'fact' works in daily life in a way which will not undermine our system of values, and so on. Our concern is not with one narrow part of knowledge but with the whole. On the basis of our complete experience of life we can see evidences of God's glory in every part of the Creation.

When and how the light of nature gives way to the greater light found in Jesus Christ, is not our primary concern today. The Holy Spirit's working is like the blowing of the wind — unseen and mysterious. The religious enquirers who came to Jesus, came with the hope that in the Gospel they would find the message for which they had been waiting. They came from very different backgrounds. That should make us careful about laying down one set path by which the unbelieving come to embrace Christ as Saviour. Christ is the only way to the Father. He is also at the centre of a rich and diverse Creation. The Holy Spirit alone chooses the path by which individuals with contrasting personalities and needs return through the Son to the Father's home.

Reviews

Klaas Runia, *'The Present-day Christological Debate' — Issues in contemporary theology*, IVP, 1984. 120pp. £4.50

This book fulfils the task of the series in which it is printed to survey issues of contemporary theology and to help theological students, and others who are interested, to reach an 'overview' of today's Christology before going on to a detailed study.

It is probably most valuable in the way in which it relates the differing views of those discussed to one another, endeavouring to distinguish the differences and the likenesses in today's opinions.

Beginning with the official Nicean and Chalcedonian statements about Christ, his person and nature, which are accepted by all the major Churches in their official formularies, Professor Runia traces the orthodox theology of Barth, the new quest for the historical Jesus of Bultmann and others, and then discusses at length the variations in the drift away from Chalcedon of such as Pannenberg, Schillebeeckx, Küng etc.

It is tightly packed as we would expect from such a widely ranging discussion in a slim volume of just over 100 pages. The author's intention to mediate present-day scholars' views of who Jesus was is largely achieved, and the most important question 'Who do YOU say that I am?' is always there.

D. A. TASSELL

D. A. Carson (ed), *Biblical Interpretation and the Church*, Paternoster Press, 1984. 260pp. £6.95

It may come as a surprise to find a distinguished Evangelical scholar affirming that Matthew 16:18 (Thou art Peter and upon this rock I will build my church) means just what it says. Because Roman Catholics have used it as the basic proof text for papal supremacy and historic succession, Reformers have contended that Jesus was really praising Peter's faith. Dr. Gerhard Maier of Tübingen will have none of this. He argues that the promise of the Lord is directed specifically to Peter . . . and then significantly adds that the real question is whether that unique historical commission demands or even allows the idea of successors to Peter.

The reference is to an essay on The Church in the Gospel of Matthew, the third of eight papers from the 'Faith and Life' study unit established by the World Evangelical Fellowship, collected in *Biblical Interpretation and the Church*, and admirably edited by Professor Carson of Trinity Evangelical Divinity School. The contributors come from seven countries.

Their chief concern is with hermeneutics, the art or science of interpreting Scripture. All are eminent scholars, given to close-packed argument. All I can do in limited space is to whet the appetite of prospective readers by indicating their themes and some of their judgments.

Professor Carson writes the first essay, a warning against preconception and presupposition; meaning, to simplify his own careful analysis, making up your own mind or accepting current ideas and then emphasising (perhaps without realising it) the Scripture passages that fit. Good theory and good theology 'depend on criticism and self-criticism of the most even-handed variety'.

Dr. R. T. France, Vice-Principal of London Bible College, follows with a brief and excellent study of The Church and the Kingdom of God. We go astray if we think of kingdom, Basileia in Greek, as some sort of social or political structure. It refers to the sovereignty of God. It is largely a New Testament gospel phrase. Jesus used a term familiar to his hearers but gave it new meanings. Nothing illustrates this more clearly than the diversity into which he stretched its usage.

The fourth essay, by Professor Clowney of Westminster Theological Seminary, has the daunting heading: A Hermeneutical Deepening of Ecclesiology; which is as good an opening as any to warn the general reader that the going in this scholarly book is sometimes tough and to promise that perseverance will be well rewarded. From a splendid analysis of metaphor in the Bible he takes up Dr. Carson's point about preconception. Is it not inevitable that every cultural context will feature one metaphor of the church, convert it into a model, and ignore less pleasing or convenient images? If so, the interpreter has a special responsibility to present the metaphors that are unwelcome or ignored, and in so doing must bring out both the original meaning and the contemporary relevance.

Next comes something rarely discussed nowadays, Principalities and Powers, by Dr. P. T. O'Brien of the University of Sydney. Much current liberal theology 'demythologises an antique world-view'. The demonic powers are humanly created social structures. Dr. O'Brien contends that the teaching of Scripture is not to be explained away. The principalities and powers are personal supernatural intelligences, seeking to influence for ill the world and mankind. The Christian's weapons in this warfare are spiritual.

Both the following essays take us out of a Western context. Tite Tienou, formerly Executive Secretary of the Theological Commission of the Association of Evangelicals of Africa and Madagascar, deals with The Church in African Theology; Professor Emilio Nunez of the Seminario Teologica Centralamericano, with The Liberation Theology of

Gutierrez. The first is novel and fascinating, centring on the African concept of the church as the Great Family. The suggestion is that too great a stress on collectivism and too little on the caring role of the local church is now being corrected. The second is on more familiar ground. Liberation theology is sympathetically described, rooted in the South American reality, and challenging conservative evangelicals by its social passion for justice; but 'in the final analysis their criterion to determine the validity of their theological reflection is not the biblical text but the social context.'

Finally, Professor Shedd of the Faculdade Teologica Batista de Sao Paolo tackles Social Justice; a theme which has much exercised evangelical thinkers in the past decade. I warmly commend what I believe to be his central theme: that profound Christian concern for social justice is a consequence of living faith and not an alternative to it. Here is the right conclusion to a book well worth study; learned, fair minded, confidently but not complacently evangelical.

EDWARD ROGERS

Holmes Rolston 111, *Religious Inquiry — Participation and Detachment*, Philosophical Library, New York, 1985. 283pp. Hardback. $22.50

In this book Professor Rolston examines Religious Inquiry as a journey undertaken with four travelling companions who represent four great spiritual traditions. St. Augustine represents classical Christianity, Ghazali Islam, Sankara Hinduism and Nagarjuna Buddhism. The Professor's basic thesis is that a Spiritual journey requires both participation and detachment if we would seek to travel well. We cannot truly understand a world view and a spirituality until we are committed — it is faith that seeks understanding, rather than understanding which leads to faith. However some form of critique is important in order to deliver us from utter subjectivity.

Professor Rolston shows us the main common factors of these great spiritual systems as they are personified in the four saints. For example the universally recognised necessity for a turning from self-centred living in order to find truth and real self value, the necessity for humility, etc. However the Professor does not in any way wish to encourage in us a naïve sense that all roads lead to the same reality. He shows us quite clearly the spiritual relativity involved in religious inquiry. He argues that it is quite possible that one system or another might well contain a closer approximation to 'The Truth' than does its rivals. '. . . students may find pointless such exclusivism in particular faiths and repoint all of them toward one goal, thinking that all of them are generally right and

particularly wrong. But this diluting of the concrete paradigms of classical faiths by finding some nondescript common denominator of all faith is quite as perspectival as to think that only one is right' (page 260f.).

The great practical use of turning from our own spiritual ghetto is according to Professor Rolston, that we might understand our own tradition better, for although, 'Whether we are remiss, or right, we see through what we are.' (page 130) it is also true that, 'We do need to look for the falsifications that other sectors of the religious world can bring to our own faiths.' (page 244)

I came to this book knowing a good deal about Augustine and Classical Christianity and virtually nothing about the other three saints and their various traditions. I found that Ghazali, Sankara, Nagarjuna and indeed Rolston, sharpened my grasp on my own world view and its spirituality. Rolston's thesis and therefore his book worked well for me.

M. W. ELFRED

Dr. Paul Brand & Philip Yancey, *In His Image*, Hodder & Stoughton, 1984. 287pp. Paperback. £2.25

In His Image is an unusual book, relating one man's everyday work and the Christian faith to each other. It is a sequel to an earlier book by the same authors, called 'Fearfully and Wonderfully Made'. Although the book is written in the first person, from Dr. Brand's point of view as a missionary doctor, Yancey's contribution is more than that of a ghost writer. He has also developed some of the ideas and insights expressed.

The main thread of the book is about the way in which the structure and function of the human body illuminates the idea of man as the 'Image of God'. Its strengths lie in a fund of stories from Dr. Brand's experience, and some novel insights drawn from them.

There are five sections — Image, Blood, Head, Spirit and Pain — in which the medical analogy with spiritual life is explored. Image concerns the outward appearance of people. This is a matter of importance to Dr. Brand because of his involvement with leprosy patients, who can suffer disfiguring deformities, and are sometimes psychologically harmed in consequence. The fact that the image of God can be reflected back from the unlovely can be a great encouragement to leprosy patients.

The section on Blood is a particularly interesting one, although not for the squeamish. Some of the stories here are fairly harrowing, but illustrate blood as a symbol of life and cleansing (as in the OT) rather than death (as we tend to regard it contemporarily). The writers manage to articulate very effectively the shock which Jesus' suggestion that his

disciples should 'drink his blood' must have been. They bring home something of the richness of sacramental imagery which we often miss.

In considering Christ as Head of the church, choosing to be limited to action through His disciples, the writers explore the metaphor of the brain and nervous system. There are some striking stories here, too, such as finding the jar containing Einstein's brain; and some helpful illustrations of the nature of sin as a kind of spiritual nerve poison, interrupting communication to the Head.

In the section on Spirit, the stories contain some interesting snippets of medical research, and explore the vital function of breath. The Holy Spirit is concerned with the connections between people, the sense of belonging, acceptance and unity, the writers explain, and present the metaphor of the immune system as defining what 'belongs' to us and what doesn't. Discussion of the value of listening to God and the need to listen lead on to some realistic thoughts on guidance.

The final section — Pain — contains some of the most novel insights. In working with leprosy patients, Dr. Brand is acutely aware that pain is vital. Without pain, the leprosy patient is doomed to physical damage; not just cuts and knocks, but the everyday pressures of the ground on the feet and so on. In the same way the body of Christ can suffer severe damage when its members cannot hear each other's pain. There are occasions when the Church 'shoots its wounded', rather than healing them. In Christ, however, the pain of man has become the pain of God.

Although the book contains some rather odd vocabulary in places, it is well written, with some memorable turns of phrase; like the observation that 'The whole mental process comes down to . . . ten million cells spitting irritating chemicals at each other'!

There is always some danger in analogies, of course, so the metaphors which the book suggests should not be taken too far. The analogy of the Head for example may suggest too causative a view of prayer. Nevertheless, the parables contained in the human body as the Image of God are illuminating and their presentation here, with plenty of interesting anecdotes and quotations, make for a good read.

GORDON R. CLARKE

Sir Norman Anderson, *Jesus Christ: The Witness of History*, Inter-Varsity Press, 1985. 176pp. Paperback. £3.95

This is a second edition, substantially revised, of Sir Norman Anderson's book 'Christianity; the witness of history' (1969). The change of title is important because the focus on the 'central figure' is a natural response to the controversies surrounding recent statements by the Bishop of

Durham, the Rt. Revd. David Jenkins. As the Church of England wrestles with the Virgin Birth and the Resurrection, this book, which examines the evidence for the historical basis of Christian belief in Jesus Christ as the supreme revelation of God, is a highly relevant document.

The book is very clearly presented, the facts and arguments being marshalled with the skill and thought of an eminent lawyer and academic. The fact that the author is in addition a practising Christian who has a real command of Biblical knowledge and who also knows in depth the work of many modern theologians makes this a weighty case for either prosecution or defence, depending on one's own viewpoint.

Sir Norman's approach is to *look at the evidence* as it applies to four questions: (1) the historical basis of Christianity — is it convincing? (2) the central figure of Christ — how should we regard him? (3) his death by crucifixion — was it inevitable? (4) the resurrection — what really happened? He is scrupulous in presenting differing viewpoints on each of these aspects, though his critical faculties are employed heavily against those whose beliefs differ from his own, e.g. Bultmann (p.116) or the Form critics (pp.37–38). His own position is definite and clear:- 'the evidence for the historical basis of the Christian faith, for the essential validity of the New Testament witness to the person and teaching of Christ himself, for the fact and significance of his atoning death, and for the historicity of the empty tomb and the apostolic testimony to the resurrection, is such as to provide an adequate foundation for the venture of faith'.

Ultimately, Sir Norman's case rests on the question of the authority of the Bible as a source of divine revelation. For him, 'Christ himself paid repeated testimony to the divine authority of the Old Testament scriptures'. Again, 'the documents (which make up the New Testament) are not the unaided recollections of the disciples, but constitute a divinely authoritative record' (pp.41–42). If one accepts these propositions then Sir Norman's argument is formidable and probably unanswerable. If, on the other hand, one sees the Resurrection (to take one example) as essentially a spiritual experience, and if one regards some Biblical language as symbolic rather than literal, then doubts may remain. However, even in this latter case, this is a book which is still well worth reading, for it drives one to reflect upon the foundations of personal faith.

W. ALAN HAYWOOD

David J. Bartholomew, *God of Chance*, SCM, 1984. 181pp. Paperback. £5.95

In this discussion of chance Professor Bartholomew tackles a concept

which has come to play a fundamental role within the scientific world-view and to pose searching questions for theology. Chance is therefore a subject which offers possibilities for fruitful dialogue between science and theology and this book constitutes an important and interesting contribution to that dialogue from the scientific side.

Bartholomew seeks to show that chance is not inimicable to order and purpose, but actually conducive to the kind of world which one would expect a God such as Christians believe in to create, in that free human choices require a degree of indeterminancy in nature. He argues that chance was God's idea and is His method of ensuring the variety, resilience and freedom necessary to achieve His purposes. The argument starts from an historical overview and considers first the work of Jacques Monod and a variety of the replies to his theses. The probabilistic arguments of Hoyle, Wickramasinghe, et al. concerning the origin of life are assessed next, and found wanting. Then comes the core of the book in which Bartholomew handles carefully the range of interpretations given to the concept of chance, and the subtle inter-relationships between chance and certainty (or law, or necessity) and builds, tentatively, a natural theology of chance. The final chapters work out the implications for the doctrine of providence in some detail, and for other aspects of Christian thought more briefly.

A welcome feature of the book is that Professor Bartholomew states explicitly his presuppositions and the criteria he is using, and acknowledges the risk involved in moving out of his specialist area. It is this feature, however, that makes the book one contribution to a dialogue rather than a definitive treatment of the subject. Bartholomew declares a 'common-sense' view of scientific activity, as describing adequately, though incompletely, an objective world. Scientific truth is considered capable of clearer, less ambiguous expression than the more profound truth of the Christian revelation, and is therefore taken as the starting point; biblical truth is interpreted in the light of scientific knowledge. This leads to Bartholomew's two criteria for an account attempting to create a synthesis of the scientific and biblical points of view: (1) It must take the facts of nature in their most obvious and natural sense. In particular it must treat chance as real and fundamental. (2) It must be capable of making sense of scripture and, in particular, it must not diminish God by assigning to Him attributes which limit His power or compromise His nature revealed as love.

The book is intended to pose questions to theology and at the theological level certain comments must be made. There is little methodological consideration as to how theological and scientific statements and descriptions relate together, or to the possibility of levels of description and meaning (not just the micro/macro distinction) made

from non-mutually reducible, though not contradictory, standpoints. For example, (1) a high view of the sovereignty of God is too easily held to point to determinism and the absence of freedom, (2) the site of God's direct action is continually sought throughout the book, surely a quest prone to lead to confusion. The idea of created, contingent freedom is not considered, indeed Bartholomew comments in passing that he sees little need for invoking the act of God to sustain the universe in being.

Much of the argument centres around a distinction between individual events, whether at the atomic or human level, and aggregates. Chance and individual freedom of action are seen as consistent with predictability at a higher level of aggregation, e.g. 'laws' of social behaviour. It is suggested that God's activity and providence be discerned primarily at the macro-level, as the Spirit works to persuade the minds of men so as to achieve God's purposes. This view is claimed to have apologetic advantages, e.g. with regard to suffering and evil, and to provide a more majestic and credible vision of God and His relationship to the world. Yet the gain in the area of theodicy is to the detriment of God's sovereignty and involvement. Bartholomew seems to be motivated by a need to resolve the conflict he finds between the chance he requires for human actions to be free and the theological grounding of all that exists in the will and act of God. Perhaps inevitably, given his methodology, the resolution tends in the direction of chance, although he still views God as generating the requisite degree of randomness, and therefore ultimately responsible.

In conclusion, therefore, Professor Bartholomew's book is stimulating, wideranging and never dogmatic; he considers a number of alternative views and invites the reader to judge whether that sketched above is more majestic and credible. The reviewer must confess he did not find it to be so.

K. G. HORSWELL

John Thurmer, *A Detection of the Trinity*, Paternoster Press, 1985. 93pp. Paperback. £2.95

This is not an easy book to read, although the author has confined his more technical material to footnotes. But then, the subject with which he is concerned is not an easy subject. He sets out to explore the central Christian doctrine of the Holy Trinity. It is quite impossible for a Christian to ignore the Trinitarian concept, for it is written into our creeds, our hymns and our liturgy. But for many Christians the attitude adopted is 'I don't understand it, I just accept it'.

What makes Thurmer's treatment of the subject interesting is that his

inspiration was the theological work of Dorothy L. Sayers. He takes up her investigation of divine/human analogy to explore the question 'What, in human thought or experience, can God the Holy Trinity be like?'

The book examines with great care the words we use, and which others have used in describing God, and the human experiences which give meaning to the words. Dorothy Sayers, in her book *The Mind of the Maker* analyses the action of creation into Idea, Activity and Power, and relates these to the three Persons of the Holy Trinity. By using her insights and other analogies, this author makes the doctrine of the Trinity accessible to us on the basis of our own human experience, and the ways in which we interpret it.

KENNETH G. GREET

Ilya Prigogine and Isabelle Stengers, *Order Out of Chaos*, Heinemann, 1984. 349pp. Hardback. £9.95

Since its inception in the 19th century, thermodynamics has been confined almost exclusively to the study of reversible processes, isolated from their surroundings, at, or near, equilibrium. Although yielding much useful information, not least to the chemist and engineer, matter is often organised in a way that is far from equilibrium: there may be a continuous exchange of energy and materials with the surroundings — for example, a biological cell or a city (p.127).

In 1977 the Nobel prize for Chemistry was awarded to Ilya Prigogine for his work on the thermodynamics of systems which are not in equilibrium. His ideas have stimulated the interest, not only of physical scientists, but of biologists, economists and sociologists.

The authors of this book trace the development of two dominant themes in classical physics — order and chaos, and their modern integration in a somewhat unexpected synthesis: a synthesis in which it seems that structure can arise from disorder in a spontaneous manner, as when streamlined flow suddenly becomes turbulent flow at a critical velocity. While turbulent flow appears to be chaotic, it is in fact highly organised on the microscopic scale.

The writers first discuss the Newtonian mechanical world view, according to which the universe is a machine which operates perfectly efficiently quite independently of man. They conclude that, whereas for the ancients nature was a source of wisdom, and to medieval man spoke of God, in modern times nature has become silent: so silent that Kant believed that science (our limited understanding of the world) and truth (how the world actually is) should be entirely separated. We have lived with this dichotomy, say the authors, for two centuries.

The second part of the book describes the beginning of a possible re-unification of knowledge via the discovery of heat and of the laws of thermodynamics. The problem with Newton's laws is that they are symmetrical with respect to time.They can be applied both forward and backward in time, to give equally valid descriptions of, for example, planetary motion. The thermodynamic conception of entropy, however, gave a definite direction to 'time's arrow'. Time is evolution towards equilibrium — a state of maximum disorder. How can this be reconciled with Darwinian evolution towards increasing complexity?

The writers argue that, central to the debate, is a rediscovery of time, that is of irreversibility. Attempts to restore classical orthodoxy in physics, through hidden variables or other means, are doomed to fail, they maintain. '. . . and it is necessary to move even farther away from deterministic descriptions of nature and adopt a statistical, stochastic (governed by laws of probability) description.' (p232).

The final part of the book reviews the remarkable developments in physics this century and includes an outline of Prigogine's own work. Some attempt is then made to point the way forward. This the authors see to be concerned with the theory of irreversible processes at the microscopic level, in contrast to that at the macroscopic level which is well established. '. . . irreversibility is a source of order at all levels.' (p.292).

They add the interesting comment, '. . . an essential characteristic of our scheme is that it does not suppose any fundamental mode of description . . . we used a multiplicity of levels . . . none of which may have a claim to pre-eminence.' (p.300). The context makes clear their view that philosophical, artistic and ethical values can no longer be separated from the scientific concept of nature.

The book is non-mathematical and contains many interesting quotes. The style is generally such as to sustain interest, although the treatment of thermodynamics formulated by Carnot is somewhat dull. In contrast, the language occasionally is rather flamboyant (as is the dust-cover!). There are copious references and an index.

D. A. BURGESS

Alan Hayward, *Creation and Evolution; the Facts and the Fallacies*, SPCK (Triangle), 1985. 232pp. Paperback. £2.75

Dr. Hayward is a physicist who has already written several books about science and the Christian faith. In this book he contributes to the current vigorous debate about origins. The book is in three parts. The first reviews genuine scientific objections to Darwinism, mainly from

biologists but also from mathematicians, physical scientists and philosophers.

In part two he considers evidence for the age of the earth. Here, 'flood geology' is criticised and arguments for a young earth examined. His firm conclusion is that the evidence for an earth much older than ten thousand years or so cannot seriously be refuted.

Part three reviews the various ways in which Christians have sought to relate the biblical account of origins with evidence from the sciences. Without necessarily agreeing with all of the writer's conclusions, I found this the most interesting part of the book. As the writer stresses in conclusion, the evidence for creation of the universe has never been greater: however, recent-creationists in misguided enthusiasm 'have brought the very idea of divine creation into disrepute.'

Although the pace is brisk, the style is never superficial. The chapters are well referenced and indexed.

D. A. BURGESS

Derek Burke (Editor), *Creation and Evolution*, Inter-Varsity Press, 1985. 288pp. Paperback. £5.95.

Ever since the publication of Darwin's *Origin of Species* in 1859, Christians have been divided on the issue of whether the biological theory of evolution is compatible with biblical teaching. This book is in the form of a debate between one group of writers (described as theistic evolutionists) who, at least tentatively, accept the theory and another group (called creationists or creation scientists) who reject it. It provides an opportunity for each side to present its case and also to challenge that of the other, thus enabling the reader to form a balanced judgment.

All the writers accept the Bible as authoritative, and therefore share important common ground. They all believe that God is the sovereign Creator, and that he created *ex nihilo*. They all believe that sin is the result of the fall, and is not to be explained by reference to animal ancestry. They all reject evolutionary philosophies (e.g., the religion of progress).

The fundamental problem is that a 'natural' reading of Gen. 1 indicates that the earth and all its organisms were created in the space of six days a few thousand years ago, while a 'natural' reading of the geological record suggests that the earth is of very great antiquity and that organisms appeared in succession over a span of millions of years. The creation scientists' response is to try to reinterpret the geological record and other scientific evidence to conform with their literal reading of Genesis. The theistic evolutionists' response is to maintain that the first

creation narrative does not have to be taken in its superficial sense. But neither side presents a convincing case — probably for lack of space. The creationists attack the theory of evolution at various weak points but do not give a clear consistent account of any theory that accords with both scientific fact and their biblical interpretation. The evolutionists quote evangelical scholars (Ellicott, Thompson, Kevan, and others) who support a non-literal view of Gen. 1, but ignore other equally scholarly writers who maintain a literal interpretation, e.g., von Rad, who writes 'What is said here is intended to hold true entirely and exactly as it stands. Nowhere at all is the text only allusive, "symbolic", or figuratively poetic'. (*Genesis: a Commentary*, Westminster Press, 1961) If all biblical scholars were agreed, to quote from some of them would be an adequate argument; but when such conflicting views are held by commentators, the evolutionists should give good exegetical reasons for accepting one rather than the other.

Further disagreements follow from the different views of Gen. 1. The creation scientists have to conceive of the events recorded in this chapter as different in principle from natural processes observed today: they maintain that God's creative activity is something different from his providential work and is necessarily miraculous. The evolutionists, on the other hand, find no reason in scripture for believing that these events cannot be explained, at least in principle, by reference to currently recognized natural laws.

The creationists fear evolution on the grounds that it so often leads to atheism and materialism. The theistic evolutionists argue that the fact that some people misinterpret a theory is no reason for rejecting the theory if there are good scientific reasons for accepting it.

These are just some of the matters debated in this book, which is readable, not highly technical in language, and courteously written.

Anyone interested in contemporary science/faith issues would do well to read this book. It probably will not change his views; but, whichever side in the debate he favours, he is bound to find it challenging.

GORDON E. BARNES

Roger Lewin, *Human Evolution*, Blackwell Scientific Publications, 1984. 100pp. Paperback. £6.80

Dr. Lewin's book is one of a series designed as a university introductory course, and hence gives a bird's-eye-view rather than a detailed study of the subject. The subject in question in palaeoanthropology, although related topics are also outlined. The overall impression given by this presentation is one of clarity, both in text and in diagram. It is a book that

makes an immediate appeal — a book to 'dip into'. Although there are 30 chapters, none is more than four pages long. One could accuse the work of superficiality, but this would be to misjudge its aim, which is to whet the appetite. In this, it succeeds admirably, and the reviewer, whose knowledge of the subject is very limited, found it stimulating. Further-reading suggestions are given, and there is an excellent index.

The author suggests that this is an exciting time for palaeonanthropology, because evolutionary theory and geology are both undergoing changes in outlook. Moreover, much information is derived from molecular biology. To this extent, such a book as Dr. Lewin's fills a need, not only as an introductory text, but also as review and re-appraisal. In the last chapter the author deals with culture and human experience, and briefly examines sociobiology, and the nature-nurture debate. He refrains from expressing a personal opinion, but as a biologist sees man as no more than a member of the animal species, albeit an exceptionally gifted member.

A. B. ROBINS

Fred Alan Wolf, *Mind and the New Physics*, Heinemann, London, 1985. 342pp. Hardback. £14.95

Quantum theory has produced a revolution in our understanding of the nature of the physical world. At its roots the solid dependable world of everyday is constituted of cloudy fitful quantum components. The cosmic machine of nineteenth century physics has proved unexpectedly creaky and there have not been wanting people to appeal to this in defence of wider philosophical points of view, though their testimony has not agreed together. There is an unresolved debate about the role of the observer and his consciousness in eliciting definite answers when this uncertain quantum world is interrogated experimentally, which has suggested to some a specific role for mind in physics. These are issues of the highest importance which demand careful consideration and accurate exposition. They do not receive this treatment in the book under review.

A paragraph prefixed to the text gives us the flavour of what will follow. It tells us that an important concept is that of the star wave and that

> A star wave is a wave from the future. In quantum physics anything physical is represented by a wave of probability called the quantum wave function. To determine these probabilities the wave must be multiplied by the star wave, the complex-conjugate, time-reversed, mirror-imaged wave. In brief the star wave makes dreams come true.

Now I know that to calculate probabilities I have to multiply the wave function (psi) by its complex-conjugate (psi star) and I also know that, because of the antilinearity of time-reversal, psi star is the time-reversed solution of the Schrödinger equation associated with psi. However, neither in brief nor *in extenso*, does that lead me to the fatuous view that the physical world is a sort of Disney-Land of dream fulfilment.

I cannot even recommend the book for its account of quantum theory itself, which I thought was often obscurely presented. Another example will illustrate Wolf's technique. Talking about the crucial problem of the collapse of the wave packet (the way that probability, which was spread out over many possibilities, becomes concentrated by the act of measurement on the actual value found) he says

'The quiff has popped. It now conforms to the will of its master.'

A whimsical account of physics is combined with the unwarranted assertion of psychic significance. For page after page Wolf burbles on in this infuriating, would-be grandiose, fashion. He tells us that he once taught a course called 'Physics for poets'. In principle that is a great idea; modern physics is a great untapped reservoir of metaphor. However if it simply produces an endless string of phrases such as 'mind is the hope of matter' it just becomes 'Dirac for doggeralists'.

This is a really bad book in its unargued pretentiousness. I fear, however, that it may prove a commercial success because there seems to be a considerable appetite for 'mind-blowing' pseudo-syntheses of the scientific and the psychic.

JOHN POLKINGHORNE

K. Thomas, *Man and the Natural World*, Lane, 1983. Hardback. £18.95; 1984, Paperback. £4.95

This book is historical and deals mainly with the period 1500 to 1800, discussing the changing attitudes to nature. It cites thousands of references to the literature of the past. The references and notes cover nearly 100 pages.

The book starts with the old idea that everything in nature was made for man. Without metals we should not enjoy the glory and pomp of war (!); the louse is invaluable in that it teaches us to be clean in our habits; horse flies were created so that we could exercise our wits against them; chickens and sheep were made so that they would be quite content to be slaughtered, and so on. These were the sentiments one would expect to hear from preachers in the churches. Up to about 1650 all evil in nature was said to be the result of the Fall but thereafter this thesis was

played down. According to the new doctrine which partly replaced it, the world is as good as it can be.

Thomas is highly critical of Lynn White's thesis that Christianity is to be blamed for pollution of the environment. There was plenty of environmental pollution in cultures such as the Chinese, Mayan and American Indian which were untouched by Christianity. White forgets about biblical passages which stress man's stewardship (e.g. Prov. 12:10; Hos. 2:18, etc.). Protestantism in particular has done much to oppose cruel sports. There are many hints in the Bible to the effect that the creatures were not all made for the purpose of pleasing or helping man. Again, it was not Christianity but science which in its early days sometimes stressed the idea that science would increase the empire of man. One early biologist urges that caterpillars should be studied so that we may learn how to kill them!

The difference of man from the beasts is discussed at length. Man differs from the beasts in being a featherless biped; or in being the only animal who cannot wriggle his ears (Aristotle). Man spends less time in the gluttonous habit of eating than does any other other animal. Londoners revolted the Venetian ambassador by their disgusting habit of eating fruit in the streets, like so many goats! Perhaps man also differs from the beasts in that he thinks he looks quite nice. Contrast the elephant who knows he is ugly, for you have but to bring him to a stream when he will deliberately stir up the underlying mud so that he cannot see his reflection in the water! It was obvious, irrespective of the difficulty of defining man too exactly, that men should stay men and not pretend to be something else. To swim in water was an all-but-wicked habit by which some men degraded themselves to the status of a fish.

Perhaps the habit of walking on two legs instead of four provides an important distinction between man and beast? An experiment was suggested to find out. Selected children were to be reared without ever seeing adults walking on two legs. Those who fed them must crawl up with food on hands and knees! Evolutionary notions were introduced, of course. Locke was reminded that the Germans call gloves 'hand shoes' which proves that man cannot always have walked on two legs. A fine proof this, which reminds one of Gilbert Ryle's famous book, *The Concept of Mind* in which he also settles facts relative to dualism by the way people talk. Descartes comes in for some interesting comments: he changed his views, it appears, and did not latterly think that animals were automata, though he denied them souls. (This is easily proved from Scripture, for St. John says that there will be no dogs in the New Jerusalem and nearly all the commentators of the day took this quite literally!) In past centuries the automata theory was natural enough seeing that the technicians of those days invented scores of automata of

every conceivable kind. Some people seem to have found it quite difficult to discover if these were alive or not, for instance a ruler in China who was shown a watch thought it was alive!

On Science and Religion, the theory of the Great Chain of Being proved ambiguous. It put man in his right place in God's universe, but seemed to suggest a continuity between beasts and men. The discoveries of Redi and others were making it impossible to believe any longer in spontaneous generation, a doctrine which had been held by all educated men for many centuries even though it imperilled the doctrine of Creation.

Of course much of this is at the anecdotal level and is highly amusing. One cannot help wondering however whether a larger fraction of the book might not have been devoted to more serious matters.

R. E. D. CLARK

Colin A. Russell, *Cross-Currents; Interactions between Science and Faith*, Inter-Varsity Press, 1985. 272pp. £7.95

This is a book of compelling interest, and the reader is carried along by the author's enthusiasm for his subject. The text is well-researched, and extensively documented, yet the only chapter which may cause difficulty because of its complexity is chapter 10, where we are given a very truncated summary of some of the recent advances in scientific theory.

Dr. Russell pursues the metaphor of science as a river. He says:- 'Rivers have much in common with science: small beginnings, capacity for useful work, potential for harm and damage, variable characteristics over a period, and above all, the tendency to get bigger, more visible and more powerful'. All these characteristics are observed as the history of science is recounted, and its interaction with Christian faith examined.

The early springs of science are back in the days of Greek civilisation. From there, the story revolves around the names of the great scientists whose work has changed the direction of human thinking and indeed history. The first of these is Copernicus, whose revolutionary ideas marked the beginning of the modern age of science.

The chapter entitled 'Troubled Waters: the Evolution Controversy' is a masterly survey of the work of Darwin and the reactions to it. Of particular interest is the evidence of Christian support for Darwin's general views. Many different attempts were made to build a 'bridge over troubled waters'. There is an excellent, though critical analysis of the writing of Henry Drummond who wrote, *Material Law in the Spiritual World*, and *The Ascent of Man*.

The penultimate chapter, entitled 'Floodtide' reminds us of the appalling threat to the whole future of mankind by the misuse of the fruits of science and technlogy, particularly in the creation of the nuclear bomb. But the writer ends on a hopeful and positive note. 'As the rivers of science and faith flow ever more powerfully, they will accomplish far more together than either could do alone. And so it should be, for each is a response to the Lord of Creation.' Thus Dr. Russell states the conviction that has been reinforced by his study of the subject to which he has brought integrity of mind, and a perceptive spirit.

KENNETH G. GREET

David Bolter, *Turing's Man: Western culture in the computer age*, Duckworth, 1984, 264pp. £12.95

For Bolter, mathematician Alan Turing's legacy was a new image: man as information processor. The former's book is about the cultural impact of the computer. His scope ranges widely, as he compares and contrasts ancient Greek manual technology with the machine technology of the past two hundred years. Computers, according to Bolter, uniquely combine the 'grand machine' of Western European dreams, with the tool-in-hand of the ancients.

Bolter's main point is that each age has a 'defining technology', which redefines the roles of humans and nature. Whereas the clock has been the dominant defining technology of the industrial era — it gave us a notion of an orderly cosmos, and quantified abstract time — Bolter suggests that we are entering a new phase of human cultural consciousness, shaped now by computer. For the computer makes new notions of logic, time, space, and language accessible to vast numbers of people. The burden of the book is an elaboration of this theme.

Artificial intelligence (which, Bolter insists, is 'engineering', not 'science') is simply one more effort in the long tradition of attempting to create humanoid beings. He sidesteps the question of whether computers will ever 'think', and dismisses the idea that AI researchers have any intention of making *more* than information processors. They do not pretend that they are producing anything approaching a 'whole man' (sic). AI, says Bolter, thus expresses both the potential and the limits of technology.

The idea that AI researchers should be concerned with *limits* is curious in the light of the *hubris* that so often pervades at least popular AI writing. But one of Bolter's proposals is that the computer, because it obliges the programmer to manage scarce resources, will in fact encourage a more widespread concern with 'limits' and 'scarce

resources', at just the time when such ecological constraints make it appropriate. Bolter goes further, hinting that our very view of history and progress could be altered by the sense of limits engendered by the computer. Could we move away from the Christian view of linear time, and its secularised 'progress' version, and return to a cyclical conception once more? Is the universe like a computer game? One day the screen will be wiped clear, and things will start over . . .

Books like this are of immense interest to Christian thought, precisely because Bolter is attempting to locate the distinctive aspects of computer-culture and new human self-images within the whole sweep of Western philosophy. Whether or not, on logical grounds, one can argue that AI challenges faith, the cultural impacts of computing will still be encountered, theologically as well as socially. One thing puzzles me, however. Will not the very advances he discusses obviate the requirement for programmers, except at a high level? And if so, will the algorithmic model really have the cultural impact that Bolter claims? Are 'defining technologies' fictions? We shall see. But it does suggest that the concept of 'Turing's man' will have to be tested in the crucible of the real world — by social and cultural as well as history-of-ideas analysis — before its value can be assessed properly.

DAVID LYON

Malcolm Jeeves (Ed.), *Behavioural Sciences — A Christian Perspective*, IVP, 1984. 271pp. Paperback. £8.95

'There are no easy answers', says Malcolm Jeeves in his preface to this important and interesting series of essays, when we try to relate behavioural science and Christianity. The reader is not expecting answers, then, from this book, but does expect and indeed receives useful insights from an evangelical perspective into contemporary behavioural science.

Inevitably, in assessing such a wide ranging set of essays, I find myself essentially an interested layman rather than an expert on most of the issues. In this context, I approached the book hoping to learn something new, and I was not disappointed. The book explores the nature of psychological research, the influence of biology on behaviour and the influence of environmental factors in its first three sections; and closes with topics such as pastoral care and education in which the interests of theology and behavioural science converge.

However, for the interested layman, there are also a number of salutary warnings. The themes and models of behavioural science are not to be endowed with any great finality; nor should they be enshrined

in our theological or philosophical approaches to the world. This is true of the physical sciences too, of course, remembering the fruitless debates about the meaning of Heisenberg's uncertainty principle, but behavioural science with its apparent human dimension is much more seductive in this respect. Caution in use of results is thus the keynote of the book, though at times at the expense of presenting a negative picture.

Each essay is helpfully preceded by an editorial paragraph introducing the topic to show its importance to Christian worldviews. Inevitably, the style and quality of the essays is uneven. Some are technical and some bland. The overall tone is, to my mind, a little tentative when it comes to facing up to the real issue of confrontation between Christian tradition and the behavioural sciences. How do we reconcile Christian notions of selfishness and 'letting God take control', for example with the clinical experience that people need to take responsibility for their own lives in order to be fully adult and fully human. I think there are answers to this, but the book does not reveal them.

Nevertheless, the essays do shed light on a number of dark corners, and provide the distinct perspective which will be helpful to a Christian readership. In particular, some guidance is given on what are important issues and what are not. Professor Jeeves' opening chapter on psychological research, for example, explains that psychologists do not claim exclusive rights on understanding how people behave, and that some Christian reaction to such research is therefore misplaced. On the other hand, he makes a plea for a human psychology, in which man is not a thing to be manipulated, but a person loved by God.

The second section of the book, concerning the biological bases of behaviour, begins with one of Donald Mackay's workmanlike essays on brain science and responsibility. This is a neat summary of Mackay's thinking in this area, with which many Christians in science will be familiar. He stresses the importance of the information processing model of brain function, and the usefulness and limitations of the brain-computer analogy. He explains that it is not brains that think, but people, so that the brain can be fully deterministic, but man still free. The arguments demonstrate that there is no need for Christians to be overdefensive about the biological nature of the brain, and that brain science if used wisely can actually enhance our ability to do one another good. This sounds a positive note which seems to me appropriate for a Christian approach to science.

Sam Berry's lively essay on genes and morals continues along similar lines. How do we overcome arguments which suggest that human responsibility can be evaded on biological premises? Perhaps Berry's approach is a bit too straightforward. The issues of genetic inequality, for

example. It is easy for an affluent society to praise the worth of the refuse collector, but is society prepared to give him a job and a decent wage for it? Nevertheless, Berry's clear message that the inheritance of behaviour is by no means unequivocal is a very important one. It means, on the one hand, that we cannot assume things about a person's behaviour from their genetic background, nor can we disclaim responsiblity for our own actions on that basis.

Duncan Vere writes about the effect of drugs on behaviour. Clearly, one would not expect a Christian book to be particularly encouraging about the drug underground, but I doubt whether we can so easily dismiss the non-medical use of drugs as wholly bad. The chapter includes an interesting discussion on pleasure, which starts out on the positive note that God wants us to have abundant life, but seems to end up regarding pleasure as generally dubious unless directed outside the self. I don't feel that this explores the problem far enough, since it is apparent that we all need time and space for ourselves if we are to flourish as human beings. All may not be well with the obsessively self-giving person. Again, it is easy for persons who are relatively content with their lives to say that escapism is a bad thing. For others, it may be all that keeps them going. We need to recognise this if we are to present Christ to them in a meaningful way.

For me, the highlight of the book was the first essay in the section concerned with social and environmental influences on behaviour. In this contribution, on social psychology, David Myers overturns some common presuppositions about the way behaviour and belief interrelate. In particular, he emphasises the finding that actions affect belief: 'Evil acts shape the self, but so do moral acts'. He shows how faith can be both a source and a consequence of action: 'Faith grows as we act on what little faith we have'. He insists that evangelism be based on truth, and not inflated or glamourised claims. He points out many ways in which human thinking can mislead, particularly the danger of selectively perceiving those things which maintain our existing ideas. This is an exciting contribution, because it suggests that new insights, emerging from social psychology can show us where we've got it wrong. While, again, we must be cautious about results we take on board, here at least are some constructive directions we might take to improve the effectiveness of the church.

Professor John H. Court tackles two major subjects in his two essays. Firstly, behaviour modification, and secondly a scientific and Christian perspective on homosexuality. He begins the chapter on behaviour modification with an informative survey of the way in which the behaviourist approach to psychology has developed and how it has been applied to clinical problems. The need for a sensitive human-

centred approach to behaviour modification is emphasised and the ethical questions explored, particularly those concerning the risk of the therapist's values being imposed upon the client. Court presents behaviour therapy, when used in a sensitive and open fashion, as a useful basket of techniques for helping people overcome problems and enjoy a greater degree of control over their own actions. Again, there is no need for Christians to overreact to the subject-matter.

On homosexuality, Court skilfully introduces the subject with a discussion of the incidence and causation of differences in sexual orientation. He explores the effectiveness of treatment (and indeed whether there should be any), and the moral and legal issues. The evangelical Christian is always in difficulties with this subject, as Biblical condemnation of homosexual acts is clear. However, as Court says, without this 'it is difficult to demonstrate that homosexual acts are any less valid than heterosexual behaviour'. This is a serious problem for the biblical Christian, for the alternatives appear to be to condemn homosexuality for what are in this day and age indefensible reasons, or to accept that the Biblical writers were speaking their own minds rather than God's.

The usual suggestion that we should accept the active homosexual as a person but condemn his or her acts, or condemn him or her to a life of celibacy, is a compromise which may be comfortable for the evangelical, but not for the homosexual. This hardly meets the obligation we have as Christians to fight the persecution and alienation which homosexuals face. I don't feel that the questions have been resolved, but this essay clarifies the issues in a sensitive way.

Gordon Stanley explores sensitization techniques, as used in the context of 'encounter groups' or other forms of 'group therapy'. He explains the major emphases in these approaches to improved adjustment for clinically 'normal' people, and points out some of the problems and limitations. One particularly useful point which Stanley picks up is the pressure towards self-disclosure which encounter groups tend to encourage. There is no evidence, he says, that people who are reserved are necessarily less well adjusted than those who are more open.

I find myself at odds with some of Stanley's criticism of the emphases of group work, however, and his analysis of the Christian response. The problem is that one cannot generalise easily about such a wide-ranging movement. My experience of group work, with skilful leadership, in the context of industrial training, leads me to believe that discovering and developing the self is fundamental to well-balanced Christian service. As I mentioned above, Christian notions of 'selfishness' may mislead us into believing we can neglect our own development. We should rather

take what action we can to 'remove the beam from our own eye' lest we just inflict our own unresolved problems on others in the way we 'serve' them. Nevertheless, Stanley is wise to commend caution, and properly trained leadership which does not seek to impose a philosophy on the group.

The section of the book which brings together theological and social science issues begins with Ronald Markillie's essay on conscience and guilt. This is a scholarly piece of work which is not easy to grasp fully on a first reading. Markillie investigates the meanings of the words conscience and guilt, and explores some of the manifestations of false guilt. He emphasises the difference between true guilt of which Jesus convicts us, and guilt feelings which are inflicted on us by our own super-ego. Our ideal is a position of secure independence before God. Unworthy, but redeemed.

Montagu Barker explores the roles of psychiatrist, counsellor and pastor, and returns to the theme of group work which was discussed above. Again, the writer is critical of such approaches, and finds it difficult to bring together an emphasis on personal growth and development with the traditional Christian view of self-giving. Dr. Barker criticises the Clinical Theology movement for offering approaches 'which may prove to be ephemeral, if not harmful'. I fear the same could be said of traditional Christian approaches to pastoral care and advice. The common factors Dr. Barker identifies which are present in effective approaches to care and counselling are worth careful examination if we wish to promote healing of the whole person within the Christian context.

In the final essay, Roger Murphy examines the impact of psychological work on education. He uses Ronald Goldman's work on the development of religious thinking in young children as a particular example. Goldman's work, it now seems, was rather too readily applied, which is a good illustration of the need for great caution in the application of social science research.

To sum up the book as a whole, comments of two of the authors come to mind. Professor Vere ends his contribution fearing the response 'You have criticised, but you have offered nothing new'. That would not be a fair criticism of this collection, however. The book is, after all, about questions rather than answers, as perhaps research in the social sciences must always be. It is informative, challenging and an interesting read. The principal message is re-iterated in the last paragraph of the book where Murphy sums up his essay. He commends a cautious critical approach to the evaluation and application of research results, which does not seek to re-inforce existing prejudices. From a Christian point of view, then, we will ask 'What is God telling us in these

data?' The great value of the book lies in encouraging us to ask that question.

GORDON R. CLARKE

P. W. Medawar, *The Limits of Science*, Oxford University Press, 1985. 103pp. £7.50

Peter Medawar is one of this century's outstanding scientists, well known in the field of immunology. This book is companion to earlier volumes 'The Art of the Soluble' and 'Advice to a Young Scientist', and it is obvious that Medawar is never happier than when trying to communicate the adventure of science, which he does very well. This book is a short one; as the author says, philosophical treatises are usually over-long and boring. Although the publisher's 'blurb' maintains that the essay of the title is preceded by two shorter essays, it is in fact the first of these, on science and scientists which is the longest. Here the joys of science are spelled out, joys which are for all, not just those who are specially gifted. This first essay is in the form of many pithy paragraphs on a variety of aspects of science, too numerous to mention here. Suffice it to say that Medawar has strong words to say to those who blame science for the ills of mankind. These pages are illuminated also by illustrations from the author's own experience at the bench. One remark which is perhaps misleading is the statement that 'Czechoslovak science was virtually brought to a standstill by the Russian conquest . . . of 1968.' This may have been true for a short period, but the generalisation is too sweeping.

A second essay asks the question 'Can scientific discovery be pre-meditated?', which is answered firmly in the negative, using three illustrations from the present-day. For these cases, funding would never have been granted, because of their un-expectedness. It is the prepared mind and observation which so often leads to discoveries. There is no such thing as the 'scientific method' which automatically leads to the desired result — only 'happy guesses'.

The essay from which the book takes its title is an examination of 'Ne plus ultra', which was attributed to pre-Columbus Spain. Are there limits to science, as was once thought about the Mediterranean? The question of first and last things, the meaning of existence etc., is not a pointless question, as we really need to know these matters for our own peace of mind. Medawar suggests that in the matter of experimental science, there are no limits, provided we have imagination, and ways of accumulating and organising data. There is no indication that scientists are running out of ideas. Nor are scientists the sort of people who will put

the future of mankind at risk from a holocaust. The only limitation is provided by the information content available in any system.

In the last chapters, the author tackles the question of origins and destiny. If belief in a God is to be accepted, then it must be a personal God, anything else is too vague. The author, however, admits that much as he might wish it otherwise, he cannot accept a personal Deity — reason tells him so. In this he echoes the dictum that man creates God in his own image, that is for peace of mind. Religion has led to much injustice in the author's view. However, the fact of special revelation, for example in Christ, is not mentioned, even in passing. This is a very interesting book as it throws much light on Medawar's thinking, and one is grateful to him for his honesty and comments on so many topics.

A. B. ROBINS

John Mahoney, *Bioethics and Belief*, Sheed & Ward, London, 1984. 127pp. £3.95

This is a book that should be read by Protestant doctors who wish to keep abreast of the thinking of moral philosophers in the Roman Catholic tradition. Its surprisingly fresh and open treatment of many topical themes now being debated inside Parliament and elsewhere makes interesting and helpful reading. The ethical and moral aspects of these contemporary issues and their impact on the individual and on society cannot be ignored, nor can the frightening vistas of possible future developments.

The author does not hesitate, in his closely argued pages, to examine objectively some of the *obiter dicta* coming from Rome, and to probe into the ethical and practical basis of these pronouncements. He appears to be sympathetic to some applications of *in vitro* fertilization, in cases where genetic material is provided by both husband and wife, but finds the intrusion of a third party unacceptable. He has some helpful comments on one-parent families and social deprivation.

He frankly admits that Catholic doctrine and natural theology are changing in such matters as organ donation and even in areas still controversial such as contraception and abortion. The present situation, he says, is 'highly unsatisfactory'. The novel is not 'an invariable indication of moral wrongness', he writes, as he refuses to condemn outright and *a priori* such procedures as the banking of human sperm and even of human embryos. The assertion that intercourse is invariably a 'morally indispensable precondition of procreation' is now abandoned, and the conceiving of a handicapped child may permit an abortion.

For a moral philosopher steeped in the Catholic tradition, the question

of the moment of 'ensoulment' raises many heart-searching problems that may appear less important to doctors whose simple Christian faith is untrammelled by the philosophy of Aristotle and Aquinas. Nor does the introduction of the idea of 'potential' really help in clarifying the situation. Some of these closely argued paragraphs seem to verge on the meretricious, if not the casuistic.

The author's comments on the criteria for the diagnosis of brain death are now generally accepted, as are his suggestions for positive alternatives to euthanasia — a procedure that he forthrightly condemns. Most readers of this review would not follow his unscriptural advice to pray for the eternal rest of the departed.

The chapter on Medical Research and Experimentation traverses familiar ground, and provides useful reminders of the criteria for 'informed consent', and of the recognition of the rights of human subjects and the 'interests' of animals in scientific investigations. The author goes so far as to admit that such experimentation on human embryos as may be directly relevant to clinical problems may be contributory to human biological life and wellbeing.

In his final chapter ('Belief and Medicine in dialogue'), the author underlines his conviction that the Christian doctor embodies the optimum potential for fruitful dialogue. He should respond positively and conscientiously to the needs of his individual patients, subjecting all his contacts to the overriding claims of God. Never abandoning his personal Christian convictions, he can work with fellow-believers and with non-Christians in furthering the purposes of God.

This is a book to buy and to ponder. We may not be able to go all the way with the author in some of his assertions, but he does make us think. Which is a good enough recommendation for any book on these important themes.

STANLEY BROWNE

Mary Midgley, *Wickedness, a Philosophical Essay*, Routledge & Kegan Paul, 1984. 224pp. Hardback. £0.00

The author, until her retirement in 1980, was Lecturer in Philosophy at the University of Newcastle. She has written an intensely interesting book; an attempt to come to terms with the existence of evil, not as a theological or philosophical problem (in spite of the title), but as a practical matter of individual human psychology. She maintains that, although many may be sceptical about the existence of sin or wickedness, this often merely means that different things are now disapproved of, for example, repression rather than adultery.

The writer considers a number of ways in which problems of human conduct have been analysed. She deals with aggression, carefully distinguishing between biological and psychological forms; with fatalism — the superstitious acceptance of unnecessary evils as inevitable, again, pointing the difference between fatalism and determinism (the latter merely a pragmatic assumption of order, made for the sake of doing science). To assume the general operation of cause and effect does not mean that we have no freedom of choice. Theories of history developed by Marxists and Social Darwinists encourage a tendency to elevate ordinary physical forces into deities and thus to think about them in a superstitious manner.

The idea of the grandeur of evil has great dramatic force, leading through Nietzsche to Hitler. Here, the author links up with Freud and his postulate of an all-pervasive instinctual death-wish. She concludes that the analysis of evil, a neglected field of study, would be illuminated by a serious consideration of NT teaching: 'the flesh lusteth against the spirit and the spirit against the flesh, so that ye cannot do the things that ye would.' (Gal. 5:17). The previous Editor of this Journal, Dr. R. E. D. Clark, wrote a most valuable contribution to such a study in 1934, entitled 'Conscious and Unconscious Sin'.

Throughout her book, the author uses an engaging style, offering perceptive insights and critiques of the writers she reviews. There is an index and extensive notes with references for each chapter.

D. A. BURGESS

Ronald Brownrigg, *Come, see the place*, Hodder and Stoughton, 1985. 254pp. Paperback. £2.95

The author of this guide to the Holy Land has known the area for forty years, has led many pilgrimages, and is therefore well-qualified for his task. He divides his book into six chapters. Two of these are concerned with Jerusalem and its environs, and two with Galilee and its wider setting. The first chapter on Jerusalem is set out in the chronological sequence of Jesus' passion, which expresses the desire of the author to present his work as a pilgrimage rather than a guide-book. Throughout, there are numerous prayers and suggestions for readings to be used by pilgrims.

The first and last chapters are different in that they present background history and present-day information. The historical chapter attempts to sketch the history of the Holy Land from the book of Genesis onwards, and thus embraces the Muslim as well as the Jew. It is history to be read at a sitting rather than to be studied in depth — to give a 'feel'

for the background. The emphasis on the Islamic religion and culture is very useful for the intended pilgrim, who will be confused by what he sees and hears, unless prepared. One does easily forget that for many centuries the Holy Land has been an Arab country. The last chapter gives a mine of useful information about present-day worship, transport, museums, etc. Since bus routes, museum opening times, and so on, are given in detail, one might wonder if this part of the book would date rapidly. It is stressed that details given are for 1984; perhaps an up-dating is envisaged at regular intervals.

The reviewer was impressed by the comprehensive index of 14 pages, and by the numerous easily-understood maps and diagrams. One might single out, in particular, a sketch-map of the walls of Jerusalem as they looked at different times (which are a puzzle to the first-time visitor,) and a diagram of the Holy Sepulchre Church, where different 'layers' of history have been drawn side-by-side for comparison. It is the fact that the city has been lived-in, destroyed, and re-built a number of times that confuses visitors, and which this guide makes much clearer. Having said this, however, it must be pointed out that the diagrams are not easily read, because the print on them is very small. It is to be hoped that future editions will rectify this fault.

The reviewer was fortunate to visit the Holy Land recently, but before the publication of this guide. Perhaps the ultimate recommendation for such a book would be to express regret that it was not available sooner. Future pilgrims will benefit greatly from Canon Brownrigg's book. Let his be the final words:-

'Above all, we shall not seek to rediscover a Christ-in-the-flesh, by the lifting up of old stones, as if to seek the living among the dead. We shall, by the awakening of our awareness to the events which have taken place within those sacred surroundings discover the presence in spirit of the living Christ who is 'the same yesterday, today, and for ever'. We shall seek to reconstruct, in our imaginations and memories, the events of his physical life, that we may more fully grasp what happened and what those happenings mean for us, as individuals, and for the whole world.'

A. B. ROBINS

Colin Brown, *Miracles and the Critical Mind*, Eerdmans/Paternoster, 1984, 383pp. Casebound. £14.20

Much of this book is devoted to a comprehensive historical survey of attitudes towards, and arguments for and against, miracles, with special reference to the miracles of Jesus recorded in the Gospels.

The main philosophical debates (as distinct from exegetical problems) have centred round such questions as: (a) could miracles, in principle, occur?, (b) did the Gospel miracles actually take place as recorded?, (c) are those miracles evidence of Christ's person, the truth of His word, or the activity of God; or is a belief in God that which makes the miracle credible?, and (d) what was the purpose of New Testament miracles?

As the book recounts the various answers that have been given to these questions, it becomes clear that those answers depend less on the evidence available than on the conceptual framework of the authors discussed. It is clear from the Gospel accounts that the witnesses of the miracles were divided in their views, not on whether an amazing event had occurred, but whether the prodigy was attributable to God or to Satan. As time passed and personal witness was replaced by documentary evidence, the debate shifted to the possibility and actuality of the recorded events. The evidential value of miracles thus appears to be very limited: they do not logically compel a response of faith.

As to the 'mechanism' of miracles, believers are again divided. There are those who see miracles as contraventions of natural law (or, in theological terms, interventions of God into His normal working); and there are others who understand miracles as the unforeseen outworking of regularities, some possibly yet to be discovered. Believing scientists today would probably entertain both concepts, depending on the particular Biblical miracle.

Having completed his historical survey, Brown adds two further chapters, one dealing with the place of miracles in Christian apologetics today, and the other discussing the significance of Gospel miracles for New Testament interpretation. In the latter, which is particularly thought-provoking, he suggests that the miracles of Jesus are in the prophetic tradition, in which actions frequently symbolize the spoken message; and that they are pointers ('signs', not proofs) to the activity of the Trinity.

This is a very valuable work, not only as a reasoned argument, but also as a work of reference. It is bound to be a standard work for many years to come. There are hints in the Introduction that we might expect a sequel on the exegesis of the miracle stories. I shall look out for it with great interest.

GORDON E. BARNES

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Abbreviations:-
* — the first page of an article
r — review
rw — the writer of a review

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