The articles in the current issue are to some extent complementary, and both deal with the matter of interpretation. The first is a transcript of the talk given by Nick Mercer at this year's AGM, and the Editor takes full responsibility for any infelicities in style which have resulted from using the taped talk. The second paper is by Dr. Denis Burkitt, the renowned cancer specialist, who has given his name to Burkitt's lymphoma, amongst other things. He is concerned that in his many travels, especially in the USA, he has found many active medical student Christian Unions, but sees a fall-out after graduation. Possible reasons for this led to his writing this paper, and readers may like to respond.

The notice concerning the Conference in Leuven in September arrived too late for inclusion in Bulletin Number 6, and will be over before this issue appears. Nevertheless, readers may like to take note of the contents, and the address of the Secretariat. The open letter from Professor Rendle Short may lead to some correspondence. The weeks of his tour are from October 2 until October 29, but the Editor has no details of the itinerary.
Addendum. We apologise for a wrong entry in our last list of new Members. The correct title of Dr. Anderson is:—

ANNUAL GENERAL MEETING, 1990

The AGM of the Victoria Institute was held on Tuesday, May 15th, at the London Institute for Contemporary Christianity, St Peter’s Church, Vere Street, London. About twenty members were present. The chairman, Terence Mitchell presided, and the minutes of the 1989 AGM, published in Faith and Thought Bulletin, Number 6, October 1989, were approved, subject to the following amendment. The introduction, in clause 3a, of the Basis of Faith, should have read:—

'the government of the Society shall be invested in a council, the members of which shall be elected from members of the Society, and who sign, if elected, a Basis of Faith approved by the Members'**

The Council has nominated the existing officers, and two members of Council for further terms of office, namely Dr. A. B. Robins, and Mr. David A. Burgess, both of whom were eligible for re-election. These nominations were approved. The Treasurer presented draft, audited accounts for the year to 30th September, 1989, but not having received the Auditors’ written certificate and report, dealt only with members’ questions, and undertook to submit the accounts for formal acceptance at the next AGM. The firm of Benson, Catt and Co. was proposed and approved to act as Auditors for the coming year. The chairman then urged members to make good use of the available literature, for recruitment of new members, reminded the company that the late Dr. R.E.D. Clark’s book ’Tomorrow’s World’ was available, and invited contributions to the Editor for inclusion in the Bulletin. The chairman then welcomed the Revd. N. S. Mercer of the London Bible College to give his address.

** The Basis of Faith referred to is that of the IVF, in its shorter form, namely:—

1. I declare my faith in Jesus Christ as my Saviour, my Lord and my God, whose atoning sacrifice is the only and all-sufficient ground of my salvation
2. I will seek, both in life and in thought, to be ruled by the clear teaching of the Bible, believing it to be the inspired word of God.
FROM ACADEMIA TO ARCADIA—GENESIS 1 USED AS AN EXAMPLE OF POPULARISING CONTEMPORARY HERMENEUTICAL ISSUES

The following is a brief summary of the talk delivered in a popular style with many more illustrations, jokes and anecdotes than we can give here by the Reverend N. S. Mercer of London Bible College at the Annual General Meeting of the Victoria Institute on May 15th, 1990, at St Peter's Church, Vere Street, London W1.

There is always a need to popularise both science and faith, and the title of this talk suggests that we move out of Plato's sphere of Academia, into John Ploughman's garden, Arcadia—though the title itself is hardly a good example of the popularisation we are seeking to achieve! We shall look in detail at the first chapter of Genesis as an example of this process.

The Bible asserts that God is the creator, and in later passages, e.g. in Hebrews 1 we read that creation is through Jesus Christ himself. Why did God make the universe? We could say, with the Westminster Catechism, that 'the chief end of man is to glorify God and enjoy Him for ever', though this does not take us much further. To the question 'Why are we here?', the Bible gives no answer, but merely accepts it as a fact. It points to creation as an object of wonder and awe, and to humanity as the most complicated of all created things—fearfully and wonderfully made.

The borderline between the Bible and science has always been an area of controversy. As far back as Bacon and Calvin we read of two books 'God's words' and 'God's works'. At this level there is no conflict, and each throws light on the other. In previous centuries there has been but little distortion of this, as a proper understanding of Galileo, Copernicus, etc. With the advent of Darwin, some Christians retreated into dualism, keeping their faith and science apart, but over the last 20 to 30 years there has developed more of a 'holistic' view—a realisation that we cannot separate these two aspects of experience; they are inter-related. To some degree this is behind some of the New Age thinking—an emphasis on holism cf Fritj of Capra. Then, on the scientific side, we have the development of GUT's and TOE'S, that is, the attempt to produce Grand Unified Theories, and Theories of Everything. What are the starting points for looking at these inter-relationships?

A. Starting from the Bible, we find that—
   1. God is interventionist, though to what degree is debatable. This is most clearly seen in the Incarnation.
2. Scripture is authoritative. When debate is joined, we choose this stand, though spirituality is not to be equated with gullibility.
3. the right interpretation of scripture is paramount—we need to know the context. An example of this is the rhyme 'Ring-a-ring of roses', which makes little sense until we know about the plague, and customs of the times.

B. Starting from science we realize that:
1. it has more often been wrong than right, e.g. over the nature of the universe, our bodies, etc. Are we any more likely to be correct today?
2. it is an intimidator, and the 'jargon' is beyond the man-in-the-street. For instance, children are often seen as a threat by their parents because of the skills and knowledge they have acquired in the area of computing.
3. it is popularly misconceived. 'How can you believe the Bible, and be a scientist?' In actual fact, science students may find faith easier than arts students.

There are three main approaches to Genesis 1.

A. *Literal interpretation.* Creation occurred over a period of six 24-hour days about 10,000 years ago, or less. This approach produces problems. For example when we read 'God spoke—' what do we mean? To whom? Who heard Him? It produces a head-on clash with science, which we may need to re-write. This is the creationist standpoint.

B. *Concordist view.* This includes the day-age idea, when 1000 years are as one day. Alternatively, there is the 'gap' theory which postulates that between Genesis 1:1 and Genesis 1:2 there is a period of millions of years. Theistic evolution in some forms fits in with this viewpoint, but often we may have bad science, and bad theology.

C. *Literary view.* We should look at the context of Genesis 1, and ask 'does it address evolution?' The answer is 'No'. It was written against a background of pagan religions to stress several important issues, which are still contemporary issues. Such are the following.

Issues which Genesis 1 attempts to address:

1. Is there one God or many gods? The Jews alone among their surrounding peoples were monotheistic. 'One God' is taken for granted, and there are no generations of gods. Nor are they to
worship anything in the heavens (Deut 4:19). This is one reason why the sun and moon are not mentioned until the 4th day, and the words for sun and moon are carefully chosen to avoid confusion with the pagan sun-god and moon-goddess. Thus they are the 'greater light,' and the 'lesser light'.

2. Man and woman have dignity, which is true of every person, being made in the image of God. This may not seem revolutionary today, but in earlier times it certainly would. The relation between the sexes was also revolutionary, viz, their equality in God's sight.

3. Is the universe a cosmos or chaos? Other religions had capricious gods, but Genesis says God is a God of order. We see this in the structure of the first chapter. Whether or not we put much store by numerology, it is striking how often the numbers 3, 7, 10 and combinations of them appear. For example, three days of separation are followed by three days of adornment, and a day of rest, making seven in all. Great time and effort have been spent in the composition of Genesis chapter 1. Even if half of the numerology is co-incidental, it still points to an orderly universe.

4. God is sovereign. In other creation stories, there is struggle, but there is majesty in Genesis 1. God speaks, and it is done. The chapter does not tell us how the universe was created, but it does tell us that God was the prime mover. The context tells us truths about God, man and creation.

General conclusions:

a. We are to come humbly to scripture.

b. We are to recognize the dignity of all men and women, the world over.

c. We are to be stewards; 'subdue' means to look after.

d. There is purpose in the creation, beyond ourselves.

e. God is not absent, or on holiday. He is sovereign, has acted through Christ, and one day will usher in the new creation (Rev. 21:1-5).

Several suggestions were made for those who have to communicate to others.

1. Simplify. Don't always explain, or we may go out of their depth. 'KISS—keep it simple, stupid.'

2. Illustrate, if at all possible (an o.h.p was used throughout the talk).

3. Resist endless qualifications at all costs.
4. Maintain integrity. We may have to keep quiet sometimes on some subjects.
5. Admit to agnosticism over some things, but—
6. Make people think for themselves.

TRUE UNDERSTANDING DEPENDS ON INTERPRETATION

1. Removing Stumbling Blocks
Our Lord was highly condemnatory of those who placed stumbling blocks in the path of those travelling to his kingdom. The purpose of this communication is to endeavour to remove what I believe to be, and to have been, a major stumbling block. Many young people have been brought up to believe that the only submissive and reverent way to interpret scripture is to believe that all was intended to be literally interpreted, and that any deviation from this approach amounted to disbelief or even apostasy. Insistence on this view has tragically and unnecessarily deviated many Christians nurtured in Godly homes from their chosen Christian pilgrimage. Finding apparent discrepancies between scripture and science their confidence in the former has been shattered, as a consequence of which they have thrown out the baby with the bathwater, a disaster that could have been prevented by caring and compassionate counselling.

2. The Role of Interpretation in Scientific Investigation
I have been privileged to have been involved in some aspects of medical discovery, that have, as in all research, entailed the making of observations that then had to be documented and exposed to the scrutiny of others. Hypotheses must then be erected on the basis of this evidence. This entails interpretation of the observed facts, and very often the initial interpretation has to be amended, or perhaps totally discarded, in the face of subsequent evidence. The willingness to admit error and alter provisional interpretations is essential to effective research.

Three examples from my personal experience will serve to underline this point.

a. Burkitt's Lymphoma
One of the fundamental and basic observations made with regard to this particular form of cancer which affects children in some tropical countries was its characteristic and peculiar geographical distribution which was shown to be dependent on the climatic factors of temperatures and rain-fall. Various hypotheses were
erected in an endeavour to explain this, but one after another these had to be abandoned in the light of new evidence until eventually an interpretation consistent with all the evidence emerged. The initial epidemiological evidence remained sound and unchanged, but the interpretation required modification.

b. Large Bowel Cancer
A similar experience followed my presentation of epidemiological evidence suggesting the ability of fibre-rich diets to provide protection against this common cause of cancer death in economically more-developed countries. The initial presentation which included a tentative interpretation, was met with ridicule. With the passage of nearly two decades, the relationship between this form of cancer and the intake of dietary fibre has become generally accepted, but the interpretation of the observed facts, with regards to mechanisms whereby protection could be provided, has been repeatedly modified in the light of newly emerging evidence. In fact I write these lines during a Conference on this very subject.

c. Appendicitis
Over the past 20 years, I have written many scientific papers and chapters in medical textbooks on the postulated cause of this disease, which is invariably rare in less economically developed countries. The concept that adequate fibre in the diet was protective was initiated by others, but I was able to procure much evidence to gain wide acceptance. I still believe this to be the most valid explanation, but new evidence was subsequently published suggesting an additional important factor. I immediately accepted this and congratulated the authors and modified my interpretation accordingly but not the observed epidemiological evidence.

3. Interpretation of Scripture
I believe the same principles hold good in the interpretation of scripture as applied to scientific data. Christians believe that the creator of the universe is also the author of Holy Scripture, and consequently any apparent discrepancy between science and scripture must be due to mis-interpretation of one or the other.

It is important to note that the term 'fundamentalist,' was first applied to a group of believers who published a series of tracts on the fundamentals of Christian belief. On this understanding I hope we are all fundamentalists. Only subsequently was the term used to denote insistence on literal interpretation of the whole of scripture. No longer
could I call myself a fundamentalist with this understanding of the word.

Some of the arguments of those who insist on literal interpretation, particularly of the early chapters of Genesis appear to me like those who put on a facade of judging Christ, with their minds already made up with a sentence of guilt. We read that they 'looked for evidence' rather than looking at evidence. It is so very easy with a closed and made-up mind to select evidence to suit one's pet hypothesis and ignore that which does not fit it. Probably all scientists have been guilty of this.

4. Process and Progress in Interpretation
It is right and proper that children should accept without question scripture as it is taught to them, just as they accept as authoritative all that mummy and daddy tell them. But in teenage years they will inevitably and rightly ask questions. Gerard Hughes, in his highly commendable book 'God of Surprises' points out that this initial acceptance followed by a questioning phase is essential to all forms of development, including spiritual. Questioning must not be viewed as scepticism, let alone heresy. He writes 'Religion must include three essential elements; an institutional element corresponding to the needs and activities of infancy; a critical element, corresponding to adolescence, and a mystical element corresponding to adulthood. There is a constant danger that one element is emphasised to the exclusion of the other two . . . If the critical element is not fostered, Christians will remain infantile in their religious belief and practice, which will have little or no relation to everyday life and behaviour.'

The concept that spiritual realities can be adequately described or portrayed in a language limited by a space and time environment is basically flawed. C. S. Lewis has made this abundantly clear, emphasising the impossibility of portraying spiritual truth in mere literally used prose. The limitations of language do not permit it, and the use of myth, metaphor or parable become essential and of course our Lord used this method extensively.

Thomas Aquinas suggested that if we were to convey our experiences at all we must use ordinary language in an extraordinary way, employing poetry, analogy and the language of religion.

Michael Christensen in his book 'C. S. Lewis and Scripture' points out that if the function of imaginative literature is to embrace in its use of language some reflection of transcendent reality then this same function can also be applied to biblical literature, its purpose being to convey religious reality by pointing through language to divine revelation.
The author will never forget being challenged by an elderly and Godly doctor with the words—"Are we not inconsistent as evangelical Christians in accepting that the Holy Spirit, endeavouring in the last book of the Bible to portray future truths beyond man's understanding, used extensively pictorial language, yet throw up our hands in horror at the suggestion that the same Holy Spirit might have used the same pictorial methods to portray past events equally outside man's understanding in the first book of scripture.'

Stanley Browne, a former President of the Christian Medical Fellowship, and at the time of his death, President of the International Christian Medical & Dental Association, wrote in his Presidential address to the Medical Missionary Association—'Man is made in the image of God. His physical frame may be related to the beasts; his self-awareness and capacity to think—his mind—sets him apart in the animal creation. But his spirit, his capacity to relate to God, makes him unique and different from his hominid ancestors.'

Many events from scripture are clearly rooted in space and time, but other accounts, including the visions of the prophets transcend these limitations.

5. Unwrapping the Parcel
Insistence on literal interpretation can block the path to discovering the deep and hidden truths wrapped up in the words. Subjecting the paper and string of a parcel to microscopical examination may preclude the discovery of the treasured truth they are used to enclose.

6. Sin and Sickness
One could point to many situations where insistence on literalism obscures the intended truth in certain passages of scripture, but I would like to emphasise just one.

It is often assumed by scripture teachers that all biological sickness and death are the result of human sin. I have for many years been searching my Bible with this in mind, and I cannot find it portrayed. Whenever sin and death are causally related in scripture it seems to me always to refer to spiritual and not biological death, right through from the first mention where Adam and Eve were warned that their disobedience against God would result in death. There is no suggestion of biological death on this occasion or in the subsequent events, though Adam and Eve lost their relationship to the source of spiritual life. One must face the facts that death and illness were in the world for vast periods of time before man was created. All animals were in the Genesis account ordered to procreate and procreation
without death would be unthinkable. Moreover, the main causes of death and disease in man are common also to animals. And how could sunshine, the main cause of one of man's commonest cancers, that of the skin, be related to sin. Such discrepancies could be multiplied. Moreover, this erroneous thinking has led to the terrible teaching that progression of disease can indicate unrepented sin in the heart. Here is one stumbling block that could surely be rolled out of the path of young enquiring believers. There is always the danger of those who insist on literal interpretation throughout scripture having to keep their faith and their science in watertight compartments and thus becoming spiritual schizophrenics. This of course can do nothing to enhance their Christian testimony.

Having written this I must emphasise that I am convinced that the fundamental literalist is infinitely nearer to the truth than is the unbeliever and I can love them as Christian brethren with whom I can share precious Christian fellowship. Moreover, I would not wish at all to alter the beliefs of simple people who can totally, without trouble, accept literal interpretation throughout scripture. Let me end with the words from Christensen's book on C. S. Lewis' interpretation of scripture—'Let us not mistake the vessels (the written word) for the treasure, nor fail to find the treasure in the vessels.'

Denis Burkitt.

1. Matt. 18:6
2. Mark 14:55

ANNOUNCEMENT

In close collaboration with the Catholic University of Leuven in Belgium, CONCILIUM, the international journey of theology, announces its intention to celebrate its 25th anniversary with an international conference in Leuven from 9th to 13th September 1990. In this way, the theologians who have grouped themselves around and in CONCILIUM over the years wish to express their sense of responsibility for preserving the spirit of the Second Vatican Council in the church. Prompted by this responsibility, they look ahead to the period after the year 2000.

Accordingly, the theme chosen for the conference is: **On the Threshold of the Third Millenium.**

The theme of the conference is in three sections.
The first will review the recent past of church and world and evaluate both positive and negative aspects.

A more analytical and descriptive second section deals with the choice for life or death.

The third section especially involves the religious and theological manner of speaking about God and the coming kingdom of God as salvation and well-being of and for mankind.

The lectures will be printed in advance in February 1990 in a special conference issue of CONCILIUM. This will allow emphasis during the actual conference to fall on group discussion and plenary meetings.

In a special panel-discussion theologians from different continents and cultures will report on the present situation of theology in the Church in their countries. The introductions will be followed by a general discussion to give members and observers a chance to exchange their opinions in a plenary session.

We would welcome your applications addressed to the General Secretariat of CONCILIUM, c/o Mrs. E. C. Duindam-Deckers, Prins Bernhardstraat 2, 6521 AB Nijmegen, The Netherlands. We can also supply information about inexpensive lodgings. The registration fee as observer for the conference is $15.00.

HELP FOR TEACHERS

Two booklets are available to help teachers cope with the evolution-creation controversy, perhaps more acute in the USA than in the UK. These booklets are:

'Teaching science in a climate of controversy' published by the American Scientific Affiliation, P.O. Box 668, Ipswich, Maryland 01938, USA.

'Science and Creationism—a view from the National Academy of Sciences', available from the National Academy Press, 210 Constitution Avenue NW, Washington DC 20418.

These two are reviewed in the American Scientific Affiliation journal 'Perspectives on Science and Christian Faith, June 1990, by David Price, J. L. Wiester, and Walter R. Hearn, whose concluding paragraph is reproduced here.

'The Bible depicts human beings not as products of blind chance, but as individual persons, created in God's image, without specifying in scientific language how that deliberate creation
occurred, nor how long it took. The sense of obligation engendered by identification with divine purpose is likely to make believers in the Bible decidedly uncomfortable—with our own moral status and with the status of our understanding of nature. Indeed, a biblical faith was a driving force behind the work of Copernicus, Kepler, Galileo, Newton, Pascal, Faraday, and other scientific pioneers, and that remains true of thousands of scientists today. It is not insignificant that modern science 'evolved' under the influence of a Judeo-Christian view of nature as orderly, consistent, and inspiring to study. After all, seen as 'the creation', nature revealed something of the mind of God. Even scientists who are not themselves theists build on the pioneering work of many scientists who were'.

This paragraph expresses something which has often cropped up in our journals, and finds an echo once more in the articles in this issue. The whole review is in the possession of the Editor for anyone who is interested.

CORRESPONDENCE

Dear Sir,

My purpose in writing to you is to mention that I have some old, bound copies of the journal of the Victoria Institute for disposal. Possibly you would know of a member who would be interested in acquiring them. They are:- Volume 51 (1919), 57 (1925), 66 (1934), 68 (1936), 69 (1937), 81 (1949) and 87 (1950).

They are all in blue cloth-covered hardboards, and in good condition. I would be open to consider any reasonable offer.

DENIS CLAPHAM
43 Chantry Road,
Moseley,
Birmingham, B13 8DN

An Open Letter from Professor John Rendle-Short

Dear Christian Friends,

Special stamps and an exhibition at the National Portrait Gallery, Trafalgar Square, marked the 1982 centenary of the death of Charles Darwin (1809–1882). The notice advertising the exhibition read: 'Science, Religion and Society. To many people evolution posed a
threat to Christianity. Doubts about the historical truth of the Bible threatened the entire fabric of moral life and civilized society.

Were the doubts of the Christians in the nineteenth century justified? What is the situation today, over 100 years later? Certainly many Christians accept the main tenets of evolution. How do they reconcile this with the Bible? Mostly they don't try. They say the scientific aspects are far too complex for them to understand—and this may well be true. Others say, with equal truth, that the whole creation/evolution controversy is so divisive. It separates Christian from Christian and (unnecessarily) Christians from the world. There are enough areas of division without adding another. So they ignore it. The minister in a large evangelical church told me, 'It's not an issue in my church.' But he was wrong. I talked to students who attended the church. With them it was an issue. They were being taught godless evolution at university, and about the Creator God in church. These ideas are irreconcilable. No wonder many young men and women decide that evolution has totally displaced God and the Bible, and so they turn their backs on Christianity.

It is to help people with these problems that Ken Ham and I are coming to the United Kingdom in October.

Briefly what can be said?

Scientifically, evolutionary theory is in disarray. Honest scientists acknowledge great problems, and the theory has had to be modified time and again. We must realize that both evolution and creation are belief systems. You believe in evolution, or you believe in creation. You cannot prove either. Each requires an examination of the available evidence, and then acceptance by faith. So Christians must examine the evidence to the best of their ability. An academic should have greater understanding of the scientific aspects than the ordinary person. But that is not all-important. The Christian has an open Bible and the power of the Holy Spirit to instruct him. Is the story of creation, the Fall and the Flood as in Genesis 1-11 historically true, or can we dismiss it as a myth? Either you believe that life formed by chance in the so-called 'primordial pond', millions of years ago, or you believe that about 6,000 years ago, God said, 'Let there be ...,' and there was. No person was there to see how it happened. This is where faith comes in. And faith does not require scientific skill.

And society? Have years of evolutionary belief altered the way men and women behave? The 'moral life' of society? I would say, 'Yes'. If you want confirmation of this, watch Ken's film, The Genesis Solution.

Ken Ham and I ask you to consider the way the thinking of the world has been downgraded by evolutionary philosophy: scientific-
ally, religiously and philosophically. And what is the answer? The Christian must go back to Genesis. This is why we have called this lecture tour ‘Back to Genesis’.

Yours sincerely in Christ
PROFESSOR JOHN RENDLE-SHORT

BOOK REVIEWS


The Holocaust. Whole Burnt Offering.

How easy to say or write the word. How difficult to come to terms with the reality. The authors have considerable experience in teaching college and university students about the Holocaust, and they have sifted through a vast amount of historical material, to compile a book with its own distinctive interpretation: not least because one of the authors is a Christian and the other a Jew.

The book is in four parts. The first traces the historical roots of anti-Jewish policies in the world of Greece and Rome, and the development of antisemitism in western Europe up to the Dreyfus trial at the turn of this century. The Christian churches, both Protestant and Roman Catholic, share considerable responsibility for encouraging antisemitic feelings.

Part 2 deals with the period when the Nazis were in power and the rationalization of genocide in the Final Solution.

Part 3 gives some of the responses to the Holocaust, from Christians, Churches and Jews themselves. Also, the attitudes of people in business and in industry are reviewed: did they carry on as usual, or were there any signs of remorse for the merciless working to death of slave labour?

The authors next consider some literary responses to the Holocaust, much of it from sketches and poems written or found by survivors during their incarceration in the death camps. This is perhaps the most moving part of the book (which is nowhere sentimental—an obscene reaction); not so much the recording of the appalling conditions, which was one reason for some of the records, but sometimes the glimpse of a human spirit struggling to come to terms with seemingly unlimited evil, not with a sense of outrage—that would be easily understandable—but rather with a genuine humility.

Whether we are Jews, Christians, or whatever, the Holocaust has to
be assimilated in some way into our beliefs about the existence or not of God. One of the most important factors is the testimony of those who survived. In the 1970s about 700 Israeli survivors were questioned about the effects of the Holocaust on their beliefs. Many spoke of the silence of God as the crucial problem. 47% said that their beliefs about God had not changed: 53% said that they had. Three out of four of the latter group lost religious faith in part or entirely. Overall, about 5% reported that they were changed from atheists into believers. Much other fascinating detail is found in this part of the book.

Some attempt is made to indicate Jewish and Christian responses to the Holocaust; this part of the book I found the least satisfactory. The Jewish author (Rubenstein) gives his own interpretation, which is based on a rejection of the biblical image of God and seems to be based on a form of pantheism (p. 313). The Christian author (Roth) confines his discussion to the views of Paul van Buren and gives no exposition of the teaching of Jesus and the other writers of the NT.

The final section, part 4, endeavours to draw lessons from the legacy of the Holocaust—which destroyed 9 million men, women and children apart from the 6 million Jews. 'The legacy of the German programs of extermination lives on and poisons the relations between nations, as indeed that legacy is likely to do for countless generations to come.' The politics of extermination have permanently altered the human condition, the authors maintain. The Jews became 'surplus people' because the Nazis had the power to define social reality. The same kind of thing has happened with the Pol Pot regime in Kampuchea, and to the Chinese in Southeast Asia, the Indians and Pakistanis in Uganda, the Vietnamese boat people and many more in the 20th century. '... None of the economic or political factors leading to the growth of massive surplus populations throughout the world has been alleviated since the end of World War 2.'

How long, O Lord?

D. A. BURGESS


'Metals in the Service of Man' was first published in 1944 by two graduates of the metallurgical department of Birmingham University.
It ran to 198 pages and cost one shilling. It was very readable and of considerable interest to scientists and also those concerned with the war effort and post-war recovery and developments.

Both authors pursued careers in metallurgy and now, having retired, have brought out the ninth edition of this very popular book. It has been completely updated to include, for instance, special applications in the preservation of the Mary Rose, and considerably expanded. We are offered a historical review, a survey of world resources, specific descriptions of the extraction of iron and aluminium, a very clear account of alloys and their structure under the microscope and X-ray diffraction.

A large number of metals, their testing, shaping, application, corrosion and future are discussed. The sequence of chapters does not always flow very happily but many of them are fairly self-contained and are therefore of considerable interest on their own, where the whole book might prove indigestible. Comparing this edition with the first, I note that a different illustrator has been used. He gives us sections rather than cut-away perspectives, but his labels are sometimes very sparse, eg on the blast furnace we are not pointed to the tapping points for the product! The photographs are more modern but not necessarily more explicit.

The present edition of 'Metals in the service of Man' properly reflects an increased interest in the conservation of the earth's resources. Christians are unhappily divided on the importance of environmental issues. One fundamentalist view dangerously prevalent among members of the U.S. New Right is that since Christ's Return in Glory is imminent, Christians need not, indeed should not, concern themselves with such matters, which deflect from the urgent need to proclaim the gospel. The Judeo/Christian tradition however is firm on humankind's responsibility within God's Creation.

'Lord, if I look at the heavens, the work of your fingers, the moon and the stars which you set in place—what, then, is man, that you remember him, the son of Adam, that he touches your heart. Yet you have made him almost a god, and you have crowned him with glory and splendour. You make him lord of the work of your hand, and you have laid the whole world at his feet,'

Psalm 8

Humankind has certainly taken its Creator at His word and exploited the world and its resources to the point that it is at last and very...
painfully coming to the realisation that it cannot continue to misuse and tamper with the natural resources of the planet and hope to survive. To take the situation seriously, however, it is necessary for people to be informed and helped to understand why policy decisions necessitate new technologies, or may trigger different environmental problems.

This book tackles questions of supply and demand, of reduced supplies of high quality ores, recycling of scrap, effect on the environment of using wood as a source of charcoal for iron smelting, the need to redesign high fuel consuming cars, which then involve different metallurgical technologies and the problems of nuclear energy production.

The wide ranging subjects covered could also make it a very useful supplement to school textbooks to meet the requirements of modern examinations for awareness of environmental impact of science and industry.

SONJA S. SINGER

Ernst Mayr Toward A New Philosophy of Biology Belknap Press. 1988. 564 pp. Hardback £27.95

The declared intention of this collection of papers to learned societies and occasional essays by the Emeritus Professor of Zoology at Harvard University is to argue that biology is a science sui generis. It has become evident that living systems differ from inanimate systems, no matter how complex the inanimate or how simple the organism. Attempts to reduce biological systems to the level of simple physico-chemical processes have failed because during the reduction the systems lost their specifically biological properties. In most classical philosophies of science explanation consists in connecting phenomena with laws. Although laws are also encountered in biology, particularly in physiological and developmental processes, most regularities encountered in the living world lack the universality of the laws of physics. Biologists nowadays use the word 'law' only rarely. The philosophy of biology is characterised by its emphasis on concepts and their clarification.

Running through this erudite work of massive scholarship there is one simple message. There is no longer a conflict between biology and Christian faith. The battle is over. Biology has won. Dr. Mayr concedes that belief in purpose and in a final cause was understand-
able in the seventeenth and eighteenth centuries; periods of optimism, reform and progress, when evidence of change was evidence of the movement to perfection. Charles Darwin shattered that happy optimism.

Though Darwin wrote of 'the extreme difficulty, or rather impossibility, of conceiving this immense and wonderful universe, including man with his capacity of looking far backwards and far into futurity, as the result of blind chance or necessity'—which Dr Mayr attributes to the careless writing of an old man—the 'Origin of Species' actually made the concept inevitable. Mayr asserts that by the time of the evolutionary synthesis of the 1940s virtually no competent evolutionary biologist believed in any final causation.

He argues that 'teleological' means 'goal-directed'. Natural selection never aims at future goals, though it is a process which rewards current success. If a particular recombination of genes is a success, that is fine for the organism concerned, but it was not planned. Furthermore, this is what gives natural selection its remarkable flexibility. The environment is in process of continuous change, but natural selection is never pre-committed to a future goal.

The individual yet species-specific programme of every fertilised cell is the programme for that individual's computer behaviour. Natural selection rewards behaviour programmes that increase survival fitness: correct and swift reaction to a food source or to a potential enemy, for example. Dr. Mayr then pursues his argument on a line of particular importance to those of us concerned with the relationship between science and Christian faith. He says that a programme that allows for appropriate learning and the improvement of behaviour reactions through various types of feedback affords greater prospect of survival.

Writers like Dr. John Polkinghorne have contended that the emergence of individuals with the capacity to think, to plan, to create, to worship, is reasonable evidence of purpose in evolution. Dr. Mayr contends that the 'purposive behaviour' of an individual which is based on its genetic coding is no more or less purposive than the operation of a programmed computer. That which is based on learning can be said to be purposive. A person may set himself a definite future goal, as I did when I read this book, drafted a review, and began to type it. But he insists that 'purpose' is not the planning of a goal by natural selection. The successful adaptation of an organism is not due to the determined intention of its ancestors or to the will of a Creator.

Is not this juggling with words, finding a place for the undeniable existence of purpose while excluding it from evolution? Mayr himself
has argued powerfully that physico-chemical experiment is insufficient to deal with biological phenomena. Description is not explanation. Oddly enough, in an essay on the probability of extraterrestrial life Dr. Mayr, not deviating from his basic doctrine, reaches a remarkable conclusion. He doubts if there can be such life anywhere else in the universe. He says: 'I demonstrate that each step leading to the evolution of intelligent life on earth was highly improbable and that the evolution of the human species was the result of a sequence of thousands of these highly improbable steps. It is a miracle that man ever happened'. Dr. Mayr is an Emeritus Professor. Is this also the careless writing of an old man? Some of us believe that we know who worked the miracle.

EDWARD ROGERS


It is more than twenty years since I presided over a group set up by the British Council of Churches to consider new techniques affecting human conception and birth. We began by examining some of the experiments being conducted in the field of animal husbandry, noted that one day animal techniques might become capable of human application, and then proceeded to try to isolate the new questions that such use would raise for Christian conscience and theology.

At the time the study seemed a little academic. But a book like Dr. Higginson's is one of many indications that history has moved fast. The author is master of his subject and makes the complexities of in-vitro fertilisation understandable for the ordinary reader. What is just as important is the fact that he brings a balanced Christian judgement to bear on the issues raised. He is not afraid to admit that on some of the ethical points he examines it is difficult to reach a firm conclusion. On some issues, however, Dr. Higginson leaves us in no doubt about his views.

The title of the book is provocative and points to questions that are very real. Medical science is now able to intervene to such an extent in the processes which once were 'left to Mother Nature' that the author wonders whether the IVF child is not in some sense the doctor's baby. IVF can, of course, involve the use of sperm, eggs or ovum of a third party and so raises the question: is the child the
donor's baby? There is also the troublesome matter of experiments on embryos. How far do these usurp the responsibility which belongs to the Creator?

These questions indicate the breadth and complexity of the field covered in this excellent treatise on techniques which are still in their infancy. Dr. Higginson's approach is positive and very sympathetic to those who suffer the pains of involuntary childlessness. At the end he sums up his thought about the future of IVF: 'Ultimately my hope boils down to a very simple one: that IVF is used for good and not for evil'.

KENNETH G. GREET

H. R. H. The Duke of Edinburgh and The Rt. Rev. Michael Mann
Survival or Extinction: A Christian Attitude to the Environment
£3.95

The abuse of the environment, rather like a dose of cyanide, tends to evoke a distinctly negative reaction in any thinking person, quite regardless of religious conviction. The response is heightened in all those having even the vaguest belief in God, for destruction now becomes desecration. To the Christian, who has in the Scriptures a very precise revelation of God's relationship to his creation, the current acceleration of pillage and pollution should generate an even stronger reaction. But we are slow to anger in things that seem to us essentially secular and are even more cautious over issues that have no index entries in our texts of systematic theology. Where is our guide to sound thinking in matters that go unmentioned by Berkhof and Hodge?

The need for a statement on the Christian attitude to environmental issues is the inspiration for this booklet, which has developed from a series of discussions on this subject at St. George's House, Windsor in which a large number of people with varied backgrounds and persuasions took part. One must look upon this publication, therefore, as at best the lowest common denominator of Christian thought.

There are two main sections, the first concerned with the raw facts about the earth's development and current condition, and the second a statement of Christian reaction to the human misuse of the environment. The first section fails to inspire confidence, if only because of its weak jocularity ('In the beginning was a Big Bang') and
its irritating errors, such as the inevitable journalistic failure to use the correct upper and lower case conventions when quoting latin binomials. The final conclusion relating to the developing environmental crisis is generally unexceptionable, though I would like to have seen more facts and figures. Has, for example, the earth already exceeded its carrying capacity for human beings? This is a question which should be addressed, and preferably in a quantitative manner.

Conservation itself is seen to tackle three main issues, namely the specific maintenance of the human environment, the protection of the global environment (which will result in advantages to other species) and the conservation of wild species even though their immediate value to mankind may not be apparent. This is a useful view of the subdivision of conservation, for it highlights the weakest aspect of Christian thought on the subject, that is, our attitude to other species and their survival.

In the second part of the booklet this attitude is examined in relation to the authority of the Scriptures, the tradition of the Church and the rationality of the human mind. Some good points emerge from an examination of the Scriptures, such as the fact that the 'dominion' accorded to man is derived from God's own position of responsible power and cannot, therefore, be a licence to exploit. But at other points the interpretation is unduly imaginative. Are the authors really justified in claiming that the Biblical account of the Fall 'speaks of the human relationship to the natural environment, rather than of disobedience in Paradise'? I fear not. The disharmony between man and nature is an outcome rather than the essence of the Fall.

One glaring omission in the analysis of the God/man/nature interaction is any mention of the role of Satan or of the fallen state of nature itself. This neglect of any concept of supernatural powers of evil leads to unresolved problems of natural disaster and disharmony in nature, that the authors fail to face. The salvation of all Creation is seen to be possible 'through our response to the Gospel message of love and salvation and the consequent mending of our ways'. There is no room for redemption here.

Church tradition is viewed in a very broad light and includes even the pronunciations of Moltmann and Runcie. Hence we are encouraged to reinterpret the Genesis command to 'subdue the earth' as an encouragement to 'free the earth through fellowship with it'. If the Scriptures are difficult to swallow, then replace them with pseudo-Buddhist philosophy. The presumed authority of 'Church tradition', since it includes modern theologians, cannot
really be separated from the authority of 'reason', so the discussion broadens into a range of interesting questions which stimulate intellectual debate, but without any attempt to 'search the Scriptures'. Does nature have an intrinsic value of its own, separate from its value to man? One does not have to proceed far into Scripture to find that God pronounces it good, so those accepting biblical authority find no problem here. The rationality of the authors leads them to the same conclusion, but they are then faced with such difficulties as whether the sacredness of life is all embracing, how man should deal with organisms in competition with himself for certain resources, and the moral position of domesticated animals (and plants?). These issues can only be fully comprehended by giving more detailed attention to the doctrine of the fall and the nature of the command to stewardship.

The book closes with a set of practical considerations and suggestions for improving the state of our environment, and these are largely ecologically sound, needing no reference to Christian theology, except for the concept of stewardship. If some readers are stimulated into a greater environmental awareness as a result of reading Survival or Extinction, then it will have served a very useful purpose and deserves credit as a consequence. But it is not likely to prove a valuable source of information for the Christian who is seeking clarification concerning the Biblical position on man/environment issues. We may well agree with the authors' conclusions about responsible attitudes to the environment, but we still need a systematic analysis of the Christian position.

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