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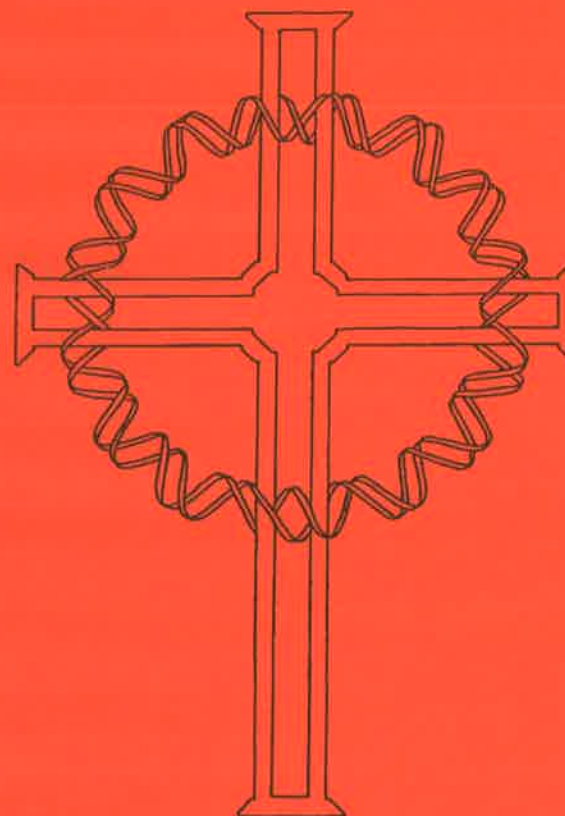
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BULLETIN No 8 PENTECOST 1992



SOCIETY OF ORDAINED SCIENTISTS

The AIMS of the Society are:

1. To offer to God in our ordained role the work of science in the exploration and stewardship of creation.
2. To express both the commitment of the Church to the scientific enterprise and our concern for its impact on the world.
3. To develop a fellowship of prayer for ordained scientists by the following of a common rule.
4. To support each other in our vocation.
5. To serve the Church in its relation to science and technology.

The RULE of the Society is:

1. To pray daily for the aims of the Society and for its members.
2. To remember the Society and its members monthly at public worship.
3. To endeavour to attend the annual gathering and retreat of the Society.

SOSc Collect

ALMIGHTY GOD, Creator and Redeemer of all that is, source and foundation of time and space, matter and energy, life and consciousness: Grant us in this Society (especially our brother/sister...) and all who study the mysteries of your creation, grace to be true witnesses to your glory and faithful stewards of your gifts; Through Jesus Christ our Lord. *Amen.*

Editorial

At this season of Pentecost our thoughts inevitably turn to the way in which the Holy Spirit is working, not only in us, but also in other people and, in fact, in the whole of creation. In our Society we seem to be continually responding to the description of the spirit given in Isaiah 11:2. 'The Spirit of the Lord shall rest upon him, the spirit of wisdom and understanding, the spirit of counsel and might, the spirit of knowledge and the fear of the Lord.' As scientists we are concerned with knowledge; the word 'science' coming from the Latin *scientia* meaning 'knowledge'. As ordained scientists, perhaps, we are particularly conscious of our role as interpreters of the last clause of the passage from Isaiah: 'the spirit of knowledge and the fear of the Lord'.

It is, therefore, timely at this season of Pentecost to see how the contributors to this *Bulletin* have been inspired by the spirit of knowledge and the fear of the Lord! Our Warden has waded through the newspapers to discover how they have dealt with the recent upsurge in interest in the science and religion debate. Some of them seem to lack the aforementioned spirit! By contrast, however, the television religious magazine programme *Visions*, which is transmitted on Sunday mornings by ITV, recently showed the members of our Eastern Chapter assembled in Chelmsford Cathedral on 27 February. This was a much more positive approach to the whole debate. At that meeting Dr Mary Seller, Reader in Genetics at St Thomas's and Guy's Hospitals, gave a talk on 'Advances in Genetic Research', which she has kindly allowed to be printed in this *Bulletin*. It will increase our understanding of the facts upon which so many of our ethical and moral decisions have to be based. This is surely an area where the spirit of knowledge and the fear of the Lord need to be shown.

As a Society we are always conscious of the ways the spirit is leading us. The Southern Chapter's report asks some questions about future activities. Sjoerd Bonting's offer of editing a volume of our 'pilgrimages of faith' is also something we should take up. In this *Bulletin* he outlines the way in which he can do it.

Two articles held over from our last *Bulletin* show the spirit moving in places where it is certainly needed. Ross Thompson's *Holy Ground* and Nigel Cooper's article on the place of spirituality in the modern ecological debate are examples of how the spirit of knowledge and the fear of the Lord are often lacking in contemporary comment. At the time of writing this has been illustrated by all the media build-up to the Earth Summit in Rio de

Janeiro. Can the spirit move at a conference where politicians will be digging themselves in, and playing to the cameras?

I am pleased to report that Michael Benton has now recovered from his operations and is back to normal. Let's hope he stays well in the future. I am not so pleased to say that Kevin Horswell has not yet received all of our subscriptions. In fact, not many at all! Details were given in the last *Bulletin*. The subs are: £16 for full members and £12 for associates. Kevin's address is given on the back of this *Bulletin*.

In wishing you all a happy Pentecost, may I also hope that you can be filled with the spirit of knowledge and the fear of the Lord.

BERNARD DAGNALL

From the Warden, May 1992

The last few weeks have been vintage time for those interested in the social psychology of media reaction to the relation of religion and science. On 24 April we had the detection by COBE ('Cosmic Background Explorer') of 'ripples' in the cosmic background radiation with its implications of non-uniformity in the early universe. Some newspapers *did* jump into theology up to the neck (*The Mail on Sunday*: the new discoveries 'give God his P45' and *The Observer* headlined its accounts, 'Has man mastered the universe?' and "'Did the hand of God shake the test tube?'" ask the clergy) – but fortunately some also turned to John Polkinghorne for comments and he was able to defuse any over-exuberant theological deductions from the discovery (if not that of one physicist who was reported as saying it was 'the Holy Grail of cosmology' – though that was probably *not* meant to be a theological verdict!). Ever ready, like a latter 20th-century T. H. Huxley, to strangle the theological snakes around the cradle of science, Richard Dawkins pleaded, 'Please do not call it the fingerprint of God'. In the end, no one did very much, in spite of the headlines.

Dawkins, of course, had come hot-foot from a debate with our Visitor on science-and-religion at the International Science Festival in Edinburgh. *The Independent's* former religious affairs correspondent, Andrew Brown, reported (16/4/92) only Dawkins' proposal that religious belief is a kind of virus, a rogue 'meme'. A 'meme', you may recall, is one of Dawkins' hypothetical units of belief-heredity whose existence: (a) was originally proposed in *The Selfish Gene* as a kind of *ballon d'essai* (to give him the benefit of the doubt); (b) has never been substantiated; and (c) would, in any case, undermine the validity of *all* beliefs, including his atheism. *The*

Observer (20/4/92) in an extraordinarily biased report again concentrated only on Dawkins and was unfavourable to the Archbishop. *The Independent* made some restitution for Brown's lack of any report of the latter by providing a more level playing field – it gave a shortened version of Dawkins' talk (20/4/92) and allowed the Archbishop to reply, which he did (4/5/92) effectively, trenchantly and, quite rightly, often witheringly – pointing out the scientism, positivism and philosophical naivety of Dawkins' whole approach.

I, too, had an opportunity of putting the record straight in the relatively civilised milieu of a Radio 3 programme ('Blue Skies', 6/5/92) concerned with science-arts interactions, when they reported on the final demise of the African 'Eve' inferred in work since 1987 to have been the progenitor of *homo sapiens* some 200,000 years ago. The statistical basis of the earlier analyses of nucleotide sequences in mitochondrial DNA, inherited only via females, has now been proved to be wrong. But originally there was a lot of media 'hype', hence the name 'Eve' – and I had the chance to say how interesting it all was, and how little significance it had for Christian beliefs and theology. So SOSc in its various manifestations has not been idle in the media!

In the last *Bulletin* (no. 7) I mentioned the suggestion from the Northern chapter than an anthology of some of our members' 'pilgrimages of faith' might be put together. I am happy to say that Sjoerd Bonting has written from California to say that he is willing to act as the Editor of such a volume (he is well set up for desktop publishing) and he asks that members' stories be provided on disk. No doubt we'll get further details from him in due course. He has recently been recovering from an operation but assures me he is doing well. As I think everyone knows, he is going to move back to Holland in 1993, where he has a new house being built, and expects to be at our 1993 annual gathering (not however 1992). Please do write to him now if there is any chance you could produce something for that volume.

Another chapter, the Southern one, has made the suggestion that, in view of the lack of training on science-and-faith issues that the clergy receive, it would be an excellent service to the church (and indirectly to the Decade...) if the Society could use its undoubted (human) resources to run workshops, anything from one to three days, on that theme. This could be on the grander scale at the national level or more locally at the diocesan or district level. That Southern chapter will be asking the A.G.M. about this at Launde Abbey this July. Meanwhile could you all sound out your local clergy opinion to help the A.G.M. judge what response there might be to the offer of such a workshop(s)?

Society for Ordained Scientists

May I also again ask you all to send to Ursula Shone and/or Tim Gouldstone any poems, prayers, extracts from books (original compositions included) which could extend the collection they have already begun and gave us last year, under the title 'Science and Spirituality'?

There are a number of new members joining us at Launde Abbey this July and I look forward greatly to meeting them there – and, of course, all of you too. So – until then – every blessing.

ARTHUR PEACOCKE

Report of the Northern Chapter

On March 2nd the Northern Chapter once again took advantage of the hospitality of Bishop David Young when we met at Bishop Mount, Ripon. For once we did not have a prepared topic or paper for discussion, but spent a good time sharing news and during lunch – food at a pub in Ripon. When we returned to Bishop Mount, Rod Anderson did try to open up discussion about global warming, but shortage of time prevented him from getting very far.

We were west of the Pennines on May 18th when we met at St Helen's Vicarage, Churchtown, Garstang, Derek Leyland's home. I do not know how the other chapters fare, but in the Northern Chapter we are very fortunate with people's kind hospitality. As always we were pleased to have the Warden with us for the meeting. This time Rod managed to present a paper on the Greenhouse effect, giving the background, and presenting some of the evidence for the increase in global temperature. The paper was timely in view of the Earth Summit to take place in Rio de Janeiro in June.

There have been a number of changes in the membership of the chapter; Kevin Horswell has been with us for a while since moving from Oxford to Chester. The chapter now has the Secretary, the Assistant Secretary, the Bulletin Editor, and the Treasurer of the Society in its membership. Is this a Northern take-over, I ask? Geoffrey Calvert has moved within the chapter area from Bamsley to Halifax. It has been good to have Derek Mellors from Leigh at our last two meetings.

Our next meeting will be at Liverpool Anglican Cathedral on October 12th and David Wilkinson, the Methodist Chaplain to Liverpool University, will be our guest.

DAVID WHITING

Report of the Southern Chapter

Nine of us met for a morning discussion on Thursday 9 April 1992 at Corpus Christi College, Oxford, followed by lunch and a Eucharist. We shared news, including that of Derek Stanesby's and Arthur Peacocke's involvement in the Rome conference for the European Society for the study of Science and Theology. We also shared personal and corporate concerns, particularly the importance of making links at parish level between academic scientific and theological issues and the life and faith of 'ordinary people'. How do our SOSc concerns engage with the day-to-day concerns of our parishioners?

We have four proposals, the first three of which we offer for wider consideration within the Society. We would be glad of reactions at Launde Abbey:

1. Should we offer a conference for any clergy who may be interested on 'The Gospel for a Scientific Age'?
2. Should we offer a conference on the same theme, but targeted for Diocesan Education advisers and those concerned with CME?
3. Should we publish occasional working papers, discussion notes, sermons etc. which might be useful parish resources – say duplicated A4 sheets in a simple folder every six months, advertised for any who would like to be on a mailing list?
4. For those of us in the Diocese of Oxford, and possibly for those in the Diocese of London, individual members undertook to explore the use of the local media, including radio, for extending a more positive media image of the relationship between science and Christian faith.

DAVID ATKINSON

Advances in Genetic Research Genetics is not new!

Since time immemorial humans have recognised the importance of genetics. The very early agricultural communities bred plants for food, and domesticated animals for their use. They achieved this by selective breeding – taking those individuals with the most desirable characteristics: for example, grasses with the fattest ears of seeds, sheep with the longest hair – and breeding from them whilst eliminating poor and weak specimens. Humans have always performed genetic manipulation.

Further, we have long known about medical genetics. The Old Testament records families with haemophilia, the bleeding disease in which affected males were excused circumcision.

Today, the position is simply that we know rather more than we did, and the potential for the application of our knowledge is greater.

Genes and genetic disease

The entire genetic material of an individual is known as the genome, and it consists (in the case of humans) of thousands (perhaps 100,000) of genes. Genes are composed of a complex chemical which is abbreviated as DNA. This carries the coded messages of the genes specifying the composition of proteins – the building blocks of the body and the chemical controllers of function. DNA can also reproduce itself. Genes are separated throughout the genome by non-coding DNA. Individual genes are not visible, but the DNA of each cell is contorted into compact structures, the chromosomes, which can be seen under a microscope. The genetic material is passed on from generation to generation by sperm and ova. DNA is replicated every time a cell divides for growth or repair or to produce the gametes, and even in aged adults, DNA is constantly replicating. Errors seem to occur fairly often in this process, and so changes in the DNA arise. DNA is also vulnerable to change from extraneous factors such as chemicals and ultraviolet light. Any alteration in the genetic material is called a mutation. These changes may produce beneficial effects, or be inconsequential, or they may be harmful. If the latter, and if the gene involved is essential to life or health, then genetic disease results. Since the genetic material is transmitted from one generation to the next, any changes produced in it will be passed on too. Thus genetic diseases are inherited.

Forms of genetic disease

Genetic disease encompasses a wide range of types of disorders.

(a) Mutations of single genes

This may involve only a minute change of the DNA, the substitution of a single chemical, or it may involve a small segment of chemicals – their deletion, duplication or shift. This will, in turn, alter the structure of the protein for which it codes, so that it will be rendered functionless or faulty. If the protein is essential for normal living then the consequences are serious. Diseases produced in this way include cystic fibrosis, Duchenne muscular dystrophy, and sickle cell anaemia. Individually these diseases are very rare, but there are thousands of them. The common factor is that they are usually very severe and often ultimately fatal diseases which we are unable to cure.

(b) Chromosome abnormalities

In this form of genetic disease, there are extra whole chromosomes, or segments of chromosomes or, more rarely, loss of chromosome material. Thus a large amount of genetic material is involved, and such a situation is usually lethal. Such abnormalities are responsible for 60% of first trimester miscarriages. Only a very few instances survive to be born – the most familiar is Down syndrome.

(c) Congenital malformations

Malformations present at birth, such as spina bifida, cleft lip and palate and congenital heart disease, are caused by multiple factors and this is called multifactorial inheritance. There is a definite genetic element, but it is rather diffuse, comprising many genes of small effect which act additively and together with environmental influences. This type of genetic disease is very common and is also what underlies:

(d) the common disorders of later life

About 10/1000 individuals are affected by such disorders as schizophrenia, diabetes mellitus, ischaemic heart disease and duodenal ulcer. They are severely debilitating and often life-threatening.

(e) Cancer

There is increasing evidence that many forms of cancer arise because of acquired changes in the genetic material of specific cell populations.

Thus, overall, much illness and debility is caused by genetic disease, and unfortunately at present we cannot cure most of it. Excluding the cancers and the common disorders of later life, what we have to offer families with genetic disease at the moment has always presented ethical problems. As advances are made in the management and treatment of individuals, inevitably additional ethical problems arise.

Present options for management of families with genetic disease

(a) Genetic counselling

People who are at risk of genetic disease, either in themselves or their children, are advised of the level of their risks, and of the options available to them for prevention and treatment.

(b) Genetic screening

We test populations of people who are themselves healthy, but who, by reason of ethnic group, or other remote factor, may be carriers of a specific genetic disease which they may pass on to their children.

(c) Prenatal diagnosis

For those 'at-risk' couples who become pregnant, we can test the foetus *in utero* by a variety of methods, to see if it is affected with the genetic disease. If it is so, we offer termination of pregnancy if the parents want it.

What the recent explosion in genetic knowledge in the molecular field has done is to expand this area enormously. But a few years ago, only a small proportion of genetic diseases could be diagnosed prenatally – mainly Down syndrom and spina bifida. Now the list is enormous and growing daily. The ability to analyse the DNA directly and knowledge of the location of individual genes within the genome has revolutionised the options available for parents, as well as giving enormous insights into gene structure and function. It should be noted that these developments could not have proceeded if the parents had not wanted it.

All these areas: genetic counselling, screening and prenatal diagnosis (and now, too, pre-implantation diagnosis), do present problems for some, as they can be seen to modify people's reproductive behaviour, and to control who is and who is not born. Overall, the use of these genetic tests implies that an ethic of the 'quality of life' is taking precedence over an ethic of the 'sanctity of life'. Society as a whole has accepted them – they are part of our Health Service, and enable people not to have children who will be seriously handicapped. But the use of these techniques is not compulsory, and people have the right, too, to conceive and bring to birth children with severe genetic disease if they choose.

Gene therapy

As previously mentioned, we have little effective treatment, let alone cure, for most serious genetic diseases, and usually what is available is burdensome and inadequate. With the molecular basis of single gene disorders now being discovered, the way is opening up for treatment by gene therapy. Gene therapy involves the isolation of a specific gene, the abnormal version of which is responsible for a genetic disease, and the transfer of it to cells of an affected individual where this normal gene will function and make good the genetic defect, so effecting a cure. Such a method is applicable only to diseases produced by a single gene mutation amongst the whole spectrum of genetic disease. It is important to emphasise that normal variations in human characters, such as personality, intelligence and stature, are determined by multifactorial inheritance. It is unlikely that gene therapy could ever be applied to the alteration of normal traits. Indeed, scientists have no interest in doing this.

As a technique, gene therapy presents enormous difficulties: the gene, together with its controlling elements, has to be got into the right cells, in the right place in the genome. Modified viruses are used as vectors to insert the gene into the cell and integrate it within the DNA. As yet there are no ways of removing the defective gene from the recipient cells, but this may not be necessary. Initially, gene therapy will be performed on bone marrow cells, as they are readily accessible, and bone marrow transplantation is already a regular procedure. Such treatment of body cells is known as somatic cell therapy. The cure should be permanent in the treated cells, but when the patient dies, the cells will die too. In order to transmit the cure to offspring of the affected individual, germline therapy would have to be performed: that is, the gene would have to be inserted into the sperm and ova. This is not proposed as a method at present because the hazards and consequences of such a procedure to future generations are not known.

DNA is the essence of life. The question needs to be asked: should we be dissecting out genes and manipulating DNA in this way? Further, the basis of our humanity resides in our DNA, and for those who believe humans are made in the image of God another question could be: is our DNA thus especially sacrosanct?

People in general have a fear of gene therapy, and this seems to reside in the slippery slope argument. This questions where it will all lead to, and argues that if we do permit gene therapy for the apparently worthy aims of curing genetic disease, we will subsequently want to insert genes to change people's looks and characteristics. As previously mentioned, this is unlikely to be possible. Other fears which are often raised are illogical – kidney, heart and bone marrow transplants already practised introduce new genetic material into individuals; alteration of existing genetic material already occurs when cytotoxic drugs and irradiation are used; and all new medical treatments carry risks. Gene therapy as proposed appears to be no more dangerous than any other fairly radical treatment, and will be subjected to rigorous testing under recognised safety protocols before introduction.

The Human Genome Project

Determining the structure of genes is a very tedious process. But along with the expansion of our knowledge has come the automation of some of the processes of analysis. This has paved the way for the realisation of a long-desired objective, namely, to determine the complete chemical sequence of the human genome. An international enterprise, the Human Genome Project (HUGO for short) has started in an attempt to accomplish this. It should be noted that simply knowing the chemical structure will not tell us what the function of the DNA is. However, in addition to invaluable

basic knowledge about, for instance, human evolution and mechanisms of ageing, it is hoped that the work will have practical consequences in the treatment and prevention of genetic disease. It is particularly hoped that we may be enabled to tackle some of the debilitating conditions of later life such as rheumatic disease, ischaemic heart disease and major 'psychiatric' disorders. Most of these seem to involve a number of genes which create a susceptibility to the disease, which is then triggered by various environmental factors to the manifestation of the condition. Knowledge of the genes involved would be the preliminary to research into ways of prevention and treatment. It will be a long process. The project will also help us understand why it is that some cells acquire changes in their DNA and become 'out of control' and produce cancer.

As with gene therapy, people have fears about such research. They worry that very soon we may be able to acquire complete genetic profiles of ourselves, and this might be used to our detriment when seeking employment or insurance. But this is not the aim of the HUGO project; neither is it a feasible possibility: it is far too complex a proposition. Other fears centre again on eugenic possibilities, and also on fear of the unknown. Eugenics is universally abhorred; it is not the aim of scientists. Fear of the unknown is no reason to ban genetic research.

Genetic research is no different from all other research, whether at the frontiers of knowledge or further back in unspectacular territory. It must proceed in a responsible manner, within the limits laid down by those who have proper authority to determine them. These limits will ensure that through all the work all individuals are respected as persons, and that the fruits of the work do not damage the nature of human persons.

MARY J. SELLER, BSc PhD DSc, Reader in Developmental Genetics

Pilgrimages of Faith

- Scope:** How ordained scientists came to accept the Christian faith and how they exercise their Christian ministry
- Purpose:** To make a contribution to the Decade of Evangelism, to help those who struggle with the question whether the Christian faith still has relevance in an age of science and advanced technology.
- Format:** Paperback, 150-200 printed pages

- Options:** 1. all 56 members; then 3 pages (1200 words) per person;
2. selection of a limited number of 15 stories, 10 pages (3900 words).
Selection criteria: order of submission? interest? priority to those who maintain or have maintained a dual vocation?
- Foreword:** By John Hapgood and/or Arthur Peacocke
- Appendix:** Bibliography of books, papers, reports written by SOSc members on the relation between science/technology and religion.
- MS guidelines:** Preferably on 3.5 inch floppy disk, Macintosh or MS-DOS format, in Word or WordPerfect program; with printout.
Those who cannot provide their text on disk: typewritten, double-spaced with 1-inch margins on all sides (but try to coerce a friend with a computer; this will save the editor a lot of work).
I would not exclude one or two line drawings for those who can express a thought in this way.
- Deadline:** October 1 1992 (so as to get the job completed before my transatlantic move).
- Editor:** The Revd Sjoerd L. Bontin, Ph.D.
1006 E. Evelyn Avenue
Sunnyvale, CA 94086
Tel. and fax: 408-738-0259
- Publication:** I hope that people with good connections in the British religious press, like John Polkinghorne or Arthur Peacocke, can find a publisher. The publisher can have the full MS on disk or in printout.

Holy Ground

Ross Thompson describes himself as 'something of a religious vagrant'. He speaks too harshly of himself, however, because his personal spiritual odyssey has enabled him to produce a most interesting and thought-provoking book, *Holy Ground* (SPCK 1990).

The book's subtitle is 'The spirituality of matter', which gives it immediate appeal for members of SOSc, whose Southern Chapter discussed the book at its meeting last October.

Thompson is a 'transcendental monist', vehemently opposed to all forms of dualism, who describes in his book his search so far for the God who is

to be found not in any gaps, but 'in the whole' of his Creation. His 'polymath' approach leads him to look at the way in which the disciplines of art, poetry, science and so on, 'interilluminate' each other in his quest.

Speaking personally, I find the book to be at once helpful and disturbing. It is helpful, firstly, in the general respect of its insistent monism (an insistence which is to be welcomed by anybody who is trying to integrate a Christian faith with a scientific training), as Thompson looks to a unified description of God's 'one world'. It is helpful, also, in particular points such as the author's illustration, using a simple computer program, of the creative potential of randomness (pp. 190ff), a challenge which the Christian has to face, for example, when contemplating Darwinian natural selection.

Holy Ground disturbs me through the description it gives of a world where relationship and interpretation are everything (p. 28), and where God is transcendent not by being outside or beyond his creation, but by standing in relation to it as music is to its notes, or as a game is to its pieces (p. 246). All of which is convincingly done, but which goes against my 'gut-feeling' about the way the world is.

In the end I suspect that the book is somewhat self-indulgent (it could, perhaps, have been shorter), but I feel the wiser for having read it. Wiser both for what I have learned from it about God and his world, and also for what it has shown me of my own need to do some background reading before tackling *Holy Ground* again – and this the book admirably helps the reader to do by its copious footnotes. All in all, well worth reading.

BILL KNIGHT

Getting there

Environmental problems have been around a long time. Perhaps the first major work detailing the destruction brought about by modern society was G. P. Marsh's *Man and Nature* in 1863. Since then, concern for the environment has ebbed and flowed several times. It has ebbed since the late eighties and some may think it only a passing fad, and yet each time it flows the tide has risen. The problems will not go away and more and more people, institutions, and companies are beginning to change their behaviour.

Our Warden has asked me to write a brief report on what the Church is doing about the environmental issues of our time. By comparison with other sections of our society, the Church remains slow in engaging with the issue. This, sadly, gives credence to the claims of many in the environmental movement that Christianity is one of the principal causes of our current

situation through its devaluing of the natural world in its concentration on spiritual issues.

A lot is being done, but mainly on the fringes. It is hard to keep track of all the initiatives that are taken. If I write mainly about the ones I am involved in, this is only because I know them better than others and my heart is in them.

Miss Eve Dennis is the Church and Conservation Project Officer, an ecumenical post at the Arthur Rank Centre at Stoneleigh, and has been seconded from English Nature. She is the only full-time worker in this field that I know of. As I understand it, her main concern is that the Church should exercise responsible stewardship in its care of the land entrusted to it. The Living Churchyard initiative is to encourage parishes and others to manage their churchyards with wildlife in mind as well as all the other users. In the diocese of Chelmsford about 90 parishes have been in contact with us to some degree. Eve and I have both been appointed to our DACs and are working at the issues that apply to buildings, from bats to heating. She is also pressing dioceses and the Commissioners to manage their farm land much more environmentally sensitively. This is particularly difficult because of its implications for the income from historic resources. This environmental concern links in with ACORA which highlighted the environment in its theological chapter.

One contribution the Church should be making is an avowedly spiritual one. Within the Theme Retreat movement I have been arranging Nature and Prayer Retreats. This year we have three, two in RC houses and one with the Iona Community. They vary in their style, but the idea is to combine a careful look at the natural world and relate it to our prayer.

I am also concerned that the Church should have something to say to those in the environmental movement, perhaps particularly of Hope. One idea being explored is to hold a symposium at the sixth International Congress on Ecology in 1994. This is a scientific gathering and I hope this idea will be supported by Professors Sam Berry and Ian Prance among others. Closer to home I am taking up WEA lecturing.

There is a lot happening elsewhere, some of which I shall just list. If members wish to follow anything up, I should be glad to give more information. St George's House, Windsor, with Derek Stanesby, have done a consultation on this which has been published. The Duke of Edinburgh got the World Wide Fund for Nature to start the Conservation and Religion Network as an inter-faith initiative. The development agencies now believe that environmental issues are integral to the development of the Third World

and a similar idea is nicely integrated into the WCC's Justice, Peace and the Integrity of Creation programme. There is Christian Ecology Link which began as an offshoot of the Green Party but now is fully independent with two regular publications, one news and one on theology. Creation Centred Spirituality led by Matthew Fox in the US is based at St James', Piccadilly, in this country. This is either loved or hated. Less contentious but also loved by those close to the New Age phenomenon is Celtic Christianity. Many groups that run conferences have dedicated one to environmental issues. The Society for the Study of Theology in 1990, the Rural Theology Association in 1991 and the Industrial Mission Association in 1992 are some that come to mind.

I am very conscious that this list betrays that I am a member of the Church of England. Much is happening in other churches and in other countries. It would probably be fair to say that the dear C of E is trailing close to the back of the pack, but we're getting there.

For those who wish to read more on Christianity and the environment, Prof. R. J. Berry has published a 'Bibliography on Environmental Issues' in Science and Christian Belief, 3, 15-18 (1991)

NIGEL COOPER

Society of Ordained Scientists Accounts for the period 1/1/91-31/12/91

Opening Balance		£333.48
Income		
Subscriptions (Full)	874.07	
(Ass.)	184.60	
Conference fees	1726.00	
Donation	100.00	
Interest	6.21	
	<u>2890.88</u>	
Expenditure		
Expenses: Cttee	130.00	
Secretarial	95.65	
Warden	55.22	
Conference: Launde Abbey		1657.38
Refunds	19.00	
Speaker (gift)	40.20	
Printing	606.14	
Other: 'Seedtime'	20.00	
Bank charges	9.01	
Barcelona conference	188.00	
	<u>2820.60</u>	
Income and Expenditure		
Income	2890.88	
Expenditure		<u>2820.60</u>
Excess of Income over Expenditure	<u>70.28</u>	70.28
Closing Balance		<u>403.76</u>
Represented by:		
Deposit Account	61.10	
Current Account	<u>342.66</u>	
		<u>403.76</u>

Note: Launde Abbey has a deposit of £50 for the 1992 conference.

PRAYER ROTA

DAY

1	Peter Arvedson David Atkinson	17	David Peat John Polkinghorne
2	Garth Barber Howard Bateson	18	Michael Pragnell Freda Rajotte
3	Stephen Bellamy Michael Benton	19	Colin Richards Michael Roberts
4	Sjoerd Bonting John Brennan	20	Bill Rumball Bob Russell
5	David Brewin Tom Broadbent	21	Michael Saunders Robert Semeonoff
6	Geoffrey Calvert Cyril Challice	22	Kevin Sharpe Ursula Shone
7	Bernard Dagnall Phil Edwards	23	Michael Soulsby Helen Stacey
8	Peter Fulljames David Gosling	24	Derek Stanesby Barry Thompson
9	Tim Gouldstone Richard Hills	25	Alex Thomson John Throssell
10	Kevin Horswell Eric Jenkins	26	Geoff Turnock David Whiting
11	John Keggi John Kerr	27	Chris Wiltsher Roger Yates
12	Bill Knight Chris Knight	28	David Young Our Visitor, John Habgood
13	Peter Levitt Derek Leyland	29	Associate Members
14	Roland Moss Robert Nelson	30	SOSc in Canada and U.S.A.
15	Phillip Nixon Maureen Palmer	31	SOSc in Europe
16	Iain Paul Arthur Peacocke		