

Issue 9

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BESHARA

M A G A Z I N E



BESHARA
A MAGAZINE
CONCERNED WITH UNITY

The Rediscovery of Time

Ilya Prigogine

W.B. Yeats and The New Age

Kathleen Raine

Recalling the Covenant

Irene Young *on the speech of Chief Seattle*

Jane Clark *on the religions and the environment*

BESHARA

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"Once a photograph of the Earth, taken from **the outside**, is available... a new idea as powerful as any in history will be let loose."

Thus said the astronomer Fred Hoyle in 1948. Since then, more than 200 people from over 18 countries have travelled in space, and this year we celebrate the 20th anniversary of one of the great symbolic events of all time – man's landing on the moon. So it seemed appropriate to begin this issue with the reflection that although the journey to space was undertaken in a spirit of conquest, it has had quite different repercussions – not least of which is a re-awakened sense of the great beauty and fragility of our planet.

In a new book 'The Home Planet' (which we review on page 39), the Vietnamese astronaut Phan Tuan says: "During the eight days I spent in space, I realised that mankind needs height primarily to better know our long-suffering Earth, to see what cannot be seen close up." Other astronauts echo his sentiments. Taylor Wang of China/USA confesses: "A Chinese tale tells of some men sent to harm a young girl who, upon seeing her beauty, became her protectors rather than her violators. That's how I felt seeing the Earth for the first time. I could not help but love and cherish her". "The first day or so we all pointed to our countries", says Sultan Bin Salman al-Saud of Saudi Arabia. "The third or fourth day we were pointing to our continents. By the fifth day we were aware of only one earth".

Such sayings intimate that, from the new awareness of ecology to the universal demand for human rights, Fred Hoyle's 'new idea' is bringing about great changes in our attitudes. "On the return trip, gazing through 240,000 miles of space toward the stars and the planet from which I had come, I suddenly experienced the universe as intelligent, loving, harmonious", said the American astronaut Edgar Mitchell. "There seems to be more to (it) than random, chaotic, purposeless movement of a collection of molecular particles." These words of hope and affirmation provide, I feel, the perfect introduction to BESHARA 9. Jane Clark

BESHARA

BESHARA Magazine was started in 1987 as a forum where the ideas of unity which are now emerging in many different fields – in science, economics, ecology, the arts and in the spiritual traditions – can be expressed. The word 'Beshara' is Aramaic (a language related to both Arabic and Hebrew) and means 'Good News' or 'Omen of Joy'.

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Front Cover. Chief Seattle, chief of Suquamish tribe, of Puget Sound, Washington
From Peter Newark's *Western Americana*.

Back Cover. Turbulence.
From 'The New Physics' ed. Paul Davies (reviewed on page 39). Photograph from Professor J. N. Newman, MIT, first published in 'Discover' magazine. Courtesy of Cambridge University Press.

Opposite: Earth rising over the lunar horizon.
Taken by Apollo 16 astronauts on 20th April 1972. Courtesy of NASA.

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News

An overview of current affairs

written and edited by Alison Yiangou

Human Rights and Responsibilities

THIS IS THE year of the bicentennial celebrations of the French Revolution, with its founding document, the Declaration of the Rights of Man and the Citizen, proclaiming the famous demand for 'Liberty, Equality and Fraternity'.

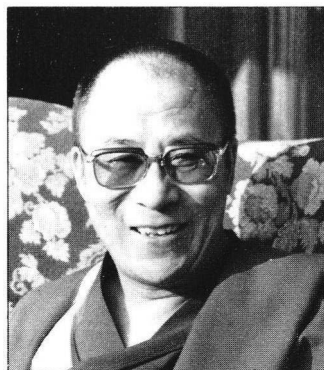
Progress with respect to these rights over the past 200 years has varied widely in different parts of the world, and this year is seeing many of the issues brought sharply into focus. The Salman Rushdie affair has concentrated world attention upon the question of freedom of expression, whilst the recent events in China have focussed upon the struggle for political rights. At the same time, we are witnessing in Russia the spectacle of a people exploring a freedom they have been denied for the past 70 years – or perhaps, even, have never enjoyed.

Rights

One of the most notable achievements in coming to a collective definition of personal freedom was the Universal Declaration of Human Rights, adopted by the United Nations in 1948 and signed by the 51 founding members. This added to the concept of rights that of dig-

nity, (it begins "...all human beings are born free and equal in dignity and rights") and established respect for the human being as an ideal. In a speech given last year to mark the fortieth anniversary, UN Secretary-General Javier Perez de Cuellar described it as "a decisive step forward in mankind's progress towards a higher level of civilisation". He feels that, even if actions do not always live up to the principle, the Declaration has made respect for human rights a universal concern, and points out that none of the 100 countries which have joined the UN since 1948 have challenged it.

It has also led to more profound reflection on the contents of such rights. "Being a synthesis, the Declaration has helped us to realise that human rights are indivisible", he said. "Human rights are a whole, like man himself, whose body and soul are indivisible. They are difficult to reconcile and their equilibrium is unstable, but they do not form a hierarchy. All human rights have priority." Further, he pointed out, "... enjoyment of these rights presupposes that peace will reign, that development will be pursued and that the environment will be protected;



HH Dalai Lama.
Courtesy of the Office of Tibet

conditions which can no longer be guaranteed by any state acting alone.... I believe indeed that the notion of fraternity must be extended to the entire world".

Responsibilities

However, alongside all this is a new awareness that the whole concept of rights is incomplete, indeed doomed to failure, without an equal emphasis on human responsibilities. As Gandhi said "...if we all discharge our duties, rights will not be far to seek. If, leaving duties unperformed, we run after rights, they will escape us like a will-o'-the-wisp. The more we pursue them, the further they fly!".

Several international organisations, conscious of the need for this to be more widely understood, are beginning work to incorporate it as a mode of action. In June this year the United Nations University for Peace in Costa Rica hosted a conference, aptly named 'Seeking the True Meaning of Peace', based on the assumption that it is possible to

educate for a universal sense of responsibilities. One of the speakers, His Holiness the Dalai Lama, has said: "Whether it is under the guise of survival and self-defence or directly expressed through domination and greed, the failure to recognise the common humanity shared by us all lies at the heart of our difficulties. To overcome it, we should begin to develop, from the level of the individual through that of society to the world at large, what I call a sense of universal responsibility; a deep respect for every living being who lives on this one small planet and calls it home." The aim of the Conference was to evolve a new Charter, to be called the Charter of Human Responsibilities for Peace and Sustainability, with the intention that it should eventually be adopted by the General Assembly of the United Nations.

A New Paradigm

Other organisations are also concerning themselves with the matter of responsibility. One is The Club of Rome (1), who last year committed itself to formulating a Declaration of Human Responsibilities which will outline the responsibility of humanity towards itself, the environment and future generations. Another is Rights and Humanities – an influential network of concerned lawyers and development workers in Africa and Europe which is pioneering a holistic approach. Lawyer

Julia Hausermann, founder and director, believes that a new paradigm is required. "We are concerned with human rights and with the law that has helped us to identify what rights are. But we are equally concerned with compassion, with tolerance, with the spirit of brotherhood and sisterhood and with goodwill. It is necessary to bring these things together, not merely to claim our rights, but to respond effectively and to be responsible ourselves" (2). To this end Rights and Humanities have now adopted the subtitle 'International Movement for the Promotion and Realisation of Human Rights and Responsibilities'.

Zia Rizvi, Secretary-General of the Independent Commission on International Humanitarian Issues (3) has taken the concept of responsibility even further, pointing out that our era of instant communication has made possible a quality of fraternity hitherto unimaginable. In a recent talk, he likened the planet to the human body, but with a major difference: if one part of the human body is ill or is hurt, the rest of the body feels it and immediately acts to repair the damage. This quality of spontaneous response is not yet the case with humankind on this planet, but it is becoming a possibility. Zia Rizvi finds the inspiration for what is required now in a saying of former U N Secretary-General Dag Hammarskjöld "In our age the path to holiness necessarily passes through the world of action".

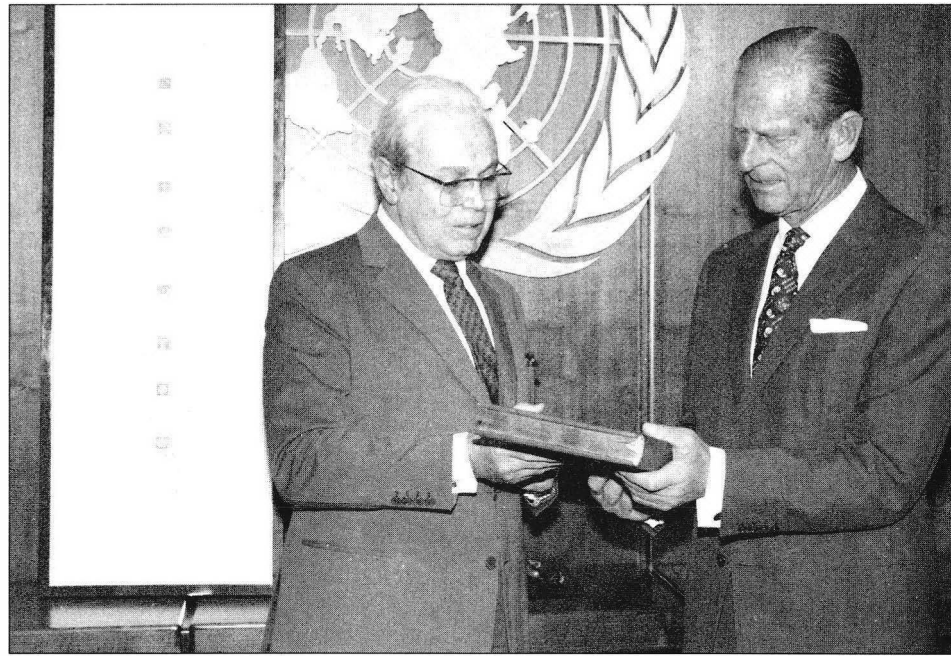
(1) See report in BESHARA 8.

(2) Address given to World Service Forum, London 1988.

(3) A group of about 30 leading world statesmen, brought together in 1983 under the leadership of Prince Sadruddin Aga Khan and Crown Prince Hassan of Jordan.

Our thanks to World Goodwill, London SW1A 2EF, for information contained in this article.

At the launch of the The Sacred Literature Trust, Perez de Cuellar hands the Duke of Edinburgh a book with the Declaration of Human Rights written in different languages. Behind is a poster with sayings from eight world religions, which was presented by the Sacred Literature Trust to the United Nations Building in New York.



The Sacred Literature Trust

ON 22ND OF May, HRH Prince Philip launched a new worldwide interfaith initiative, the Sacred Literature Trust, which will translate into English many of the world's religious classics. The stated aim is to produce "the most comprehensive, authoritative, readable, poetic, widely obtainable series of the world's spiritual and ethical heritage". At the opening, held in the United Nations Building in New York, Prince Philip said that through the translation programme, the Trust also hopes to encourage greater dialogue and understanding between the religions, and so bring about greater international understanding.

This venture is remarkable not only because of its scope – it will include many works which are not available in English and also new translations of major works like the Qu'ran – but also in the fact that the world's religions have agreed to cooperate. It has been set up by ICOREC (International Consultancy on Religion, Education and Culture), which describes its role as catalytic. The sugges-

tion to undertake the translations came from them, but the response from the world's faiths indicates that the proposal was timely. Indeed the need for such translations has become increasingly apparent in the work of The Network on Religion and Conservation – an association between the religions and the Worldwide Fund for Nature (see page 10). As Prince Philip, who is President of the WWF, explained at the launch: "The Network has come to be recognised as a new and potentially very valuable link between the world's religions, but discussions about attitudes to nature soon revealed that, since much of the sacred literature is not available in any of the principle international languages, there were problems about the mutual comprehension of the relevant scriptural texts."

As the world's great religious texts are invariably also great works of literature, the programme aims to produce translations which are veridic in terms of both meaning and literary value. Each faith will appoint a translator from within its

own members, and a 'wordsmith' – a poet, playwright, author or journalist who either professes the faith or has deep sympathy with it – whose first working language is English. The wordsmith will co-operate with the translator to achieve a rendering which is as close as possible to the meaning and to the literary 'voice' of the original text. After their translation has been approved by the faith it will be passed to the Sacred Literature Trust, whose Literary Panel is headed by British Poet Laureate Ted Hughes.

The Trust are presently negotiating with Collins/Harper & Row to set up a new jointly owned publishing imprint. The Trust estimate that the venture will demand an investment of \$8 million from Collins/Harper & Row. A further \$7 million has already been covenanted to the Trust, the majority as unallocated funds but some as specific bequests for particular translations.

The potential number of translations is enormous, and it is envisaged that the project will span many decades.

By 2000, it is hoped that 15-20 works will be available, amongst them:

- the first English translation of the Orthodox Bible, undertaken by the Orthodox Church. This will fulfil a need for millions of English-speaking Orthodox members as well as offering new possibilities for understanding between the Western and Eastern Churches.
- the first English translation of the Qu'ran sanctioned by Mecca. Selections of Islamic law contained in the Hadith (oral traditions) will also be published.
- a post-biblical canon of Jewish texts. The World Jewish Congress has already begun work on this collection, which will stand alongside the Torah and Talmud as the third authorised Jewish canon.
- the Taoist classic the T'ai Shang. Although almost unknown in the West, the T'ai Shang, reputed to have been written by Lao Tzu, is the most popular Taoist classic in China.
- ancient wisdom of indigenous peoples. The Trust will fund research and translation programmes to be carried out by indigenous peoples of Africa, Australia and America.
- lost Chinese treasures. The Portugese enclave of Macau is the last surviving treasure house of Chinese religion and belief. The government of Portugal and governor of Macau are working with ICOREC to establish a centre for the study and translation of Chinese folk religion.
- Baha'i faith centennial publication of selected scriptures, to coincide with the celebrations of the anniversary of the death of its Persian founder Baha'u'llah in 1992.

The Sacred Literature Trust has also been able to announce the award of an annual prize of \$10,000 for the English-language novel, poetry or play judged to have made the greatest contribu-

tion to religious thought and understanding. The importance of this award is not only that it highlights the literary dimension of the Trust, but also that it draws attention to the fact that the meanings previously revealed through religion can also be revealed through great literature. Says Martin Palmer, Executive Director of the Trust: "The revelatory nature of the Word has not stopped with the sealing of the great religious texts. Great works of literature can reveal aspects of the Divine and of ourselves."

The winner, whose work must have been published in the year of the prize, will also receive a bronze sculpture of a pair of hands open in invocation.

Real Presence in Art

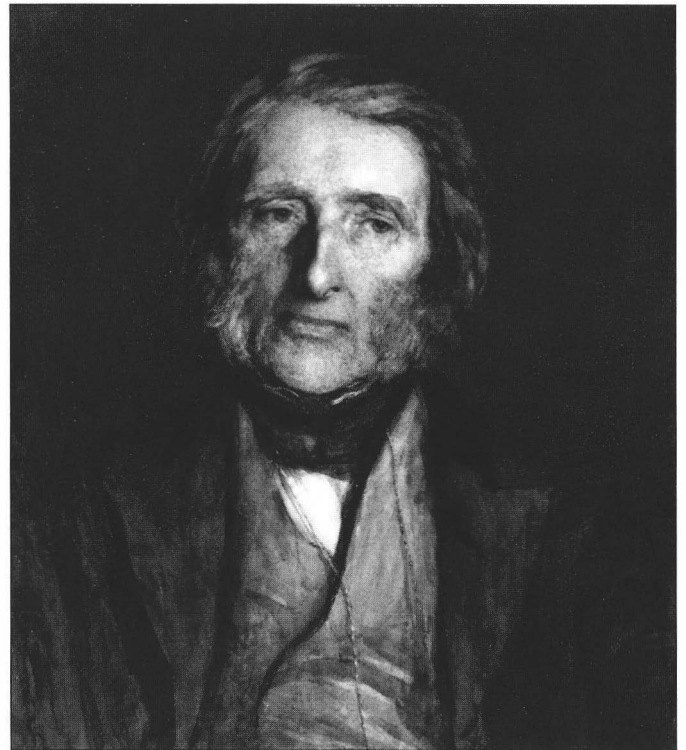
THERE ARE great changes pending, it seems, in the world of art criticism, where recent works by three British writers – Peter Fuller, David Barrie and, in a different way, George Steiner – have come to our attention as being remarkably similar in their intent.

Peter Fuller is one of Britain's leading (and most controversial) art critics and the editor of the successful journal 'Modern Painters' which was launched in 1988. At the end of last year he published 'Theoria', subtitled 'Art and the Absence of Grace' (1) which, far from dwelling on such absence, presents a strong argument for the recognition of the spiritual or transcendent element in art. Fuller acknowledges the 19th century painter and critic John Ruskin as his primary influence; indeed, 'Theoria' is a Ruskinian

term which indicates "...the response to beauty of one's whole moral being". This is contrasted with 'aesthetics' which Ruskin describes as "the mere sensual perception of the outward qualities and necessary effects of bodies". Further:

"If Ruskin was not a forerunner of modernism, he was the inspiration of a continuing if neglected romantic tradition. Far from being 'escapist', this tradition has expressed imaginative, spiritual and aesthetic insights which modernity disregarded. Today these insights are coming into their own. ... Perhaps that unity between scientific, spiritual and aesthetic life which Ruskin longed for, is again becoming possible.... He provides clues not only to the spiritual and aesthetic dilemmas of his time, but also to our own."

Ruskin's monumental work



John Ruskin in 1879. Portrait by H.von Herkomer. Courtesy of the National Portrait Gallery

'Modern Painters' (from which Fuller's magazine takes its name) has recently been re-issued in a new abridged edition by David Barrie (2). Barrie, who by profession is a First Secretary in the Diplomatic Service, writes in his introduction: "... the essential message of

'Modern Painters' lies in its consistent declaration of the perfectness and beauty of the work of God ... He (Ruskin) was prepared at the end of his career to affirm that 'the personal relationship of God to man' was 'the source of all human virtue and art'".

Ruskin's journey towards

the certainty expressed in these words was, from all accounts, a very painful one, but Barrie feels that "approached with the sympathy which all great creative works demand, 'Modern Painters' has the power to deepen our understanding not just of art and society but of our place in creation"

Ruskin had a strong scientific bent and took a keen interest in the scientific discoveries and debates of his day. Barrie follows in his footsteps in a recent article entitled 'Religion, Science and Art' (3) by employing insights from present-day scientists such as the physicist Paul Davies and the mathematician Benoit Mandelbrot to support his views. He concludes:

"Perhaps the vision of an infinitely complex, fundamentally indeterminate, yet ordered, universe which science now offers us may help to restore the feeling of awe and the sense of beauty which our attachment to the mechanist world-view has so long denied us. From there it is but a short step to the reverence which lies at the heart of all the religions and which can find adequate expression only in praise. And, as Ruskin knew, it is praise which is the essence of all great art."

We find ourselves on similar territory in George Steiner's new book 'Real Presences' (4), which undertakes perhaps a more subtle task – that of investigating the nature of meaning itself. In this extended essay which considers literature, drama and poetry as well as painting, Steiner stands against the purveyors of meaninglessness, negativity and absence in art, declaring:

"Very plainly ... it is the enterprise and privilege of the aesthete to quicken into lit presences the continuum

between temporality and eternity, between matter and spirit, between man and 'the other'. It is in this common and exact sense that poesis opens on to, is underwritten by, the religious and the metaphysical. The questions: 'What is poetry, music, art?'... 'How do they act upon us and how do we interpret their action?' are, ultimately, theological questions".

Steiner considers the standpoint of many contemporary schools of criticism, who hold that when one looks closely at any linguistic form, the relationships which define it as a meaning distinct from other meanings 'dissolve' as it were – just as, when one observes a form in the physical world at the atomic or sub-atomic level, the particular form 'dissolves'. Some critics have enunciated these ideas in despairing tones and would consequently declare 'the death of meaning', the 'impossibility of communication' and 'the death of God'. Steiner feels that "it may well be that the forgetting of the question of God will be the nub of cultures now nascent", but he points out that should such a mutation of consciousness occur, artistic creation would be impossible; art, which assumes the presence of meaning in its forms, would become a thing of the past.

This re-assertion of spiritual meaning is controversial and far from accepted by the majority of critics. There is also much that is tentative and unformed about these ideas, especially in Steiner's writing. But there is no doubt that they constitute a significant movement towards bringing out the 'theology' hidden in all creative activity.

- (1) Chatto & Windus, 1988
- (2) André Deutsch, 1987.
- (3) Apollo Magazine, May '89
- (4) Faber and Faber, 1989

Removing the Gap

This year's Templeton Prize is shared

THE 1989 Templeton Prize for Progress In Religion has been awarded jointly to The Very Reverend Lord MacLeod of Fuinary, founder of the modern Iona Community, and the physicist Professor Carl Freidrich Freiherr von Weizsaecker of West Germany.

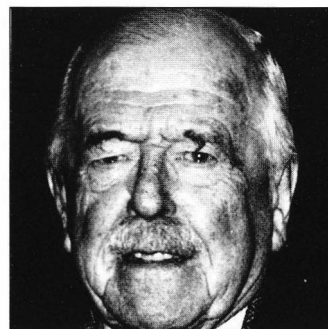
The Templeton Prize, established in 1973 by financier and millionaire Sir John Templeton, is an annual prize not for religion as such, but for progress. Not dissimilar to the Nobel Prize, and in financial terms the largest award in the world, its aim is to bring to public attention the life and work of people whose insights into spiritual truth are fresh, creative, and in keeping with the times.

Both recipients of this year's prize have worked to remove the gap between spirituality and science which characterised the first half of this century. Lord MacLeod established a community where the applications and consequences of our scientifically-based way of life are seen as being completely within the domain of a living faith, whilst Professor von Weizsaecker has endeavoured to demonstrate the unavied nature of physics, cosmology and theology.

George MacLeod

George MacLeod, born in 1895, became a minister of the Church of Scotland in 1926. Through his work in Glasgow, where he was appalled by the social deprivation he witnessed during the Depression, he began to feel that something more was required than was normally offered by the Church. This he characterised as a living faith which did not separate

the spiritual from the material; which did not emphasise individual salvation on Sundays and leave world problems and weekdays to economics and science; but which rather saw quality of action in the material world to be a direct response to,



The Revd. George MacLeod

and the responsibility of, a spiritual vision. He said: "He (Christ) is the only interpreter but the quite sufficient interpreter of our modern impasse. He must somehow be declared again to the physical consciousness, the scientific enquiry and the social passions of modern man...."

Lord MacLeod conceived the idea of founding, as an experiment, a Christian community where his vision could be demonstrated. For its site he looked to Iona, a small island off the West coast of Scotland which was the first British home of the early Celtic Church. Voyaging from Ireland in 563, St Columba had established there a monastic community which, through its example and through the missionary work of its barefoot monks (known as the Peregrini Wanderers), became one of the leading centres of Christian mission in Europe. It is said that there 'worship, work and learning were seen as part of the same tapestry', and that hospitality was regarded as a sacred custom,



The Abbey Church on Iona.

having precedence over other monastic obligations. St Columba would cancel fast days in order to honour and offer hospitality to a guest for, in the words of the Gaelic Rune of Hospitality, "Often, often, often Goes the Christ in the stranger's guise."

Lord MacLeod set off for Iona in 1938, and founded his community on the site of a ruined Benedictine Abbey, which had itself been built over the old Columban monastery. The Abbey Church had already been restored as a place of worship open to Christians of every denomination, and under MacLeod's direction, clergy and laity rebuilt the abbey into a pilgrimage centre.

Although initially conceived as being a place to train young men for urban ministry, the Iona community soon spread far beyond its original intention. Its ideals attracted large numbers of people, young and old, from far and wide, and the emphasis on urban work was gradually replaced by a much wider commitment – to peace and justice on an international scale, to the importance of community and celebration within a real ecumenism, and to a

reassessment of work and a new economic order. Today, the community numbers over 100,000 friends worldwide and 200 members in residence. The George MacLeod Centre has been built on Iona to house the Abbey's extensive youth education programmes, and there is a centre in Glasgow which coordinates mainland activities.

George MacLeod was elevated to the peerage in 1967 and resigned as Leader of the Iona Community. However, a statement made by him in 1956 is perhaps as relevant now as then, and not only to the Iona Community. "In Iona," said St Columba, 'God will reveal Himself anew'. We cannot know what this means. Certainly no man or movement could assist by one iota such revelation. But men can build cradles...Perhaps the Iona Community...is not completing a task but being made aware that it may have a home now from which to begin for the first time – to fashion cradles."

Carl Friedrich Freiherr von Weizsaecker

Carl Friedrich Freiherr von Weizsaecker was born in 1912, in an age when spirit was considered to be the sub-

ject of religion and the behaviour of matter to be that of science. Von Weizsaecker, however, had always been impelled by the desire to understand the relationship between the two. "I was never concerned with power in physics", he has said. "To me, physics was first of all about admiring cognition. Later, since the atom bomb, it was also about actual responsibility. When I was a child I wanted to become an astronomer. As a twelve year old, alone in a magnificent summer night full of stars, I felt I knew two things first hand – God is present here, and those dots of light are far away balls of gas. I knew both, only I did not know how they were related to each other. This I intended to find out in future life."

After meeting Werner Heisenberg in 1927, he became convinced that the Uncertainty Principle "represented hope to understand the problem", and therefore decided to become a physicist. He studied under both Heisenberg and Niels Bohr and went on to an extremely distinguished career in physics, astro-physics and cosmology. In 1970 he became Director of the Max

Planck Institute and Honorary Professor at the University of Munich, and is responsible for several key discoveries in modern nuclear physics.

He saw in the Quantum Theory of Niels Bohr a theory about human knowledge which recognises that subject and object – mind and nature, spirit and matter – are inseparable. "Because Quantum Theory takes seriously that matter, as extended substance, is defined through being knowable; and that consciousness, as the thinking substance, is defined through knowledge; it inevitably addresses the problem of what these different substances have to do with each other."

His certainty regarding the unified nature of spirit and matter led him to initiate conversations with his academic colleagues, and these were seminal in opening up real dialogue between the disciplines of natural science and theology. They led eventually to the world conference 'Faith, Science and the Future' sponsored by the World Council of Churches in 1979.

VonWeizsaecker feels that the real problem is not the understanding of how mind

and nature, spirit and matter, God and creation, can be reconciled; but rather understanding how they could ever have been set apart. "I have never been able to understand Cartesian dualism except as an ideology of power. Why should extended reality (the universe) not be able to think, and why should thought not be able to present itself as extended (manifest)?"

Nor does he see this dilemma as one which is confined to philosophical musings, but rather that it is at the heart of a future scientific method. He asks: "Why does it (nature) present itself obstinately in three dimensional extension? It is not the spirit that presents the first enigma when one approaches this problem but

the body. Why did spirit become flesh?...". And:

"Is Nature and with it my physically visible brain perhaps only the spirit that does not know itself as spirit yet? Are not all the clods of earth God's children? Despite the poetical way of expression this is not supposed to be an added-on mythology, rather a programme of further science."

The quotes from von Weizsaecker are taken from his speech delivered to the conference on 'Mind and Nature', Hanover, May 1988, translated from German by Marianne Schollen.

Quotations from Rev. George MacLeod are taken from 'Chasing the Wild Goose' by Ron Ferguson. Fount Paperbacks, 1988.

Global Forum to Meet in Moscow

IN JANUARY 1990 an event heralding a new development in international co-operation will take place in Moscow. The Global Forum on Environment and Development for Survival will be bringing together over 300 spiritual leaders, legislators, scientists, artists and journalists from all over the world, along with up to

700 counterparts from all 15 Soviet republics, to take part in a series of workshops and forums on the problems of sustainable development.

The intention behind Global Forum is to bring together spiritual and temporal leaders on an equal footing, in order to influence each other and also to extend their influence for

peaceful change to the communities they serve. Akio Matsumura, Executive Coordinator, explains: "Our traditional ways of thinking have not proved sufficient to deal with the great issues of our time. The hard, practical realism we have brought to problems has not always succeeded by itself alone. We need to balance realism with idealism and moral values, which can be provided by spiritual leaders."

This principle – that governance of the temporal must be based on spiritual values, whilst the spiritual finds its expression in the temporal – has been at the heart of many past civilisations and has shaped their greatness. It is interesting to note in this context that the Moscow conference has as its joint organisers the Supreme Soviet, the Soviet Academy of Sciences, all Soviet faith communities and the International Foundation for the Survival and Development of Humanity. This is the first time that these great Soviet institutions have collaborated on a project; a cooperation which they see as the pattern for the future.

The Forum convened its first Global Conference of Spiritual and Parliamentary Leaders on Human Survival in April last year in Oxford, when it brought together 200 religious and political representatives from 56 countries (1). Whilst it was then anticipated that the next conference would be in five years time, the decision to hold one in 1990 was announced after a meeting of the Steering Committee in Moscow last October. Global Forum themselves acknowledge the role played in this development by Mr Gorbachev. To quote Mr Matsumura, "...we are struck by his emphasis on the need to fashion a new way of thinking to tackle major global issues (2). We are honoured and encouraged by the endorsement of the concept that is represented

ed by Global Forum".

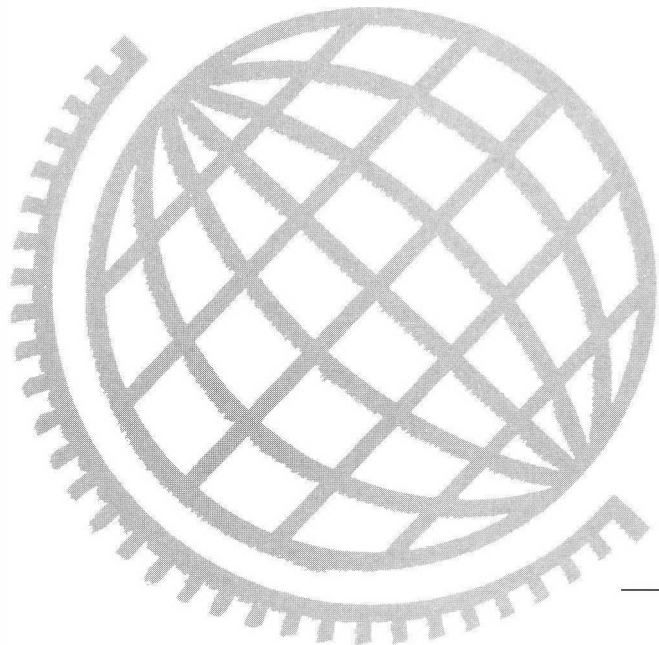
All the forums next January will consider their role with respect to those environmental and development problems which threaten global survival. The main Forum – of spiritual and legislative leaders – will be addressed by Mr Gorbachev and by United Nations Secretary-General Javier Perez de Cuellar, after which participants will divide into working groups for specific discussions. These will present their recommendations and conclusions at a final plenary session. 'Mini-forums' for news media, scientists, business and cultural leaders will also be held prior to the main event.

Global Forum have perceived the importance of informing and educating public opinion. Unlike the Oxford Forum, which reached only a limited audience, the proceedings of the Moscow Forum will be broadcast worldwide by satellite, and two documentary films will be produced. One of its organisers, the Native American elder and spiritual leader Chief Oren Lyons has summarised what is required. "...the issues are so tremendous", he says. "We must find a process without foundering. We have to clarify the problems and then educate the general public. After that the people can bring pressure on world leaders." (3) In Chief Oren's Native American tradition, leadership entails both a respect for life and an obligation to safeguard the Earth not just for the present, but for seven generations to come. "This is a profound instruction..." he explains. "When this respect, protection and continuance of life becomes a priority of humans, then we will have peace".

(1) Reported in Issue 6 of BESHARA.

(2) In his speech to the United Nations, Dec 6th 1988.

(3) Shared Vision, No 1 1989.



Conferences

GAIA, EVOLUTION AND CONSCIOUSNESS

Wrekin Trust. Winchester. April 1989.

This 12th conference in the series 'Mystics and Scientists' included a distinguished range of speakers. James Lovelock, originator of the Gaia Hypothesis, gave an update on current debates and developments relating to the theory. Characterising it as being essentially scientific, he repudiated any mystical overtones that others might ascribe.

Dr Mae Wan Ho, who is a Reader in Biology at the Open University, was less circumspect in her approach to science and made a passionate plea for the 're-animation' of nature. "Love", she said, "is fundamental to science" and quoted extensively from art and literature to support her claim for nature to be understood from within, through empathy and identification.

Bishop Hugh Montefiore declared himself to be "neither scientist nor mystic", but described Gaia as "the immanent working of the Holy Spirit". The following speaker, designer and author Keith Critchlow, gave an invigorating introduction to "a Socratic vision of the planet as a living creature", throughout which he reiterated the need to continually refer to the principle of unity in our search for knowledge. In a similar vein Brian Goodwin, Professor of Biology at the Open University, described the principle of the Golden Mean with reference to biological form, demonstrating the inheritance of dynamic order and intelligibility in nature.

Yet Si Blue, a direct descendant of Chief Seattle, testified by her presence at this conference to a new movement within the Red

Indian peoples. "Our elders" she said, "have waited for the time when the white man would understand about what we call 'creative living laws'. Our bible is the whole world and the cosmos is our religion". In her account, and throughout those of the other contributors, lay a profound sense of the beauty and order of the living universe, and the urgent need to change mental attitudes that lead to its desecration and despoliation.

Kathy Cresswell

THE SECOND ANNUAL ECKHART CONFERENCE

The Eckhart Society. West Wickham, Kent. April 1989

Four excellent papers were given at this conference which will do much to further establish the society as a forum for serious study and discussion of Meister Eckhart's work. Fr Simon Tugwell OP spoke on 'Eckhart's teaching on Abgeschiedenheit and its Neoplatonist Background' (*Abgeschiedenheit* often translated as 'detachment', may also be rendered by the more accurate, if awkward, 'cut-offness'). Professor Rowan Williams of Christ Church, Oxford, discussed similarities and dissimilarities in the writings of St Teresa of Avila and St John of the Cross in his paper 'Eckhart and the Carmelite Tradition', whilst Gai Eaton's paper 'Muhyiddin Ibn 'Arabi In the Islamic Tradition' provided a very informative introduction to a great mystic whose writings so closely parallel those of Meister Eckhart. Prof. Oliver Davies delivered a well-researched talk on 'Eckhart and the Beguines' covering the intellectual and spiritual climate in Northern Europe during Eckhart's time.

Martha Chamberlin

COULD DO BETTER

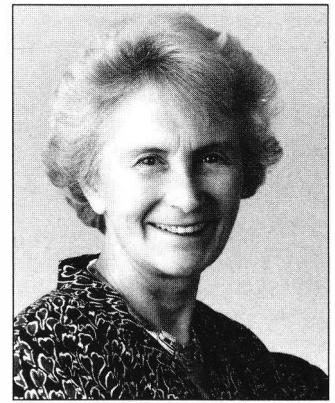
Educational Perspectives on Science and Religion.

Science and Religion Forum. Herts. March 1989.

In his opening address, chairman Christopher Isham, Professor of Theoretical Physics at Imperial College, London, spoke of the difference in the way science and religion are taught in our present educational system. "The 'profession' agrees essentially on the end points of modern physics... what might be called the linear nature of science. In contrast, people do not agree on the end point of religion, therefore religious teaching is far more open-ended, a non-linear process." He pointed out that many children lose their sentiment for religion in the nebulous age from 11-14 years, when Bible stories and pictures no longer suffice. It is not until they are much older that they become aware of a spiritual need as they face the responsibilities of adult life.

Mrs Rosemary Peacocke, one of Her Majesty's Inspectors of Schools, stressed that education must address the spiritual needs of the student, and considered it significant that the word 'spiritual' is now included, though undefined, in the new national curriculum. Mike Poole, lecturer in Science and Education at King's College, London, felt that the rift in attitudes towards science and religion, already apparent when children begin secondary education, may be partly due to the way the media misrepresent science as a kind of belief system rather than as a method of enquiry.

Chairing the plenary session biologist Rev. Dr Arthur Peacocke pointed out that, in the present university system in Britain, there is no place for interrelating the two disciplines. The conference also concluded that requirements now so urgent in the fields of science and



Elizabeth Sidney of the New Economics Foundation

religious education are also necessary in all fields of learning.

Christopher Ryan

SAINTHOOD

The Sixth Symposium of the Muhyiddin Ibn 'Arabi Society. Oxford. April 1989

The Andalusian mystic and philosopher Muhyiddin Ibn 'Arabi (1165-1240AD) earned the epithet Sheikh al-Akbar (greatest master) because of the depth and universality of his knowledge, and this meeting dealt with a theme central to his thought. For Ibn 'Arabi, the quality of sainthood resides not with external actions, but in an interior knowing of, and being in union with, God. This union he saw not as the end of man's spiritual journey, but as the beginning, for it is only when man knows himself in this manner that his real education and purpose can begin.

The Symposium was addressed by 12 speakers drawn from all over the world. They included Peter Young, Principal of the Beshara School of Intensive Esoteric Education, who spoke on purity of heart; Dr Bernard Radke of Bergen University who presented the ideas of Hakim Tirmidhi – a 9th century precursor to Ibn 'Arabi – and Dr Paul Fenton of Lyons University, who gave a fascinating comparison of the hagiographies of the Islamic and Jewish mystical traditions.

Alison Yiangou

THE ECOLOGICAL CRISIS AS AN EVOLUTIONARY & SPIRITUAL CHALLENGE

The Scientific and Medical Network, Imperial College, London, May 1989.

The Chairman, Dr Peter Fenwick, began this open conference by questioning the inclusion of the word 'spiritual' in a scientific discussion of the state of the planet. "We normally act" he said, "as if the world outside is separate from our minds. But we now know that this view is a trap, and that the world is a mental construct. The task in this age is to go beyond the 'half science' that emerged in the 17th century, and come to a 'true science' which includes both the quantifiable primary qualities and the secondary qualities of the mind".

This sentiment was apparently received with heartfelt agreement both from the speakers who followed him, and from the audience of more than 100 scientists, psychologists and healers. Dr Henryck Skolimowski, Professor of Philosophy at Michigan University, maintained that we shall only emerge intact from the 'ecological crisis' if we recognise that it demands not only action but a change of consciousness. For him, the spiritual aspect is to do with a search for meaning, rather than specific practices or beliefs, and the development of a new science based on "a reverential understanding of the cosmos".

Monica Bryant of the International Institute for Symbiotic Studies in Brighton, spoke of our need to re-establish a proper relationship with the microbial level of life. She quickly established the importance of this by pointing out that there is much evidence – from cancer to the increase in allergy-related disease to AIDS – that we are suffering from a major degeneration, if

not a breakdown, in our bacterial systems. She related this both to the continuing 'shoot to kill' policy of allopathic medicine and modern agriculture, and our attitude towards the planet as a whole (as, of course, much of the ecosystem, such as the atmosphere, is maintained by micro-organisms).

The final speaker, Peter Russell, author, psychologist and futurist, developed the argument that we are in trouble because we identify happiness and peace of mind with material wealth and security; we are what the Eastern religions call 'attached to the world'. Whereas all the great Saints, the enlightened people, have told us that it is possible to live life in a very different way. Indeed, he said, to make that step into a different sort of consciousness is our highest purpose, and quoted St Bernard: "Life is to learn to love, and time is for knowing God".

If one was to encapsulate the quality of this day, it would be in the words of Professor Skolimowski, who resisted the all too frequent tendency towards doom and gloom. He maintained that "we (mankind) still have a stupendous future" and lauded the quality of hope. "Hope is a vector of our continuing transcendence" he said. "It is a re-assertion that there is meaning in the universe. Hope is crucial to a life lived in beauty".

Jane Clark

THE OTHER ECONOMIC SUMMIT 1992, Trade and Self-Reliance

New Economics Foundation, London, May 1989

The New Economics Foundation has as its aim the generation of new economic ideas. This, the 5th Other Economic Summit which it has organised, had on the front of its programme a quote from the 1987 Brundtland Report to the effect



Cartoon from Monica Bryant's presentation. Courtesy of IISS/Shovel.

that: "The sustainability of ecosystems on which the global economy depends must be guaranteed" and "relationships that are unequal and based on dominance are not a sound and durable basis for interdependence".

The first day considered the opening up of Europe to trade in 1992. Seeing this as an opportunity which could lead to a more human economic order, or equally exacerbate the problems of the existing system, the conference set out to generate ideas and analyses which will be conveyed to the European Parliament. Speakers included Martin Bond of the European Parliament Information Office who maintained that "the hour of the Nation State is over" and that the single market will have effects that go beyond any willing co-operation between sovereign states.

There were also two speakers from the USSR Academy of Sciences, Vladimir Kollantai and Mikhael Lemeshev, who gave us a taste of the great changes which *perestroika* is bringing about by speaking

of the importance of giving control of resources to the local level. Elizabeth Sidney of the new Economics Foundation, speaking on 'Changes in values and the workplace', made the interesting observation that the 1980's have been characterised by a reassertion of the outer direction of the 1950's together with the stronger inner direction of the '60's and '70's.

The second day was concerned with problems arising from trade; for instance, how the rainforests could be gone in ten years, having been destroyed to service development loans granted in the 1970's which failed to achieve their purpose of industrialisation; and how exports of arms are sometimes 'linked' to promises of aid. Paul Ekins, in his overview of the two days, pointed out that the vast majority of the gains in trade have gone to the industrialised nations and suggested that what is needed now is self-reliance for all nations so that they can control their own pace of development.

Graham Dalgleish

Recalling the Covenant

Concern about the environment is causing many people to question their relationship with the natural world. Here Jane Clark reports on the contribution that the major religions are making to the debate, and Irene Young introduces a famous speech by the American Indian, Chief Seattle of Puget Sound in Washington State.

After Assisi

A look at the new alliance between religion and conservation

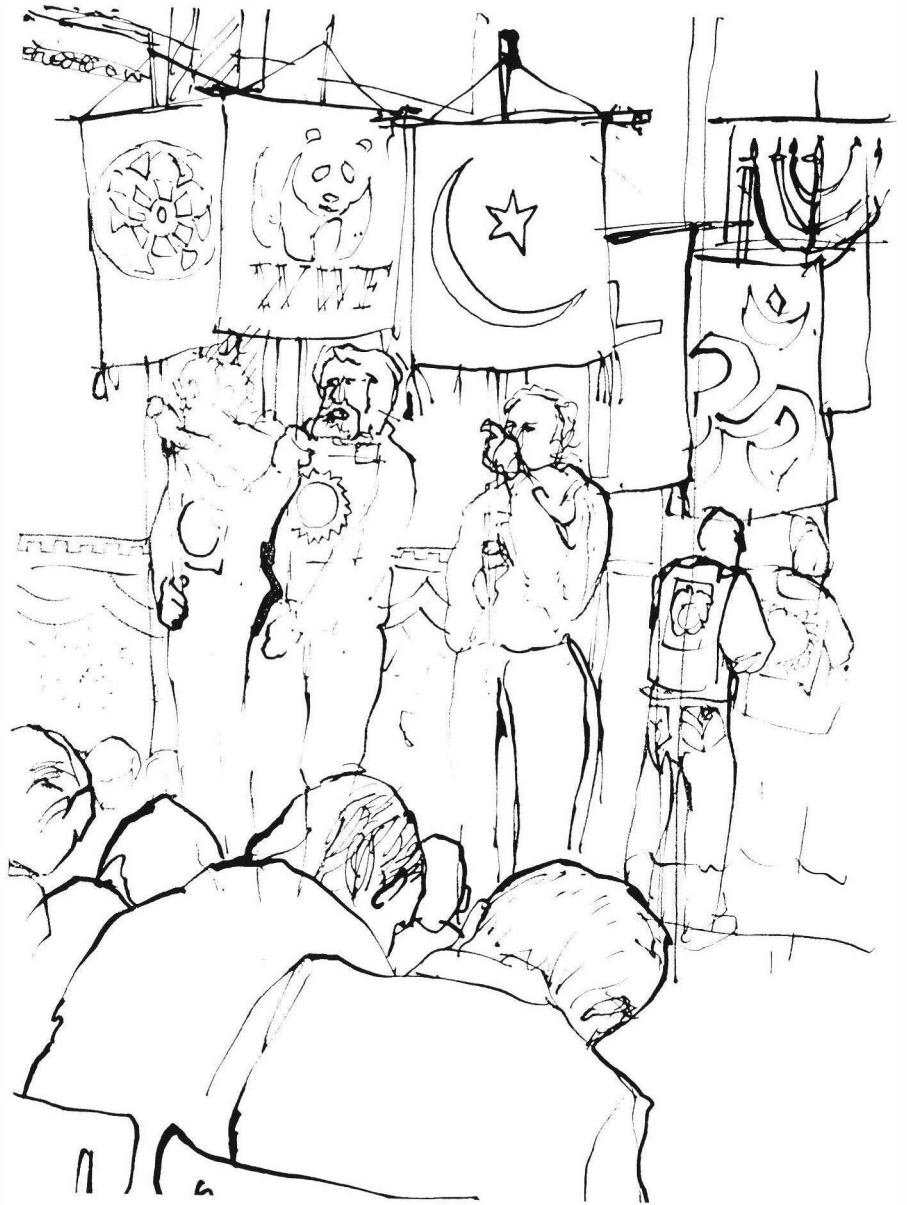
"I believe that today, in this famous shrine of the saint of ecology, a new and powerful alliance has been forged between the forces of religion and the forces of conservation. I am convinced that secular conservation has learnt to see the problems of the natural world from a different perspective and, I hope and believe, that the spiritual leaders have learnt that the natural world of Creation cannot be saved without their active involvement. Neither can ever be quite the same again".

THESE WERE THE words of the Duke of Edinburgh, spoken in September 1986 at the end of an historic event at Assisi in Italy. In his capacity as President of the Worldwide Fund for Nature International (WWF), the Duke had welcomed representatives from the world's five major religious traditions – Buddhism, Christianity, Hinduism, Islam and Judaism – to meet with conservationists to discuss ways in which they could work together to save the world from ecological disaster.

Remarkable not least because it was the first public event in which all the world's major religions had overtly co-operated with each other, Assisi created a flurry of interest at the time and was widely reported throughout the world. Since then, one has heard little about the effects of the meeting, which has in fact spawned a multitude of activities and new initiatives whose value can hardly yet begin to be assessed.

A Rediscovery of Meaning

One of the major organising forces of all these events has been the International Consultancy on Religion, Education and Culture (ICOREC) directed by Martin Palmer. Asked what he felt to be the most important out-



Illustrations in this article are taken from the book 'Faith and Nature', an anthology of scripture, stories and writings from the different faiths, produced by WWF. The book is illustrated by Miles Aldridge, Michael Nicholson, Rachel Ross and Chris White, and it includes an account of the Assisi event plus the full text of the 'Declarations on Nature' from which the quotes overpage are taken. All are reprinted by the kind permission of WWF.

come of the meeting in 1986, he had no hesitation in answering: "It is that through a whole series of different programmes, the major faiths are re-evaluating what their own scriptures, traditions and practices have to say about our relationship with nature – and then working to make that a living practice".

When the idea of a meeting between the religions and the conservation organisations was first mooted, Palmer reveals, the WWF had seen it simply as a matter of the religions endorsing their work, and were surprised when the faiths showed a more essential interest. It was at first suggested that a single, universal declaration should be produced at the end of the conference, but it soon became clear that this would not be truly meaningful to anyone. Instead, each of the religions produced its own declaration – and this had great

God and man, between God and nature; a re-exploration of the notion of compassion towards the world".

New Interpretations

Within the Abrahamic traditions (Judaism, Christianity and Islam), one of the principle texts is the old testament story of Noah, to whom God promised, at the end of the great flood, that he would not again destroy the life upon earth (see panel). Often in the past referred to as the Noahic Covenant, with the attention focussed on what it says about the relationship between God and man, it is now being emphasised that it is equally between God and all living things.

Alongside this is renewed interest in those people and movements which have emphasised the relationship with nature. Judaism, for instance, has a long-standing tradition concerning

and St Thomas Aquinas, the great 13th century theologian whose writings give a metaphysical basis for understanding our unity with nature. Edward Echlin, writing last year in the WWF's newsletter, New Road (1), quotes St Thomas's definition of creation, as: "Creation is none other than the relation of the creature to the Creator as to the very principle of its being", and goes on:

"This provides a valuable insight because it describes a real relationship to ultimate reality which every creature shares with every other creature. In a few crisp words, St Thomas defined and illuminated the same insight that had moved Assisi, the Celtic monks, the early Christian writers and Jesus himself – all men are brothers with each other, with all the living and with all creatures"

Another aspect is that ideas which were previously seen as passive are being emphasised and turned into active principles. In Buddhism, for instance, the principle of the interconnectedness of all things is well understood, and the practice of compassion to all sentient beings is central to the religion. And so it was found that in Thailand the areas around the Buddhist sacred sites – the monasteries and the precincts of the temples – were virtually conservation sites because of the way the monks treated the land. This attitude is now being consciously extended to other areas.

Emerging Action

There is no doubt that the religions are taking the task very seriously. The Hindu delegation responded to Assisi immediately by holding a conference in 1987 which brought together the Hindu, Jain and Sikh faiths and the Tibetan Buddhists to discuss what could be done in the East. The Roman Catholic Church is now in the process of establishing a pontifical faculty for Christian ecology, 'The Franciscan Centre for Environmental Studies', in Rome, which will open in September 1989, whilst the World Jewish Congress has announced a major educational project which will undertake research into written Jewish sources such as the Torah and the Talmud, and then disseminate material to grass-roots, synagogue level.

Several faiths have decided to dedicate a festival to the environment. The Muslim World League is working on a Hajj (pilgrimage to Mecca, which each



The Harvest Festival at Winchester Cathedral, 1987. Photograph by Tony Berry.

repercussions. Through setting down their ideas, they realised that they had an internal job to do, re-examining their own traditions, before they could proceed to active involvement with conservation.

"When most of the traditions were written down", Palmer explains, "Nature's relationship with the Divine was assumed. Over the intervening years, it has simply been left dormant, and in some cases this has led to a rather too simplistic 'anthropocentrism'. What is happening now is a re-affirmation of the Covenant between

trees stemming particularly from the Rabbinic era, with many texts in the Talmud relating to their symbolic meaning and proper treatment, one aspect of which is the need to make provision for future generations. The World Jewish Congress is now considering making the yearly Festival of Trees, Tu B'shvat, into a festival of the environment as a whole.

Within Christianity, interest is rekindling in, amongst others, the early Celtic Church, which was influential in Europe until the 12th century, the medieval mystic Hildegard of Bingen,

God spoke to Noah and his sons: "See, I establish my Covenant with you, and with your descendants after you; also with every living creature to be found with you, birds, cattle and every wild beast with you; everything that came out of the ark, everything that lives on the earth. I establish my Covenant with you: no thing of flesh shall be swept away again by the waters of the flood. There shall be no flood to destroy the earth again.

God said: "Here is the sign of the Covenant I make between myself and you and every living creature with you for all generations: I shall set my bow in the clouds and it shall be a sign of the Covenant between me and the earth. When I gather the clouds over the earth and the bow appears in the clouds, I will recall the Covenant between myself and you and every living creature of every kind..."

The Old Testament. Genesis

There is a natural relationship between a cause and its resulting consequences in the physical world. In the life of sentient beings, too, including animals, there is a similar relationship of positive causes bringing about happiness and negative actions causing negative consequences. Therefore, a human undertaking motivated by a healthy and positive attitude constitutes one of the most important causes of happiness, while undertakings generated through ignorance and negative attitude bring about suffering and misery. And this positive human attitude is, in the final analysis, rooted in genuine and unselfish compassion and loving kindness which seeks to bring about light and happiness for all sentient beings.

From the Buddhist Declaration on Nature

The Fathers of the Church understood well the marvel of man's dual citizenship and the responsibilities placed upon him. In the word of Gregory of Nazianzen: "God sees man upon earth as a kind of second world, a microcosm; another kind of angel, a worshipper of blended nature... He was kind of all upon earth, but subject to heaven; earthly and heavenly; transient, yet immortal; belonging both to the visible and the intelligible order; midway between greatness and lowliness".

Most certainly, then, because of the responsibilities which flow from his dual citizenship, man's dominion cannot be understood as license to abuse, spoil, plunder or destroy what God has made to manifest His Glory. That dominion cannot be anything other than a stewardship in symbiosis with all creatures".

From the Christian Declaration on Nature.

In the ancient spiritual traditions, man was looked upon as part of nature, linked by indissoluble spiritual and psychological bonds with the elements around him. This is very much marked in the Hindu tradition, probably the oldest living religious tradition in the world.

The Hindu viewpoint on nature is permeated by a reverence for life, and an awareness that the great forces of nature – the earth, the sky, the air, the water and fire – as well as the various orders of life including plants, and trees and forests and animals, are all bound to each one other within the great rhythms of nature. The divine is not exterior to creation, but expresses itself through natural phenomena.

From the Hindu Declaration on Nature

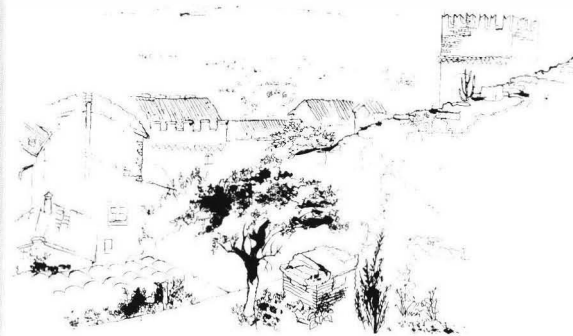
When we submit to the Will of God, we become aware of the sublime fact that all our powers, potentials, skills and knowledge are granted to us by God. We are His servants and when we are conscious of that, when we realise that all our achievements derive from the Mercy of God, when we return proper thanks and respect and worship to God for our nature and creation, then we become free. Our freedom is that of being sensible, aware, responsible trustees of God's bounty and gift.

Allah is Unity; and His Unity is also reflected in the unity of mankind and the unity of man and nature. His trustees are responsible for maintaining the unity of His creation, the integrity of the Earth, its flora and fauna, its wildlife and natural environment. Unity cannot be had by discord, by setting one need against another or letting one end predominate over another; it is maintained by balance and harmony.

From the Islamic Declaration on Nature

year has a different theme) on the environment; the Swedish Church has made Midsummer Day, which is a major event in their calendar, an ecology day; whilst the Greek Orthodox Church has just announced that it will institute a new feast day on 1st September – the first new day to enter their religious calendar since 841AD.

The Church of England has chosen the Harvest Festival as the focus of its efforts, and has begun to transform it into a Festival of Creation. In 1987, a new Creation Harvest Celebration was launched at Winchester Cathedral, along with a 'Rainbow Covenant', which affirms the role of man as 'steward', rather than master, of creation. In September of 1989, celebrations will focus on Canterbury, where a four day festival under the title 'Faith and the Environment' will echo the Assisi



Assisi

event; it will include a pilgrimage, services from different faiths and a conference on 'Christian Faith and Ecology' (see page 18).

A Two-Way Challenge

But perhaps more important than any specific project, is the continuation and expansion of the dialogue begun at Assisi. Several faiths have been drawn into the alliance since 1986 – the Bah'ais, who have produced their own declaration on nature, and some of the ancient religions of the American Indians, the Australian Aborigines and the South American peoples. WWF has instituted a network of individuals and groups who wish to participate, and established a newsletter 'The New Road' as a forum where the ideas can be shared. There have been high-level meetings between the religions and consortia of scientists and environmental groups such as the United Nations Environmental Programme (UNEP), the WWF and NACRE (The North American Conference on Religion and Ecology) in America and The Green Party in the UK; whilst at grass-roots

level more than 60,000 religious groups of all denominations throughout the world have met with conservationists during the past three years.

Martin Palmer sees this as vital not only for the religions, but also for the conservationists. "Without the interaction with the faiths", he says, "the environmental movement would be completely lost in terms of values and ethics. They are able to accept them from the religions in a way which they cannot from political ideologies like Marxism". More than this, he perceives the initiative at Assisi as a two-way challenge, in that it calls into question the way in which many professionals in the conservation movement – WWF, UNEP, IUCN and suchlike – approach their task. "The basis on which secular conservation operates at the moment is a soulless one," he contends (2). "It has really sold its soul in a Faustian kind of bind to the very forces which are destroying the natural environment ...in the sense that it has tried to apply a purely economic criterion to the wealth of creation, and has made that a utilitarian approach – so that you justify preserving the natural environment on the grounds of its usefulness to us."

An example of the sort of arguments which are used is that we should not destroy the rainforests because we do not yet know what its plants or animals might yield for us in the way of medicines, food or genetic material. Palmer sees this 'utilitarian anthropocentric economics' as not only limited but dangerous. What happens, he asks, if a creature is found to have no use? Are we really saying that millions of years of evolution are only justified by its usefulness to man? He has said:

"There is a profound need to inject into conservation, into the secular understanding of the environment, an idea that actually the whole of creation has intrinsic value in itself, precisely because it has come from the Divine.... Whether we see it or not is totally irrelevant. It is important in the eyes of God. No more, no less. That is the insight, and the hope, that we can bring from the spiritual side... because it is precisely because we know that the Divine operates and revels and enjoys the whole of creation, that we know also that there is hope." (3).

In line with these sentiments, the WWF announced in March a major five year 'Biodiversity' campaign to prevent the accelerating extinction of

species, and increase awareness of their intrinsic value.

New Perceptions

All of this does not mean that all conservationists should formally embrace a religious faith – any more than it is expected that the faithful should all become activists. What is hoped for is that they should come to know that there are other ways of looking at the matter. "The environmental crisis is as much a crisis of imagination as it is of the physical means", Palmer contends. "If you appeal to the lowest common denominator, basically to selfishness and self-interest, you will get a selfish, self-interested response. What religion has to say, and has always had to say, is that there is more to the human being than just selfishness, than just greed, than just envy. It has pointed out the divine image in us; the potentiality for creativity; the ability to take that which is wrong and transform it through the outward expression of the soul touched by the divine" (4).

These sentiments are echoed by the Director of the British environmental organisation Friends of the Earth, Jonathon Porritt, who has taken an active part in the Network and will be speaking at the Canterbury conference in September. Representing a broad spectrum of people with stances ranging from political activism to the biocentric spirituality of deep ecology, Porritt has repeatedly made known his belief that the transformation to a 'green' society must include a spiritual dimension.

There is a pragmatic aspect to this belief; any cool analysis, he claims, of our present situation must conclude that effective change in the way we treat the planet is going to require a real change in the way that we in the industrialised nations live. Porritt is not afraid to use words like 'selflessness' as indications of the kind of change that is required, and resists the proposal that the planetary crisis will necessarily precipitate the imposition of restrictions in a totalitarian way. "Unless people actually embrace the changes that are required, I do not think that they will work", he said at a recent conference (5), "We have to allow the perception of the word 'self-interest' to take on a different meaning. Self-interest at the

moment means the accumulation of consumer durables, of accumulating more power through money. Whereas things like success and progress have a wider meaning, in the totality of human experience, not just materially".

Porritt, who is himself a Christian, correctly perceives this redefinition as religious in nature, and is fiercely critical of the churches for not articulating the challenge sufficiently. He points out that many people in the developed



Buddhist novices planting a pine tree in Gangtok, Sikkim, India. Photo WWF/ Hans-Dieter Hofrath.

world have turned, and are continuing to turn, away from established religions; and there is even a substantial critique which lays the blame for the way in which European civilisation has treated the earth at the door of the Christian interpretation of the Old Testament (in particular Genesis 1.28). He perceives a definite movement away from monotheism as it is understood in the West towards the pantheistic, animistic concepts of the ancient, primitive peoples. These he sees as embodying "the notion that whatever Divine forces may be involved, they are immanent, not external to the earth or vested in a super-natural deity. They are part of us and part of every living thing on earth – the old-fashioned, very powerful, very inspirational notion of the sacredness of all living and non-living things." In speaking of the effect of the environmental crisis on the faiths, he says: "Let

us hope that institutions like the Church of England can genuinely find new life in coming to terms with these matters. If not, I do not believe that they will have any relevance at all in helping to shape the evolution or future of mankind".

Unity and Balance

Porritt's opposing of the so-called monotheistic and pantheist traditions begins to seem too simplistic in the context of current developments. Over the last few years there has been an increasing recognition that the primitive peoples – those whom Laurens van der Post has called the 'first men' of America, Africa and Australia – are not simple nature worshippers but have a strong sense of an absolute reality which encompasses the destiny of all. At the same time, any examination of religions such as Christianity and Judaism reveals that they do recognise in some degree – and have always recognised – God's immanence in the creation.

In fact, one of the most striking effects of Assisi has been the growing understanding between the faiths, and a movement in each towards a balance of the different aspects – transcendence and immanence, supernatural and natural, stewardship and servant-

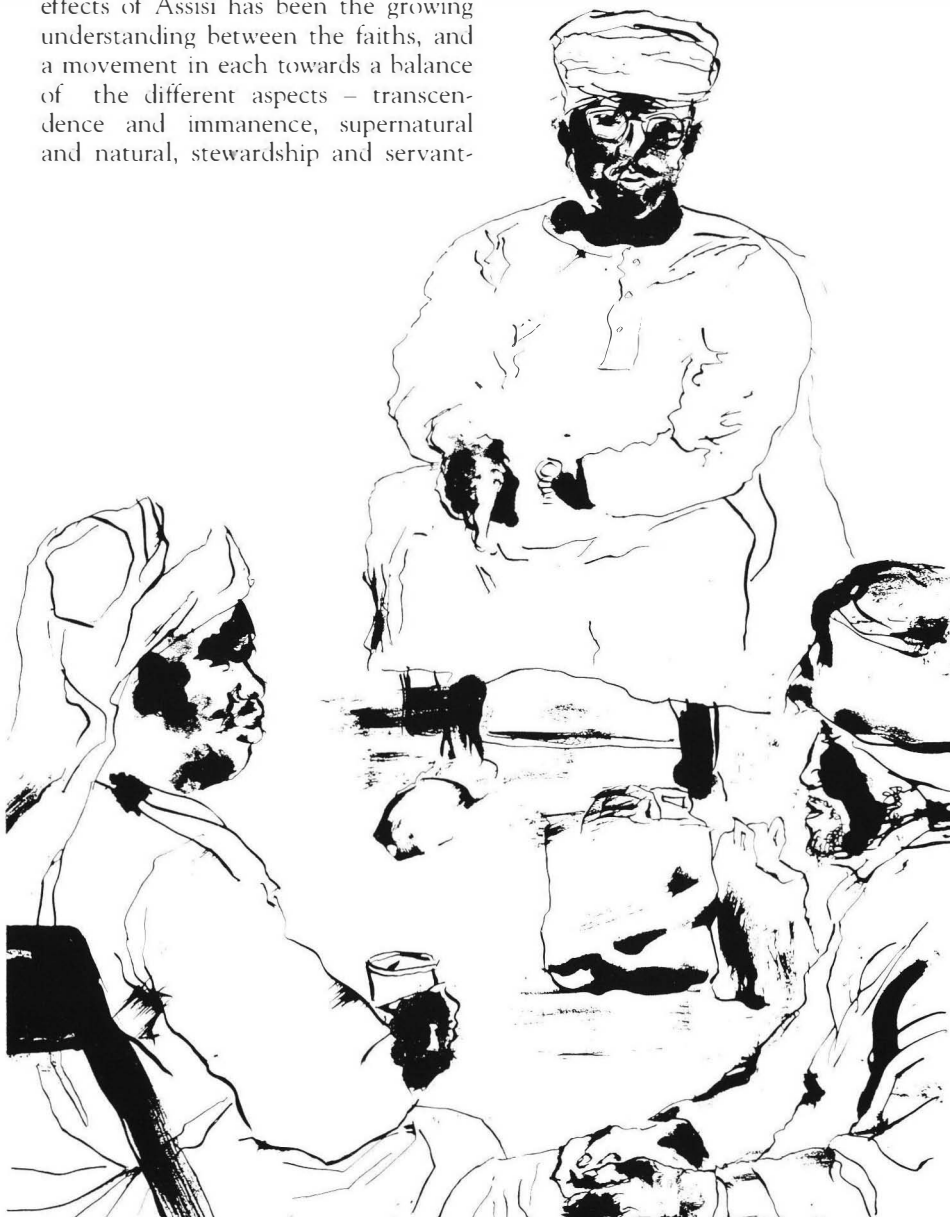
hood, etc. It is not expected that a 'universal religion' will emerge from the dialogue; indeed, Martin Palmer feels strongly that diversity is to be encouraged. "Just as one needs a gene pool to propagate a diversity of species," he says, "so what we hope for is that this conversation and debate will allow a diversity of approaches to develop".

However, diversity only flourishes where there is recognition of implicit unity; and all faiths are ultimately in agreement about the unified nature of reality as the source of the unity between man and God, between man and nature. The idea of selflessness, which Porritt extols, does not, in the end, simply mean renunciation, but implies the ability to identify with something other than the self – with greater dimensions of the whole. Porritt himself has pointed out that the very use of words like 'resources' and 'sustainable' betrays a point of view in which there is a devourer and something to be devoured (6); whereas

those cultures – and those people – who have understood in a more integrated way have been characterised by an attitude of gratitude and thanksgiving towards their creator, and by complete confidence in his continuing generosity and provision.

Such thoughts give a hint, perhaps, of the great potential of the impulse which manifested at Assisi and the radically different attitudes which it could engender. Not the least effect is a deepening understanding of the essential unity of existence, which resides not only in acknowledging the oneness and interconnectedness of all things but in coming to know the truth of what Aquinas called 'the very principle of our being'. This is beautifully expressed, in the WWF's anthology of scriptures, commentaries and stories from the different religions, 'Faith and Nature' (7), in a saying by the Jewish mystic Rabbi Schneur Zalman.

"Everyone who has insight into the matter will understand clearly that everything created and having being is absolutely naught with regard to the Activating Force, which is in all created being. This Force constitutes its reality and draws it forth from absolute nothingness to being. The fact that all created things seem to have existence and being in their own right is because we can neither conceive, nor see with our physical eyes, the Force of God which is in the created world. Were the eye able to see and conceive the vitality and spirituality in each created thing, which flows through it from its divine source, then the physicality, materiality and substantiality of the created world would not be seen at all; because apart from the spiritual dimension it is absolute nothingness. There really is nothing in existence besides God". (p49)



(1) Founded as a forum for the exchange of these ideas after Assisi; available from WWF International, Switzerland.

(2) From 'Nemesis and Genesis', a paper given to the Arcane School Conference in 1988, published by World Goodwill.

(3) *ibid*

(4) From 'Believing in the Environment', given to the Council for Environmental Education in 1987, also published by World Goodwill.

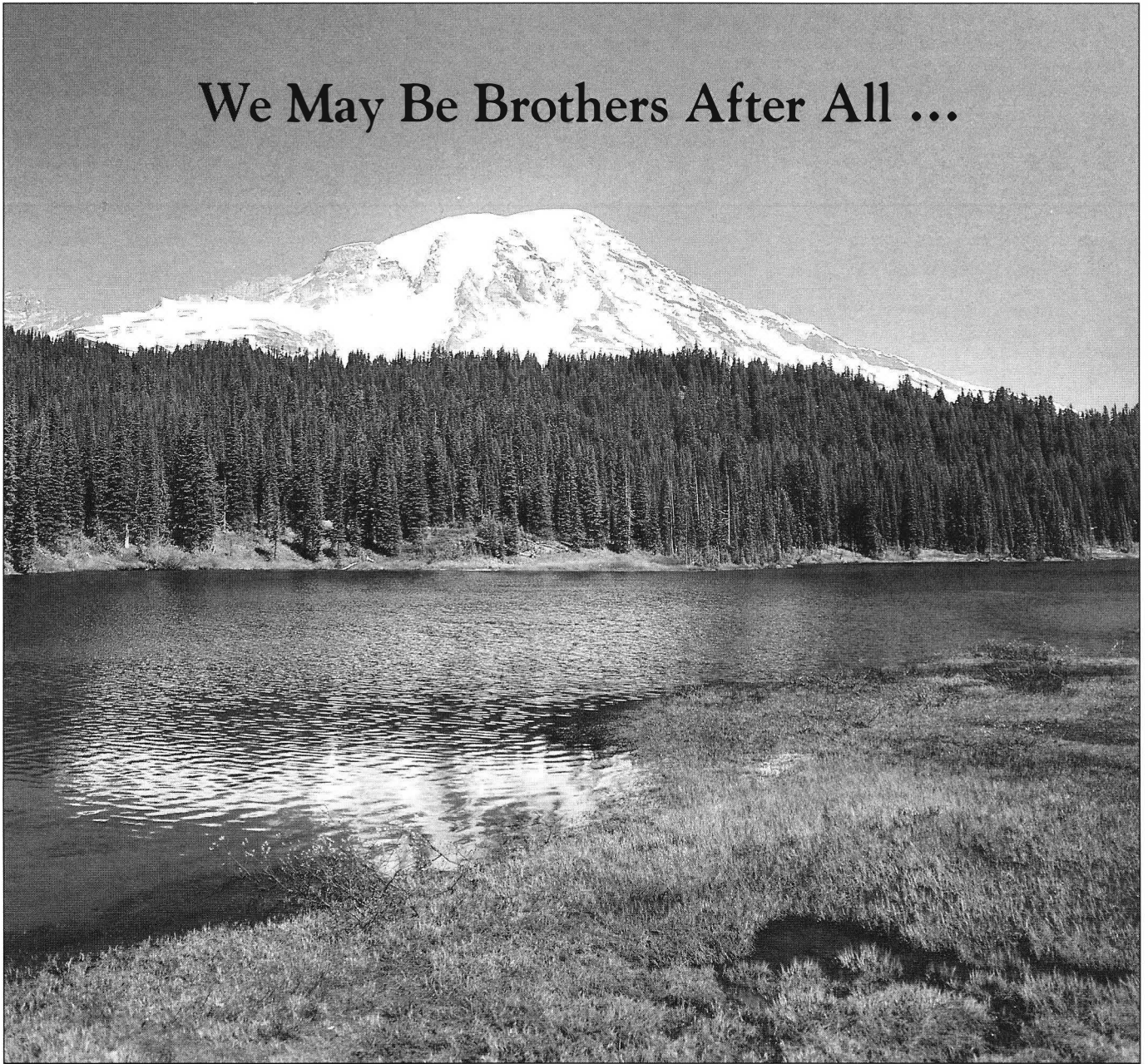
(5) From 'Gaia: A New Internationalism', a Resurgence Lecture April 1989

(6) A seminar at Beshara Sherborne in 1988

(7) Century/Rider Publications with WWF.

Our thanks to ICOREC for their help with this article.

We May Be Brothers After All ...



Washington National Park.
Photograph by Bill Ross.

Irene Young introduces a speech by one of the great orators of the North American Indian tradition, Chief Seattle.

THIS SPEECH, which is widely known as Chief Seattle's Testimony, is a reconstruction of an undocumented oration by Sealth, patriarch of the Duwamish and Suquamish Indians of North West America. It was elicited by an offer, from a representative of President Pierce in 1854 (1), to buy the traditional living places of the tribes in what is now Washington State in return for a reservation in which they could live their lives in peace. Chief Seattle, a man of large and imposing stature with a voice that could be heard clearly for half a mile, emerges as one of the great prose poets of America

and seems tailor-made to be the patron saint and hero of ecology. With crystal clarity the profound truth he expresses is projected through time to reach an age beleaguered by the effects of its unthinking desecration of the environment.

And yet, essentially, the beauty and trans-historical potency of his statement derives from a unitive vision known to mystics and sages from all traditions and epochs. The cosmos is seen as a harmonious and ordered whole in which the Creator is universally present yet transcends in His being the flux of nature and the passing of tribes. As in many oral traditions Chief Seattle expresses thoughts in

images and graphic similes of nature displaying through them an intimate and intuitive appreciation of the great mystery of existence, man's place and relationship to the world he lives in and to God. This knowledge is not mere passive observation but rather participation in the process of wholeness itself, in which there is no essential separation between the knower and that which is known.

To relegate this testimony to the status of a declaration of primitive nature worship or animism would be to fail to perceive its fineness of discrimination. At different points our attention is drawn to 'the earth as Mother', 'the earth as self'

and to the earth as sacred charge to man from God. This is neither vague nor contradictory but a precise expression of the real subtlety of man's nature, for he is at once the dust of the earth, the child of the earth and its appointed guardian.

With a dignity founded on humility and service to Life itself, Chief Seattle testifies to that which he has been given to know. The purpose of God in giving the white man dominion remains hidden and unknown to him but is accepted as an aspect of the total order, and knowledge of it is referred to God. The apparent absolute opposition between the native American culture and the white man who is fired by hungers, passions and beliefs which will inevitably erode tribal values is not ignored. However judgement is surrendered in an encompassing faithfulness and trust that the decisive word is to the Creator who is universally compassionate. All men are indeed subject to the common destiny. Therefore for us equally, to listen and receive the meaning and responsibility implied here requires both humility and unmitigated veracity.

Most directly and optimistically this testimony invites and promises, one might even say predicts as inevitable, the discovery of the secret of its beauty. For it is the invitation to the discovery of the truth of the One God, revealing His Beauty in innumerable different forms which is the very special message, eternal and undying, that lies at the heart of true brotherhood. A heart and mind predisposed to this truth knows the profound mystery that underlies all creation and change, real flexibility of action and response, all meaning and discernment of value. Such a heart and mind can be large enough for the truth contained in all forms and receive the meaning of Chief Seattle's communication without despondency or harking back to an irretrievable Utopian age. The spiritual values demand to be passed on, they are the sound of a completion yet to come. A generation, neither exclusively white nor red, may yet hear the essential message and its transformative potential for establishing a global vision which perceives the underlying reality of the interconnectedness of all things. It is this grand vision that is the dynamic pivot of the balance we yearn for and which is indicated to us by Chief Seattle. We ignore at our own peril such a generous exposition of the art of living. "We may be brothers after all. We shall see."

(1) This is the most likely date It has also been given as 1854/5 and 1865 which belong to different presidents.

The Chief's Testimony

THE GREAT CHIEF in Washington sends word that he wishes to buy our land. The Great Chief also sends us words of friendship and goodwill. This is kind of him, since we know he has little need of our friendship in return. But we will consider your offer, for we know that if we do not sell, the whiteman may come with guns and take our land.

How can you buy or sell the sky, the warmth of the land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you buy them? Every part of this earth is sacred to my people – every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people. The sap which courses through the trees carries the memories of the redman. The whiteman's dead forget the country of their birth when they go to walk among the stars. Our dead never forget this beautiful earth, for it is the mother of the redman: we are part of the earth and it is part of us. The perfumed flowers are our sisters; the deer, the horse, the great eagle, these are our brothers. The rocky crests, the juices of the meadows, the body heat of the pony and man all belong to the same family.

So when the Great Chief in Washington sends word that he wishes to buy our land, he asks much of us. The Great Chief sends word that he will reserve us a place so that we can live comfortably, to ourselves. He will be our father and we will be his children. So we will consider your offer to buy our land, but it will not be easy, for this land is sacred to us. This shining water that moves in the streams and rivers is not just water, but the blood of our ancestors. If we sell you our land you must remember that it is sacred, and you must teach your children that it is sacred, and that each ghostly reflection in the clear water of the lakes tells of events and memories in the life of my people. The water's murmur is the voice of my father's father. The rivers are our brothers, they quench our thirst. The rivers carry our canoes and they feed our children. If we sell you our land you must remember and teach your children that the rivers are our brothers, and yours, and you must henceforth give the rivers the kindness you would give any brother.

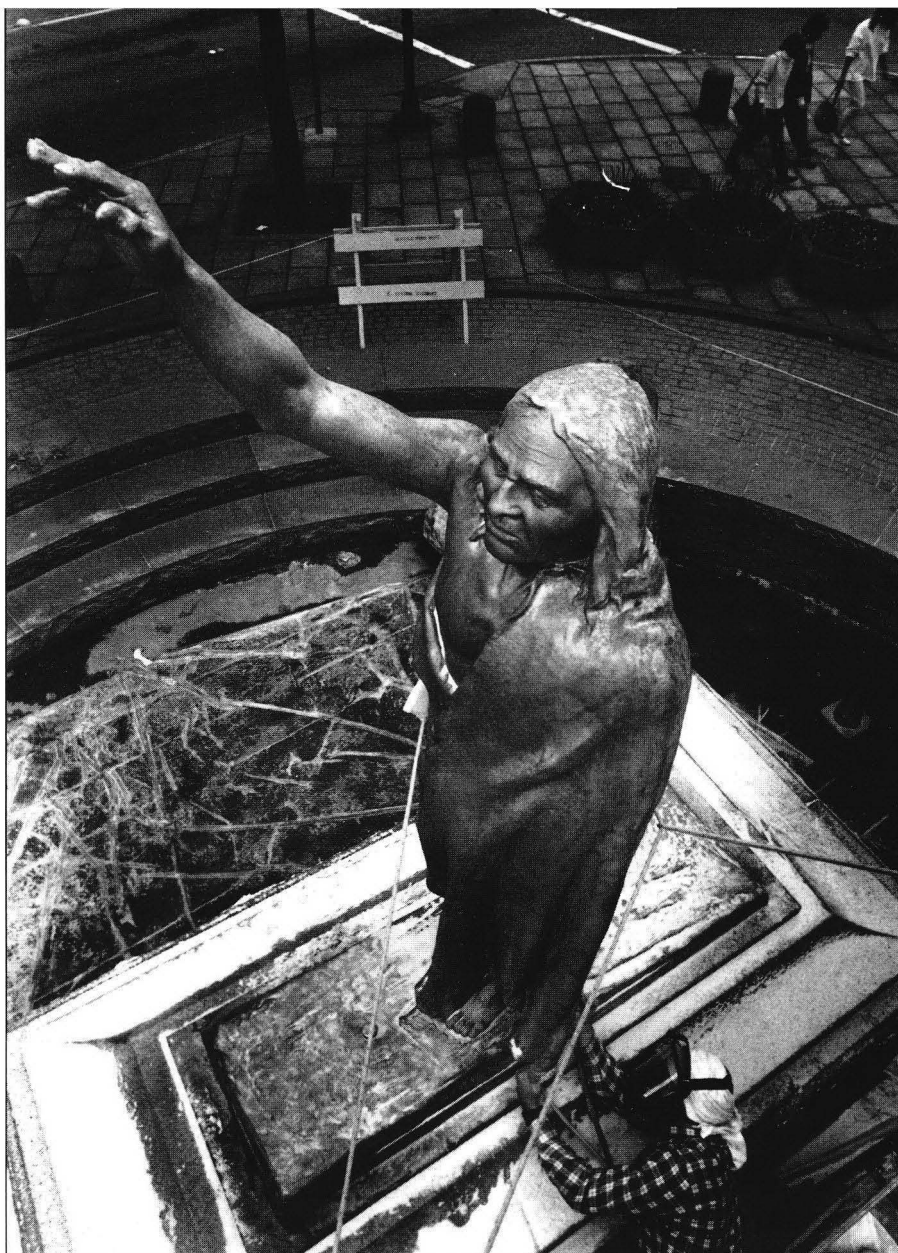
The redman has always retreated

before the advancing whiteman, as the mist of the mountains runs before the morning sun, but the ashes of our fathers are sacred, their graves are holy ground. And so these hills, these trees, this portion of the earth is consecrated to us. We know that the whiteman does not understand our ways – one portion of land is the same to him as the next, for he is a stranger who comes in the night and takes what he needs. The earth is not his brother but his enemy, and when he has conquered it he moves on. He leaves his fathers' graves behind and he does not care; he kidnaps the earth from his children, he does not care. His fathers' graves and his children's birthrights are forgotten. He treats his mother the earth and his brother the sky as things to be bought, plundered, sold like sheep or bright beads. His appetite will devour the earth and leave behind only a desert.

I do not know; our ways are different from your ways. The sight of your cities pains the eyes of the redman, but perhaps it is because the redman is a savage and does not understand. There is no quiet place in the whiteman's cities – no place to hear the unfurling of leaves in spring or the rustle of insects' wings. But perhaps it is because I am a savage and do not understand. The clatter only seems to insult the ears. And what is there to life if a man cannot hear the lonely cry of the whippoorwill, or the arguments of the frogs round the pond at night? I am a redman and do not understand. The Indian prefers the soft sound of the wind darting over the face of a pond, and the smell of the wind itself, cleansed by a midday rain or scented by the piñon pine. The air is precious to the redman, for all things share the same breath. The beast, the tree, the man, they all share the same breath. The whiteman does not seem to notice the air he breathes: like a man dying for many days he is numb to the stench.

But if we sell you our land, you must remember that the air is precious to us, that the air shares its spirit with all the life it supports. The wind that gave our grandfather his first breath also receives his last sigh. The wind must also give our children the spirit of life. And if we sell you our land, you must keep it apart and sacred as a place where even the whiteman can go to taste the wind that is sweetened by the meadow's flowers.

So we will consider your offer to buy



Chief Seattle's monument in Seattle has recently been renovated. Here, the finishing touches are being put on the gold leaf which covers him. Photograph by Phil H. Webber.

our land. If we decide to accept, I will make one condition: the whiteman must treat the beasts of this land as his brothers. I am a savage and I do not understand any other way. I have seen a thousand rotting buffaloes on the prairie, left by the whiteman who shot them from a passing train. I am a savage and I do not understand how the smoking iron horse can be more important than the buffalo that we kill only to stay alive. What is man without the beasts? If all the beasts were gone man would die of a great loneliness of spirit, for whatever happens to the beasts soon happens to man. All things are connected.

You must teach your children that the ground beneath their feet is the ashes of our grandfathers. So that they will respect the land, tell your children that the earth is rich with the lives of our kin. Teach your children what we have taught our children – that the earth is our mother. Whatever befalls

the earth befalls the sons of the earth; if men spit upon the ground, they spit upon themselves. This we know – the earth does not belong to man, man belongs to the earth. This we know. All things are connected, like the blood which unites one family. All things are connected. Whatever befalls the earth befalls the sons of the earth. Man did not weave the web of life, he is merely a strand in it. Whatever he does to the web he does to himself.

But we will consider your offer to go to the reservation you have for my people. We will live apart and in peace. It matters little where we spend the rest of our days – our children have seen their fathers humbled in defeat; our warriors have felt shame and after defeat they turn their days in idleness and contaminate their bodies with sweet foods and strong drink. It matters little where we pass the rest of our days. They are not many: a few more hours, a few more winters and none of the chil-

dren of the great tribes that once lived on this earth, or that roam now in small bands in the woods, will be left to mourn the graves of a people once as powerful and hopeful as yours. But why should I mourn the passing of my people? Tribes are made of men, nothing more. Men come and go like the waves of the sea. Even the whiteman whose God walks and talks with him as friend to friend cannot be exempt from the common destiny. We may be brothers after all, we shall see.

One thing we know, which the whiteman may one day discover – our God is the same God. You may think now that you own Him as you wish to own our land, but you cannot. He is the God of man, and His compassion is equal for the redman and the white. This earth is precious to Him, and to harm the earth is to heap contempt on its Creator. The whites too shall pass, perhaps sooner than other tribes. Continue to contaminate your bed and you will one night suffocate in your own waste. But in your perishing you will shine brightly, fired by the strength of the God who brought you to this land and for some special purpose gave you dominion over this land and over the redman. That destiny is a mystery to us, for we do not understand when the buffalo are all slaughtered, the wild horses are tamed, the secret corners of the forest heavy with the scent of many men, and the view of the ripe hills blotted by talking wires. Where is the thicket? Gone. Where is the eagle? Gone. And what is it to say goodbye to the swift pony and the hunt? The end of living and the beginning of survival.

So we will consider your offer to buy our land. If we agree it will be to secure the reservation you have promised; there perhaps we may live out our brief days as we wish. When the last redman has vanished from this earth and his memory is only the shadow of a cloud moving across the prairie, these shores and forests will still hold the spirits of my people. For they love this earth, as the newborn loves its mother's heartbeat. So if we sell you our land, love it as we have loved it; care for it as we have cared for it; hold in your mind the memory of the land as it is when you take it; and with all your strength, with all your heart, preserve it for your children and love it, as God loves us all.

One thing we know: Our God is the same God. This earth is precious to Him. Even the whiteman cannot be exempt from the common destiny. We may be brothers after all – we shall see.



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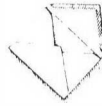
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Letters



Dear Sir,
With a deep sense of gratitude I received your BESHARA Issue 7, and with great interest read the thought provoking articles in it, especially 'Compassion Through Understanding'.

I honestly say that this journal should be read by the followers of every religion, as it contains articles appealing to every religious person.

Ven. Dr Hammalawa
Saddhatissa
British Mahabodhi Society

Dear Sirs,
The last issue of BESHARA contained a report on a recent survey of Christian belief in Britain. The survey is fascinating because it produced contradictory results which can suggest either that Christian belief is in terminal decline (church attendance down, knowledge of the creed confused) or that it is in the bloom of health (ecumenism strong, individual seeking widespread). How is this discrepancy to be explained? The magazine suggests that the discrepancies are evidence of a healthy process of growth away from the essentially limiting external form of religion to its more universal interior meaning.

This is an important point because it helps to clarify a related discrepancy regarding the status of spirituality in western society. On the one hand, it is asserted that western society is a material cornucopia lacking a spiritual focus or ground. As Norman Cousins once remarked, we enjoy the world's highest standard of the low life. On the other hand, however, it is claimed that we are entering a 'new age' of spirituality. We enjoy an unparalleled measure of freedom to seek and to find for ourselves, and the power of tradition or institutions to compel or limit our assent has never been weaker. Accordingly, the question of spirituality in the west is open to two contradictory interpretations, depending on which indicators you choose; it is the best of all times; it is the worst of all times. And what explains the contradiction? The same movement away from external forms (which are in decay) to the quest for inner meanings (which is in bloom).

Interestingly, Alexander King deals with the same discrepancy, though less satisfy-

ingly, in his speech which was printed in BESHARA 8, 'Technology and the Future'. According to King, western society is dangerously unbalanced – it has a tremendous development of material forces and technology based on virtually nothing spiritual. Traditional restraints evaporate as faith in religion declines, thereby producing disrespect for the law and even terrorism. What is needed in the future then, is not more technology but spiritual evolution. This latter is produced when individuals deliberately cultivate interior reality. Notice then, that while King recognises the same contradiction, he views it more as an unnecessary mistake than as an opportunity. Thus he sees the movement away from external forms as a mistake for which the movement towards inner meanings is a solution. But might it not be better to say that the former is not a so much a problem as a pre-condition for which the latter is not so much a solution as a harvest. Perhaps what we are seeing here is not a problem needing to be solved but a process wanting to be encouraged.

John Bardi

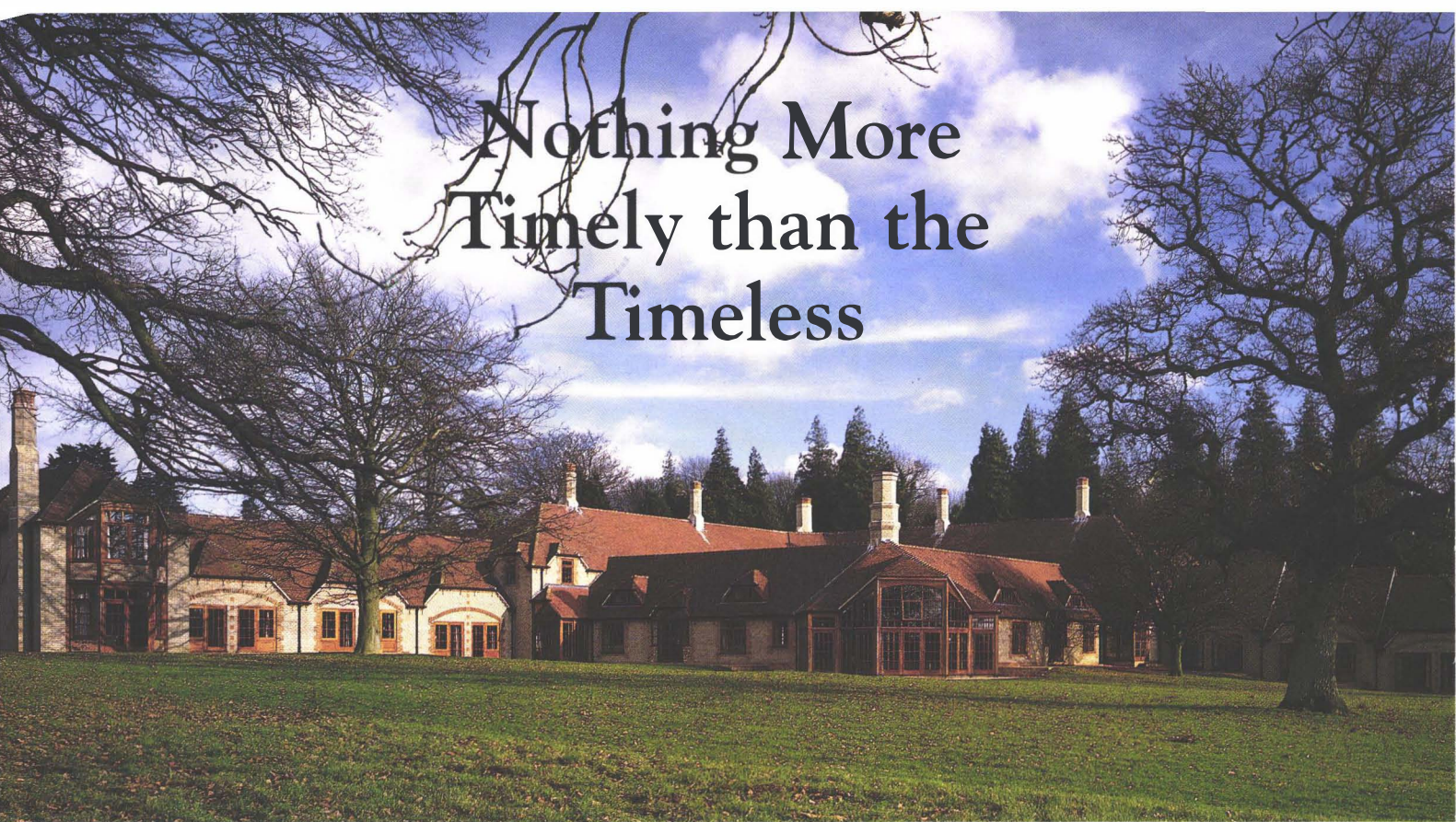
Dear friends,

Thank you for the latest and very impressive issue of BESHARA. I wanted to clarify a few points in the piece 'Rethinking Man and Nature' (Issue 8). The chief critic of 'biocentrism' in the States is Murray Bookchin (not Bochnin) and his reasons for criticising it are not limited to the proposition that ecology is 'purely social'.

'Earth First', which is an American publication of biocentric thought and action, published two articles which aroused the ire of many libertarians. One of them suggested that AIDS was a good thing because it would reduce population; the other suggested that Mexicans should be prohibited from immigrating to the States. Critics of biocentrism from within the environmental movement feel that the philosophy contains anti-human elements that may have carried the anti-anthropocentric reaction to the point of actual misanthropy; that it may have actually excluded 'the social' altogether. Bookchin is not the only person in the Green current to see the danger in this flattening-out tendency, this anti-humanism.

Peter Lambourn Wilson

Nothing More Timely than the Timeless



Richard Twinch visits an unusual new building at the Krishnamurti Foundation

ARCHITECTURE AS it is normally practised today is very much a matter of subjective judgement and whim, largely ruled by fashion. But the newly completed headquarters of the Krishnamurti Foundation in Hampshire, England, is different. Initiated and inspired by Krishnamurti himself and designed by Dr Keith Critchlow, this original and innovative building is a rare modern example of what is possible when there is an intention towards expressing a greater purpose.

Krishnamurti was a man of universal stature whose major contribution to 20th century thought has perhaps been to question the basis upon which value judgements are made, and so go to the root of our conditioned views of the world. He maintained that it is our conditioning which prevents us from seeing the reality as it is – but he resisted being drawn into saying what that reality is. His method (if method is a name which can be ascribed to it) was to face the inquirer with a ‘mirror’ or ‘blank sheet’ which could then allow them to examine themselves.

As with all such men there were, and are, many who wished to attach a label to him, but he rejected all such labels, including the role of ‘teacher’. When a claim was made on behalf of India for the copyright on his many books after his death, on the grounds that he was Indian, Krishnamurti’s retort was “I am not Indian” despite having been born

in the sub-continent. Being a ‘citizen of the world’, his works have been left to the Krishnamurti Foundation (now based in the new building) which distributes both books and video-tapes worldwide.

The Centre, whose construction did not begin until after his death in 1986, reflects his philosophy. The basic concept is to provide a suitable setting, the ‘blank sheet’, where people can come and read the books, watch videos, meet, discuss and, most importantly, have space in which to grow spiritually without the encumbrance of formal religion, teachers or ‘-isms’. In Keith Critchlow, who taught for many years at the Architectural Association and is currently at the Royal College of Art, Krishnamurti found a designer whose blend of talents, honed from a lifetime’s study of geometry and sacred design, made him uniquely able to transfer that vision into formal expression.

Dr Critchlow’s involvement with the project began after he gave a lecture on Thoronet Abbey. This was founded by St Bernard of Clairvaux in 1146 and was the first building in Northern Europe to adopt the pointed arch (albeit only just pointed) blending Islamic and Christian elements. It was, incidentally, one of Le Corbusier’s favourite buildings. Critchlow was subsequently asked to meet Krishnamurti, who was at the same time interviewing a number of other architects. His ‘interview’ consisted of a

series of rhetorical questions posed by Krishnamurti such as “What will my building look like?” finally concluding with “Are we communicating?” to which the interviewee responded in the affirmative.

Dr Critchlow explained later that it was not so much an interview as Krishnamurti indicating what he wanted and what needed to be considered in the design. Afterwards he was asked to present a scheme for evaluation. Much to the consternation of a young colleague (Peter Gilbert, who was later to help with the design), Critchlow refused on the grounds that competition, according to Krishnamurti’s philosophy, was the cause of great unhappiness. He knew this because his father had been deeply influenced by Krishnamurti and he himself had studied Krishnamurti’s writings from the age of 13. He was subsequently given the job, even though as yet there was no design.

In the middle of the following night, Dr Critchlow awoke with the idea of the building as a person seated cross-legged looking at the view and immediately transferred his thoughts to paper. Later he was to ask for a phrase in keeping with traditional practice for sacred architecture which the building would express. After deliberation the phrase that came was: “The world is you, and you are the world” which corroborated the image of the seated person.

The following morning sketches were presented both to Krishnamurti and to the trustees of the Foundation. Mary Lutyens (daughter of Sir Edwin Lutyens) later wrote in an account of this event that "Krishnamurti himself was more impressed with the man than his designs." (2). In such ways are marriages / buildings made!

Krishnamurti did feel, however, that Critchlow was sensitive to what he wanted the Centre to be, especially the quiet room. "There should be a room where you go to be quiet", Mary Lutyens quotes him as saying. "That room should be used for that and not for anything else. It should be like a fountain filling the whole place. That room should be the central flame; it is like a furnace that heats the whole place. If you don't have that, the Centre becomes just a passage, people coming and going, work and activity".

And so the building hinges around the 'quiet room' as the hub or 'vertical axis' of the design, with a 40ft square courtyard providing the central focus. The courtyard is flanked by the adjoining sitting-room and dining rooms, and the kitchen and library look onto it across a wide ambulatory, paved with tiles. The 'legs' of the sitting person evolved into wings of accommodation culminating in what appear to be small houses. These, the dining-room, sitting room and conservatory share a spectacular view across the Estate.

CRITCHLOW REQUIRED the help of a firm of architects and brought in a local practice, Triad (partners Nigel Lane and James Connell, project architect Jon Allen) to do working drawings and detailed design. Meanwhile he started work on the fine geometry of the building, which, encompassing both the large and the small scales, enabled him to blend the elements into a unified whole, much as a good cook blends his ingredients. You may say that this is something that all good designers do, but what is special about Critchlow's approach is the use of geometry to ensure that a proper balance is maintained; a process which requires constant, time consuming juggling until the design finds its own balance.

Number is also an important element, and he takes care in choosing appropriate numerical 'assonance'. Geometry not only has the benefit of harmonically relating man to his environment (Le Corbusier's Modulor



is one such method but works only in one dimension) but is essential if the building is to mirror the soul of man. Plato wrote that "the soul is mathematics" and geometry, Critchlow affirms, is the medium for its expression. His designs involve what he calls 'integral geometry', which works in three dimensions of space and one of time – the latter allowing for movement through the building. As with all artistic expressions the whole balance must accord with the eye (beauty being in the eye of the beholder), and, in the case of religious buildings such as Thoronet Abbey or the Suleymanye mosque in Istanbul, or musical buildings such as the Holywell Room in Oxford, this also includes the ear.

This emphasis on geometry places the Krishnamurti Centre in the tradition of what Christopher Alexander has termed 'timeless building.' It is, one feels, very much in

The geometry of Thoronet has infused the Krishnamurti Centre, and its arches are to be found in the oak arches of the dining and sitting rooms. Elsewhere Krishnamurti and Critchlow were concerned not to echo the design of previous aeons. A flattened elliptical arch was chosen for the quiet room, the entrance door fanlight and the internal arches of the library, with the curve coming down to meet the hand of a standing person. Both the closeness of the arch and the closeness of the roof outside are symbolic of the integration of what we call 'heaven and earth', or transcendent and immanent reality. This embodies the idea that the purpose of a building is to remind those who use it constantly of the unity and integrity of life, and this happens on many levels both hidden (in the geometry that develops the spaces) and apparent (in the arches, rose windows and panes of glass).

the spirit of what the Prince of Wales was calling for when he said in 1986: "I think it is time to resurrect the principle by which classical Greece operated – in particular we should hoist the flag of Polyclitus from the highest



Great care has been taken in designing the windows, which Crichtlow sees as the filter through which the beauty of the world is perceived – a filter which again constantly reminds the observer of his source. What then appears to be an ‘olde-worlde’ pastiche – why all those small panes when you can have great big ones? – is actually a statement concerning the essence of man. The windows ‘call’ to the occupant to come to them to look out rather than giving the view with no effort. Once the viewer is next to the window, the full panorama unfolds.

Photograph by Neil Jinkerson.

craftsmanship at the Krishnamurti Centre is superb. The lead-work on the windows and the plasterwork throughout the building are quite exceptional, and the wood-work, which includes massive structural oak beams and columns as well as delicate lambs’ tongue mouldings around the windows, is to be entered for a ‘craftsmanship’ award to give it its full recognition. Indeed, the whole building resonates with the care with which it was built and Crichtlow is able to point out many elegant solutions that the builders had found to awkward corners. It is a credit to the design team that the builders were allowed to innovate in this way, reminding the architects that they by no means rule supreme.

A feature of the building is that light penetrates whenever possible, and windows are placed in such a way as to make the building seem transparent, without resorting to scaleless window walls. While drinking coffee in the dining room, a glance up shows the courtyard and beyond, through another window, the ambulatory. Beyond that,

tower block. He said: ‘Proportion is not a matter of individual taste, but depends upon mathematical laws of harmony which could only be broken at the expense of beauty’” (1).

The ‘mathematical laws of harmony’ expressed through geometry re-iterate timeless relationships, and hence are ‘classical’. They are not, however, static, since they appear in the fabric of the new (steel, concrete, glass, etc.) as well as the old (stone, brick and wood) and are themselves subject to the ultimate arbiter: beauty. Crichtlow himself is fond of quoting the philosopher S.H. Nasr: ‘There is nothing more timely than the timeless’. That the Centre is in conformity to the Prince’s clarion call for a more meaningful architecture is confirmed by the fact that the Prince, researching his book ‘Visions of Britain’ has seen drawings and photographs and is said to admire the building.

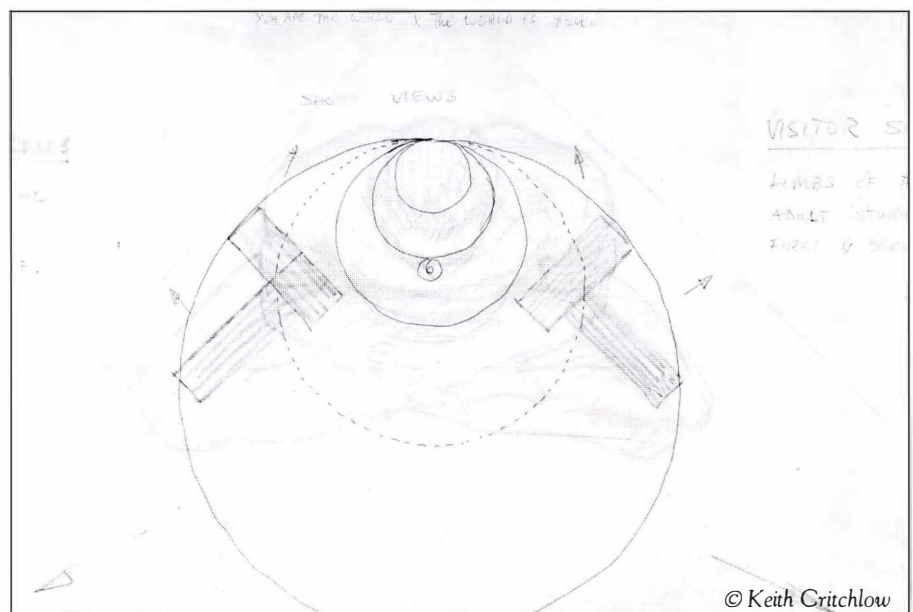
KRISHNAMURTI WAS concerned that every aspect of the building, including the building materials, should be of the very highest standard, and the choice of builder was therefore crucial. Four of those chosen for interview were major national contractors who unanimously declared that the building was impossible to build within budget. One of the local contractors looked promising, but the quality of work was not considered quite good enough. Finally one George Smith and his son (a quantity surveyor) appeared. He started by saying that he was in semi-retirement but that on seeing the design his reaction was “I’d like to build that”. Furthermore he agreed to

do it within budget.

Crichtlow realised that he was dealing with quite another quality of builder when he proudly presented some brick samples stuck to a card. George Smith’s reply was “I’m not touching that, I can’t see the back of it”, since he knew that the whole brick, not just one face, was important if it was to be used successfully. (The building uses hand-made grey bricks made near Gloucester. Crichtlow was delighted with this find and talks lyrically of the craftsmen who make such special objects. The grey is used to match the local flints used around the quiet room and provide the tonal contrast with the more traditional red Sussex bricks).

There is no doubt that the

One of the early drawings, showing how the seated figure inspired the layout of the building.



through yet another window, one can see the library and beyond again, through the fourth transparent layer, the sight of daffodils growing outside. Discovering new and different views is a constant source of enjoyment, for they are not contrived. Nor is this occupation confined to adults, since Critchlow has ensured that the glazed doors and windows are low enough to allow children to participate.

The high level dormer windows provide further opportunity to catch shafts of sunlight breaking through clouds to illuminate corners and render the surfaces alive. The feeling in the dining room and sitting rooms, with their tall eight-sided oak columns arched over and supporting the pitched roofs, is more like being in a ship than in a fixed building since the light constantly shifts and moves and distant views open and close.

AS ONE APPROACHES the Krishnamurti Centre from the rolling countryside, it signals its newness only by the brightness of the timber (which will tone down to grey) and the occasional pile of workman's tools where some minor adjustment is still being made. Its appearance echoes the

barns and houses round about, with hipped tiled roofs and contrasting soft greys of flint and reds. The immediate architectural antecedents are the country houses of Lutyens and Lethaby built in the tradition of the 'Arts and Craft' movement of the 19th century, which was itself a restatement of the perennial tradition of building where materials in the hands of craftsmen, and the landscape itself, moulded the form of the building as much as 'design' and 'function'. Indeed, we are reminded that form and function did not always carry the division that 19th and 20th century thought imposed upon them.

However, to confine this building to a 'nostalgia for the past' would be to mistake appearances (however disarming) for reality since it is a direct result of a fresh spiritual inspiration. And it embodies the major feature which distinguishes 20th century architecture from the building of previous eras – the freedom of space. This was initiated, as Reyner Banham so eloquently describes in 'Space, Time & Architecture' (3), by Einstein and Relativity Theory, which swept aside formal preconceptions. The 'modern' movement, alas, has interpreted the freedom this created by reformalising

the formless and identifying it with concrete, steel, 'high tech', window walls etc. The mistake has been to confuse means with ends. The real importance of space is that it represents the soul, and the building itself is like the body, confined to space and in a perpetual process of decay. The building, however, is like a musical instrument 'played' by light, wherein the precise proportions and dispositions of the elements determine the timbre of the 'music'. So freedom of space is the pre-requisite of truly 'modern' buildings, since the natural place of the soul of man is in freedom, whether he is at home, at work, in the theatre or even on the sportsfield.

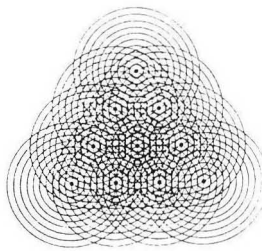
(1) *At the launch of the Inner City Development Trust.*

(2) *'Krishnamurti and the Open Door' by Mary Lutyens, John Murray 1988.*

(3) *Harvard University Press.*

Richard Twinch trained as an architect at Cambridge and the Architectural Association. He currently runs a building technology consultancy and is correspondent on Computer Aided Design for Building Design and Atrium magazines.

Colour photographs by Michael Chalifour.



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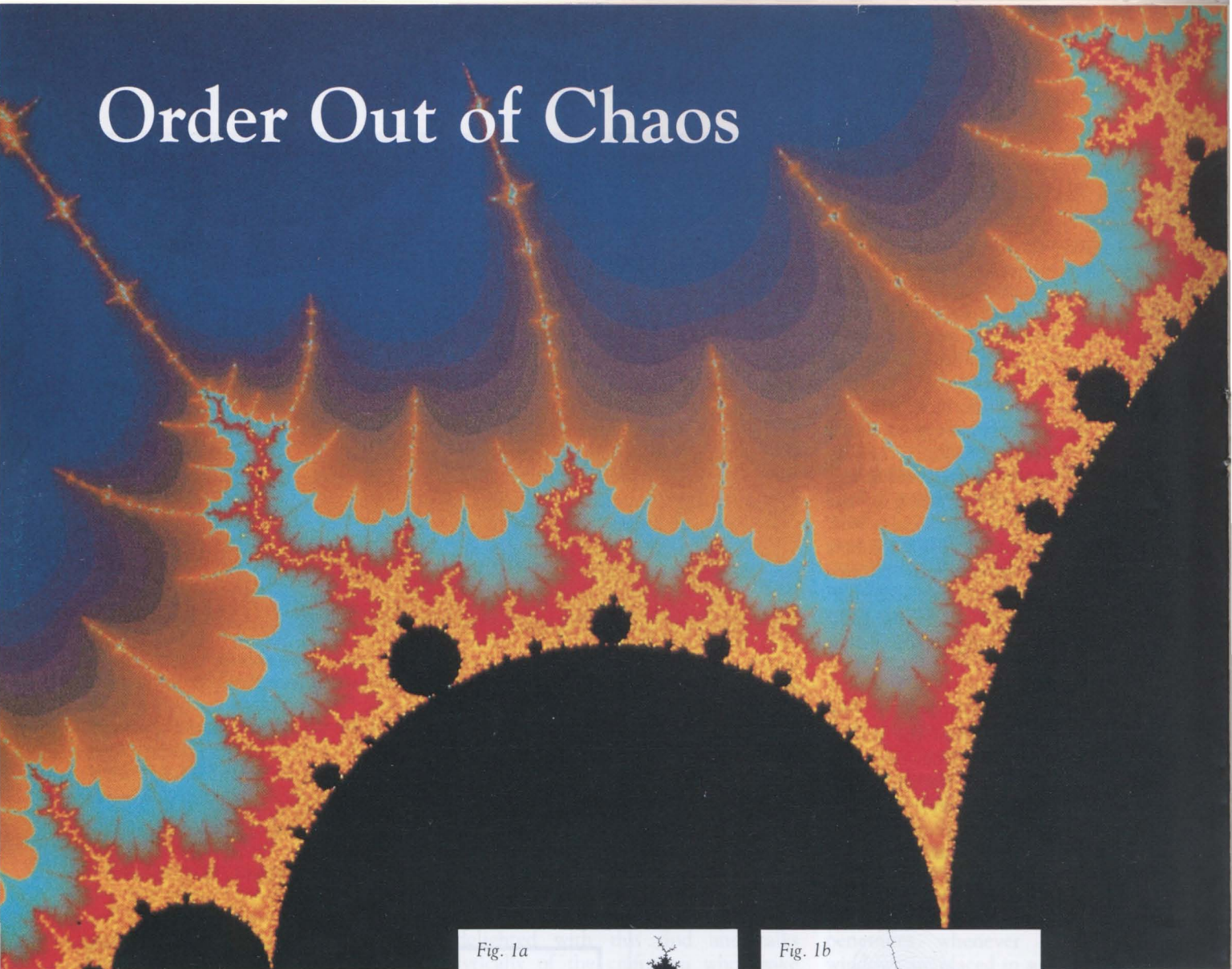
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Order Out of Chaos



It is exceptional for a new group of ideas to make such a deep impression in every area of science, from physics to biology, as has happened with the new science of 'chaos'. It was developed during the 1960's and 70's, and in contrast to glamorous, high-tech fields like particle physics and astronomy, started out as a 'back-room' science. Its pioneers studied everyday phenomena like dripping taps and rattling car bumpers and used desktop computers to do their calculations. For many years they were not taken seriously, but it is now becoming clear that their work has revolutionised our ideas about nature. In these two articles, Dr Michael Cohen introduces the basic concepts of the new science and Professor Ilya Prigogine explores some of its philosophical implications.

Fig. 1a

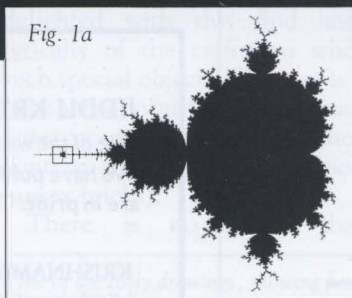


Fig. 1b

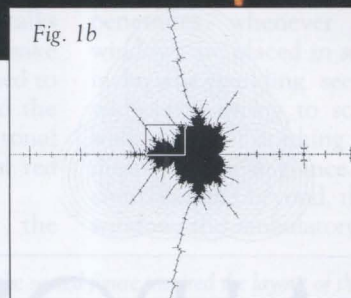


Fig. 1. Computer simulation of the Mandelbrot Fractal. A detail of Fig. 1b, itself a detail of Fig. 1a. Reprinted with the permission of Peigen H.O./Richter, P.H.: 'The Beauty of Fractals' 1986, © Springer Verlag Berlin-Heidelberg

Inner Infinity

by Michael Cohen

THE IDEAS BEHIND the new science of chaos have their roots in 19th century mathematics. In this period the revolution initiated by Sir Isaac Newton in the 17th century reached its apogee. The physical laws governing a wide range of natural phenomena had been made precise, and the mathematical techniques necessary to apply them had been refined and deployed with triumphant success, leading eventually to the Industrial Revolution. The upshot was a deterministic view of science in which, provided the initial state of the physical

system was known, its future development could be predicted precisely, whether one was dealing with machinery, planetary motion or the movement of skaters across ice.

This view of the universe was, in principle, made obsolete by the appearance of quantum mechanics in the 1920's, which introduced a fundamental indeterminism into science. But quantum effects are usually negligible except where events on a minute scale are being considered, and so in most areas of thought the deterministic mind-set has continued to be predomi-

nant throughout the 20th century.

Nonetheless, it was already known at the turn of the century that there were severe limitations in this point of view. The problem is that, even if one accepts the Newtonian picture and assumes that the development of a system is predictable, one can never know the initial state exactly. Any measurement, however carefully done, can only achieve a certain degree of accuracy. In the simplest cases, this is of no importance, since a slight change in the starting point has only a small effect on the future behaviour. In more complex systems, however, even the slightest degree of uncertainty (even in the 1000th decimal place) regarding the initial conditions destroys any possibility of future prediction after a relatively short time – as Ilya Prigogine explains so well in the next article. These systems are now called ‘chaotic’ and have been discovered to be ubiquitous throughout nature – to the extent that it seems extraordinary that they have only really been studied during the last 25 years.

The Butterfly Effect

One of the pioneers in chaos theory was the meteorologist Edward Lorenz. In about 1960, he was exploring the possibility of using a computer to pre-

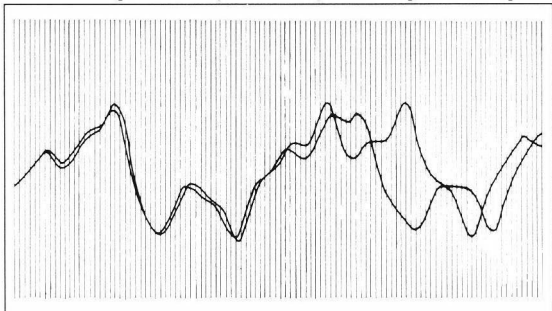


Fig. 2. The divergence of weather patterns

dict the weather. He programmed his primitive computer with a few equations to model an idealised version of weather patterns, gave it various initial conditions and mapped the outcomes. He discovered the chaotic nature of his equations by chance one day when he wanted to repeat a previous run. He found that his results on the second experiment diverged sharply from the first after a very short time (Fig 2). Investigating the cause, he discovered that he had not used precisely the same starting conditions, but that the second set differed from the first by a minuscule amount – in the 4th decimal place.

Lorenz went on to study chaos intensively and concluded that it led to ineluctable limitations on weather pre-

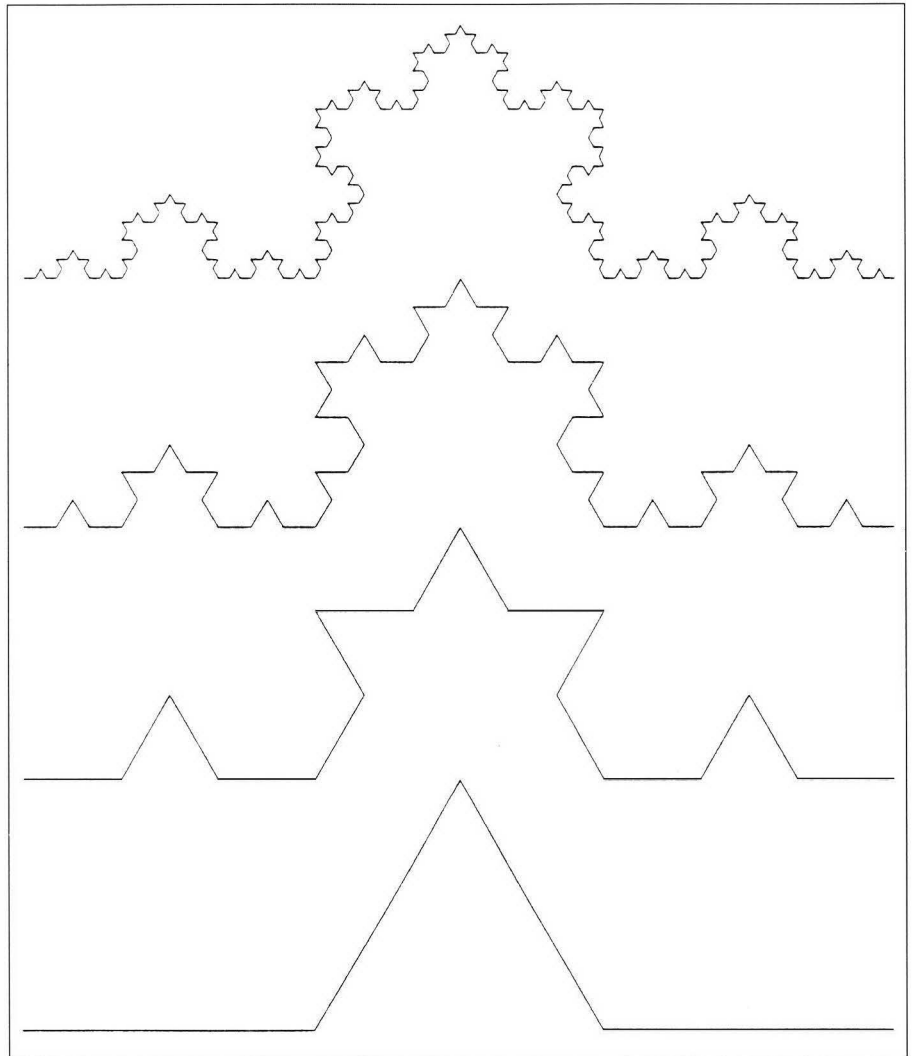


Fig. 3. The Triadic Koch Curve, showing the pattern repeating at every degree.

diction. His discovery became known as the ‘butterfly effect’ – the idea being that the stir of a butterfly’s wing in Brazil could set off a tornado in Texas.

Lorenz was only one of a number of scientists who, at first in isolated groups, stumbled across chaos in the 1960’s and 1970’s; and the story of how the science emerged is vividly told in the best selling book by James Gleick entitled ‘Chaos’ (1). Most of the workers had wide scientific backgrounds and a non-reductionist attitude that pre-disposed them to the perception that ‘chaotic’ phenomena could be manifestations of a higher-level order. To understand something of this order, it is necessary to first understand something about another phenomenon which has come to the fore since the 1960’s – fractals.

Fractal Geometry

Traditional geometry deals with straight lines, smooth curves and surfaces. In the 1970’s, the mathematician Benoit

Mandelbrot suggested that these standard geometric objects are not suitable for picturing the irregular forms which occur everywhere in nature, such as the shape of a cloud or a leaf. Consider, for example, one of Mandelbrot’s favourite examples, the coastline of a country. A stretch of coast which appears straight from a distance will, at close quarters, be seen to contain inlets and lagoons. If we magnify a small portion of one of these inlets, then further smaller inlets will appear, and so on, *ad infinitum*.

It is clear that to model a coastline exactly mathematically, one would have to generate a curve that is infinitely jagged at every level of magnification, and hence it would be of infinite length. Such curves were actually modelled by mathematicians in the 19th century; a famous example is the ‘snowflake’ curve generated by Helge von Koch and known formally as ‘the triadic Koch curve’ (Fig 3). This curve is infinitely crooked, and ‘self-similar’ in the sense that, at any level of magnification, the curve looks the same. (Such a curve can, of course, only be drawn to a certain degree of accuracy;

but then, nobody has ever drawn with a ruler a perfectly Euclidean straight line with zero thickness).

These strange curves had come to light as the result of the need to put the foundations of mathematics on a rigorous basis, and to make notions such as 'length' and 'smoothness' precise. They were an unwelcome side-effect of the process, and to most 19th century mathematicians, they appeared monstrous and pathological – an attitude which persisted down to the present day. Mandlebrot's suggestion that the very properties which generated suspicion made them suitable for modelling natural form was, therefore, revolutionary. There were only a few intimations from earlier times to palliate the general revulsion; in his book, 'The Fractal Geometry of Nature', (2) Mandlebrot quotes the reaction of the late 19th century mathematician, Césaro, to the Koch curve:

"This endless imbedding of this shape into itself gives us an idea of what Tennyson describes somewhere as the inner infinity, which is after all the only one we could conceive of in nature. Such similarity between the whole and its parts, even its infinitesimal parts, leads us to consider the triadic Koch curve as truly marvellous. Had it been given life, it would not have been possible to do away with it without destroying it altogether, for it would rise again and again from the depths of its triangles, as life does in the universe."

(p 43, (Mandlebrot's translation)

Fractional Dimension

Another mathematical concept made precise in the early 20th century was that of dimension. Everyone knows, for example, that a circle is one-dimensional, the surface of a sphere two dimensional and a solid cube is three dimensional, and these results are confirmed by the modern theory. When the dimensions of the Koch curve and its fellows are calculated, however, they turn out not to be whole numbers (for instance, the dimensions of the Koch curve is about 1.2618). This was a further cause of suspicion amongst the community of mathematicians, but for Mandlebrot, it had an intuitive meaning. For him, the dimension gives a measure of the degree of 'jaggedness' of the curve and the rate at which the irregularities appear as degree of magnification increases. Both of these have applications to natural phenomena.

Mandlebrot coined the word 'fractal'

(from the Latin 'fractus' meaning irregular or broken) for any geometric curve or surface which has a fractional dimension. The Koch curve is just one of the simplest examples. In 'The Fractal Geometry of Nature' he gives many other examples, all of which display the same 'inner infinity' of irregularity. They are all self-similar, in that the same features recur at any level of magnification – although in the most interesting ones, never in the same way. Mandlebrot indicates how such processes have their counterpart in nature, and gives examples from many diverse areas – from the formation of galaxies to the network of arteries in the human body.

Computer Graphics

The explosive development of high-quality computer graphics in the last fifteen years has been one of the greatest stimuli to the growth of fractal geometry. All books on the subject are full of beautiful computer-drawn plates. (Fig 3). Mandlebrot's techniques have

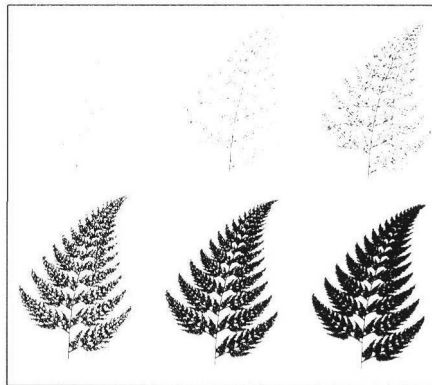


Fig. 4. Barne's fern fractals

been improved and supplanted by Michael Barnsley, whose method allows, with the iteration of a few easily-programmed rules, the construction of many fractals resembling natural forms. One of his earliest examples is the fern (Fig.4) which was done on a small desktop computer. His methods have such elegance and power – and the results are so startling – that one feels that he has truly stumbled onto one of nature's secrets.

Fractal techniques have been used for special effects in the cinema, the earliest large-scale example being several of the computer-generated sequences in Star Trek 2 (most notably the 'Genesis' planet transformation sequence).

Order in Chaos – Attractors

To return to the question of there being a high degree of order in chaotic system: the unexpected regularity behind

chaotic phenomena can most easily be displayed by considering the 'phase portrait' of a system. Figure 5 illustrates the behaviour of a simple, non-chaotic system such as a pendulum. 5a shows the pendulum swinging regularly backwards and forwards, but in 5b friction eventually forces it to come to rest. The final state of rest, which in this case is a point at the origin, is called the 'attractor' of the system, and any trajectory will spontaneously approach nearer and nearer to it.

Figure 6 is a phase portrait in three dimensions of one of the chaotic systems considered by Lorenz. Here the attractor, which was a point in the previous diagram, has become the extraordinary surface known as the Lorenz attractor. Any trajectory will approach and stay near this surface, whose intricate structure, with neighbouring strands passing to different wings, occurs at every level of magnification.

Indeed, the Lorenz attractor is a kind of fractal, not in ordinary space but in the abstract mathematical space of the phase portrait. The fractal structure explains both the unpredictability of the unfoldment of any specific trajectory (in that any two trajectories which begin close together will eventually diverge in the manner explained above and this is reflected exactly in the fractal structure of the attractor) and the hidden regularity of the system as a whole. Indeed, taken as a whole, the attractor shows the most remarkable degree of order and beauty, and this is reflected in the system at every level. An example of this is the tides. The exact motion of each wave is impossible to predict, but the times of the high and low tide can be predicted centuries in advance.

The Lorenz attractor was one of the

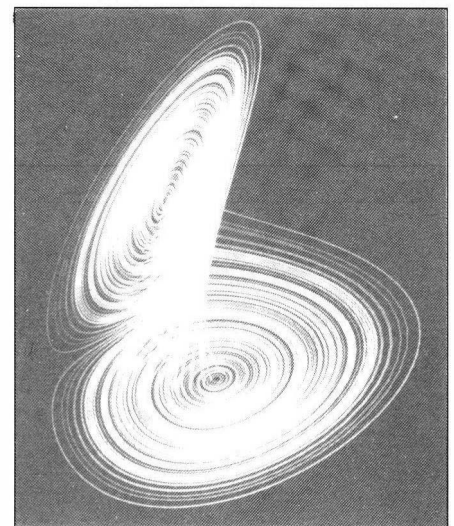


Fig. 6. The Lorenz Attractor

earliest examples of fractal attractors. They have now been found in dynamical systems governing the unfoldment of a whole range of natural phenomena, from the rattling of a car bumper to the patterns formed by frost and the fluctuations of the stock market.

The Geometrisation of Nature

All these developments are part of a wider trend towards the use of geometry to obtain a qualitative understanding of nature. The development includes another theory – catastrophe theory – which was formulated by the French mathematician René Thom around 1970 as an attempt to describe the way in which sudden abrupt, ‘catastrophic’ change takes place. This theory, which aroused much controversy, falls outside the scope of this article, but for those who wish to know more about it, there is an excellent account in a recent book by Ivar Ekeland called ‘Mathematics and the Unexpected’ (3).

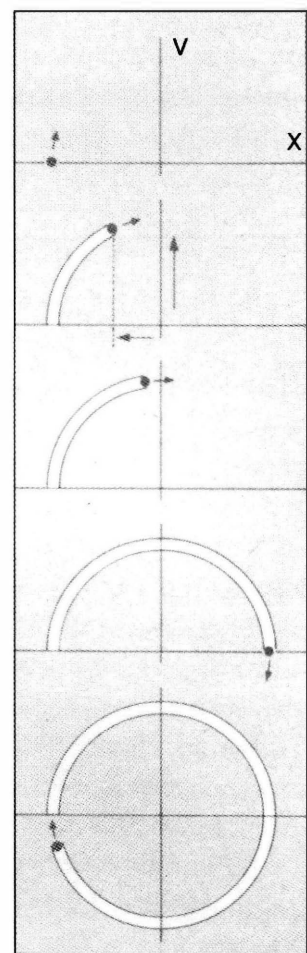
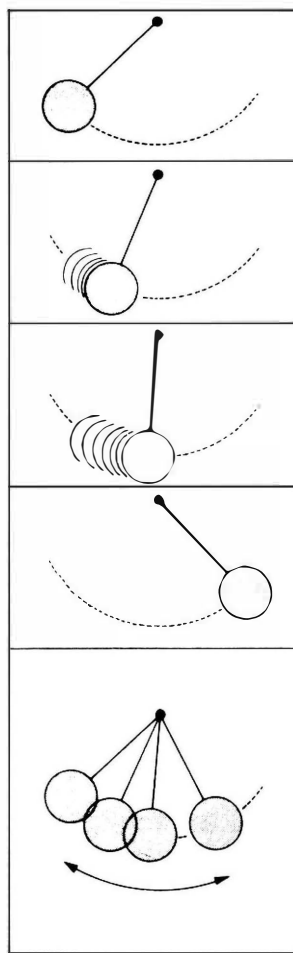
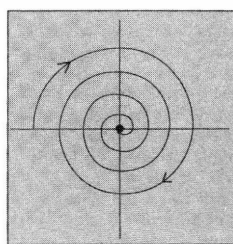
Here it is enough say that these three theories – chaos, fractals and catastrophe – are just the beginnings, it seems, of a new approach to natural phenomena, which one might call holistic and qualitative, rather than reductionist and quantitative – an approach which was pioneered at the end of the last century by the great mathematician, scientist and polymath Henri Poincaré (1854-1912) ‘Mathematics and the Unexpected’ is the best attempt to date at taking an overview of the whole field, and is especially interesting because Ekeland attempts to place the mathematics in a wide cultural and historical framework, relating it to the roots of Western culture. Originally published in French in 1984, the book has won the coveted Jean Rostand prize for scientific writing directed to the layman and has just appeared in English translation.

The Laws of Freedom

The study of fractal attractors is the first serious attempt in modern science to mirror the tension, found everywhere in nature, between unexpectedness and regularity. Ekeland focuses on this tension at the end of his book where he relates it to two different ways of viewing time. These he sees as exemplified also in many great works of art and philosophy, and takes as one of his examples the Illiad and the Odyssey of Homer. In the Odyssey, he says, “time is a single block, from beginning to end. The present announces the future and accomplishes the past”. The Illiad, on

Figure 5. The motion of a system can be represented by a ‘phase portrait’ which plots velocity against position. The state of the system at any moment is given by a point on the phase plane, and the behaviour over time is represented by a curve called a ‘trajectory’.

Fig 5a (right) shows a pendulum swinging regularly. Fig 5b (below) shows the effect of friction which slowly brings it to a halt.



the other hand, is “an epic of the present. The present is no longer commanded by the past, and it enters the future with full freedom”. It is “an isolated instant of time, which carries its own justification”. Ekeland says:

“This is very like the opposition between modern indeterminism and classical determinism... On the one side we have a continual happening, where the present builds history in an unpredictable way. On the other we have an eternal being, where the flow of time is just a human illusion. Gods, or scientists, can see the past and the future at once, as an eternal present, and satisfy themselves that there is nothing new under the sun”. (p117)

“The true nature of time”, he goes on, “evades mathematicians. All they can do is to express the tension between these two extremes”.

The geometric view has provided the basis for a “way of seeing”, and thus of seizing the reality of phenomena in an inclusive way. Gleick quotes one of the pioneers of chaos, Robert Shaw: “You don’t see something until you have the right metaphor to perceive it”. (p262)

One repeatedly finds in the declared aspirations of its proponents the promise of a return to an older view of science, that of Goethe, which is rooted in a wish to enlarge our immediate perceptions of the everyday. Mitchell Feigenbaum, whose discovery of the ‘Feigenbaum Numbers’ is a cornerstone of the new theory, put it like this: “Somehow the wondrous promise of the earth is that there are things beautiful in it, things wondrous and alluring, and by virtue of your trade you want to understand them”. (Chaos, p187))

The new ideas have been born of an alliance between such age-old desires and the refinement, in the late 20th century, of the technical tools needed to give them expression in the language of science. It is as if Nature herself has displayed a new face to us, and demanded that her ageless beauty be seen with fresh eyes.

(1) Heinemann, London, 1988.

(2) W.H. Freeman, 1982.

(3) University of Chicago Press. New York 1988

Dr Michael Cohen obtained a PhD in mathematics at Newcastle in 1978. He currently teaches mathematics in London.

The Rediscovery of Time

Science in a world of limited predictability

by Ilya Prigogine

Ilya Prigogine has made his name investigating the phenomenon of self-organisation in nature. He won the Nobel Prize for Chemistry in 1977 for his work on the thermodynamics of systems which are far from equilibrium, and has written a best-selling book, 'Order Out of Chaos', on the subject. (1) In this article, which is taken from a talk he gave at the 'Mind and Nature' symposium in Hanover last year, he explores some of the philosophical implications of the new sciences of chaos and self-organisation.

I remember when I was young that I read a sentence by Eddington, which I kept in my mind for many years. Eddington wrote: "In any attempt to bridge the domains of experience belonging to the spiritual and physical sides of our nature, time occupies the key position".

Now this is completely true. Time is an essential concept in the sciences. It is also the basic element of our existential experience. Time is at a junction, with science and nature on one side and mind on the other. In classical science, there was a strange duality between these two sides; Einstein said not so long ago that for him, time as irreversibility, as existential experience, was an illusion. However, today, fewer and fewer scientists would, I believe, accept this point of view. And it is this change in our point of view which I would like to describe in this lecture.

The 20th century has been a remarkable one in physics. It started with new theories and concepts such as relativity and quantum mechanics. Then in the second third of the century, there occurred a lot of absolutely unexpected discoveries, which nobody could have predicted; namely, the discovery that matter is unstable; that elementary particles can transform one into the other; that the universe itself has a history (classically the idea was that there could be no history of the universe because the universe already contains everything). Then, more recently, has come a third major discovery; that non-equilibrium irreversibility can be a source of organisation.

These changes radically alter our views on space and time. And what we are trying to do now, in the sciences, is to incorporate these unexpected discoveries into a more consistent picture.

God-like Knowledge

"for a sufficiently informed being, nothing can happen which is not already in the present"

I said above that from the point of view of classical physics, there was a dichotomy. Physics viewed the universe as a giant automaton, which satisfied time reversible and deterministic laws (see panel on page 31). On the other hand, for us, when we contemplate our own internal, spiritual life, we constantly see the importance of creativity; the fact that time flows forward towards the future but not backwards to the past (ie. it is irreversible); the fact that we have at least the feeling that we see order coming out of disorder, new ideas arising from the coming together of fragments.

Now the view of classical physics was not an accident. It was elaborated in a very famous discussion between Leibnitz and Samuel Clark speaking in the name of Newton. This is still a very interesting discussion to read today nearly two centuries after it took place. Leibnitz attacked Newton, saying that Sir Isaac Newton has a very poor idea of God, because he believes that God is inferior to a good watchmaker. This was because, in the view of Newton, God had to come to repair the universe from time to time. In other words, in more modern language, one would say that Newton, curiously, was in favour of an evolutionary view of the universe.

Clark retaliated by saying that the idea of Leibnitz – that everything was created in a single step – made of God a *rex otiosus* because once the creation of the universe has taken place, God has no more hold over it.

What is so important about this discussion is that there is a theological component to it, and this is very revealing about the way in which people

understood the role of the scientist in the 17th century. In their theology, as people imagined God at this time, God knew everything; for Him, there could be no difference between past, present and future. And indeed, Leibnitz again and again says that for a sufficiently informed being, nothing can happen which is not already in the present. Therefore, for the scientist – who in this sense would be the representative of God on earth – also, time should be an illusion, as I quoted Einstein as saying.

In other words, one of the main components of classical science was the attempt to reach a knowledge such as we imagine God would have. And I feel that one of the most important things we have learned in this century is that such a knowledge is impossible – that, in essence, we have only a window on nature and to know more we have to extrapolate. We are ourselves involved in the nature which we describe.

Thermodynamics

"... the non-linearity of these reactions leads to the giving up of deterministic descriptions."

I would like to explain to you briefly how this new aspect has come into physics. First, by speaking about non-equilibrium processes – thermodynamics – then about classical mechanics because I believe that is where we see the biggest changes. I will then go on to speak about some recent ideas of cosmology and the role of time and irreversibility in the creation – or, it would be better to say, in the starting – of our universe.

Thermodynamics, as most people know, is based on the Second Law (see panel on page 31). This second law says that for any isolated system, (ie. a system which is closed to outside influences), its entropy will increase. If it is not isolated, then entropy will be produced, anyway, by irreversible processes. Now people have always tried to minimise the Second Law; to say – this is rather a trivial statement. If I have two boxes, and in one I put 100 particles and in the other 20 particles and join them together, then, of course, after some time I will have 60 particles in each. That is rather trivial; so we don't have to worry about the Second Law.

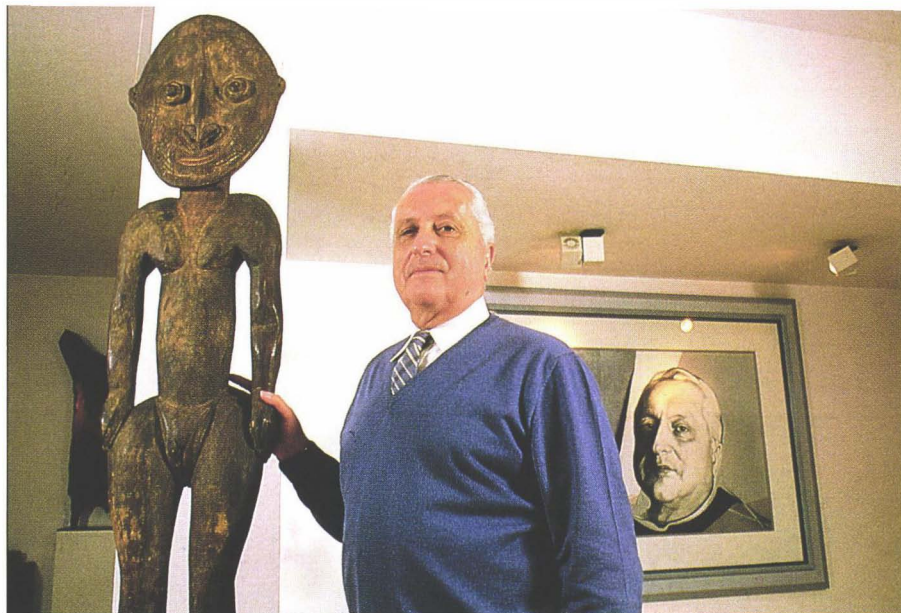
But now we know that this attitude is completely wrong, because we understand that irreversible processes (see

panel) – and I should point out that the whole of chemistry consists of irreversible processes, as does the whole of biology – create both order and disorder at the same time. If I again take the example of two boxes; if I put hydrogen and nitrogen into them and heat one box and cool the other, then after a while I will have more hydrogen in one side and more nitrogen in the other. In other words, I produce order. It is true that I have had to pay a price – in this case, I have to pay a price because I dissipate energy through the heat flow – but the fact is that this price leads to order. And this is well understood now in many other cases

So we have to change our paradigm. The classical paradigm was that a crystal, for instance, was an ordered object. But we now know that even a nice crystal is far from being completely ordered; the particles within it are moving and this motion is described by incoherent thermal waves. On the other hand, phenomena which we previously believed to be disordered – such as turbulence – appear today to be highly ordered. In order for turbulence to occur, particles have to be correlated over an enormous distance – much larger than the inter-molecular distances within the crystal. The substance has to be coherent on a macroscopic scale. Therefore we now understand that non-equilibrium processes – such as turbulence – contain much more order than most, or even all, equilibrium processes.

This completely changes our view on the relationship between order and disorder on the one hand, and equilibrium and non-equilibrium on the other. (see panel). And over the last few years more and more such phenomena have been discovered – in hydro-dynamics (the science of flowing), in chemistry, in the science of materials, etc. Not a month goes by, it seems, without some new kind of non-equilibrium structure being discovered. What we are seeing, in essence, is an unexpected evolution of chemistry, because chemistry is a science of irreversible processes. It is also a science of non-linear processes (ie. processes which are characterised by interaction between the parts and feedback), because chemical processes involve unpredictable elements such as collisions and interactions between particles.

What I want to emphasise here is that the non-linearity of these reactions leads to the giving up of deterministic descriptions. In other words, the system



Ilya Prigogine. Photograph by Marc Deville/FSP/Gamma.

can only be described in a probabilistic way; we cannot predict where it will go. Quantum mechanics has become famous for introducing probabilistic concepts on a microscopic scale; now we have probabilistic concepts on the macroscopic scale. So, as I said, non-equilibrium physics is in a period of exponential expansion.

Dynamics

“... there is a real difference between having finite knowledge, such as we have, and going to the limit of infinite knowledge.”

To all that I have said above, it is perhaps possible to say: well, all this is still phenomenology. It involves systems with many particles which I cannot solve exactly from the point of view of dynamics. It is therefore interesting to see how this problem of irreversibility can be related to a revolution in dynamics which has been happening over the past thirty years. I want to read out to you a paragraph written by a very famous British mathematician two years ago:

“I have to speak on behalf of the broad global fraternity of practitioners of mechanics. We collectively wish to apologise for having misled the general educated public by spreading ideas about the determinism of systems satisfying Newton's Laws of Motion which after 1960 were to be proved incorrect”

This statement by Lighthill (3) is quite amazing. It happens, of course, that individual scientists apologise for mistakes which they may have made. But that somebody in the name of all people doing classical dynamics should apologise for a mistake made for three centuries is something unique, I think,

in the history of science. What he says is that the whole interpretation of classical dynamics – the interpretation which was the basis of all our philosophy of space and time, of the way in which Kant and Bergson and others have seen classical science – was wrong.

What is this new type of dynamical system which has been discovered? The great names are Poincaré at the end of the last century/beginning of this, and Kolmogoroff, who is perhaps the greatest mathematician of this century. What Kolmogoroff discovered is that there are many dynamical systems which are so unstable that whatever the initial distance between two trajectories in time they will diverge exponentially (see Diagram 1 on page 25). Even if the distance between them was initially very small, after some time it will become as large as you want. The way in which this expansion grows is called the ‘Lyapounov exponent’, and this exponent determines what we can call the ‘temporal horizon’ of the dynamical system, after which we can no longer talk about trajectories at all.

In other words, after a certain time, the concept of a trajectory (ie. that the object has a definite path along which it is moving) is lost, whatever the initial conditions may be. The only way out of this is to know the initial conditions exactly – which would be to have infinite knowledge. But in physics we never know the starting conditions exactly. We can have knowledge of them to whatever precision we wish to define, but what we know is always a small region of space, not a point. And the important thing to realise in these unstable dynamical systems is that there is an essential difference between knowing a small region and going to the limit of a point; in other words, there is a real difference between having finite knowledge, such as we have, and going to the limit of infinite

knowledge.

For stable dynamical systems, there is no difficulty; you can go to the limit of infinite knowledge. That is why astronomers tell me that we can predict the position of the earth with respect to the sun in about five million years, which is already quite a large time. However, nobody can hope to predict the weather for better than one or two weeks. It is not that we are more stupid in meteorology or climatology than in astronomy, but that the systems we are dealing with are unstable; they have Lyapounov-exponents and this makes them very difficult to predict. And what is so extraordinary – what still surprises me – is that this type of unstable dynamic is prevalent; we find them everywhere – in liquids, in gases, in quantum mechanics, everywhere. And the reason is – and I don't want to go into technicalities here – that you find this type of instability every time you have strong resonances; every time you have oscillators which have the same frequencies, or frequencies which are very close together and can therefore transfer energy. Resonance leads to very chaotic behaviour, and this is why we find so many of these unstable systems in nature.

Spontaneity in Nature

“We see the appearance of spontaneous processes which we cannot control in the strict sense which was imagined to be possible in classical mechanics.”

So how do these systems behave – in contrast, for instance, with planetary motion? The most important element is that they are not controllable. The classical view of nature, of the laws of nature, of our relationship with nature, was domination. We assumed that we can control everything, that if we change the initial conditions, the trajectories change; if we change the initial wave function, then the final wave function is slightly changed. And this remains true for very many situations. When we send a Sputnik into space, for example, fortunately, we can control its trajectory.

But that is not the general situation. If, for instance, I take a few hundred particles and give them all kinds of positions and speeds, then whatever I do, I cannot prevent them from reaching thermal equilibrium after some

time. The system escapes my control and behaves how it wants to, regardless of the instructions I gave it.

Now you might say, well, a system with a few hundred particles is a very complex one; it is not surprising that we cannot control it. But recently some of my colleagues have performed numerical analysis – computer experiments and other analytical calculation – for the simplest problem in electrodynamics, which is the emission of radiation.

If I have any charge which is oscillating, it radiates according to classical electro-dynamics, and sends light into space; in quantum mechanics, we would say that it sends photons. What they have shown is that we can prepare the initial charge in many ways, and we can even prevent the system from radiating for some time, but whatever we do, after some time, it begins to behave according to laws of electrodynamics. In other words, it escapes from our control.

The main point I want to emphasise is that we now see a greater spontaneity in nature; that we see the appearance of spontaneous processes which we cannot control in the strict sense which was imagined to be possible in classical mechanics. This is not, of course, a giving up of scientific rationality. After all, we have not chosen the world in which we are living. We scientists have to describe the world as we find it – and we find that it is highly unstable. However what I want to emphasise is that this knowledge of instability may lead to new types of strategies, to new ways of interacting with systems.

Cosmology

“... in some sense, time precedes existence – because in the initial vacuum, time is already there but it is not manifest.”

Thermodynamics and classical dynamics are, of course, part of classical physics. And it is very remarkable that it is precisely those parts of classical physics which were supposed to be in a final form – or a nearly final form – which are changing so much in the present evolution of science. And we can expect that this evolution in classical physics will also have profound consequences in the modern fields such as quantum mechanics and relativity, because all these were, in essence, born inside classical physics, and they have

used some of the concepts of stable dynamical systems which were for so long considered to be the only type to exist.

There is no more dramatic example of the increasing role of time in our view of the world than cosmology. Modern cosmology, what we might call theoretical cosmology, is essentially an outgrowth of Einstein's theory of general relativity. The first model which Einstein made of the universe was a static geometrical one in which time's arrow had no role whatsoever. Then came an unexpected development; theoreticians like Friedman showed that Einstein's equation was unstable, and then, in 1929 (3), it was discovered that the universe is moving in respect to us. So, it seemed that a strictly static universe was not possible. But many people were not very worried by that, because, they said, it is simply a geometrical motion; there is nothing intrinsic in it.

But then came one of the greatest discoveries of this century; the discovery of the residual black body radiation (4). It was found that that our universe is full of photons, which must have originated at a very early stage of its development. Another way of saying this is that the universe is full of entropy. In fact, our universe has a very strange, dual structure. It seems that there are actually very few material particles floating in a bath of photons. We do not see the photons so easily now because they are at a very low temperature, but in earlier times they really had practically all the energy.

Now this discovery means that we have to take very seriously the idea of the evolution of the universe. And, moreover, that the evolution of the universe is certainly not the evolution described by the ordinary second law of thermodynamics. In the ordinary second law, entropy is increasing; we start with low entropy and we go to high entropy. But in the development of the universe, most of the entropy, apart perhaps from a hundredth of a percent, was produced at the beginning. The heat death is behind us, and not in our future. The universe, in one way or another, started with an enormous entropy explosion; with an enormous irreversible process. In other words, the universe started with the arrow of time. Time and the universe have been born at the same moment.

Now how do we explain this in terms of modern cosmology, the basis of which is Einstein's equations? Well, if

we follow Einstein's equations back in time, earlier and earlier, we come eventually to the famous Big Bang, to a singularity or an initial point at which the universe starts. How do we understand this very early stage of the universe?

I am going to put forward a hypothesis. There is a very interesting book, recently published, by Stephen Hawking, called 'A Brief History of Time' (5). Hawking, as you perhaps know, is a phenomenon. He is very ill but despite that he is producing some very important ideas, and some of the things which I am going to mention now are closely related to his work.

As you know, one of the most curious objects of modern cosmology is a black hole. The idea behind a black hole is that matter, under its own gravitation, can implode or contract, and at some point it forms a black hole. In a black hole, matter is trapped inside a membrane; it cannot escape because it is stabilised, you might say, by self-gravitation. We do not know whether black holes exist in nature at present. Hawking says that he thinks there is a 95% chance that they do; I am not an astronomer, I don't know.

Hawking has discovered a thing called 'Hawking's Radiation'. He has discovered that black holes are not so black, but that in fact they emit radiation. To understand how this can happen, one has to have an understanding of the 'quantum vacuum'. A vacuum is normally considered to be simply emptiness; but when we speak of a quantum vacuum, then we have to understand that the emptiness is only apparent; that it is actually full of fluctuations, and consists of pairs of parti-

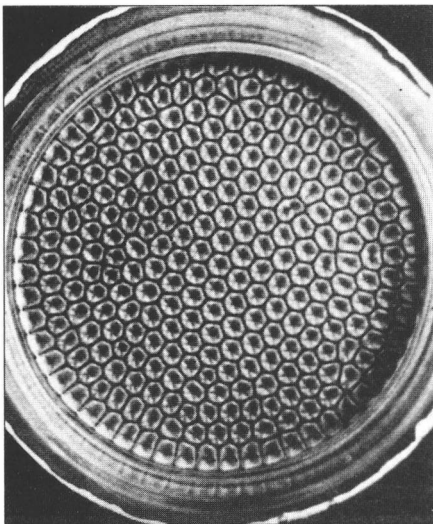


Fig. 7. Bénard convection cells. The characteristic space dimension of such a cell is in the millimetre range; whereas molecular distances are in the range of 10^{-7} mm.

Notes

Time Reversibility

The major laws of physics, such as Newton's Law, and even Einstein's Laws of Relativity, are time symmetric in that they are equally valid whether time flows forwards or backwards, and time reversible in that all actions could be undone without changing the basic nature of the system. For example, Newtonian dynamics are often demonstrated by showing the interactions between billiard balls. If one was to run a video tape of such a demonstration backwards, then there would not be anything remarkable about it; in fact, it would be hard to tell that it was going backwards. Another example is the gradual extension and return of a spring. Should the spring stretch, however, then it would be an irreversible process.

The Second Law of Thermodynamics/Time Irreversibility

The Laws of Thermodynamics were formulated by the Viennese scientist Ludwig Boltzman in the 19th century. They are effectively statistical formulations which allow us to predict the way in which heat energy will behave. The Second Law states that in any closed system, the overall entropy (which is approximately equivalent to the degree of disorder) will increase. It is the only law in physics which embodies the irreversibility of time.

The very interesting situation it indicates can be demonstrated by considering shuffling a pack of cards. If we start with the pack in order, with all the suites in numerical order, then the initial entropy is 0. Each time we shuffle the pack, the order decreases until such a time as the cards are basically in a random order. Then the entropy has become infinite, or at least extremely large. Each individual action during the shuffling conforms to Newton's Laws and is reversible; but the overall effect is irreversible. In fact, it is statistically possible that we could shuffle a pack from its disordered state into a perfectly ordered one, but it is so unlikely that should we take a video of the shuffling and run it backwards, we regard what we see as remarkable.

Equilibrium and the Heat Death

The Second Law – which was formulated by Rudolph Clausius as "The energy of the world is constant; the entropy of the world endeavours to increase" – tells us that in the absence of balancing forces, things have a tendency towards equality and amorphousness. If, for instance, we have two rooms, one hot and one cold and open the door, then heat will flow from one to the other until the temperature is equal between them. When this has happened, the heat flow stops and the system is said to be in a state of equilibrium. Interpreted as a general tendency towards dissolution and decay, the Second Law was extrapolated by 19th century scientists to argue that the entire universe is heading toward a state of amorphousness and what is called a 'heat death'. It is interesting that Darwin was developing his theory of evolution, which posited that living things have a tendency to evolve towards higher and higher degrees of complexity and order, around the same time.

Non-equilibrium Systems and Self-organisation

The new phenomena which have been discovered can be explained by a simple experiment done by Bénard. He basically heated a liquid in a specially-arranged way. When he started, the system was all at the same temperature and was therefore in equilibrium. As the temperature rose, the molecules at the bottom of the container became hotter than those at the top, and an equalising process – convection – began. At a certain definite temperature, Bénard found that the liquid arranged itself into the patterns shown in the photograph on the left, which have become known as Bénard cells. The system at this point is said to be 'far from equilibrium'. As the heating went on, the pattern eventually broke up and the system entered another phase – that of 'turbulence' – which is now understood to be an ordered 'chaotic' state. The emergence of long-range co-ordination and order in these far from equilibrium systems, which was not suspected by classical thermodynamics, is analogous to the organisation which is found in living organisms. Hence they are called 'self-organising'.

cles and anti-particles which are constantly being created and annihilated. Now these 'virtual particles', as they are called in quantum mechanics, can in some way interact with the black hole to cause it to emit radiation. This means that the black hole loses mass and it will eventually evaporate.

Following from this, it is possible to imagine a very simple mechanism for the creation of the universe which includes the concept of the arrow of time from the very beginning; in which space-time transforms into matter, and this is the beginning of our universe.

To situate this statement, let me mention two things. In the Newtonian view we had a separation between space/time and matter. The two were not connected, and space/time was seen as a kind of reservoir in which matter was floating. In Einstein's universe, we have a famous equation in which on the one side we have the geometry of the world (which describes space/time) and on the other matter. What is novel about this situation is that matter and space/time are now connected; they form a kind of a unit. But I would like to go one step further, because our universe is not only a complex system, in which we would like to find some unity, some unification and relate the various forces – the strong, the weak, the electro-magnetic, etc. But we also know that it is an evolving system, and that it is evolving on all the levels of which we have knowledge – on the geological level, on the human level, on the cultural level, on the level of the universe itself. Therefore we would expect that while there is a relationship between space/time and matter, this relationship is not symmetrical. We would expect that space/time should be able to give rise to matter, but matter cannot give rise to space/time. As a friend of mine said when I explained this theory to him, it is like a wave which can give rise to foam, but the foam cannot give rise to the wave.

Now the mechanism is a very simple one. We do not start from nothingness – nobody can start with nothingness. We start with the vacuum, in which there are fluctuations and, now and again, virtual particles. We imagine that these virtual particles become condensed, by chance, into a small region of space and there are so many of them that they form a black hole. (We find that it is necessary for about 10^{23} photons to be in the same region to form something like a black hole.) Once the black hole is formed, the fluctuations

are destroyed; they are stabilised; as we said above, the black hole acts like a membrane, it prevents the fluctuations from dissipating. The only way in which a black hole can decay is to emit radiation through Hawkin's radiation, and when it decays like this, it emits real matter. So in this model, the history of the early moments of the universe would be: space/time (quantum space/time or the quantum vacuum) giving rise to black holes, which in turn give rise to matter. This is not the place to go into details, but let me just mention that the calculations lead to a very good agreement with all the thermodynamical data which we presently have on the universe.

This process is irreversible. And the most important thing about this model is that it means that instead of being born of a singularity, the universe is born of instability; the instability of the vacuum. And so we see that we have the same type of phenomena going on at every level of nature – irreversible processes producing both order and disorder, producing at the very start both the baryons which have made possible the emergence of galaxies and finally life, and the photons which are essentially waste products of the universe. And irreversibility – the arrow of time – would appear at the very, very beginning of it all. I would like even to say that in some sense, time precedes existence – because in the initial vacuum, time is already there but it is not manifest. But when there is a large fluctuation, then it jumps into a new stage and then the irreversibility becomes manifest.

Implications

"I can talk about the origin of life, or about the date that someone was born, but I cannot speak about absolute time."

I would like to finish by making two observations. One is that in a model such as I have just put forward, we are at the limit between time and eternity; here, irreversibility and eternity are becoming the limit of one another. Indeed, if this were a true model, our universe would have an arrow of time from the very beginning. It would have a direction. We could speak about the age of this universe, and say that it is 15 billion years or something like that. However, we could never speak about an absolute age, because this phe-

nomenon could start again. So I can speak about irreversibility – ie. relative time – but I cannot speak about an absolute time. In the same way, I can talk about the origin of life, or about the date that someone was born, but I cannot speak about absolute time. Irreversibility would be a kind of eternal property of the universe, and therefore when we are on this kind of time-scale, the difference between time and eternity becomes something much more fragile.

Now it is quite remarkable to me that this change in our view of time has appeared at the very moment when the human race is going through an age of transition – when instability, irreversibility, fluctuation and amplification are to be found in every area of human activity. For instance, the idea of chaos and amplification has become very popular in the United States after 19th October 1987 – the famous 'Black Monday' of the crash on Wall Street. It seems that there is an overall atmosphere, an overall cultural atmosphere, be it in science or in the humanities, which is developing at the end of this century. As I mentioned at the very beginning, in the classical sciences, the view we saw when we looked from the inside and the view from the outside were opposite to each other. Today, the images converge. That is an event whose importance, I think, extends beyond science.

(1) 'Order Out of Chaos' by Ilya Prigogine and Isabel Stengers. Heinemann, 1984. Fontana Paperback, 1985

(2) Sir James Lighthill, Provost of University College London.

(3) When Edwin Hubble observed that there is a 'red-shift' in the frequency of light transmitted by distant stars and galaxies, which indicates that they are moving away from us.

(4) If there was a big bang, then some of its residual heat would be expected to remain in the universe. In 1965, Penzias and Wilson of Bell Telephone Laboratories discovered a homogeneous background radiation of about 3°K, which was taken as confirmation of the theory.

(5) Bantam, 1988.

This paper was given at the 'Mind and Nature' Conference, organised by the Foundation of Lower Saxony in Hanover May 21st-27th 1988, and reprinted with their kind permission. Many of the papers will appear in a book this summer, published by Scherz Verlag. For further information, please contact: Stiftung Niedersachsen, Ferdinand Strasse 4, 3000 Hanover 1, West Germany.

NB. Notes and brackets within the text are by the editor.



The Tarkovsky Window. Photograph by A. Chipling

Means of Expression

Delia Whitbread talks about her stained glass window 'A Tribute To Tarkovsky'

Delia Whitbread is a stained glass artist and mural designer who is presently studying Visual Islamic Art at the Royal College of Art. Her window was originally designed for the Hetley/Hartley Wood Stained Glass Competition in 1987, where it was commended. It has been on display at St James Church, Piccadilly, London, since January 1989.

THE ALL-TOO-BRIEF working life of the great Russian film-maker Andrei Tarkovsky (1932-1986) was a testament to just how much sacrifice the life of an artist must entail if he is to maintain the integrity of his vision.

Tarkovsky made three films in Russia that won great acclaim; but 'Mirror', made in 1974, was deemed 'inadmiss-

ably elitist' by the authorities and further funding was withheld. Over the next four years, he made 24 applications before deciding that, if he was to continue his career in the way he wished, he would have to work in the West. In the subsequent move he lost not only the country he loved, but also his home and his son, who was not allowed out of Russia to see him until he was dying of cancer five years later. His last film, 'The Sacrifice', is dedicated to his son and features a man who makes a choice between saving the world or losing his home. Such is the dreamlike nature of Tarkovsky's film world that one is never sure at the end if the 'hero' is a madman or a visionary. But certainly Tarkovsky was a visionary, and so it was the last scene of 'The Sacrifice' that I chose as

the inspiration for my stained glass tribute to his work.

In my design I have included all the major elements that recur in the complex and poetic imagery that is Tarkovsky's particular vision; fire and water, trees and sunlight, words and icons. In the branches of the tree are flowers bearing the names of the seven films he made and there are extracts from the poetry of his father, Arseniy Tarkovsky, in both Russian and English – poems that he used in several of his films. In the movement of light to dark across the window and the circle enclosing the burning house I wanted to suggest the natural rhythm of nature that runs through all Tarkovsky's films and makes them, however apocalyptic in tone, a visual pleasure and a profoundly moving experience.

In his book *'Sculpting in Time – Reflections on the Cinema'* (1) Tarkovsky writes movingly about his work as a film director, and also of the role of art in society and the responsibility of the artist. He saw art as crucial to humanity's aspiration towards God and unity, saying:

"The striving for perfection leads an artist to make spiritual discoveries, to exert the utmost moral effort. Aspiration towards the absolute is the moving force of the development of mankind. For me the idea of realism in art is linked with that force. Art is realistic when it strives to express an ethical ideal. Realism is a striving for the truth and the truth is always beautiful. Here the aesthetic ideal coincides with the ethical."

In his uncompromising spiritual stance Tarkovsky is not, however, sentimental – he does not believe that the artist should shun the 'dirt' of human existence and says that "diamonds are not to be found in black earth; they have to be sought near volcanoes". Nor does he underestimate his own, or any other artist's, imperfections and limitations; rather he sees these as a necessary part of the expression of any work of art that makes it a uniquely human activity. He sees the masterpieces of the world "scattered like warning notices in a minefield" – often unrecognised in the time of their creation for they were seen as 'dangerous'. "When an optimistic world view is the order of the day, art becomes an irritant."

"We should long ago have become angels had we been capable of paying attention to the experience of art, and allowing ourselves to be changed in accordance with the ideals it expresses. Art only has the capacity, through shock and catharsis, to make the human soul good."

Although Tarkovsky believed that art should not play safe but address itself to the real moral problems of the world – even though by so doing it risked rejection – he is scathing about what passes for modern art. He saw the obsession with being 'avant-garde' as a sign of the moral degeneration of the artist who prefers personal expression to truth, and displays what ought to be seen as experiments as finished pieces of work purely for the 'instant reward' of ego gratification. Tarkovsky's own model comes from the example of the icon paintings that feature so prominently in his films. In sacred art, the artist sacrifices his ego for the expression of a form that is non-personal, and submits himself to the discipline of the craft involved with the same humility. 'Andrei Rublev' was a film he made to celebrate in epic style the life of the most famous of Russia's icon painters, and it is Rublev's icon 'The Trinity' that repeats into the distance in my design. Tarkovsky saw this beautiful painting as a perfect image of love, brotherhood and reconciling faith; but his film shows in

graphic detail just how unlovely, cruel and faithless the times that gave it birth could be.

It is on just that paradox that the profound truth of Tarkovsky's vision is based: not a sentimental love of beauty that denies human pain and suffering, but an encompassing of both within the same frame. His films are not easy because they demand that the viewer give up looking for a storyline and live in the moment of the experience. He chooses images by instinct and intuition – not with a director's usual wish to manipulate the audience into seeing things his way, but in order to be as true as possible to his own vision. He often used his dreams as a source. His hope was that his audience would make of those images their own truth:

"...an image can be created and make itself felt. It may be accepted or rejected. But none of this can be understood in a cerebral sense. The idea of infinity cannot be expressed in words or even described, but it can be apprehended through art, which makes infinity tangible. The absolute is only attainable through faith and the creative act."

The art of seeing is as important as the art of creating, and it is this understanding that is crucial to an appreciation of Tarkovsky's work. When I read his book, it was this passionate commitment to truth and the desire to communicate that so moved me that I wanted to make the window. The task was a labour of love and in the struggles I had to perfect the design I saw it was a gift to have been given the opportunity. To Tarkovsky the role of the artist was always to be a servant to a higher ideal, finding in such a servanthood that "true affirmation of self that can only be expressed in sacrifice". In his complete humanity Tarkovsky never underestimated the pain of that sacrifice but knew, as all artists know, that one works first and foremost to redeem one's own pain, both the personal and the political; hoping, often without any idea of why, to transform both oneself and, by the grace of God, the world in which one lives:

"Suffering is germane to our existence; indeed how, without it, should we be able to 'fly upwards'? And what is suffering? Where does it come from? From dissatisfaction, from the gulf between the ideal and the point at which you find yourself? A sense of 'happiness' is far less important than being able to confirm your soul in the fight for freedom which is, in the true sense, divine".

"Art affirms all that is best in man – hope, faith, love, beauty, prayer...What he dreams of and what he hopes for...When someone who doesn't know how to swim is thrown into the water, instinct tells his body what movements will save him. The artist, too, is driven by a kind of instinct, and his work furthers man's search for what is eternal, transcendent, divine – often in spite of the sinfulness of the poet himself."

"What is art? Is it good or evil? From God or from the devil? From man's strength or from his weakness? Could it be a pledge of fellowship, an image of social harmony? Might that be its function? Like a declaration of love: the consciousness of our dependence on each other. A confession. An unconscious act that none the less reflects the true meaning of life – love and sacrifice."

(1) Translation by Kitty Hunter-Blair, Bodley Head, London 1986.

'A Tribute to Tarkovsky' will be on display in St James Church, Piccadilly, London, until the end of September

W.B. Yeats and the New Age

Kathleen Raine assesses the place of the great poet, who died 50 years ago this year

The end of the first world-war and the beginning of the second saw the advent of the Modern Movement – essentially a secular, anti-traditional, rationalist movement, rejecting the past, valuing innovation and the breaking of old forms. Doubtless this iconoclasm had its positive side in that much nineteenth century literary and pictorial lumber had little value. But convention – the rule of habit – and tradition, as a current of unaging spiritual wisdom, are very different things, between which the destructive impulse does not distinguish. In literature, strict verse-forms used with skill gave place to ‘free verse’ (which has since itself become a convention and a habit), irreverence was the vogue and I remember the shocked surprise with which my own generation at Cambridge learned that T.S.Eliot was a practising Christian! Eliot could be forgiven because he did write in free verse, and his imagery was drawn not from outworn poetic symbols but from contemporary imagery of the modern city and personae like Klipstein and Burbank and Sweeney.

But Yeats was another matter; his “rose upon the rood of time”, his Celtic Twilight with its long memory, the beauty of his verse (for beauty at that time had given place to stark realism, the crude, and a taste for mild obscenities intended to shock the middle classes) did not fit the picture at all, although from his youth to his death Yeats’s was a presence too great to be wished away. What were these modern-movement revolutionaries (and Marxist politics with its doctrine of ‘social realism’ was also coming into vogue) to make of the roadsides of the West of Ireland where

“.....the voices melted into the twilight,
and were mixed with the trees, and
when I thought of the words, they too



*Yeats. Photograph taken during his last years.
Courtesy of the Mander and Mitchenson Theatre Collection*

melted away, and were mixed with the generations of men. Now it was a phrase, now it was an attitude of mind, an emotional form, that had carried my memory to older verses, or even to forgotten mythologies. I was carried so far, that it was as though I came to one of the four rivers, and followed it under the wall of Paradise to the roots of the trees of knowledge and of life. There is no song or story handed down among the cottages that has not words and thoughts to carry us as far, for though we can know but a little of their ascent, one knows that they ascend like mediæval genealogies through unbroken dignities to the beginning of the world. Folk art is, indeed, the oldest of the aristocracies of thought, and because it refuses what is passing and trivial, the merely clever and pretty, as certainly as the vulgar and insincere, and because it has gathered into itself the simplest and most unforgettable thoughts of the generations, it is the soil where all great art is rooted."

How different from the ephemeral ideology of the Modern Movement! Later, in bitterer and barer words, Yeats wrote:

"We were the last romantics – chose for theme
Traditional sanctity and loveliness;
Whatever's written in what poets name
The book of the people; whatever most can bless
The mind of man or elevate a rhyme;
But all is changed, that high horse riderless,
Though mounted in that saddle Homer rode
Where the swan drifts upon a darkening flood".

Pegasus, the winged horse, who in the Greek mythology carried the poets into high regions of inspiration.

TRADITION, THE SACRED, and the beautiful: do they not go together, and is not, at the heart of all these, the answer that we give to the ancient question, 'What is Man?' The modern assurance of the materialist ideologies prevailed in intellectual circles, and Yeats's voice, when he declared man to be a spiritual being, with a spiritual destiny, was almost alone. It seemed to his contemporaries that in this he was out-of-date, that he disregarded or was ignorant of, the newest findings of science, etc., etc. Now we see it otherwise: when Yeats declared that: "The three provincial centuries are over; wisdom

and poetry return", the words were prophetic – a self-fulfilling prophecy, perhaps, since the words of the greatest poet of his century are themselves the agent of the change they proclaim. It was the purpose of Yeats's life-work to reverse the premisses of materialism, to reaffirm the supremacy of the spirit, to discover and to describe reality in terms other than those of a materialist science. He was mocked by his avant-garde contemporaries for 'dabbling' in spiritism and occultism, for his belief that the material world is not all. In the words of one of these, "the supernatural forms no part of our mental furniture". Now we can see how great was the transformation Yeats envisaged and himself laboured to bring about. It is the Modern Movement that has now become but a closed chapter in the 'history of ideas' while the abiding truths Yeats all his life served are unchanged. Yeats was more than a great poet, his was one of the great transforming minds of his age.

In the first year of this century, Yeats addressed fellow-members of the Magical Society of the Golden Dawn in words which are, again, prophetic:

"We have set before us a certain work that may be of incalculable importance in the change of thought that is coming upon the world."

In his poetry, as in all those other activities which occupied his life – theatre, politics, magical and psychical research – Yeats served the Imagination, which he understood in Blake's sense, as 'the true man', the sacred source, and he was at all times "engaged in that endless research into life, death, God, that is every man's reverie".

SON OF AN AGNOSTIC artist father, grandson of the Anglican Rector of Drumcliff in County Sligo in the West of Ireland, Yeats shared the Anglo-Irish culture of his family, but grew up also close to the Irish country-people, doubly linked to the invisible worlds by the Catholic religion and the vestiges of the older, pre-Christian body of Celtic mythology and folk-lore – a continual awareness of the presence of an unseen world. In an essay entitled 'Swedenborg, Mediums and the Desolate Places' (dated 1914), appended to his friend Lady Gregory's work on 'Visions and Beliefs in the West of Ireland', Yeats outlines 'a doctrine of souls' which he had begun to formulate through comparing evidence of country

beliefs, the findings of psychical research (in which Yeats was himself an active investigator over many years) and the visionary teachings of the 18th century mystic, Swedenborg. This essay foreshadows his later work, 'A Vision', in which the complete system is set forth. This complex symbolic system, comprising both the soul's history and the history of civilizations and their changes, was first published in 1920; a greatly revised version was published later, in 1928. Though 'communicated' through the mediumship of his wife, George Yeats, the work bears traces of a lifetime of study of the records, written and unwritten, of the 'excluded tradition' of 'the learning of the Imagination'. There is an entire consistency and unity in Yeats's development from first to last, and all his studies relate to a single theme.

Yeats's investigations in the fields of the 'paranormal' – psychical research, folklore, and the techniques of magic – were but aspects of a greater whole. We can now, considering his work in the context of his own time and of our own, see him as the forerunner of a great transforming vision. The academic world, unwilling to confront the radical nature of Yeats's thought, like to cite a phrase from 'A Vision' in which some discarnate spirit tells him "we have come to give you images for poetry". But by 'images' and 'poetry' Yeats intended no mere literary mode, but a mode of thought, a discourse of "the deeps of the mind" clothed in images whose resonances communicate truths of the Imagination, in Blake's sense of the word, as the divine indwelling spirit of prophecy – truths incommunicable in discursive terms, since they concern values and meanings, not facts. In all his studies Yeats was exploring the frontiers, gathering the lost fragments of a reality whose very existence is denied by the ideologies of materialism. It was his lifelong and deliberate purpose to open other regions, to chart a different map, a world established in spiritual realities. This simple central purpose was the restoration of the Perennial Philosophy, which he did by lifelong studies of the records of that tradition, written and unwritten.

From his own account Yeats had read Swedenborg even before he became the first editor and greatest disciple of Swedenborg's greatest follower, William Blake. At the age of twenty Yeats also became acquainted, through the Dublin Hermetic Society, with the Theosophical movement, and a thread

of Indian thought runs through his whole lifework, which finally became a full commitment, through his teacher, Sri Purohit Swamy, to Vedanta. But his journey led him through many profound studies, the first of which was Blake, whose *Prophetic Books* first appeared in the Quaritch edition edited by Yeats and Edwin J. Ellis (an associate of the Pre-Raphaelite world in which Yeats's father moved). It was Blake who proclaimed the supremacy of the Imagination – the 'Divine Humanity', which was to remain Yeats's own guiding principle. From the Theosophical Society he parted company, but pursued his studies in psychical research for many years, and likewise his studies in the Western esoteric tradition of magical techniques, Christian Kabbalah and Rosicrucian symbolism.

His story is of a continuous adding to an edifice of knowledge, always grounded in the one theme of the primacy and creative power of the Imagination. He read Plato, and the Neoplatonists, many of whose works were translated into English for the first time by Blake's one-time friend, Thomas Taylor the 'English Pagan', and re-issued by the Theosophical Society. Stephen Mackenna's beautiful literary translation of Plotinus he also read; and the Cambridge Platonists, More and Cudworth. Later, he came, through Ezra Pound (who at one time acted as Yeats's secretary) to know the great Japanese Noh drama of the spirit-world, and he himself based two plays – 'The Dreaming of the Bones', and 'Purgatory' on the Noh model. Thus he was adding, throughout his life, piece to piece of a lost knowledge which would be, as he believed, the foundation of a renewal of a New Age, already announced by Blake and Swedenborg, and whose advent Yeats saw in terms of the Great Year of ancient astrology.

THESE ARE BUT A few of the landmarks in Yeats's continuous lifelong studies in a learning not taught in schools. Indeed, widely and deeply read as he became over the years, the reading of a poet is very different from the erudition of the scholars: whereas the latter read in order to acquire information, the poet's reading is a search for truth and reality. Book-learning was only one part of Yeats's studies – in astrology and magic, psychical research and folk-lore, book-learning played no part. This again has proved baffling and repugnant to the academic world, and yet there is a consistency and unity in



County Sligo where Yeats spent his later years. Courtesy of the Irish Tourist Board.

Yeats's thought which includes all these and more besides.

So great is Yeats's mastery of words and images that an uninitiated reader may remain satisfied with the form without discerning the resonances and overtones of his profound imaginative thought which link that thought with the sacred traditions of all religions; Indian, Islamic, Platonic and Christian also. Like Botticelli and other Florentine painters, he possessed the art of veiling his learning in the airy-light garb of beauty – which at once conceals that learning from those incapable of receiving it, while offering clues to those able to recognize their presence. Those who do follow the many clues, so casually offered, as it seems, in Yeats's writings, will discover how great and exact is that knowledge of the whole body of imaginative literature and philosophy, of Europe and beyond.

Having, so to say, scanned the whole horizon of available knowledge of the universe of the soul, from Plato to Blake, from Dante to Goethe to Shelley, from Porphyry to the Noh Theatre of Japan, the Golden String he had followed through its many windings led him at last to India; and in his last years Yeats, with Sri Purohit Swamy, translated the twelve principal Upanishads, to several of which he alludes in 'A Vision'. Even to the present time Yeats's poetry has been studied and discussed in ignorance and disregard for the life-current of sacred tradition which fertilised it. Indeed the works Yeats himself studied are not likely to be found on any university syllabus – Dee and Paracelsus, Myers and Lombroso on the Afterlife, Coomaraswamy's 'Mirror of Gesture', the poems of Kabir, the 'Kabbala Denudata', 'The Secret Commonwealth of the Elves, Faun and Fairies'

by the Rev. Robert Kirk of Aberfoyle. Neither for that matter are Plato, Proclus, Porphyry and Plotinus, The *Hermetica*, the Middle-Eastern sects and poets, the Bhagavad Geeta and the Upanishads.

T.S. Eliot's works are interwoven with allusions to literary sources, English, French and Italian, generally known and studied in the English Faculties of Western Universities. But between these two great poets lies a watershed. At the time it was taken for granted that T.S. Eliot's was the more seminal, the more contemporary mind and guide to the future; while Yeats's greatness as a poet was in spite of, not deeply rooted in, his disreputable dabbings in occult studies. Now it is clear that the civilization upon which Eliot's work is supported, and of which it is the last great flowering, belongs to the past; "A greater, a more gracious time is gone" – in Yeats's words. But Yeats, in looking towards the root of all civilizations, the human imagination itself and its manifold creative powers, and to the sacred traditions of the Perennial Philosophy, in all its branches, and above all to India, has opened for us a door towards the future – "the rise of soul against intellect, now beginning in the world". Great artist though he was, his poetry is more than an 'art'. It is a profound mode of thought, an extension of the frontiers of the imagination, an enlargement of human consciousness as yet barely understood, but a great tower of thought awaiting our arrival.

Kathleen Raine is a distinguished scholar and poet, and the editor of the journal devoted to the sacred arts, *Temenos*. Her published works include 'William Blake', (Thames and Hudson 1970), 'Yeats the Initiate', (Allen and Unwin 1986) and 'Selected Poems' (Golgonooza Press 1988).



Ismail Hakki Bursevi's
translation of and commentary on

FUSUS AL-HIKAM

by *Muhyiddin Ibn 'Arabi*

rendered into English by Bulent Rauf
with the help of R. Brass and H. Tollemache

It is with great pleasure that the Muhyiddin Ibn 'Arabi Society is able to announce the publication of the first three volumes of this major work of Muhyiddin Ibn 'Arabi, who is known in the Islamic world as 'The Greatest Shaykh'.

Born in Andalusia, Spain, in 1165AD, Muhyiddin Ibn 'Arabi left Spain when he was in his early thirties and travelled East, visiting the Maghreb, Cairo, Mecca, Anatolia and Baghdad before settling in Damascus. On his journeys, he met and conversed with the greatest mystics, divines and philosophers of his day. He was an outspoken critic of religious and philosophical dogmatism, but nevertheless was, and is, revered as a saint and teacher of incomparable stature.

Ibn 'Arabi wrote some five hundred books, of which he considered the *Fusus al-Hikam*, written just a few years before his death in 1240 AD, to be the most important. The title has been translated as 'The Bezels of Wisdom' and 'The Wisdom of the Prophets', and its theme is the infinite wisdom which is at once unique in itself and many faceted in its expression. It consists of twenty-seven chapters, each treating a unique aspect, or 'bezel', of wisdom as exemplified in a particular prophet in the line from Adam to Muhammed. It is simultaneously an explanation of the profoundest meaning of man's existence and perfectibility and an esoteric exegesis of the Qur'an.

This translation of the *Fusus* has been rendered into English from the Turkish translation and commentary of Ismail Hakki Bursevi (1653 – 1725AD), a Shaykh of the Sufi Order of the Jelvetis. His extensive commentary, published here in full, is regarded by many as the best of the many which the book has inspired, whilst his Introduction, which forms an integral part of Volume 1, is a masterpiece in itself.

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*"This book is beyond ordinary measure. It is beyond the general
run of mystic writings and is more than just a book of meanings.
It is to do with the meaning of meanings, with the meanings,
realities and knowledges of God ..."*

from Rosemary Brass's Introduction to Volume 2

Reviews

Books

...in brief

SCIENCE

The New Physics

Edited by Paul Davies
Cambridge University Press, 1989.
H/back. 516pp. £30

This beautifully illustrated book makes a sweeping survey of the latest developments in physics, from astrophysics to superconductors, chaos to fundamental particles. The articles are written by leading figures in their fields, who, the dust-jacket claims, "have been meticulously edited to ensure that they will appeal to a wide range of readers". They are indeed clearly written, substantial and fascinating accounts hot from the laboratory with genuinely helpful diagrams and illustrations. But there are still quite a lot of equations and such like around, and excellent as it is, it is not really a work for the complete layman in the same way as, for instance, Professor Davies's own books are.

The Ages of Gaia

by James Lovelock
Oxford University Press, 1989. H/back, 244pp, £13.50

In 1979, James Lovelock put forward the Gaia Hypothesis, which proposes that the earth and all its life-systems behave like a single organism – a theory

which has since generated wide-spread interest both within and beyond the scientific community. In this book, which he calls 'A Biography of the Living Earth', he explores Gaia further; first as a theoretical model for evolution, and then as it has operated during different eras of the development of the earth. He concludes with a consideration of the wider implications of the hypothesis, such as its compatibility with religious belief and the new scientific theories of chaos and self-organisation.

The Symbiotic Universe

by George Greenstein,
William Morrow and Co. New York,
1988. H/back, 262pp, \$18.95.

Arguing from the recent discoveries of 'the fine-tuning' of the universe, and the conclusions of quantum mechanics concerning 'the observer', George Greenstein, Professor of Astronomy at Amherst College, USA, proposes that the cosmos had to bring forth life in order to exist. He sees that there is a symbiosis (mutual dependence) between the physical universe and life, and in this book, which is written for the general reader, he explores the idea both philosophically and in the realms of cosmology and particle physics. He feels obliged to distinguish between the scientific 'anthropic' principle and the medieval idea of anthropocentrism, which he sees as suffused with unwelcome religious connotations, but this is

nevertheless an interesting and informative account.

The Home Planet

Edited by Kevin W Kelly
MacDonald Queen Anne Press, London,
1988. H/back, 252pp, £20.00

This is a ravishingly beautiful book which consists solely of pictures taken during space missions, juxtaposed with quotations from astronauts about their feelings and impressions as they look back at their home planet. There are the now-familiar views of the whole earth, and also a stunning series of cloud, sea and surface formations. The book has been prepared by the Association of Space Explorers and co-published with the Soviet agency, Mir, and so is the result of uncommon international co-operation; each quotation is printed in the original language as well as in English. The project was partly funded by the Institute of Noetic Sciences in California, which perhaps explains the extraordinarily low price for a book of this quality.

WORLD AFFAIRS

The Gaia Peace Atlas

Survival Into the Third Millennium

General Editor: Dr Frank Barnaby
Pan Books, 1988. P/back, 271pp,
£10.95

Peace is inseparable from a sustainable future, argues this atlas, which contains much information not collected anywhere else and a number of considered proposals for action in both the short and the long term. It was produced by a group of six writers under the editorship of Frank Barnaby, a former head of the Stockholm International Peace Research Institute, the outstanding independent source of information on weapons manufacture, trade and disarmament. Barnaby has brought his contacts into the book; it includes messages and contributions from an unparalleled gathering – including political leaders (Reagan, Gorbachev, Thatcher), spirituals (the Pope, the Archbishop of

York) and 'Greens'. The nine chapters are introduced by people of real distinction in their fields and the whole thing is underpinned by specialist knowledge. The multiplicity of voices occasionally jars, but overall this is a significant achievement and should make its mark.

**The Inner Limits of Mankind
Heretical Reflections on Today's
Values, Culture and Politics**

by Ervin Laszlo

One World, London, 1989. P/back,
143pp, £4.50

Public attention is increasingly being focussed on the limited physical resources of the earth, but Ervin Laszlo, the foremost exponent of systems philosophy and general evolution theory and a member of the Club of Rome, argues that we are tackling the wrong issue. The truly decisive limits are inner, not outer, and it is only by redesigning our thinking and acting that we can solve the problems which we currently face. There is much that it is sound and sensible in Laszlo's analysis, which is basically an optimistic one. The next phase of humanity's evolution, he argues, is the bringing about of "a globally integrated social, cultural and technological system", but this will happen only if we manage to transcend our own inner limits.

MYSTICISM

Rumi and Sufism

by Eva de Vitray-Meyerovitch

Translated from French by Simone Fattal
The Post-Apollo Press, New York, 1987.
P/back, 165pp, \$12.95

This book is an excellent introduction to one of the greatest spiritual masters of all time. Jalal'udin Rumi lived in Konya, now in Turkey, during the 13th century. He was the inspirer of the Mevlevi order of dervishes (the whirling dervishes) and his vast legacy of mystical poetry is amongst the most profound ever written. Eva de Vitray-Meyerovitch gives a clear and scholarly exposition of his life and thought; plus a history of the subsequent development of the Mevlevi Order and a good introduction to Sufism in general. She draws out the universality of Rumi's thought, describing how in his lifetime he had followers from all the religions – including atheists. Containing as it does extracts from Rumi's letters and works which are not yet available in English, this book will interest even those who already know something about Rumi.



The oldest known portrait of Rumi. From 'The Sufism of Rumi.'

The Silence of God

The Answer of the Buddha

by Raimundo Panikkar

Orbis Books, New York, 1989.

P/back, 268pp, \$16.95. (British distribution by Fowler Wright of Leominster.)

"When I began writing this book, early in the sixties", this book begins, "my odyssey had already included the experience of the confluence of Christianity and Hinduism. But... I had yet to experience – in intellectual depth and emotional intensity – both that great post-Christian phenomenon called atheism, and that great post-Hindu phenomenon called Buddhism" (pxv).

Raimundo Panikkar is a distinguished exponent of inter-cultural stud-

ies with a vast knowledge of his subject and an original point of view. In modern man, he observes, simple faith in a "fatherly, protective, good and almighty God" is in decline, but neither are we able to leave off believing in something. In this situation, Buddhism, which refuses to define ultimate reality and has even, perhaps, "eliminated God from the path of salvation", has much to say, and can encourage us to embrace "a new innocence in which false alternatives will be by-passed".

In a profound and fascinating analysis, he goes on to rescue Buddhism – which, he points out, is qualified by hope, compassion and the promise of liberation – from comparison with false

alternatives like atheism, nihilism and cynicism, etc. and to explore the 'silence' of the Buddha in the face of ultimate questions. "... it seems to me", he says, "that the reason for the silence of the Buddha resides precisely in the fact that this ultimate reality is not... Ultimate reality is so supremely ineffable and transcendent that, strictly speaking, Buddhism will be constrained to deny it the very character of Being. Being, after all, is what is: but what is, by the very fact of its being, is in some manner thinkable and communicable. It belongs to the order of manifestation, of being. And therefore it cannot be considered to be the ultimate reality itself." (p14)

He goes on: "When the Buddha refuses to respond then, it is not for any subjective reason – neither his own, nor that of his hearer, nor that of human nature – but in virtue of an exigency of reality itself. His is not a methodological silence or a pedagogical silence, but an ontic silence. His silence not only clothes the reply, it invades the question. He is not only silent, he reduces to silence".

The Spirit of the Earth *Reflections on Teilhard de Chardin and Global Spirituality*

By Ursula King

Paragon House, New York, 1989.

P/back, 198pp, £7.25

Spirituality is a personal and collective matter, says Ursula King, but it now has to be developed in a cross-cultural context, as created by our contemporary political, cultural, social and political realities. It is in this sense that one can talk of a 'global spirituality'. The French Jesuit priest and mystic Teilhard de Chardin, she feels, had real insight into this matter, and it is this which she attempts to draw out. Ursula King holds the chair of Theology at Bristol University and the book is both an excellent survey of current ideas and developments in inter-faith communication, and an education in Teilhard's vision. Teilhard has attracted criticism from many quarters, but from Professor King's account he emerges as a man of great spirituality whose ideas have not yet been fully understood. "One might say that a hitherto unknown form of religion... is burgeoning in the heart of modern man", she quotes. "God is no longer sought in identification with things that annihilate personality, nor from an escape that dehumanises man. God is attained... by entry into a total sphere which embraces all things – a

centre that is itself in formation. Far from being shaken in my faith by such a revolution, it is with irrepressible hope that I welcome the rise of this new mysticism and anticipate its inevitable triumph". (p118)

The Upanishads

Translated by Eknathe Easwaran

Arkana, 1988. P/back, 249pp, £5.99

The Upanishads are mystical texts attached to the end of each of the Hindu scriptures, the Vedas. In his lengthy introduction, Eknathe Easwaran explains that the word suggests 'sitting down near' and that they record the ancient teachings of illuminated sages to their intimate students. Unlike the Vedas, which are like revealed scriptures with strictures on religious belief and conduct, the Upanishads concern themselves with the perennial, mystical wisdom of Oneness which cannot be reached by ritual. Eknathe Easwaran is a Sanskrit scholar who now runs his own meditation centre in America. This book contains his new translations of the ten principal Upanishads, plus the beautiful Shvetashvatara and four minor yoga Upanishads.

GENERAL



A dream artifact from the Saora people of Orissa, India. From 'Dreams'.

Tibetan Medicine

by Tom Dummer

Arkana, 1988. P/back, 283pp, £8.99

Whilst much attention has been given to Chinese medical practices such as acupuncture, the ancient and sophisticated Tibetan system has remained almost unknown. In order to write this book, Tom Dummer, a practising osteopath and Buddhist, studied with Tibetan doctors in Dharamsala, the refugee headquarters of the Dalai Lama.

In the first part he describes both the metaphysics and the application of Tibetan medicine, whose roots lie in the four medical tantras. In the second half, he draws parallels between Tibetan and Western medicine, and suggests ways in which they can be practised in conjunction. This is a rigorous and clearly written book, perhaps more for practitioners than for the general reader, but fascinating nevertheless.

Dreams

David Coxland and Susan Hiller

Thames and Hudson, London, reprint

1988. P/back, 96pp, £5.95

A re-issue of one of Thames and Hudson's 'Art and Imagination' series, this coffee table book contains a wide-ranging introduction to its subject and a wealth of beautiful images drawn from all cultures and traditions.

The Creative Manager

by Peter Russell and Roger Evans

Unwin Paperbacks, 1989.

H/back, 213pp, £12.95

This book emerges from the consultancy and training workshops which the authors have done for businesses throughout the world, and its interest lies as much in what it reveals about the way modern business is changing as in the specific ideas. Evans and Russell argue that we are entering an era which will be characterised by constant, accelerated change; in order to cope, everyone, especially those with a leadership role, will have to develop their own flexibility, overcome their fixed ways of thinking and learn to act from what they call "a still centre of inner stability and calm from which we can think and act with greater clarity and creativity". They believe that all real change starts from the individual and that the great undocumented area which managers now have to tackle is the "mysterious inner dimensions". We must learn, they say, to listen to our own inner wisdom.

A Mantis Carol

by Laurens van der Post

Hogarth Press 1975. Penguin, P/Back edition, 1989. 168pp, £4.50.

"And always Mantis would have a dream... and the dream would show him what to do".

This stone-age text concerning Mantis, who was for the first people of Africa symbol of their highest meaning, achieves an immediate contemporary relevance in this remarkable book, which has just been released in paper-

back. In a tale of fact stranger than fiction, Laurens van der Post is led to an encounter with a lone bushman, not this time in the Kalahari desert but amid the skyscrapers of 20th century New York. Initially brought to America as a circus freak, Hans Taaibosch settled, lived and died there, and the quality of his life is revealed in his impact on those that gave him shelter. However, the full weight of its meaning

only comes to light in a completion occurring after his bodily death. This is brought about through the recognition and appreciation that Sir Laurens, with his unique knowledge of man and bushman, is able to give. It is not just as a representative of the anthropological past that this child of Mantis is brought to the reader, but as herald of a new fulfilment of the human spirit which is yet to be released.

Jung. A Biography

by Gerhard Wehr.

Shambhala, New York, 1988

H/back. 550pp. £20. P/back £9.95

Jung. The Wisdom of the Dream

by Stephen Segaller and Merrill Berger

Weidenfeld and Nicolson, 1989

H/back. 211pp. £12.95

Hilary Williams

GERHARD WEHR'S biography is an excellent introduction to Jung. Described on the dust-jacket by Franz Jung, C.G. Jung's son, as "the best available biography (and) a thoroughly reliable piece of documentation", it is suitable for either the casual reader who knows little about his life, or for the more fully informed who would like more detail.

Apart from three short essays at the end of the book – one on western consciousness and eastern spirituality, one on Jung's contacts, dialogues and disputes with well-known figures of the time, and one on Jung's influence – the author does not attempt an examination of Jung's ideas as such but rather presents a straight-forward biography with a thoughtful commentary and many pithy quotations culled from both Jung's formal writings and his personal correspondence. Its great merit is that it allows the largeness of spirit and quality of its subject to shine through, and perhaps more than any other biography, draws out the inner, spiritual aspects of Jung's life and work.

Certainly, Wehr has a fascinating story to tell. Jung was born in 1875, the son of a Protestant pastor of whom he later said:

"He did a great deal of good – far too much – and as a result was usually irritable. Both parents made great efforts to lead devout lives, with the result that there were angry scenes between them

only too frequently. These difficulties understandably enough, shattered my father's faith..." (p16)

"... he did not know the immediate living God.... I saw how hopelessly he was entrapped by the Church and its theological thinking. They had blocked off all avenues by which he might have reached God directly, and then faithlessly abandoned him." (p48)

The young C.G. Jung declined a career in the ministry and as a student his attention turned to psychic phenomena. One day, in a flash of inspiration, he became aware that the only career possible for him was psychiatry: "Here alone the two currents of my interest could flow together and in a united stream dig their own bed. Here was the empirical field common to biological and spiritual facts, which I had everywhere sought and nowhere found. Here at last was the place where the collision of nature and spirit became a reality." (p66)

He consequently became a distinguished young doctor working at the Burghölzli clinic in Zurich and it was here that he was introduced to the work of Sigmund Freud. In describing their meeting, Wehr draws on Jung's autobiography, 'Memories, Dreams and Reflections' where he said of Freud: "(He) was the first man of real importance I had encountered; in my experience up to that time, no one else could compare with him... I found him extremely intelligent, shrewd, and altogether remarkable." (p49)

The two men corresponded avidly for many years but the eventual break was inevitable. It happened when Freud said to his younger colleague: "My dear

Jung, promise me never to abandon the sexual theory... You see, we must make a dogma of it, an unshakeable bulwark." Jung describes his response as follows:

"First of all it was the words 'bulwark' and 'dogma' that alarmed me; for a dogma, that is to say an indispensable confession of faith, is set up only when the aim is to suppress doubts once and for all. But that no longer has anything to do with scientific judgement; only with personal power drive. That was the thing that struck at the heart of our friendship." (p107)

In fact, as Wehr's account makes clear, Jung could not accept Freud's central premise – that "all neuroses were caused by repression of sexual traumata" – and he shrank from the thought that all of human culture could be thought of as the morbid product of repressed sexuality. His own insights and experiences pointed far beyond the personality and caused him to question the whole philosophical and scientific premises on which Freud's psychoanalysis rested. Jung wanted to explore the psyche's tendency to unity, and this needed a more profound method of enquiry and a larger theoretical framework than that which Freud – who had concentrated on repression and the personal unconscious – had provided.

In 1912, he entered a mid-life crisis which lasted until around 1917. During it, he had many extraordinary dreams and experiences, which he later described as: "a fiery stream of basalt; out of them crystallised the stone which I could then work on... The years when I was pursuing my inner images were the most important of my life... It was the 'prima materia' for a lifetime's work."

In one dream he saw a row of sarcophagi, going back in chronological order to the 12th century. As he walked past the line of what he thought to be dead forms, one figure after another came to life on being looked at or touched. Wehr quotes him as saying later that "such contents are not dead, outmoded forms, but belong to our living being". He also conversed with an ancient and venerable figure whom he called Philemon who was for him equivalent to a spiritual guide and of whom he said: "He conveyed to me many an illuminating idea." (p184)

Consequently Jung formulated what became for him central organising ideas such as 'the unification of the opposites', 'the collective unconscious' and

...in depth

'the archetypes'. He constantly stated that he was no theologian or metaphysician, and indeed whilst having a lively and pragmatic interest in the spiritual and psychological, he had a very limited interest in the philosophical. He saw himself as an empiricist rather than a theorist and derived his insights not from a principial understanding but from an empirical quest. Consequently terms like 'the collective unconscious' and 'archetype' remain vague. For Jung everything of value had to be gained empirically and experientially: "All my writings may be considered tasks imposed from within; their source was a fateful compulsion. What I wrote were things that assailed me from within myself. I permitted the spirit that moved me to speak out." (p209)

Jung's perception of the importance of the unification of the opposites brought him eventually to take an interest in alchemy. He spent many years reading and translating texts and found in the alchemical images of those who sought the 'philosopher's stone' a path of inner transformation corresponding to the outward chemical and physical transformations of metals. Ultimately, the goal of the multi-stage process was the successful unification of the opposites in the '*unus mundus*'. He came to understand his own experiences of 1913–17 as corresponding to processes of alchemical transformations, and would quote Gerhard Dorn, the 16th century Paracelsist: "Transform yourselves into living philosophic stones."

In 1944 Jung had a serious heart-attack and was very close to death for some time. His later descriptions of the things that were shown to him, too lengthy to be quoted here but amply covered by Wehr, are striking and beautiful. To a terminally ill American colleague he wrote during the following year:

"When you give up the crazy will to live and when you seemingly fall into a bottomless mist, then the truly real life begins with everything that you were meant to be and never reached. It is something ineffably grand... Not I was united with somebody or something – it was united, it was the *hiros gamos*, the mystic Agnus. It was a silent, invisible festival permeated by an incomparable feeling of eternal bliss such as I never could have imagined as being within human experience. Death is the hardest thing from the outside and as long as we are outside of it. But once inside you

taste of such completeness and peace that you don't want to return" (p343)

"After the illness a fruitful period of work began for me. A good many of my principal works were written only then. The insight I had had, or the vision of the end of all things, gave me the courage to undertake new formulations. I no longer attempted to put across my own opinion, but surrendered myself to the current of my thoughts. Thus one problem after the other revealed itself to me and took shape." (p349)

Consequently, a new emphasis became added to Jung's practice. He wrote:

"...the main interest of my work is not concerned with the treatment of neuroses but rather with the approach to the numinous. But the fact is that the approach to the numinous is the real therapy and inasmuch as you attain to the numinous experiences you are released from the curse of pathology." (p347)

He died in 1961 at the age of eighty-six, and was buried in the family grave



Jung. Courtesy of the Institute of Analytical Psychology.

which bore the same inscription as the one he had chosen to carve in stone over his own doorway: "Called or not, God will be present."

Since his death, many of the concepts which he introduced and worked with, such as 'complex', 'archetype', 'introversion' and 'extroversion', '*animus*' and '*anima*', 'the collective unconscious', have found their way into common parlance, or been naturally absorbed into our own collective understanding of the world. Others have remained more obscure and difficult to understand. Perhaps this is partly through the intrinsic subtlety of the concepts and partly through the provisional and exploratory character of Jung's understanding, which he himself acknowledged.

"I can only hope and wish," he said in a letter in 1946, "that no-one will become a Jungian. I do not advocate any doctrine, you see, but only describe facts and draw certain conclusions which I think are worth discussing...I promulgate no cut-and-dried doctrine, and I perhorresce at 'blind adherents'. I do not refuse anyone the freedom to adjust the facts in his own particular

way, for of course I take this liberty myself." (p353)

'JUNG, THE WISDOM of the Dream' gives some insight into just how far this hope has been fulfilled. Published as a companion to a recent television series (1), it aims to be an introduction to Jung's thought and purports an analysis of his ideas. But considered alongside Wehr's book, it is a slighter work in every way. Riding on the tide of Jung's current popularity, his expansive reflections are reduced to categories and the attempt to 'up-date' the ideas merely trivialises because of the lack of understanding of what is universal in his thought. Like many books on the man, it is the actual quotations from Jung himself (mostly very familiar ones from 'Memories, Dreams and Reflections') that leap out from the page – like jewels in a dark cave.

Where it does achieve a certain freshness and originality, is that the authors have taken the trouble to interview people who actually knew Jung and/or have a professional interest in him. These include Dieter Bauman (an analyst and Jung's grandson), Marie-Louise von Franz (who worked with

Jung on his alchemical studies and has made herself a specialist in fairy tales), Joe and Jane Henderson (American analysts who were analysed by Jung), Don Cuppitt (the theologian), James Hillman (the foremost exponent of Archetypal Psychology) and Robert Johnson (who studied with the Jungs and Sri Aurobindo).

The quotations are bundled together under categories of subject matter, but one can nevertheless discern distinct strands among Jung's followers and those that have been influenced by him. The Hendersons' and von Franz's observations are generally psychological and adhere to what have become the 'orthodox' terminology. Cuppitt gives us a kind of modern humanistic, psychologically based theology, whilst James Hillman has settled himself into the world of archetypes. His contribution is valuable for his understanding that things constantly change, although he seems to lack the corollary insight of unchangeability. Robert Johnson tends to spiritual insights and, for my money, has a greater depth of understanding into concepts like 'myth' and 'collective unconscious'.

Shortly before he died Jung said to a

friend: "Today nobody listens anymore to what lies behind the words... to the Ideas that underlie them. Indeed, my work consists above all in giving new names to these Ideas and realities. Let's take for example the word 'unconscious'. I have just finished reading a book by a Chinese Zen Buddhist. I felt as if we were talking about one and the same thing and were simply using different words for it. The use of the word 'unconscious' is not the decisive thing; what counts is the Idea that lies behind this word." (Wehr, p449)

On the evidence of 'Jung The Wisdom of the Dream', he would complain equally about the way many of his followers interpret his work today; the 'Jungians' are on the ascendent. It lies in the ability of the reader to read between the lines and discern that the great, ever-questioning spirit of Jung is alive and awaits more eloquent and insightful expression than we have been offered here.

(1) Shown in Britain on Channel 4, May 2nd, 9th and 16th 1989.

Hilary William is a therapist who lives in Cambridge

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Awakening Osiris: The Egyptian Book of the Dead

Translated by Normandi Ellis

Phanes Press, 1988 P/back, 222pp, £9.00

Jeremy Naydler

THE ANCIENT EGYPTIAN 'Book of the Dead' is a collection of 'words of power' in the form of hymns and incantations, whose principal purpose was to enable a soul to journey through the Underworld, meeting and overcoming the forces of opposition which that region harbours. The end of this journey was the divinization of the soul through its union with the god Osiris. These are sacred texts which express the ancient priestly wisdom in symbolic language that is of great refinement and sophistication. Every word, every image, every reference to a god, to a mythic place or mythic being is deliberate and exact. The sacred writings of ancient Egypt (of which the 'Book of the Dead' is but one collection) together constitute a symbolic science of the spiritual world, as precise in its own way as are any of the modern physical sciences.

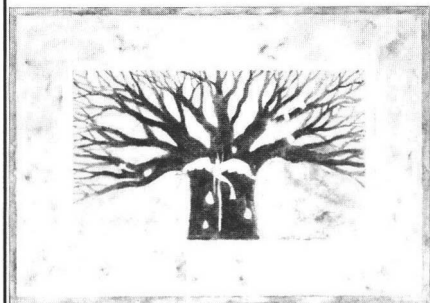
The translator who wishes to make these texts accessible to the modern reader is therefore faced with a dilemma – for it is of their nature, as it is of any modern scientific tract, that they can be comprehended only after years of study. Should the translator therefore smooth over, or even eliminate, symbolic and theological references which would be lost on the non-specialist reader? Or should he or she be as literal as possible, but thereby risk producing a translation that to the modern reader is at first sight incomprehensible? The dilemma is heightened by the fact that, unlike modern scientific tracts, the esoteric literature of ancient Egypt contains layers of meaning whose ultimate significance is only revealed to one who returns again and again to contemplate their profound spiritual content. It is not 'knowledge' in the modern scientific sense, but a type of initiatory wisdom.

Normandi Ellis' new translation of the 'Book of the Dead' (which she has retitled 'Awakening Osiris') takes the first course. She sets out, in her own words, "to blow a little dust off the old

Text and Vignette from the Papyrus of Netchemet. Courtesy of the British Museum. From E. A. Wallis Budge's classic translation of 'The Book of the Dead' which has just been re-issued Arkana Penguin; paperback, £8.99.



THE LIVING TREE



ART AND THE SACRED

John Lane

Life and art have been put into separate compartments. The arts have been confined to concert halls, galleries, museums, or the private collections of the wealthy; its value has become that of an investment. Ordinary life is inundated with mass-produced objects that have no beauty. John Lane, in *THE LIVING TREE*, makes a plea for bringing art and life together again.

In his foreword, the painter Cecil Collins writes:

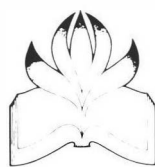
"There is a growing awareness that modern art is approaching a severe crisis, and that sooner or later it will have to undergo a ruthless evaluation. John Lane has written an important book which goes straight to the heart of this crisis."

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GREEN BOOKS

Egyptian book and let it shine anew in a more modern era". The result is not so much a translation as a completely new rendering of the 'Book of the Dead', whose relationship to the original is often, to put it mildly, tenuous. She has chosen to rewrite the 'Book of the Dead' as a series of prose-poems; spiritual songs that scintillate with a richness of imagery and such incandescent beauty that anyone who did not know the original would find them quite irresistible. The 'Book of the Dead' seems to pulsate with new vigour – but the question arises as to whether this is still the 'Book of the Dead', or whether it is too far from the Egyptian papyri to legitimately lay claim to that title. Those who know the scholarly translations of E.A. Wallis Budge (and to a lesser extent R.O. Faulkner) will have little doubt that Ellis's 'translation' severely alters both spirit and content of these remarkable writings. Gone is the symbolic precision of the original; many of the significant references to gods, mythic situations and mythography are obscured or eliminated; and lost are the subtleties of meaning which can only breathe when the theological and ritual context of the papyri are retained. Richness of symbolism and incantatory force are sacrificed to an overly lavish prose which too often tips into a very modern kind of sentimentality – the antithesis of the pristine egolessness that is so characteristic of ancient Egypt.

It is an irony of Ellis's translation that, because what comes through from the original appears in such a weakened and attenuated form, it is thereby made more appealing to the modern reader. No doubt this translation will prove to be the most popular just because it leaves behind so much that is difficult. One doesn't have to work hard to read Ellis's lush and seductive prose, but by the same token there is less here to work on. 'Awakening Osiris' makes the 'Book of the Dead' accessible to the modern Western mind by effectively denying the reader access to the ancient Egyptian mind. It is therefore not a book for the serious student of ancient Egyptian spirituality, whom it will almost certainly antagonise. Read, however, as a personal evocation of ancient Egypt that takes its inspiration from the 'Book of the Dead', it stands in its own right as a work of imaginative power and beauty.

Jeremy Naydler is a gardener who lives in Oxford

Christianity and the World Religions

by Hans Kung.

Collins Fount Paperbacks, 1987.

P/Back, 460 pp, £5.95

Martin Notcutt

CHRISTIANITY AND the World Religions' is the offering of an influential Christian theologian to what he calls the "slow awakening of global ecumenical consciousness."

Hans Kung believes in the value of dialogue between people of different beliefs. There may be many reasons why he believes it is good, but in the end he holds that it is essential for peace. He says, "The alternative today is peace in the *ecumene* (inhabited world) or destruction of the *ecumene* itself." Religions, religious leaders, sincere believers, have a special responsibility in this.

The book arose from a series of lectures given in 1982 at the University of Tübingen, Germany, by Hans Kung and three learned colleagues. Each of these scholars gave four lectures on one of the world's religions – Islam, Buddhism and Hinduism. And after each paper Hans Kung would present a second paper, a 'Christian response'.

It has to be said that the book has its problems. First, some of the material has not made the transition to print successfully. The general structure of the book is over-complicated, and it is burdened with too many intentions. But if we put aside the informative lectures, we are left with an original work by Hans Kung, comprising his twelve 'Christian responses.' In them, he displays a characteristic willingness to grapple with thorny issues, and to ignore the anxieties of authorities. And the writing is so full of ideas, that often trying to follow it is like trying to grasp a catherine-wheel.

In an area where scriptural guidance is lacking, he tends to fall back on a historical and social perspective. For example, he regards India as providing the prime example of 'mystical religion'. Here he refers to the specific practices of yogins, etc. for this is quite distinct from popular Hindu religion.

"The basic experience of mystical piety," he says, "... is a renunciation and dissolution of the human, a dedication to infinity, which climaxes in ecstasy or nirvana... It is a process of self-transformation, in which the mys-

tic appears as one who goes without but, in the end, as one who knows. The highest point of a life of mystical piety is reached in extraordinary experiences beyond normal consciousness ... Mystical piety is familiar with the most sophisticated methods of asceticism and meditation so as to induce mystical states and thus find the way to redemption." (p176)

By contrast he points out that although the life of 'prophetic religion' includes experience of receiving a 'call' or revelation from God, extraordinary ecstatic experiences are not the object of religious life nor the measure of the relationship with God, which is realised in prayer, faith and moral conduct.

"The highest charisma, according to Paul, is not ecstatic speaking in tongues, but faith, hope, and love. Prophetic piety, as embodied in Judaism, Islam, and even Christianity stands out most emphatically by a kind of spontaneity that cares little for systems and methods, psychological techniques and training." (p177)

Based on a historical explanation, Kung sees in these two dispositions two fun-

damentally distinct traditions. Although he acknowledges that the two dimensions are present in both Western religion and Eastern religion, he wishes to avoid reducing one type to the other.

In response to what he describes as the three 'classical' affirmations of Hinduism – that Brahma and the world are wholly one (the *advaita vedanta* of Shankara); that Brahma and the world are wholly separate (the *dvaita* doctrine of Madhva); and the 'theistic monism' of Ramanuja – Kung undertakes a review of 'Christian' thinking on the relation between God and the world. He arrives at a position close to that expressed by Nicholas of Cusa, who described the world as the *explicatio Dei*, the unfolding of God. He says:

"There is no way to talk about God here except in paradoxes, in a *coincidentia oppositorum*. As Bonhoeffer said, 'God is the Beyond amidst our lives'. This strikes me as an understanding of God for modern times and the world at large. Not only does it tally with the contemporary scientific world picture, but it also seems appropriate to the still more uniform pattern of Indian think-

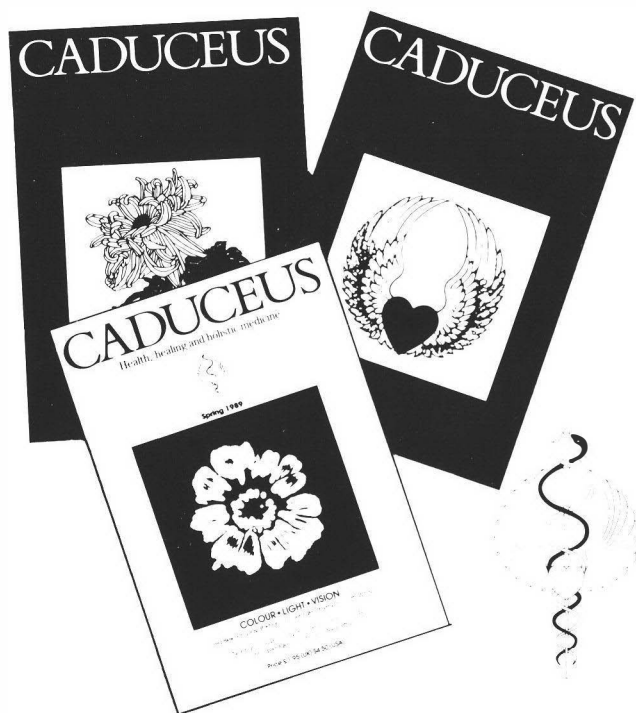
ing: a God both immanent in and superior to the world, a God who as the bearer, maintainer, and companion of the world is simultaneously the depth, the centre, and the height (images all) of the world and man. Precisely because God is this way, he can justly be called the creator, conservator, and completer of the world. That is why Christian thinkers have understood God's creative nature as his vitality and the power of his being, as the fullness of his self-giving to the other, the world. Christians see this process, in the deepest sense, as love." (p207)

If nothing else, this book demonstrates what good things can come out when a person of generous spirit listens carefully to others. Thus despite all its difficulties, 'Christianity and the World Religions' is somehow an important work. To this reader it is as though it is pregnant with meaning, one step away from being born. The step which would be required would be into the darkness beyond religion.

Martin Norcutt is a Trustee of the Beshara Trust. He works as a business analyst in Oxford.

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Making It Happen (Reflections on Leadership)

by Sir John Harvey-Jones

Fontana, 1988. P/back, 336pp, £3.95

Steven Henson



THE WINTER OF 1946/7 saw the North Sea freeze over. Post-war Europe was suffering severe rationing of most basic commodities and the dismantling of the industrial base of Germany had begun. The author, at the time a 22 year old naval officer, was sent to Wilhelmshaven – once the largest naval dockyard in Europe – with instructions to supervise its shipment to the Soviet Union as part reparation for the damage caused by Nazi Germany during the Second World War. The task ahead, even for the most competent manager, was enormous.

Both the Germans and the Russians had suffered too much at each other's hands for there to be any effective agreement as to what was to be done, let alone how it should be achieved. Add to this an inevitable language barrier and the picture of Sir John's introduction to the world of management is complete. I won't tell you how these problems were overcome; instead I recommend that you read the book and find out how this task changed the direction of John Harvey Jones's life and led, quite directly, to his becoming one of the great industrial visionaries of our time. Now one of the world's truly famous businessmen, he made his name as the man who rescued one of Britain's largest companies, ICI, from the brink

of disaster by radical and innovative management. 'Making It Happen' reveals to us the fundamentals of his method, and has already sold thousands of copies.

Sir John tells us that the decision to enter the world of industry was fired by a wish to make a contribution to the world's wellbeing by participating in the process of wealth creation – as a vehicle for facilitating social change. He notes that the application of wealth alone cannot bring about change but astutely reminds us that without wealth it would be virtually impossible to address this matter at all.

He advocates a 'point of view' rather than a formula for managing. He points out early in his book that management is an art – not a science – where the individual, his needs, and the skills he can bring to any situation are of paramount importance. By 'individual' Sir John means everyone from the top to the so-called bottom of an organisation. It is precisely the uniqueness of each individual, working together with his peers, junior and senior colleagues in a constructive framework, that is the secret to making anything of lasting value 'happen'.

The responsibility of management teams is to engender a common vision for the future, by agreement rather than imposition. They must provide the

resources – financial and educational – to permit individuals to teach and motivate themselves and, most importantly, should themselves listen and learn in order to understand the 'other person's' point of view. Running through the book is the pointed awareness of the mutual dependency that exists between those who manage and those who act, even to the extent that the 'common vision' is more often than not derived from the collective views of those engaged in all levels of the business activity. To emphasise this he notes that commitment comes about only when there is present a high degree of understanding and involvement from all those engaged in a task.

For Sir John the recognition that we live in a world of change is vitally important. Commensurate to this is the need for businesses to respond accordingly. This ability flows directly from the reciprocity of management and employees participating in a united vision. Perhaps most importantly, his experience highlights some significant changes that are taking place in the world of industry. "All over the world individuals are asserting themselves and refusing to be codified or grouped or collectivised. Unless companies change ...they will die". His book details the effects of change which, in short, amount to the need for a more purposeful quality of life – with the individual coming very much to the centre.

In the final chapter, entitled 'And So To Tomorrow', Sir John not only summarises his whole approach to management, but also sets on record his views on the world of work to come. He notes the importance of organisations such as the Club of Rome and the growing trend amongst many young people to reject materialism in favour of a more immediate contribution to society. He concludes that tomorrow's world will increasingly be the world of the self-motivated individual who comes to believe, through his or her own processes, that what they are doing is worthwhile – an encouraging vision for us all.

The principles outlined in 'Making It Happen' are universal. Work is an intrinsic expression of the consciousness of man, and is not separate from his evolution in other spheres. It is this that makes Sir John's book compulsive reading and a valuable source of wisdom.

Steven Henson is an accountant who lives in London.

Events

CONFERENCES

Samyé-Ling Interfaith Conference

Our World: how it came into being and our responsibility towards it.

Scotland, 21st-23rd August 1989.

The first inter-faith conference held by the Tibetan Buddhists, on the theme 'Compassion Through Understanding', was reported at length in BESHARA 7. This year's event gathers together the same speakers – including the Khentin Tai Situpa, Rev. Michael Hare-Duke (Bishop of St Andrews), Dom Sylvester Houédard and Peter Young. The discussion is *in camera* for the first two days, although it can be watched on video, and on the third it is thrown open to the public.

Details: Samyé-Ling Tibetan Centre, Eskdalemuir, Langholme, Dumfriesshire. Tel: 03873-73232.

Evolving Earth: Which Way Forward

London, 4th November 1989.

One of the Teilhard Centre's transdisciplinary forums, this day considers humanity's responsibility towards the world and what action each person can take. Speakers include John Newson, Jungian analyst and Anglican priest; Eileen Noakes, a transpersonal psychology consultant, and development economist Piet Terhal from the University of Rotterdam.

Details: The Teilhard Centre, 23 Kensington Square, London W8 5HN. Tel: 01-937 5372

Gaia and Mutual Aid

Camelford, Devon, 8th-12th November 1989.

This is the third of the Camelford Symposia, which

were initiated by 'The Ecologist' to explore the implications of the Gaia Hypothesis in a wide variety of spheres. This year's speakers include Jim Lovelock, Lynn Margulis and Dr Mae Wan Ho.

Details: Ecologist, Worthyvale Farm, Camelford, Cornwall PL32 9TT. Tel: 0208 381785.

International Conference on Holistic Health and Medicine

Bangalore, India.

8-12th November 1989.

Planned as a major international event, this conference will be addressed by key speakers from Britain, USA and India, including the Dalai Lama and Mother Theresa; plus a concert by Ravi Shankar. Special Air India fares are available.

Details: ICHHM, Travel Corp (1) Pvt. Ltd., 9 Residency Rd, Bangalore-560 025, India.

The Way of the Dream

Regent's College, London.

11-12th November 1989.

A weekend film seminar on the meaning and significance of dreams, featuring Dr. Marie-Louise von Franz, one of the leading interpreters of Jung's thought. There will be 20 half-hour films with discussion led by Dr Anne MacGuire.

Details: Denis Quinn, 2 Suffolk House, Circus Rd. London NW8 6PA. Tel: 01-722 8019

Science and the Sacred

London, 25-26th November '89

A weekend with Rupert Sheldrake, Pir Vilayat Khan and Sir George Trevelyan which will explore links between science and the spiritual path. One of the many events which the Wrekin Trust have on their autumn programme.

Details: The Wrekin Trust, Runnings Park, Croft Bank,

West Malvern, Worcs. WR14 4BP. Tel: 0684 892898.

The Beauty of Surprise Science and Mystery in a Self-creating Universe.

Forres, Scotland. 25th

November - 1st December '89.

Billed as a 'gathering' rather than a conference, this event will include workshops as well as lectures. Contributors include Willis Harman of the Institute of Noetic Sciences, biologist and artist Mae Wan Ho and Dieter Grossman, Director of the Institute for Social and Economic Research in Vienna. This is only one of the many events in the Findhorn Foundation's autumn programme.

Details: Findhorn Foundation, The Park, Forres, IV36 0TZ. Tel: 0309 30311

Scientists and Sages

Munich, 9th-11th March 1990.

Named after Renée Weber's well-known book, this ambitious event will be addressed by the lady herself along with David Bohm, Raimundo Panikkar, Peter Lasalle, Pir Vilayat Khan and others.

Details: Aquamarin Verlag Voglherd 1, D-8081 Grafting, Germany. Tel: 08092/9444.

LECTURES AND SEMINARS

The Schumacher Lectures Soil, Soul and Society:

Integrating Ecology, Spirit and the World.

Bristol, 7th October 1989.

There are three speakers for this annual event: the economist, Manfred Max-Neff, founder of the Development Alternative Centre in Chile, will speak on 'Human Scale Economics': the

physicist and philosopher Vandana Shiva, Director of the Foundation for Sciences, Technology and National Research Policy in India, will talk on 'Women, Ecology and Development', whilst Bill Mollison of the Permaculture Institute in Australia will cover soil care.

Details: Schumacher Society, Ford House, Hartland, Bideford, Devon EX39 6EE. Tel: 02374 621

The Financial Initiative: An Approach to Green Investment Today

by Giles Chitty

Charing Cross Hotel, London.

6.30pm, August 30th 1989.

One of a series of monthly lectures which the World Service Forum hold in London.

Details: World Goodwill, Suite 54, 3 Whitehall Court, London SW1A 2EF. Tel: 01-839 4512

The New Economics: Critical Perspectives

Worcestershire,

18-19th November 1989.

The Green College is a new independent, international college which aims to provide education on ecological issues. It is residential, and this weekend course is just one of the many courses, workshops and conferences it is planning.

Details: Green College, Pickersleigh Court, Malvern, Worcs, WR14 2ET. Tel: 0865 249020

FESTIVALS, ETC.

Planetary Partnership Congress

Interlaken, Switzerland.

August 2nd-6th.

An event which brings together artists, scientists and representatives of spiritual traditions into



The John Addis Islamic Gallery

This new gallery of the British Museum, which opened on 28th June, for the first time allows the museum's important and comprehensive Islamic Collection to be presented in a single display. It covers the culture of the lands of Islam from the 7th century to the present day, and highlights include Iznik ceramics, Mughal miniatures, enamelled glass and lustre pottery.

Above: Pottery Jar from Kashan, Iran. c1200. © British Museum

what it is hoped will be a fruitful partnership. Participants include Maurice Berman and Lama Chagdud Tulku Rinpoche; performances include The Mirrors (Ethno-Music, New York) and the Japanese Kabuki dancer, Tomijuro Nakamura.

Details: Tantra Gallerie, Jungfraustr. 29, CH-3800 Interlaken, Switzerland. Tel: 036/227414.

The Edinburgh Festival

12th-27th August 1989

This year's festival has a Spanish flavour, with the Spanish National Orchestra, Madrid Opera and various Spanish theatre companies; plus a major exhibition of El Greco at the Scottish National Gallery. Simon Rattle will be in residence with the Birmingham

Symphony Orchestra. For details of the full programme phone 031-226 4001.

Faith and the Environment

Canterbury, 15th-17th September 1989

Arising from the alliance between the religions and conservation groups reported on page 10, this celebration includes pilgrimages from Coventry, Winchester and London; a festival of drama, dance and music, services by the different faiths, and a conference on 'Christian Faith and Ecology', with Jonathon Porritt, The Archbishop of York and David Bellamy.

Details: WWF-UK, Panda House, Weyside Park, Godalming, Surrey GU7 1XR. Tel: 0483 426444.

Green Shopping Day

28th September 1989.

Organised by Friends of the Earth, this is a day when 'green consumers' can show manufacturers the power they potentially wield.

Details: Friends of the Earth: 01-490 1555.

EXHIBITIONS

The Berrgruen Klee Collection

The Tate Gallery, London SW1. Until 13th August

This important collection of the work of Paul Klee consists of eleven paintings, 71 watercolours and eight black and white canvases which span the artist's life. A further 20 works are also on display.

The Artists Eye: Bridget Riley

The National Gallery, London. Until 31st August.

One in a series of exhibitions in which well known artists select pictures from the Gallery which have influenced their own work. Here, abstract artist Bridget Riley makes her selection with one painting of her own also on view.

A Vision of Britain

A Personal View of Architecture by HRH The Prince of Wales

The Victoria and Albert Museum, London SW7. 8th September - 22nd October 1989

Based on the controversial documentary made for BBC Omnibus last year, this exhibition is a restatement of the Prince's views on planning and architecture. Its centrepiece will be the unveiling of the Prince's architectural 'Ten Principles' - his personal code of good design.

Gauguin and the School of Pont-Aven (1888-1896):

Prints and Paintings

Royal Academy, London. 9th September-19th November 1989.

Between his time in Paris and his journey to the South Seas, Gauguin lived in Pont-Aven in Brittany. There he worked with a group of artists to bring about radical changes in the art of painting and print-making, and

this exhibition gathers together about 65 of the works produced.

Chinese Bronzes: Art and Ritual

British Museum, London.

Until 29th October.

A selection from the museum's collection, dating from the Shang (c1700BC) to the early Han (206BC). Most of the exhibits are ritual vessels, used to make offerings of food and wine to ancestors and so are revered by the Chinese.

ARTS EVENTS

Ham House International Evenings - Russia

Richmond, Surrey. 26th October 1989

An evening devoted to the arts of Russia. It includes a slide-show 'Russian Icons and the Spirituality of Transformation' by Archpriest Basil Osborne, music by John Taverner and a concert by Voces Angelicae. This is one of a series of international evenings; still to come are Brazil (28th September) and Germany (30th November).

Details: Special Events, Victoria and Albert Museum, London SW7 2RL. Tel: 01-938 8366.

The Living Image

The Icon - Doorway to Mystical Christianity.

London, 28-29th October 1989.

This seminar will investigate the origins of the icon and its role in spiritual practice. There will be slides, music and lectures. The weekend will be taken by Dick Temple, an expert on medieval icons and their symbolism. This is just one of the many events to be held by Open Gate this autumn.

Details: Open Gate, 6 Goldney Road, Clifton, Bristol BS8 4RB. Tel: 0272 734952

The Poetic Vision

Bath, 17-19th November

A look at the spiritual values expressed through the poetry of different traditions, including that of Rilke, Kahlil Gibran, Yeats and Tagore. Speakers include Prof. S B Bushrui, Mr Tagan Gupta and Mrs Lotte Kramer, whose own poetry will be discussed.

Details: World Congress of Faiths, 28 Powis Gardens, London W11 1JC.

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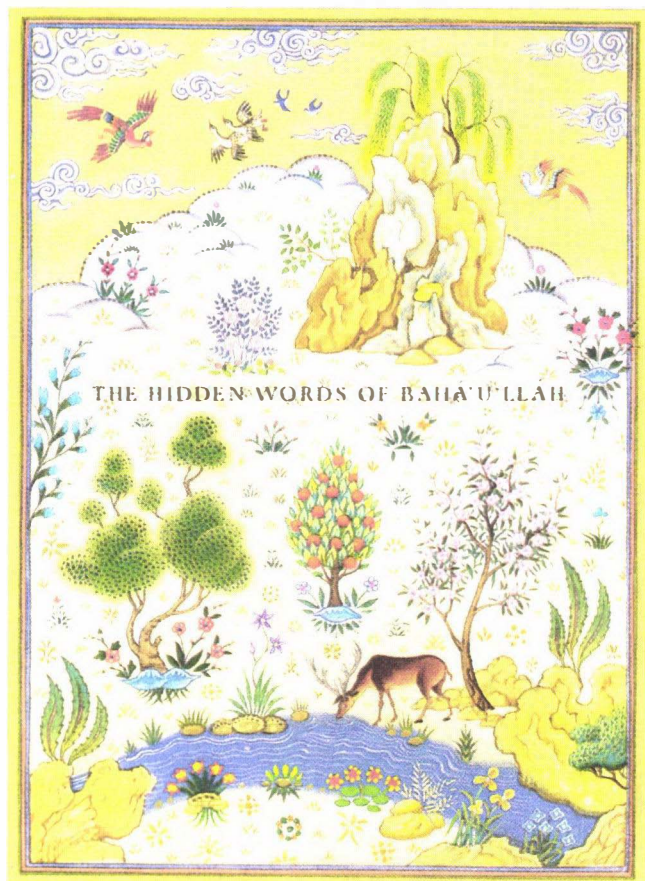
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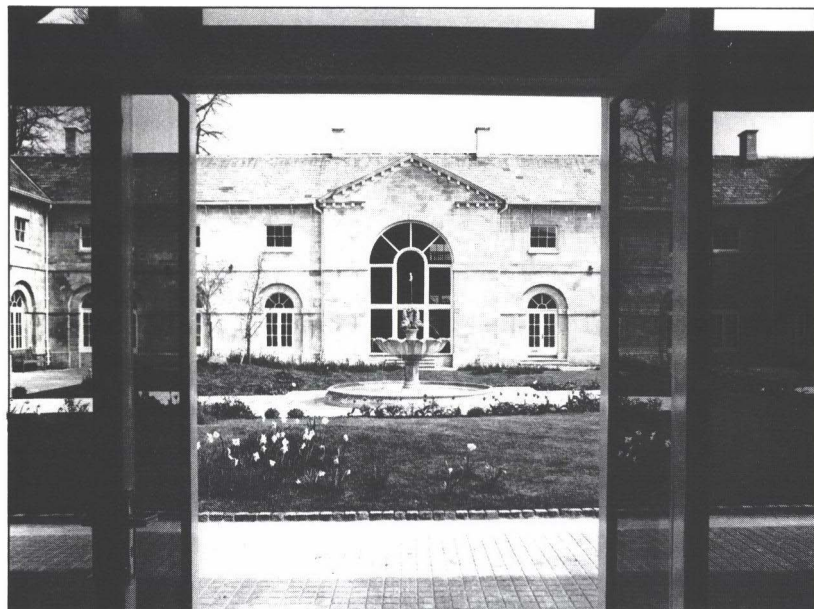
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The well-known phenomenon of turbulence generated by a moving boat is now understood to exhibit a high degree of order and coherence. See 'Order Out of Chaos' on page 24.