

Issue 12
£2.50
\$5.00

BESHARA

M A G A Z I N E



BESHARA
A UNIFIED PERSPECTIVE IN
THE CONTEMPORARY
WORLD

The Generative Order of Life

An interview with Professor Brian Goodwin

To Be Heard, Read and Seen

Cecilia Twinch on the meaning of the Mappae Mundi

Muhyiddin Ibn 'Arabi

*Stephen Hirtenstein on the life and work of
the great Andalusian mystic*

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BESHARA Magazine

was founded 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. 'Beshara' means 'Good News' or 'Omen of Joy', In its Arabic form it is found in the Quran, in its Aramaic form it is translated as the 'Glad Tidings' of the Bible, and it is also found in its Hebrew form in the Torah.



The Great Mosque, Damascus, would have been standing during Ibn 'Arabi's lifetime. Drawing by Peter Mabey. See Muhyiddin Ibn 'Arabi, page 28

Front Cover: *Uncurling Blechnum Sp. Fern* of Sri Lanka, showing, in the beautiful symmetry of its leaves, the geometric order of plant growth. Photograph by Kjell L. B. Sandved, Oxford Scientific Films.

Back Cover: *Haystack (Sunset: snow effect)* 1890-91. Showing in 'Monet in the 90s' at the Royal Academy in London. From the Art Institute of Chicago, Potter Palmer Collection. Photo courtesy of the Art Institute of Chicago.

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 Telephone: Oxford (0865) 391149
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 ISSN 0954-0067

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BESHARA is published by Silverdove Ltd.

Subscriptions
 £9.00 per annum UK and Europe
 £10.50 elsewhere (surface Mail)
 \$25.00 USA
 Airmail on quotation.

Readers in America and Australia can subscribe through:
 Beshara Foundation,
 PO Box 42283, San Francisco
 California 94101 USA

Beshara Australia
 Canonach RMB 2060, Bells Flat Road
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 Telephone: (060) 271 573

Advertising Rates:
 Colour £350 per page
 £175 per half page
 B & W £210 per page
 £105 per half page
 £70 per third page
 £50 per quarter page
 £35 per sixth page
 Rate card and sizes on request.

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The views expressed in this magazine are those of the individual writers, and not necessarily those of the editor or the editorial board.

Beshara Magazine was produced on the Macintosh computer with Quark Xpress software and printed by Beshara Press of Cheltenham.

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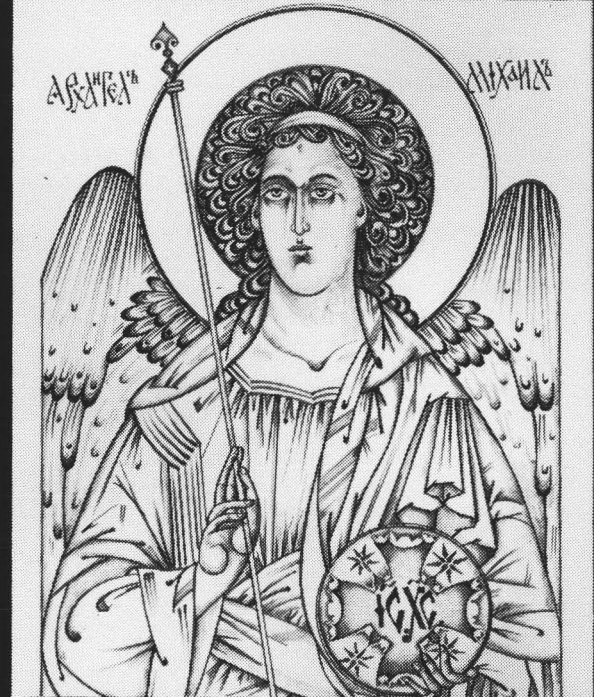
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Editorial

FIRST OF ALL, we would like to apologise for the length of time that has elapsed between BESHARA 11 and BESHARA 12. This has occurred, as many of our subscribers are already aware, because in June of this year the magazine very suddenly and unexpectedly lost its major source of funding. Consequently, the whole organisation has required major reconstitution, putting back the editorial by several months.

We would like to thank all those people who have written to us during this very difficult period, giving support both generally and financially; it has been very much appreciated. It has also confirmed a feeling that all of us who work on the magazine have always had – that our readers are not merely ‘consumers’ who buy an item that we have produced, but are very much a part of the magazine and its development. So, during our re-organisation, we considered how this aspect of participation could become more realised, and the proposal that we came up with is that those readers who wish to actively support the aims and intentions of BESHARA should be able to become a ‘Friend of Beshara Magazine’.

As a Friend, you will be invited to an annual gathering, at which the staff of the magazine and some of its major contributors will meet readers to talk about development and future plans. There will be a social side to the event – including a good lunch – and a talk by a distinguished guest. The Friends will also be able to elect a representative onto the Board, and the election will take place at this annual gathering, the first of which we are planning for June 1991.

Of course, BESHARA is an international magazine, and it may well be that we shall have to consider several such events in different locations, depending on the response. We very much hope that through this scheme, not only will the magazine gain a source of support – for finance is an important consideration at the moment – but also that we will come to know our readers better. Details on how to become a Friend are on the subscription form.



Federico Mayor, Director General of UNESCO, who has been prominent in the recent initiatives embodied in ‘Education for All’ and ‘Rights of the Child’. Photograph by Dominique Rogerm, courtesy of UNESCO.

This magazine appears at a strange time in world affairs. After the optimism of the past year, with the end of the Cold War and the democratisation of Eastern Europe, culminating recently in the reunification of Germany, we now seem aware only of the great difficulties that lie in the way of achieving the harmonious and wealthy world that liberation promised. As the Gulf crisis increases the threat of economic recession or worse, there is growing awareness that during the 1980s the plight of the world’s developing countries worsened rather than improved; with food production failing to keep pace with population growth and the flow of capital reversing from a positive flow of \$42.6 billion in 1981 to a negative one of \$32.5 billion in 1988. Some commentators now fear that, with the political motivation of the Cold War removed and disillusionment with ‘aid’ setting in, the poorer countries will increasingly play no part in the economies of the richer nations – a process being called ‘de-linkage’. Sonny Ramphal, former Secretary-General of the Commonwealth, has warned that “what is happening in the 1990’s is the

utter estrangement and abandonment of the developing world.” (‘One World’, May 1990)

This is such a depressing scenario that it is perhaps not surprising – though not for that less welcome – that it is drawing out in some quarters an affirmation that we are, in fact, ‘One World’, as the recent world-wide TV spectacular aimed to show. We report in this magazine on two practical initiatives organised by the United Nations – ‘Education of All’ and ‘The Rights of the Child’ – which embody this spirit by aiming to bring basic opportunities for development to all people on earth, and on a number of conferences, amongst them a remarkable gathering of talents in Amsterdam, which sought to generate ‘new paradigms’ for a global perspective. Cecilia Twinch points out, in her report on the medieval world maps, that these *Mappae Mundi* have a special significance in this respect, for they were symbols of such an integrated vision in pre-Renaissance Europe. These were not just concerned with physical and economic realities, but also with the realms of culture and spirituality, and the possibility of unification at all these levels – something which Muhyiddin Ibn ‘Arabi, another medieval thinker whose work seems startlingly relevant now, also affirmed: for, Stephen Hirtenstein explains, he strove “for the complete integration of the human being, with all his or her faculties”.

Our contemporary symbols are often generated by science. Our interviewee this issue, Brian Goodwin, takes the whole organism as his starting point, and maintains that this “... generates parts that conform to its intrinsic order – resulting in a harmoniously integrated, though complex, organism”. From this point of view, it is not possible for the development of any part to take place separately from the whole. If one were to consider the world as a single organism, these ideas would surely indicate a re-think of the whole notion of economic and human development, and confirm the importance of considering ourselves to be one earth and one people.

Jane Clark

News

Education For All

As the millenium approaches, we report on two initiatives which aim to bring basic skills to all people

International Literacy Year

"Never before in history has there been such a gap between the knowledge that could empower people and improve their well-being, and its actual availability to those who most need to know."

SO SAID Federico Mayor, Director General of Unesco, in his opening address to the World Conference on Education for All earlier this year.

Not only is the volume of useful information greater than ever before, but so also is the capacity to communicate that knowledge, using technology that becomes more advanced and cheaper with each passing decade. Yet despite such potential for improvement, the present fact of the matter is that, across the world today, one adult in every four can neither read nor write, and there are 130 million children between the ages of six and eleven who have never attended school. Amongst these people, women are worse off than men. An estimated 70% of the world's illiterates are women and girls; the largest concentration of them being in South Asia.

Aims

The phenomenon of illiteracy is a global concern, affecting industrialised as well as developing nations. It is moreover a growing one, for whereas the percentage of illiterates has reduced over the last 20 years, the absolute number has increased – 760 million

in 1970 compared to 900 million today.

One cause for the increase is that many of the poorer countries have been forced to stall basic education and literacy programmes in an attempt to cope with the staggering debts and stagnating economies that became their lot during the 1980's. Even in economic terms this is a short-sighted approach. Most economists, development agencies and financial institutions now agree that human development through education is the key to real development in all areas. The failure of the poorer countries to develop their human resources therefore carries the threat of an ever-widening gap between rich and poor in the next century.

It is in an effort to curb this growth in illiteracy, and from an awareness of its disturbing implications, that the United Nations General Assembly has declared 1990 to be 'International Literacy Year', calling upon UNESCO to assume the role of lead organisation for its preparation and observance. The aim of the year is to intensify efforts to spread literacy throughout all continents and to launch a plan of action that will work to eradicate illiteracy altogether by the year 2000.

This may seem a mammoth task. However, providing the political will can be mustered, on both national and international levels, to reorder our priorities accordingly, it need not prove an



Adult Literacy Class in Lahore, Pakistan. Photograph by Sean Sprague/Panos Pictures.

impossible one. To put the matter into perspective, the annual cost of primary education for all by the mid 1990's is roughly equivalent to a mere 2% of what developing countries are obliged to pay in debt servicing every year.

A Global Concern

Whilst 95% of those who can neither read nor write live in the so-called 'third world', many wealthy industrialised countries have recently discovered to their horror that a significant proportion of their adult populations experience what is termed 'functional illiteracy'. In Britain, for instance, a 1987 MORI poll showed that 44% of the adults questioned could not understand a simple fire notice, 26% had difficulty filling

in a form correctly, whilst a worrying 27% could not subtract £1.80 from £5.00. Despite 100 years of nationwide compulsory schooling, more than six million Britons lack basic communication skills. A survey in Canada suggests that 22% of all non-immigrant Canadians suffer from functional illiteracy, whilst in France observers estimate that 15% of the population are affected.

It is easy to imagine the considerable disadvantages suffered by such people in a complex technological society such as ours, where most people are fluent readers and where we are bombarded by written information at every turn. But what are the educational needs and what are the difficulties illiteracy poses to

those in the so-called 'third world'?

UNESCO tells a typical tale of a farmer in India who lost his ancestral lands because he could not read the document he had signed with his thumbprint, and of the young mother in Ethiopia who nearly lost her sick child because she forgot the instructions for administering the medicine and could not read the instructions on the medicine bottle.

There are hundreds of stories of individuals, families and communities in the slums or rural villages of the developing world, who, without basic education, are unable to exploit the options open to them to improve their situation. For those who do learn to read and write, the personal transformation is dramatic. It is noticeable how often the metaphor of light is used to describe the change. "I am no longer illiterate. I have been brought out of the shadows and into the light", wrote an Ethiopian woman.

Joining the Party

Forty years ago it was still possible to question the ethics of exporting literacy skills to peoples whose cultures were primarily oral. In 1949 for instance, Ananda Coomaraswamy published an essay entitled 'The Bugbear of Literacy' (1) in which he challenged the unthinking equation of the type of literacy produced by compulsory mass education with a high level of civilisation. He sought to show that to impose our literacy upon a cultured but illiterate people was, in many cases, to destroy their culture in the name of our own.

Now, at the close of the 20th century, few remote, isolated communities remain beyond the reach of western technology and industrial development. Moreover, the majority of those who have tasted their fruits are crying out for the knowledge and skills upon which they are based. As Prince Charles succinctly put it in his recent documentary for the 'One World' series (2): "We in the West have been having a pretty good party. Now all

the others want to join in. It's no good saying to them that it's just become a business lunch and anyway they're not invited".

The spread of education not only helps people to satisfy their economic and social needs, it also helps them to make choices about how best to fulfil their aspirations. One choice they face, with global repercussions, is how many children to have. The correlation between illiteracy and large families is high, and some countries are now waking up to the importance of educating their women – not only with a view to ensuring fewer, healthier babies, but because no literate woman will willingly allow her children to be illiterate. So increasing the literacy of women helps to ensure the education of the next generation.

Wider Issues

There are some hopeful signs that International Literacy Year may be the start of a new global effort to give education the priority it deserves. For instance, the World Conference on Education for All in March was considered by many to be the most important gathering that has ever been held on educational matters, setting as its aim to forge "a global commitment in the form of a world declaration and a framework of action to fight illiteracy, to provide good quality primary schooling for all children around the world and eventual knowledge and skills for adults to cope with the demands of the modern world".

It is on what precisely we mean by "the demands of the modern world" that our definition of literacy finally depends. For literacy is a relative concept which vary with time and difference in culture. The question of what it is that children and adults need to know, and to be

able to do, within a rapidly changing world is an issue only just beginning to be analysed and acknowledged. In so doing we begin to recognise the seriousness of illiteracy, not just in the sense of not being able to read and write, but also of scientific, technological and environmental illiteracy, and general ignorance of the global issues that shape and threaten the quality of our lives.

In this sense, the meaning of global education does not stop at the level of reading and writing for all. As we

become aware that we belong not only to a national, but to an international community, our task as scientists, educators, economists or whatever, is to work towards a global perception of the collective needs of the world today, and the consequent educational demands they give rise to. For this vital task the discussions in this International Year of Literacy are just a beginning.

Elizabeth Roberts

1. 'The Bugbear of Literacy', 1949.
2. One World, BBCI May 1990.

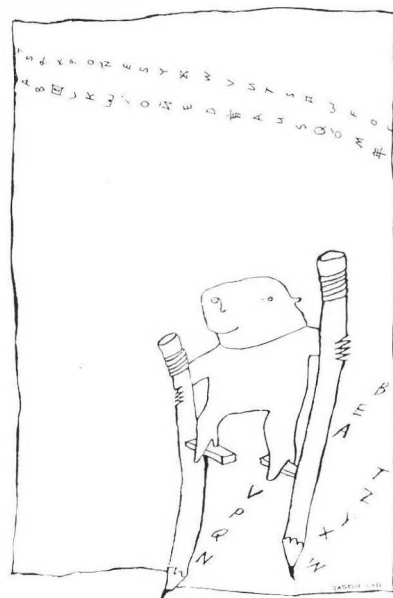
Meeting Basic Learning Needs

THE WORLD conference 'Education for All: Meeting Basic Learning Skills', which took place in Jomtien, Thailand, from 5th to 9th March this year, was a huge event which brought together 1500 people – educators, government ministers and civil servants – from 155 countries to take a fresh look at the state of education in the world. Organised by four United Nations agencies – UNEP, UNESCO, UNICEF and the World Bank – it was the first step in a ten-year campaign to provide basic skills to everyone on the planet by the year 2000. One of its principle achievements was a statement of intent – 'The Declaration of

Education for All' – which all the participating countries signed. It also set concrete targets of action and, perhaps most interesting, a set of detailed guidelines to help achieve them.

For whereas the right to education was established in the United Nations Declaration of Human Rights in 1948, in the 1990's it seems that for the first time in human history it is conceivable that it could be achieved. One reason for this is the new spirit of international co-operation; another, as Barber Conable, President of the World Bank, pointed out in his opening address, is the appreciation that education is not an optional extra or a luxury, but essential to economic development in the modern world. "Education is an investment that repays itself with a profit", he quoted Adam Smith.

Another reason for the timeliness of this initiative is that over the past forty years a great deal of experience has been accumulated. Several countries – amongst them Europe and North America and more recently Japan, Korea and Singapore – have



1990 INTERNATIONAL LITERACY YEAR

This poster for International Literacy Year was designed by the Canadian art student Zabell Côté, who won an international competition from 52 other finalists. "I put my character on stilts, in this case pencils", she explains, "to indicate how the ability to read and write gives a person a new perspective on life and the world around him or her".

successfully carried through programmes of basic education equitably and effectively, whilst many others have come up with exciting schemes to cope with their own particular situations. A special exhibition which ran alongside the main conference at Jomtien included a project in Mozambique for training teachers of children traumatised by war and violence, and a Saudi Arabian solution to educating a nomadic population.

Equitable Development

Amongst its six specific goals, the final conference statement gave priority to "universal access to complete primary education by the year 2000", and also to reducing the adult illiteracy rate to 50% of its 1990 level by the same year. This emphasis upon the primary level of education is new, and it stems from a recognition that the well-being of a nation depends upon the quality of life of the whole of its population, and not just on a well-educated elite. Basic education does not only provide essential learning tools: it is also the means of cultivating moral values and establishing cultural and spiritual heritages, so that without it people are not able to participate properly in their society or control their own lives. It is also the basis of lifelong learning, on which further levels of training can be built. The conference heard that several African countries have accordingly dropped their secondary school leaving age in order to channel resources more effectively to lower levels.

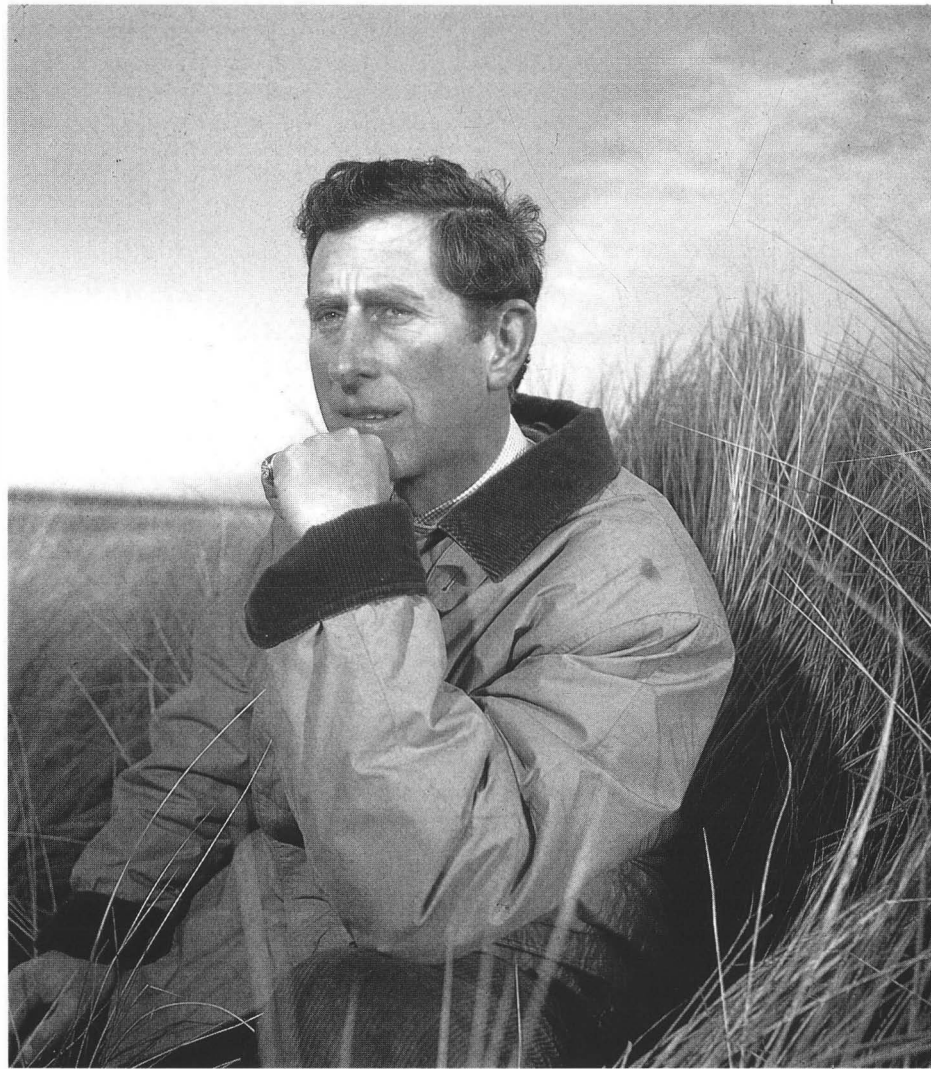
The Declaration of Education for All warns that for these aims to be achieved, it

"... requires more than a recommitment to basic education as it now exists. What is needed is an 'expanded vision' which surpasses present resource levels, institutional structures, curricula and conventional delivery systems."

This 'expanded vision' re-

vealed itself as including such things as a new emphasis on equity, with attention being directed particularly towards women, cultural minorities and people in very poor countries, who have suffered discrimination in the past: on the importance of pre-school age learning; and on the role of mass communication in bringing education to even the remotest areas.

But for many countries, however committed they are to the idea, all this remains a dream without funding. The four agencies who are co-ordinating the effort announced that they were each more than doubling their budgets for basic education over the next decade – not a small consideration when it is understood that the World Bank is currently the world's largest supporter of educational projects; their contribution will be an annual \$1.5 billion (albeit in repayable loans). International co-operation will also be essential – financially, of course, but also in other ways; in the sharing of knowledge and experience and in allowing the passage of educators through areas of military conflict. But above all, the conference concluded, what is required is fair economic relations in order to address existing economic disparities, for only "a stable and peaceful environment can create the conditions in which every human being, child and adult alike, may benefit from these goals".



Photograph courtesy of the BBC.

One World

THE 'ONE WORLD' series which was broadcast on television networks throughout the world in May this year was a unique venture. Conceived originally by the German television executive Rolf Seelman-Eggebert, who had worked on the 'Live-Aid' broadcasts in 1985, its aim was to raise public awareness of global ecological problems and to encourage people to become actively engaged in solutions. Live-Aid had 'opened people's purses but not their minds' said Eggebert. 'One World' set out to re-dress the balance.

One of the strengths of the series was that it firmly made a connection between environmental problems and the economic and political situation in the world. Prince Charles, in a specially made documentary 'The Earth in Balance' which expressed his own views on the issue, extended that connection to the realms of religious and spiritual ideas. As he contemplated the recently acknowledged environmental damage to

Eastern Europe, he described how many people blame Christianity in its European interpretation for such desecration of the earth. But there is also, he maintained, in Europe's past, an idea which could now be revitalised and put to work again – the idea of stewardship. Walking through the ancient monastery of Subbiacco, he spoke of St Benedict and the monastic rule which he established. Benedict believed that "reverence for nature obliges us to accept responsibility for the creative stewardship of the earth", and that a life of prayer and scholarship would be strengthened if his monks also got their hands dirty working in the fields. "He insisted that his monasteries were self-sufficient, and set us an early example of the idea of sustainability. The monks had to pass on their lands in as fertile a state, if not more so, as that in which they were given them". St Benedict has been made the patron saint of the new united Europe, and this, felt Prince Charles, is a sign of hope.

Art Meets Science and Spirituality in a Changing Economy

Richard Gault reports on a unique gathering in Amsterdam

'ART MEETS Science and Spirituality in a Changing Economy' was the title of a remarkable symposium which, in September this year, brought together twenty of the world's most influential artists, scientists, spiritual thinkers and economists. Consisting of five days of open-ended conversation, it was notable not only for the calibre of its participants – who included such figures as the Dalai Lama, David Bohm, Huston Smith, Raimondo Panikkar and Robert Rauschenberg – but also for its audience, which was almost entirely made up of top European business men.

The idea for the event developed from meetings the Dalai Lama had with leading artists and scientists – amongst them Joseph Bueys and Fritjof Capra – in the early eighties. Bringing together some of the world's foremost artists, scientists and spiritual thinkers, they believed, could help the formulation of new, global, cultural paradigms. After many years of preparation and at a cost of £500,000, the symposium took place in one of the world's great museums of modern art, the Stedelijk in Amsterdam, from September 10th-14th. But the final event

was much larger even than originally envisaged.

For in December 1988, Dr J.R.M. van der Brink, a former Dutch Minister of Economic Affairs, offered the inspired suggestion that economists should be included amongst the symposium's panelists. The subsequent inclusion of 'a changing economy' in its title brought the symposium to the attention of the Dutch business world, and revealed that industry and commerce in the 90s are awakening to the relevance of ideas, imagination and spirit. Top managers were eager to attend and their businesses wished to be sponsors. The financial viability was thus assured, and the symposium became the first of this nature in which big business has had a major presence.

Creative Response

In an interview with the Dutch news magazine *HP/Tijd*, Paul Fentener van Vlissingen, a leading business man whose company was one of the principal sponsors, explained that there were basically two reasons why large companies are now keenly interested in the thoughts of artists, writers and spiritual thinkers. Firstly, businesses wish to accept more responsibility for their

actions, and in order to learn what is 'right action', managers need to acquire a wider vision of the world than the purely economic. The motive for this is not only that of compassion for others, but follows from an understanding that a failure to accord with society's needs and wishes ultimately will lead to the demise of a business. Secondly, the success of a modern business, particularly in the increasingly important service sector, is now seen to rest on the creative qualities of its personnel. Fresh ideas for business may therefore be stimulated by listening to the unfamiliar ideas of other creative thinkers.

So the business-men who made up the daily audience of 200 may have been attracted initially by the presence of the economists, but they came primarily to participate in discussions about topics that would not usually be found on the agenda of a business conference.

As to the quality of what they heard: it has to be said that the symposium had some difficulties, principally at the level of communication. Each day an artist, a scientist, a spiritual thinker and an economist – all of whom had been invited because of his or her achievements in a specific field of endeavour – sat down together to talk. But because they had not yet discovered the sought-for 'common paradigms', they spoke to one another from different ones, and this caused fundamental misunderstandings. The Carmelite Mother Tessa Bielecki, for instance, caused confusion when she identified the

failure of people 'to be human' as both the symptom and the cause of the problems of our age. The American artist Lawrence Weiner, and many speakers from the floor, saw her contention as meaningless, since for them all people are, by definition, 'human'.

But to conclude from this, as much of the Dutch Press did, that the symposium failed, would be unfair. For those who sought more than entertainment or easy formulae, it offered a sound bearing of our times, and it was particularly interesting to study the areas of agreement and disagreement amongst the participants.

A Mirror to the Self

Of the four groups, the spiritual thinkers (the Dalai Lama, Lama Sogyal Rinpoché, Mother Tessa and Professors Raimondo Panikkar and Huston Smith) demonstrated the greatest degree of self-coherence (a criterion emphasised by the physicist David Bohm). They stressed the importance of the individual's search for self and for wisdom, and spoke against the institutionalising of religion. They were sympathetic to what art could be, but wary of what science is and critical of the materialism and monetisation of economics.

The scientists, however, were less unanimous. They recognised that science is generally held to be the source of truth in contemporary society, but whilst for two of them, the Nobel Prize-winner Ilya Prigogine and the Italian chemist, Professor Liquori, this is a rightful under-

Panel discussion on day 5. From left to right: Marina Abramovic, Fritjof Capra, the presenter, Brian Redhead, Raimondo Panikkar, H. T. Witteveen.



standing, the other three felt that this is not merely a misunderstanding of science, it is humanity's hubris. For the physicists David Bohm and Fritjof Capra, and the biologist Francesco Varela, science offers only knowledge and this is something much less than the wisdom human beings need.

The economists on the whole did not share the worries about the state of the world that other panelists expressed. For them, the events of the past year in Eastern Europe demonstrated the naturalness and correctness of liberal capitalism. Only Stanislav Menshikov, a member of the Central Committee of the Communist Party and a chief architect of *glasnost*, added the qualification that western-style consumer-orientated society should be regarded as provisional. While endorsing the importance of the individual self, which in various ways was a thread running through all the discussions, the economist's call for change – the very call which gave rise to the event – was on the whole a muted one. This silence on issues as varied as pollution and the ethics of work, served to reinforce the need for the business-men present to look beyond economics for answers. Indeed, the economist and sufi, a former Dutch minister for Economic Affairs, Dr H. J. Witteveen, concluded his presentation by revealing that he thinks that spreading ideas about the inner life is much more important than economics!

Understandably, given the Symposium's title, many of the participants were looking to the artists for answers, but it became increasingly clear that there was no agreement amongst the artists themselves that this was their role. The American conceptual artist Lawrence Weiner was blunt: "My job is not... about showing a better way to live. It is trying to determine what the hell is going on around us". His fellow artists, Robert Rauschenberg, John Chamberlain, J. C. J. van der Heyden and

the Yugoslavian Marina Abramovic, were not so extreme. The answers, they seemed to say, were to be found in the very process of searching for them. Works of art could serve as mirrors to society or to the self, and possibly through such mirrors solutions could be discovered. But what was to be seen in the mirror was ultimately a matter for the viewer, not the artist.

The Business of Business

For harassed business managers looking for a few days away from the office, this conference did not provide an easy option. For despite its problems, it brought up many challenging and disturbing ideas which will require much further reflection on their part. Mother Tessa Bielecki expressed the opportunity presented to each of them as that of changing from 'a business man' to being 'a man in business', and declared that: "If the business of business is business, then business has no business being"

As for the panelists, this symposium demonstrated at once both the need for common paradigms and the difficulties in developing them. Here too, much further reflection is needed. At the close of the five days, the indefatigable initiator of the event, Louwrien Wijers, brought the news that the opportunity for this further reflection has actually been secured, for President Havel of Czechoslovakia has invited the panelists to Prague to pursue their search further. So it is possible that the changes in Eastern Europe will, as Stanislav Menshikov suggested, affect the West, too, and in ways as yet unimaginable.

A book, in English, was published to coincide with the conference. 'Art Meets Science and Spirituality in a Changing Economy'. Ed. Tisdall, Wijers and Kamphof, SDU Publishers, 's-Gravenhage, Netherlands. A documentary will also be shown on Dutch television in the autumn.

Equal Footing After 500 Years

Martin Notcutt reports on a new concordat in Spain

1992 will be an important year for Spain. The eyes of the world will be on it as it hosts the Olympic Games, and surely the historic voyage of Christopher Columbus across the Atlantic to the 'East Indies' will be widely remembered on its 500th anniversary. In Spain itself, though, perhaps the event which will be most strongly evoked is the re-unification of the country under Christian rule in the same year of 1492, when the combined forces of Ferdinand and Isabella overran the last Moorish territory in the peninsular – the Kingdom of Granada.

But there was a dark side to the re-unification – and that was the subsequent discrim-

ination against Spain's non-Catholic peoples, highlighted by the decree of 1492 expelling the Jewish population. It has taken until now, it seems, to work it out of the system.

Equal Footing

An important step forward came in March this year, when the Spanish government signed an agreement with Jewish and Protestant leaders which puts other faiths on an equal footing with Roman Catholics before the law. This is the first agreement of its kind ever to be concluded with non-Catholics, although a similar one is currently being negotiated with Muslims, and is expected to be in force by 1992.

Expelled Spanish Jews (known as 'Sephardi Jews') retained a distinct culture and spiritual tradition, wherever they went. This marriage certificate, from Ismir in Turkey, dated 1830, was displayed as part of a travelling exhibition 'Sephardi Jews in the Ottoman Empire' shown at the Jewish Museum of New York and in Jerusalem earlier this year. 1992 will see further major exhibitions about the Jewish culture in Spain itself, in New York, London and Israel. Courtesy of the Jewish Museum of New York (under the auspices of the Jewish Theological Seminary of America, 1109 Fifth Avenue, NY 10028).



For the Jewish population, the agreement means that Jewish marriages will enjoy civil status for the first time; people who donate money to Jewish institutions can now claim tax benefits, and rabbis will receive the same welfare benefits as Roman Catholic priests. Jewish workers will have the right to negotiate religious holidays with their employers and Jewish schoolchildren, military conscripts and prisoners are entitled to religious classes. "This concordat is the most important thing to happen to Spain's Jews since 1492, when the community was expelled", said Mr Samuel Toledano, the secretary-general of the Federation of Jewish Communities.

Dispersion

The Christian reconquest brought to an end nearly seven centuries of Muslim rule in Southern Spain, and it set the seal upon an era when members of the three Western religions (Christianity, Judaism and Islam) had not only co-existed, but contributed jointly to make the region the most prosperous and cultured within Europe.

The subsequent order of expulsion followed a century of increasing violence against Jews in Christian lands. Many Jews followed the practice which had developed in the previous period, and underwent a form of conversion to Christianity, becoming known as 'conversos', rather than leave Spain. Those who did attempt to leave found it difficult to get out, but nonetheless, some 30,000 families – perhaps 200,000 people – left in the course of a few months. The Spanish were determined that those who stayed would henceforth be required to take their new religion seriously, and it was the New Christians more than anybody else who were the victims of the Spanish Inquisition.

Most of those who left went to Portugal, some to the cities of Italy, and others to Holland. Having fought their own battle for Protestantism and freedom from Spanish rule, the Dutch welcomed them and Amsterdam became the largest centre of

Spanish and Portugese Jews in Europe. Some escaped to the growing Turkish empire, where significant communities grew up in Istanbul, Ismir, Solonika and Rhodes, in Jerusalem and later in Safed. The Sultan of the time, Bayazid II, is reported to have said of Ferdinand of Aragon: "Can you call such a king a wise man? He has impoverished his own country and has enriched mine".

Many of Columbus's crew were Jews looking for a new place to settle, and there are grounds to believe that Columbus himself was a secret Spanish Jew who had removed to Italy in order to revert to his faith.

This highly educated and cultured groups of refugees made an impact wherever they went. The majority of Jews had no choice, though, but to remain in Spain as *conversos*, or in Portugal, where they were forcibly baptised in 1496. Even under these conditions they left an enormous heritage. Ironically, two of Spain's most famous Christian spirituals, St John of the Cross and Theresa of Avila, had Jewish grandparents.

Three Cultures

Some Christian theologians, prompted by the horrors of the holocaust in Nazi Germany, have reflected on the part played in that massacre by the long history of anti-Semitism in the Churches. Seeing that such hatred of anyone is a cancer for the body which harbours it, some have concluded that the Church will not be free of this until it begins to recover the roots of Christianity in Judaism. Thinking along complementary lines, Hans Kung has suggested that the attitudes of the Jewish Christians of the first century could constitute a bridge between Christians and Muslims, because their understanding of Christ corresponded very closely to that of the Quran.

While theologians look for common ground between faiths in the Abrahamic tradition, perhaps Spain has something special to offer, because of its particular experience. For it has at different times



Santa Maria la Blanca in Toledo, one of the few surviving early synagogues in Spain. The building has recently been restored by the Spanish government and is now in use again.

Built around 1200AD, the architecture of Santa Maria is typical of the Moorish style at its peak. The period between the 10th and 13th centuries had been a particularly expansive and confident time. Despite shifting political fortunes, there were many who esteemed learning and supported it. In this atmosphere, it was possible for knowledge to cross many barriers. For the Jewish community, the era produced some people whose influence extends to this day, such as Moses Maimonides, born in Cordova in 1135, and Moses ben Shem Tob, the compiler of the Zohar who lived at Avila between 1295 and 1305. The Muslim world produced Averroes (Ibn Rushd – died 1198) and Muhyiddin Ibn 'Arabi (1165-1240).

sought to purify itself of foreign influences by expelling Moors, Jews and Gypsies, or by compelling them to adopt the forms of Christianity. That this is futile is immediately evident to any outsider visiting Southern Spain, for these things run in the life-blood of the country. Perhaps this is also being recognised by the Spanish, who, after the darkness of the Franco era, feel a kind of hunger to retrieve something of their birthright.

Certainly the authorities in Spain have been very willing to support activities which

refresh the memory of its past, such as the annual Congress of the Three Cultures held in Toledo since 1983, with the most distinguished contributors and guests. In November 1990, the Regional Authority of Murcia will host a conference to celebrate the 750th anniversary of the death of Muhyiddin Ibn 'Arabi, and is extending this to public lectures, exhibitions of manuscripts and Moorish antiquities, and publications of some of his works.

All this indicates an increased interest in the particular contribution that Moorish

Spain made to European culture – something which Dr Francisco Gimenez, an official of the Region of Murcia who has been involved in setting up these events, feels is rarely acknowledged. Taking one example, he has said:

“The most paradoxical thing in respect to this is that Europeans consider themselves as direct heirs of the Hellenic civilisation, whereas... the intellectual legacy of the Greeks has only reached the West after having been studied seriously by the Near-East, and without the existence of Islam and its philosophers, Europeans would have remained ignorant of this knowledge...” (1).

The Jewish community had a part to play in this transmission; in the period between the 11th and 13th centuries, for instance, Christian scholars from all over Europe would visit Toledo, where Jewish scholars translated the works of Aristotle (and the commentaries of Avicenna and Averroes) from Arabic into Latin.

THUS IN 1992, while some will be celebrating the reunification of Spain and the beginning of an era of national expansion, others will be able to celebrate the reunification of Spain in the present, because of the elimination of long-standing discriminations against its non-Catholic peoples, and indeed will look towards the recovery of a particular foundation for the interchange of real knowledge.

1. At the Symposium of the Muhyiddin Ibn 'Arabi Society in Oxford, April 1990.

A New Form of Chaos

Michael Cohen

AS IF LIFE was not complicated enough already, recent research by a physicist at Cornell University, Christopher Moore, has indicated the possible existence of 'chaotic' behaviour which is even more complex and unpredictable than any previously understood.

Current theories of so-called 'chaotic systems' – examples of which are everywhere in nature – assume that they can be modelled by precise mathematical equations, and it is only because their starting state cannot be known with complete accuracy that their behaviour is unpredictable. Even the smallest fluctuation in the initial state of such a system will cause unlimited deviation in its future development – a situation poetically described with respect to the world's weather by the statement that the flutter of a butterfly's wing in Mexico might mean the difference between calm weather and a tornado elsewhere in the world. But it is still possible to investigate the general qualitative features of the dynamic order underlying such phenomena. (see Figure 1)

However, the new form of chaos discovered by Moore – termed 'complex chaos' – does not stem from the 'butterfly effect'. Even if the initial conditions were known exactly, the subsequent behaviour is so complicated that it is not

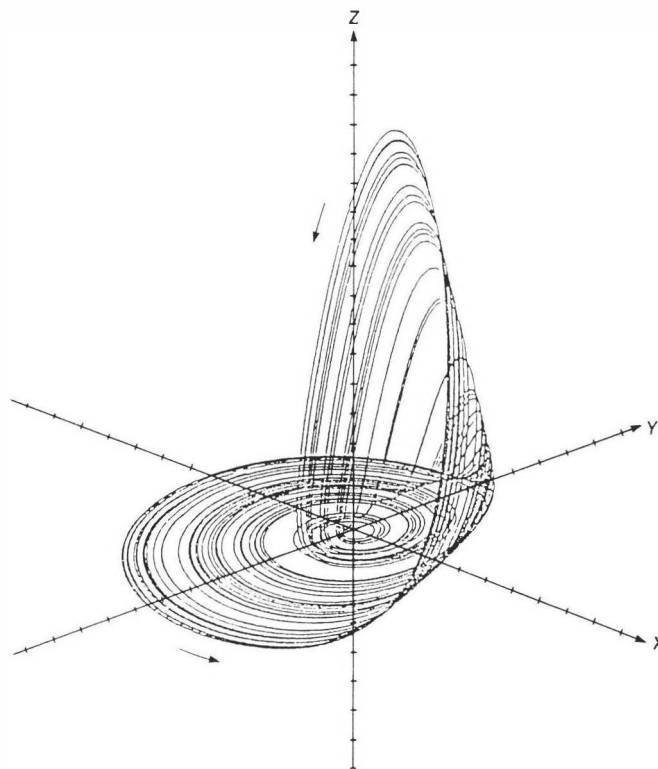


Figure 1. The Rössler Attractor illustrates the regularity underlying a typical chaotic system. The possible behaviour of the system over a period of time is represented by a curve called a 'trajectory'. Several trajectories are shown. The precise one followed by the system in any particular case is unpredictable, but they all approach the irregular-shaped surface, the attractor.

possible to predict anything about it (1). In a recent paper (2), Moore gives a simple theoretical example of such super-chaotic behaviour which indicates that it is likely to be a feature of many phenomena in nature – although no concrete examples have yet been found. He describes a repeating geometric transformation of a square that has the desired properties (see Figure 2). By repeating the transformations, the parts of the square are scrambled up in a way impossible to predict, although each move is deterministic. Says Moore: "... we have

exhibited a kind of motion which is unpredictable in a qualitatively stronger way than what is usually referred to as 'chaos'... virtually any question about its long-term behaviour is undecidable..." In particular, the kind of regularity exemplified by such things as the Rössler attractor is absent.

Moore's work is likely to usher in a new phase of research – for it is hoped that his discovery will allow many chaotic phenomena to be modelled more accurately – as well as knocking a new nail into the coffin of determinism.

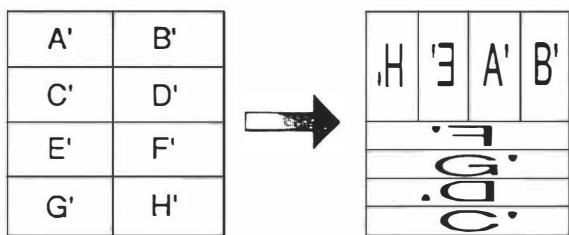


Figure 2. Moore divides a square into 8 segments and transforms it as indicated by the letters. Points on the boundary are transformed in a complicated way not indicated on the diagram. When the transformation is continually repeated, the motion of any point of the square is 'super-chaotic'.

1. The unpredictability is related to classical results of mathematical logic, discovered by Kurt Gödel and Alan Turing, concerning the existence of propositions whose truth cannot be determined.

2. Physics Review Letters, Vol.64, p2354.

Rights of the Child

Alison Yiangou reports on a new principle of international action

IN A YEAR which has seen so many unprecedented events, perhaps one of the most profound was the passage into international law of a principle capable of affecting the course of political, social and economic progress throughout the world – that the lives and the normal development of children should have ‘first call’ on society’s resources at all times. “If the trench of such a principle could be dug across the battlegrounds of political and economic change in the decade ahead, then civilisation itself would have made a significant advance”, says James Grant, Executive Director of the United Nations Children’s Fund (UNICEF).

This principle embodies and summarises the result over 30 years of slow and painstaking work on children’s rights, which have come to fruition in two recent events: the adoption of the Convention on the Rights of the Child by the United Nations General Assembly in November 1989, and the World Summit for Children this September. The latter drew together 72 Heads of Government, including George Bush, Vaclav Havel and Margaret Thatcher, at the UN Headquarters in New York, in order to translate the principle of first call into specific aims which are achievable and affordable in the decade ahead – aims which, if achieved, could save the lives of 50 million children.

Current Situation

The Summit reflects growing compassion towards the plight of the world’s children. Judging by current mortality rates, 150 million children under five will die in the next decade from malnutrition, ill-health, and lack of clean drinking water. One third of these deaths – 40,000 children per day – are believed to be preventable by means which

are well-known, simple, and inexpensive. UNICEF statistics (1) include some striking examples: every day some 8000 children die from measles, whooping cough and tetanus, preventable by low-cost vaccines: 7000 die from diarrhoeal dehydration treatable at a cost of pennies; and 6000 die from pneumonia when cheap antibiotics are available. The cost of saving the 50 million lives is estimated at an annual \$2.5 billion – the amount of the world’s military expenditure in one day; or the amount spent annually on cigarette advertising in America.

Although much hope is placed on the ‘peace dividend’ for releasing the necessary finances, action on the scale demanded cannot take place without the concerted political will to bring about change. It is perhaps in the aspect of mustering political will worldwide that the Convention and the Summit have the most immediate significance.

New Laws

The Convention on the Rights of the Child took some ten years to draft – a measure of the time it takes to reach consensus on what is essential and possible, given the widely differing religious, social and economic backgrounds of the UN’s diverse member states. Being a Convention, it is legally binding on those countries which ratify it (a process which involves ensuring that their national laws are completely in accordance with the Conventions’ provisions) and specifies a mechanism, an independent Rights of the Child Committee, for monitoring compliance. When a certain minimum number of countries have ratified it, then it passes into International Law.

Ratification can be a lengthy process, involving extensive amendment or addition to existing legislation. However, in this case the

required total of 20 ratifications was reached, extraordinarily, within one year (on September 2nd) – an encouraging indication that governments are giving it priority. By the end of the Summit, 49 of the world’s nations had completed the process, most of them so-called ‘developing countries’. (Many of the ‘developed’ nations, including the UK, have as yet failed to ratify.)

The Convention covers four main areas of children’s rights: survival, development, protection and participation. These extend over different levels of the child’s being – physical, emotional, intellectual and spiritual – for it was recognised early on that the real aim is not mere survival, but the full development of each child’s potential. As Federico Mayor, Director-General of UNESCO, has said: “The struggle to save children’s lives must go hand in hand with an effort to change the lives thus saved”.

As well as drawing together in a single document key

both adults and children within their nations about children’s rights – even to the extent of including the subject in educational curriculae.

Human Development

The World Summit marked the first time that leaders from around the world had met for a single, common purpose – indeed it turned out to be the largest ever gathering of Heads of State and Government. They had been invited in order to secure their personal, active commitment not only to the main principles of the Convention, but also to achieving specific targets for the 1990s. These included:

- reducing the under-5 mortality rate in all countries by one third
- reducing by half severe and moderate malnutrition among children under five
- halving maternal mortality
- providing universal access to free primary education, to safe drinking water, and to



Children in ‘Zoe Bruno’, a squatter town of 10,000 people in Abidjan, Ivory Coast. Shanty towns have grown up all over Africa, caused initially by the rural exodus which began in West Africa after independence in the 1960s, and aggravated in the last two decades by drought and economic depression. Zoe Bruno presents typical problems of cramped, ramshackle housing, no roads, no sanitation or waste disposal facilities. Electricity and water are tapped illegally; schools and hospitals are unauthorised. Photograph by Murray-Lee UNICEF.

provisions already scattered over different international treaties; it also breaks completely new ground. For example, it emphasises that the touchstone for all decisions affecting the child should be the child’s best interests, and gives children the right to participate as fully as their maturity allows in any decisions affecting them. It also obliges signatories to educate

adequate sanitation.

By signing the World Declaration on the Survival, Protection and Development of Children and the Plan of Action to implement it, the leaders undertook to make resources available to meet these targets; and agreed that United Nations Agencies should monitor implementation of the Plan. The Secre-

tary-General is to carry out a review of progress in 1995.

In the broader context, the Summit takes place against a backdrop of fierce debate about the nature of development. Interestingly, it occurred just one week after the 40th birthday celebrations of UNDP, (the UN Development Programme), which has occasioned many questions about development aid – such as whether it has been misdirected in the past, and in what manner and at what level it should continue.

What is now clear is that aid directed towards capital projects, technology and growth of GDP has not succeeded in its aim of increasing human development. On the contrary, to sum up the statistics, the very poor are getting even poorer, to the extent that Keith Griffin, a Professor of Economics in California and economics adviser to the Bolivian government, believes that economic 'de-linkage' – the separation of the economies of the developed and least developed nations, with the 'South' taking no part in the economics of the 'North' – is already taking place, and that development aid may well decrease in coming years (2).

Many environmentalists have tried to counter these trends by pointing out that environmental problems – which affect developed and under-developed nations alike

– can only be overcome if unified, concerted action is taken to combat the spiral of poverty and environmental degradation. Maurice Strong, a member of the Club of Rome and Secretary General of the UN Conference on the Environment in Brazil in 1992, maintains that "there is simply no future for the planet without a global war on poverty". At the same time, UNDP has begun to challenge the very basis upon which development has been assessed, asserting that people should in future be at the centre of development projects.

Concern for the Future

In this context, the The Convention of the Rights of the Child has extensive implications for the future. It also affirms two important principles – one of which has traditionally marked the degree of wisdom and civilisation of a society; whilst the other is, in historical terms, unprecedented.

The first is the concern for future generations. Whilst many traditional societies have always embodied this concern (American Indians, for example, judge actions by their effect on seven succeeding generations) it is widely argued that our society has abandoned it in favour of immediate gain, and by so doing has brought upon itself the present ecological crisis.

However, the principle of 'first call', which requires that all actions be judged in terms of their effect on children, makes explicit and codifies this concern for the future.

The second is the legal recognition that each child is a unique individual, with legal rights quite distinct from those of its parents or guardians. Equally unprecedented

is the extension of those rights to every single child in the world, without exception.

Recognition of these two principles is now potentially binding upon all adults – and if they are put into effect side by side, then it can bring about an understanding of each which is truly new.

1. *The State of the World's Children*. OUP, 1990.

2. *Guardian*, September 21st 1990.

No Remote-control Compassion

ONE OF INDIA'S most outstanding figures, Murlindhar Devidas (Baba) Amte – a man whom many have likened to Gandhi for his advocacy of peace and tolerance – has been in the news on several counts this year. In May, his work with leprosy sufferers was brought to the attention of the international community when he was awarded the prestigious Templeton Prize for Progress in Religion at a ceremony in London (sharing the honour with Australian biologist Charles Birch), whilst in India his campaign against the Narmada Dam project has brought him to the centre of the political stage.

For, now 75 years old and almost crippled by a spinal injury which allows him to stand or lie down, but never sit, Baba Amte has left the community that he founded 40 years ago, and set up home amongst the tribal peoples of the Narmada valley. This willingness to share their fate conforms to the principle "Not for the people, but **with** the people" which he established at the very beginning of his life's work. Then, as a young lawyer, son of a prosperous family, he was asked by the *Harijans* (the Untouchables) of his area to help them set up a Trade Union. He would do so, he replied, only on condition that they allowed him to work with them for a year so that he could understand their problems. And so he gave up his privileged position and became a 'night-soil

worker' – the most despised job in caste-ridden Hindu society, done by the 'untouchables of the untouchables'.

Karma Marga

It was whilst he was working with the Untouchables that, one night, he came across what he thought was a heap or bundle in a monsoon drain. As he came nearer, he saw that it was a man in the last agonising stages of leprosy. Gripped with fear, he ran away: but later he found himself drawn back to work with such people. Although Baba Amte rejects 'religion' in its ritual aspect, and the violence and injustice which religious dogmatism generates (1), his relationship with the rejected and the lost of society stems from a deep spiritual insight and compassion. For many, he has come to personify the Hindu way of *Karma Marga* – the pathway of service and self-abnegating works and action. He himself says about his encounters:

"When I come across a person suffering from leprosy, foul-smelling and ulcerous, I can see the imprint of His (Christ's) kiss on his lips, His kiss. What did they not do to sufferers of leprosy in His time, yet the carpenter's son cared for them and touched them. That hand is an emblem for me – that hand that cared for the loneliest and the lost. The Christian is... he who not only lights the darkest corner in the world but also the darkest corners in his own heart". (2)

Provisions of the Convention

- **SURVIVAL.** The first specific right mentioned is the right to life. States must ensure "to the maximum possible the survival and development of the child". This includes the right of access to health care services, to an adequate standard of living (including food, clean water and a place to live), to a name and a nationality.
- **DEVELOPMENT.** The aim of the Convention is the development of each child's fullest potential. It contains provisions relating to the child's right to education directed to this aim (including making primary education compulsory and free for all children); the right to rest and leisure; to freedom of expression; the right to information from national and international sources especially if it aims to promote the child's social, spiritual or moral well-being and mental and physical health; to freedom of thought, conscience and religion.
- **PROTECTION.** Many of the provisions are designed to provide protection for children in a wide range of circumstances, including:
 - mental or physical disability
 - refugees or parentless children, or children separated from their parents
 - in some cases, protection from a child's own parents
 - economic, sexual and other forms of exploitation
 - protection from the use and sale of drugs
 - rights in times of armed conflict
 - protection for children in trouble with the law
- **PARTICIPATION.** The Convention stipulates that parents shall give 'due weight' to the views of children in accordance with their age and maturity, and to raise them to be able to play an active role in society at large.

Neither is he afraid to utilise every resource available to help. "Spirituality is not unwordly", he maintains. "Indeed, science and spirituality are two sides of the same coin. An introspective search for an order in an individual and the universe is spirituality. When that search is turned outward we call it science. Both spirituality and science are to be applied to transform the human condition". Accordingly, he took a course in the clinical treatment of leprosy before he began his serious work with lepers, and the community which he began in the province of Maharashtra, East India, in 1951 pioneered new methods of organic farming, building, health care and recycling which have subsequently been emulated by villages all over India. If the maimed and sick can achieve these things, they say, then why not the able-bodied?

The beginnings of this project – which came to be called *Anandwan*, 'Forest of Joy' – were not auspicious; the government gave 50 acres of disused quarry and forest, infested with wild animals and with no tilled land, on which he and his wife, along with their two small children and six leprosy sufferers, had to subsist. But Baba Amte envisaged from the very start a different kind of community, in which the sick were not just cared for but expected to work. Through activity, he believed, the spirit and dignity of people can be restored, the 'man-in-the-round' rebuilt – "Charity destroys but work builds". Accordingly, everybody, diseased and well, worked together to dig wells, build shelters and produce food. It was a miracle, they felt, that they survived, but after two years *Anandwan* was self-sufficient in everything except sugar, oil and salt. By the end of the 1954 there were sixty patients, six wells and a surplus of food, and the community was about to build its first hospital and schools.

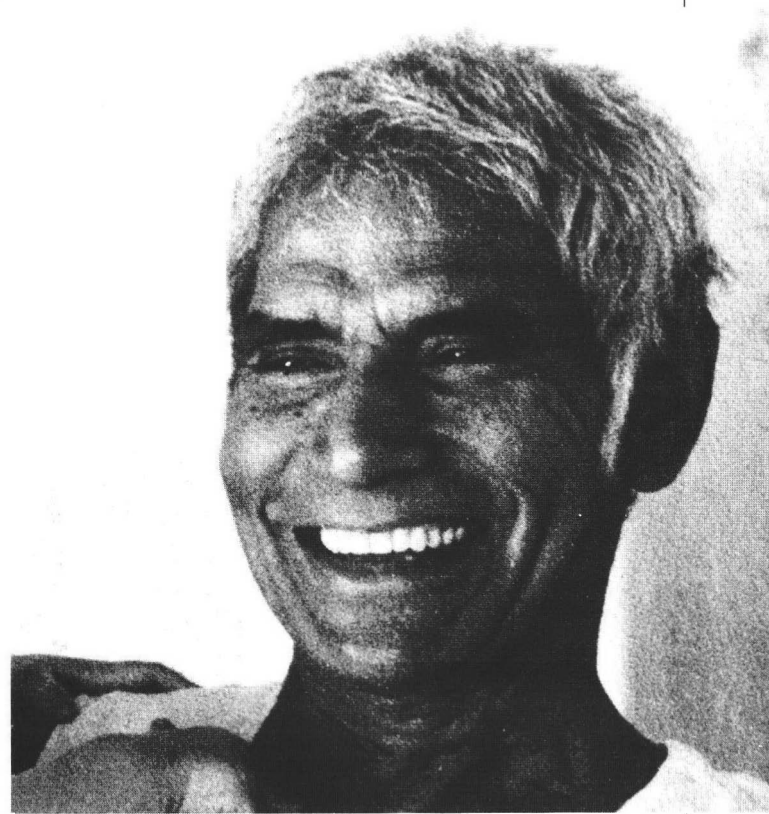
The Essentials of Development

Anandwan today is an impressive sight. On 450 acres

of land, it accommodates 1400 lepers who provide a work-force of builders, carpenters, mechanics, weavers, printers, etc. to service the community. There is a cottage hospital, a library, banks and shops, a primary school, a theatre and a four-faculty college of Commerce, Art, Science and Agriculture which takes 1750 students. Nor are lepers the only people cared for: there is an orphanage, a school for deaf and mute children and training centres for the handicapped – and much more. It has also spawned dozens of other activities, amongst them four organic farms run by lepers around the province.

These communities are more than places where a revolutionary approach to disease has been developed. They are also models of harmonious living at every level. "This centre is a sanctuary for love", Baba Amte said in 1982. "It is a sanctuary for humans, for animals, for trees. We go on sharing the joy and grief together" (3). In affirming a way of life based entirely on compassionate action, he has a friend in the Dalai Lama, who visited *Anandwan* last January, spending two hours in intimate conversation with its founder and pledging some of his Nobel Peace Prize money to its support.

One aspect of sanctuary which has particularly pre-occupied Baba Amte in recent years is the relationship to the environment; the ecological research centre at *Anandwan* has undertaken several agro-forestry projects, aiming to develop new varieties of fast-growing trees and grasses for fodder, which reflect his particular feeling for the importance of trees. In joining the Narmada Dam campaign, however, he tackles a matter with enormous ramifications, and the outcome could influence the fate of all such large-scale development schemes in India and other developing countries. The Narmada project, which is backed by the World Bank and the Indian Government, involves the construction of one of the biggest dams in the world



"It is strange that man seeks sublime inspiration in the ruins of temples and churches, but sees none in the ruins of man."

This quote from G K Chesterton is often used by Baba Amte when he is asked why he has given over his life to serve the sick and outcast.

and is seen as the solution to drought in East India. It will create a reservoir more than 200km long and displace over 100,000 people, many of them 'tribals' who have lived there for generations. Although Baba Amte has the ear of many in high places and has for years conducted a 'long-range' campaign against big dams, he felt that he had to go and live with these people. "There cannot be remote-control compassion" he told 'The Illustrated Weekly of India' in June. "Remote control terrorism exists, but not compassion."

His presence has sharply focussed attention on the deeper meanings of the issue. He himself believes that Narmada – which is one of the great sacred rivers of India – will become a symbol of the struggle against vested interests, and against a society which exploits. In his address at the Templeton Prize-giving, delivered by his son, Dr Vikas Amte, whilst he settled into his new home (a small hut in a place where a major

bridge is planned), he put it in an even wider context:

"The battle is not to save the Narmada alone. The larger goal is to bring the message of Mother Earth to the whole world.... The worldwide environmental movement contains the glimmers of a new hope. To realise this hope, however, it must concentrate on the essentials and discard the fads..."

"All true development is, ultimately, spiritual. The growing environmental movement can lead us back to the eternal, can reverse the present tendency towards destruction, only if it remembers this fundamental truth."

1. *He has led two 'marches' through India attempting to bring about unity between the faiths; one, after the assassination of Indira Gandhi, to heal the breach between the Hindus and the Sikhs.*

2. *'More than Conquerors' by Graham Turner, Hodder and Stroughton, London 1976.*

3. *Resurgence, July-August 1982.*

Conferences...

SCIENTISTS AND SAGES

Munich, March 9th-11th 1990

"In the face of a world dominated by technology, what is the responsibility of a person? How is he to take the outer world of the scientist with the inner world of the sage in order to solve the problems that we face? Surely, the purpose of this conference is to answer this question."

These words by Pupul Jayakar, thrown up during one of the discussion periods, aptly set the scene for this report. For although the conversation often meandered, 'Scientists and Sages' was bold enough to tackle these important questions seriously and sincerely, and occasionally achieved a level of dialogue which was truly remarkable in such a large public event.

Compared to Britain and America, Europe has not seen many open meetings at which the matter of science and spirituality has been aired like this. There was a conference in Switzerland in 1978 which saw the Dalai Lama and physicist David Bohm on the same platform; and then in 1988 the massive 'Mind and Nature' Conference in Hanover, which brought together more than 200 speakers from all over the world. Many participants left the latter discontented, feeling that its very scale and public profile had obliged many speakers to defend their existing positions and killed off the possibility of dialogue. It was because of this that Peter

Michel, head of the Aquamarin Verlag publishing house in Munich, conceived of a smaller, less formal event which could explore the important issues freely.

In the end, though, 'Scientists and Sages' was not particularly small, occupying the main lecture theatre in Munich's new show-case conference and arts centre, and drawing an audience of over 500 people on each of the three days. It took place just a few days before the East German general election, and one felt that this level of interest was a significant sign for the future at a time when Germany and the whole of Europe is undergoing such epoch-making change.

Science and Unity

Aquamarin Verlag itself publishes many of the books which have fuelled this interest, amongst them 'Scientists and Sages' by the American philosopher, Renée Weber (1) which inspired the title of the conference. The fact that Renée Weber was herself speaking, therefore, was undoubtedly one of the main reasons for its success, although it would be unfair to underestimate the drawing power of the other advertised speakers – amongst them David Bohm, Raimondo Panikkar, Peter Lasalle and Pir Vilayat Khan. In the event, neither Peter Lasalle nor David Bohm were able to attend due to ill-health. The latter was particularly missed, as he was the only *bona fide* scientist amongst the major speakers

and his absence accentuated an imbalance which was extraordinary considering the conference's title.

But Bohm's influence was nevertheless prevalent; his paper, read by the Finnish philosopher, Paavo Pyykkänen, was one of the highlights of the three days. Entitled 'A New Theory of the Relationship between Mind and Matter', it questioned the division which has existed in Western consciousness since Descartes by suggesting that "there is a coherent approach which can bring mind and matter together without reducing one to the other." This approach, based on Bohm's causal interpretation of quantum mechanics, regards mind and matter as independent manifestations of a deeper, 'super-implicate', order.

Behind David Bohm's physics is the concept of the wholeness of reality – an idea also developed by other speakers; Renée Weber reiterated her conviction that "a parallel principle drives both science and mysticism – the assumption that unity lies at the heart of our world and that it can be discovered and experienced by man", whilst Pir Vilayat Khan, in his paper, 'The Experience of the Implicate State in Meditation' compared Bohm's theories with the experience of contemplatives. "Those to whom unity is revealed see the absolute whole in the parts. Yet each is in despair at its particularisation from the whole" he quoted the 14th century Sufi, Mahmood Shabostari, and his presentation undertook the hitherto neglected task of correlating the wisdom of the Sufi tradition with the 'new science'.

Science and Wisdom

Such ideas came under fierce scrutiny during the discussion sessions, when the other speakers, amongst them such distinguished 'sages' as Raimondo Panikkar, Abbot Emmanuel Jungclaussen (replacing Peter Lasalle), and Gunther Schiwy, were invited to comment. Raimondo Panikkar in particular brought great clarity and elevation to the proceedings by acting as 'devil's advocate' to

any under-examined assertions. In what was perhaps the key discussion period of the conference, tackling the theme 'Religion as Experience' on the morning of the second day, Panikkar questioned whether in fact the 'problematiques' of science and wisdom are the same. For those whose minds have already been 'scientised', he maintained, science provides a very reduced metaphor for truth. Moreover, many things now attributed to 'the new science' are in fact well-known in wisdom – the statement that "Everything is connected to everything else", for instance, has been a cornerstone of Buddhism for 25 centuries. There is a danger that we will come to think that fundamental questions, such as unity and diversity, can be treated by scientific categories; whereas they are much more difficult and general problems. "Trinity is not a three-phase electric current and love is not a gravitational field and creation is not a 'Big Bang' ", he stated in a typically poetic defence of wisdom.

Panikkar asked Abbot Emmanuel what he thought St Francis of Assisi, whom the latter had mentioned in his paper, would have thought about the development of science. Abbot Emmanuel thought that Francis would not have wholly condemned the forms of our modern life, but would have recognised that it is the inner attitude which matters. There is a fundamental question, he went on, which applies as much now as in Francis' own time; that is, to what extent does contemplation require us to be cut off from the world? How is it possible for us to go into the world to find God in ourselves and serve Him? These were questions which Francis himself attempted to resolve with the foundation of his 'third order' for those who wished to serve whilst remaining in everyday life.

This discussion made one aware that a great change has crept up on us over the last ten years. For whereas in Renée Weber's book, the relationship between 'scien-

Munich skyline. Photograph by Max Prugger, courtesy of the German Tourist Board.





Renée Weber

tists' and 'sages' presented itself as a dialogue between different people, in Munich it emerged as a question about the integration of each individual person and the way in which they combine between their inner and outer worlds. Pupul Jayakar, a follower, like David Bohm, of Krishnamurti, most succinctly presented this view in her main paper, asking, "What is it that separates us from reality?" "It is the invisible line between the outer and the inner", she answered herself. "To tackle this is to embark upon a journey of self-knowledge." What is required, she went on, is the awakening of an intelligence which resides on the illusory line between outer and inner. It is only here that the scientist and the sage become one, and only such a mind, "which is capable of taking technology and seeing it without releasing destructive forces".

The Market Place

The emergence of such an integrative point of view led naturally to a high level of discussion when questions of action and ethics were considered. Renée Weber, for instance, responding to a question from the floor concerning the ethics of certain sorts of science, replied that what was required was the scientist/sage; for "the mystic has got what Kant called 'Holy Will' - ie. the will only to do good. Take the Buddha,

for instance; his very being was ethical, and therefore could only do good." Not surprisingly, the great changes taking place in Eastern Europe were mentioned as indications of a new spirit of freedom and hope in the world, which brings with it also a new realisation of responsibility. Raimondo Panikkar brought a quote from Gandhi: "I am a politician looking for holiness" as an example of the kind of dilemma we find ourselves in today; "Spirituality is forged in the market places of the world", he said. "But the precondition is that we overcome this dichotomy in ourselves".

It may be that this conference was itself part of this 'market-place'; for it became clear during the course of the three days that it had a much larger function than the mere exchange of ideas at an intellectual level. The fact that topics such as meditation and compassionate action were discussed openly and at length indicated that most of those present were already sincerely embarked upon a "journey of self-knowledge".

Any disappointment at the absence of 'hard science' was also alleviated by the realisation that the matter of 'the scientist' and 'the sage' is one in which no-one is merely a spectator. As Professor Schwy pointed out in the closing session, all professionals have two areas of knowledge: one in which they are specialists, and

the other in which they participate by virtue of their general humanity. It is reflection on the latter which leads to wisdom. Perhaps we all need to learn that it is an abnegation of our responsibilities to simply hand over decisions to the specialists. Instead, we must find a way of embracing specialist knowledge within a general wisdom.

Jane Clark

1. Routledge, London, 1986.

THE INTERPARLIAMENTARY CONFERENCE ON THE GLOBAL ENVIRONMENT

April 29th - May 2nd 1990
Washington DC.

At a time when many people feel increasingly frustrated by the apparent lack of initiative on the part of governments in tackling environmental issues, this Conference on the Global Environment brought some rays of hope. It built upon the progress achieved this January in Moscow at the Global Forum of Spiritual and Parliamentary Leaders for Human Survival, which produced important statements of principle and intent. The explicit aim of this gathering, by contrast, was to translate intent into legislation.

The conference brought together over 160 delegates from 42 nations. They divided into working groups to address seven specific areas: global climate change; ozone depletion; oceans and water resources; deforestation and desertification; sustainable development; preservation of biodiversity; and population pressure. The outcome was a series of highly detailed legislative strategy papers useable by any government in forming national or international policy.

In his opening address the Chairman, US Senator Albert Gore spoke of the conference as setting a number of important precedents. One was responsibility to future generations. "The principle of environmental responsibility between the generations would appear to be among the few self-evident truths

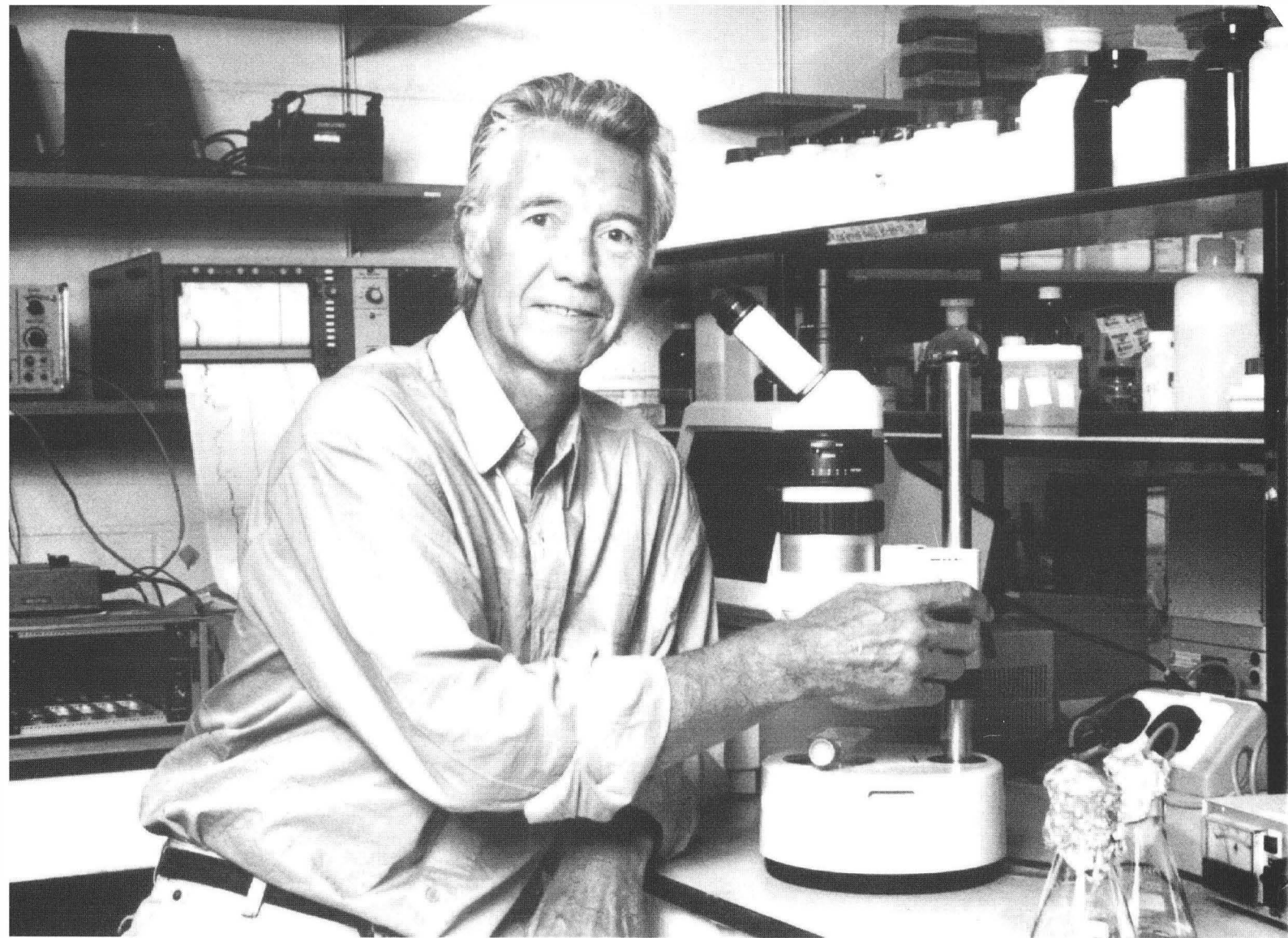
available to us. But the application of this principle in detail will be a severe test not only of the wisdom of lawmakers, but also of the people themselves". Another was the opportunity to abandon the familiar political mode of seeking one party's gain at the cost of another's loss, but to act instead for a common good.

Delegates were asked to lend their personal support to the resolutions of the conference, and to urge their respective governments to adopt them. To reinforce this, each signed a Declaration of Environmental Interdependence, which resolved, amongst many other things, to develop a Global Marshall Plan for sustainable development and the environment, initiated by all developed nations: to establish a National Sustainable Development Charter and a Bank for Sustainable Development; and to develop an International Convention for the Protection of World Forests.

In support of the need to implement a global policy on the environment, the conference saw the opening of INEP, the world's first computerised International Network for Environmental Policy. Initially developed specifically for this conference, INEP will be extended to build up a unique store of information on scientific, technical and policy issues. It will allow legislators, scientists, corporate leaders and policy makers around the world to access and contribute to this information, and to communicate with each other.

This event emphasised that the environmental crisis holds more than a negative dimension for mankind. Said Emil Salim, Indonesia's Minister of State for Population and Environment: "...parliamentarians must be willing to rise above local and even national interests in the face of critical global issues. As they do so they will discover that together with other legislators the world over, they will now represent a much larger constituency, a global constituency."

Alison Yiangou



Photograph by John Farnham

The Generative Order of Life

Jane Clark and Alison Yiangou talk to Professor Brian Goodwin of the Open University

ONE OF THE MOST interesting events of recent months was a debate in London (1) between Dr Richard Dawkins, one of Darwin's most erudite modern interpreters, and Brian Goodwin, Professor of Biology at the Open University, which brought up many basic questions about evolution and the way in which we think about biological organisms – and therefore ourselves. Whereas Richard Dawkins' spirited assertion that our 'selfish genes' are the prime movers in evolution has received much attention over the past ten years, and books such as 'The Blind Watchmaker' have become best-sellers, Brian Goodwin's ideas have remained almost unknown, being embedded for the most part in scientific journals and conference proceedings. Few people are aware, as yet, of the valuable work that he and his colleagues throughout the world are doing, quietly nurturing a 'new biology' which not so much opposes the Darwinian vision as transforms it by placing it in a much wider context.

Brian Goodwin, in contrast to the majority of biologists who emphasise randomness and chance in

evolution, prefers to affirm the "deep intelligibility of nature". A Canadian by birth, he studied Biology at McGill University and Mathematics at Oxford, an education which has aided him in his desire to introduce into biology some of the basic ideas of modern physics and mathematics such as field theory and complex dynamics. He went on to study with the eminent C. H. Waddington at Edinburgh, from which stems his lasting interest in the relationships between the growth and development of organisms and their evolution. His work at the Open University includes many practical research projects – from the investigation of dynamic patterns in fruit-fly development to the mathematics of leaf and flower patterns – which are finding resonances with past scientific thinkers, such as Goethe and those of the Hermetic Tradition, who affirmed the intrinsic order and harmony of nature.

But he still makes time to participate actively in wider issues, such as health and the environment and global ecology, which he sees as irrevocably linked to the way in which we understand life itself: "The new biology, it

seems to me, is the key to a new order," he has said. "An order of cooperative, subtle interaction with the environment... where health is understood as an expression of transformational order and meaning which derives from belonging within a cosmos which is a living unity."



It was clear in the recent debate you had with Richard Dawkins that you have a very strong critique of modern biology, particularly neo-Darwinism. Why do you think it is so inadequate?

I feel that it is founded upon basic assumptions that are really very deeply flawed. The first is that one can reduce organisms to a collection of genes, and the second is that organisms are the result of natural selection. These are the two main pillars of contemporary biology, and whilst I accept that both of them have a limited degree of validity, conceptually they are inadequate to explain the basic phenomena of biology. Natural selection is correct in a certain way, but it's a tautology, a necessary truth. And whilst genes are certainly part of organisms – an extremely important part – you cannot explain everything in terms of their effects.

The dominance of these two assumptions has meant that the notion of 'an organism' has almost disappeared from biology, and been replaced by a collection of parts – genes, molecules and the components that they are supposed to produce like eyes, limbs, or whatever other structure you want to focus on. I feel that this is exactly the wrong way round. We have to start with a concept of the whole organism as the fundamental entity in biology and then understand how this generates parts that conform to its intrinsic order – resulting in a harmoniously integrated, though complex, organism. This is basically the problem of embryonic development: to understand the orderly sequence of transformations from egg to adult form. The whole of biology rests upon this reproductive process.

So how could one evolve a science in which this concept of the whole organism is central?

I like to start with Goethe's vision of the organism, because he actually combined a notion of history and structure that was unique in his day, and it continues to be an inspiration for us (2). Goethe located organisms in time, in history, the way neo-Darwinism does, but at the same time he understood that there is an ordering principle, a *logos*, which acts and is manifested through living things. Goethe's description of the organism is as a dynamic form (See Figure 1). That is, it is something that is constantly changing and transforming in order to be itself. I love that notion. In order to be true to its own nature, the organism has to become all the time. Its not a matter of being, but of becoming.

This is in no sense incompatible with intelligibility, and I feel that the whole problem in modern biology is to learn how to hold this totality in mind, to understand it, and to explore it with technology in order to begin to reveal the type of dynamic order there is in organisms – the real generative order. I use the term 'generative' here because I think what is happening in science today is the

replacement of a historical, reductionist paradigm of events by a generative paradigm of process.

Can you give an example which illustrates this dynamic order?

Take the very familiar structure of one of our own limbs – a leg or an arm. It has a complex form and it is extremely useful, therefore it's quite obvious that it serves a very important role in relation to our survival. By extension, limbs on all the tetrapods serve important functions.

Now, it is very interesting that all these limbs have a structure that is basically similar. Therefore, Darwinism maintains that they have a common ancestor, and Darwin used the notion of common ancestor as **explanatory** of biological form. But the problem is, where did the common ancestor come from? Historical explanations just take you back and back to some origin which is simply pointed to, not explained. We want to understand the particular structure of these limbs – their common order. And we want to know how we can describe this mathematically and how the variations of limb expression are generated.



Figure 1. Goethian Transformations

Goethe noticed that all the leaves of plants are not identical, but their form expresses the growth of the whole plant. Figure 1 shows the leaves of *Scabiosa columbaria* as they appear along its stem. The uppermost leaves are quite unlike the first ones, whilst the middle leaf has the appearance of being assembled by two diverse halves: the 'above' and the 'below' meet, but do not interpenetrate. The top leaves express the radiating tendency of the flowers, which Goethe saw as formative on the entire growth process.

A modern interpreter of Goethe, Gerbert Grohmann, explains: "The study of leaf metamorphosis leads to an understanding of the quintessence of the plant-kingdom – dynamics. We shall never be able to grasp life if we stare at the fixed shape, at the finished product. Rather we must consider the process of 'becoming'. The single leaf is only a mile-stone in the plant's development, a visible product left by life flowing on... The metamorphosis which eventually leads to the development of the flower is already announced by the transition from the first leaf to the second one. The flower is the aim of all the changes... if the vegetative process alone existed, the plant would grow on forever unchanged".

(From Gerbert Grohmann, 'The Plant', Volume 1 (1989), *Bio-dynamic literature*, Ch. 3).

Did Darwin not have the idea that there's a random component which generates a host of possibilities, and that natural selection then chooses the most suitable?

The problem is that randomness does not explain intrinsic order of the type we are talking about. Neither does natural selection, since this simply says that the limbs are useful, telling us nothing about how they are generated. Actually I have no quarrel with either random mutation or natural selection as parts of the explanation of biological form, but it bothers me when biologists suggest that they actually explain the generative origins.

What we would say, in contrast, is that there is a *logos* – a generative order – in tetrapod limbs. By this I mean there is an intrinsic causality which is ordered, which has its own generative rules. Perhaps the easiest way of explaining this is to take an example from physics. Say, the structure of the elements. When a physicist gives you an explanation of why there are elements such as carbon, oxygen, or nitrogen, he or she does it in terms of the intrinsic properties of the fundamental particles – in this case it's enough to talk about protons, neutrons and electrons – which have particular states of dynamic order, which are stable states. The stability is what Darwinism focuses on as natural selection. Physicists don't use this term because they don't need it. They use the term 'dynamic stability'.

They also at the same time have principles of generative order which are the rules – and this is where the *logos* comes in. The deep intelligibility of nature is to be seen in the existence of the kind of order that produces carbon, oxygen, nitrogen – all the elements – as stable forms of the elementary particles. The programme in biology which I am working on is to understand biological form in terms of similarly deep rules of order and organisation.

The way in which laws are usually understood in physics is that they are eternal, 'outside' principles which imprint themselves upon passive, inert matter. In other words, they embody a dualist philosophy. But I think that you would take a more unified view of the situation.

Yes, indeed, I really abhor dualisms. I am going to argue for unity all the way through. One of the dangers of the notion of law is that it seems to imply a static universe, one in which the laws are laid down by *fiat* from the beginning and never change. I don't believe in that kind of cosmos. I believe the cosmos is radically evolutionary, that everything is changing – although perhaps not always at the same time and at the same rate. This is of course something that physics is now discovering as well, in that many cosmologists now believe that the fundamental laws of physics and the four fundamental forces were not always as they are now. They were actually generated during the Big Bang.

This creative principle of emergence is a deep mystery. It is intelligible, but it is also mysterious. It's very difficult to hold these two ideas in your head at the same time, because intelligibility seems to force you into a kind of straight jacket of law and order – and that's the last place we want to be. We want to be in a dynamic universe

which is alive, immanently, and where everything is always working together. That is why I feel that alongside this notion of intelligibility, one has to affirm that there are no ontological dualisms. We can have strategic dualisms; we can say, let's separate these concepts, mind and matter, strategically, just to work on them. But what has happened in Western culture is that we've separated them ontologically, in being, and the result is that we have a mechanical universe on the one hand and a mind that is spinning off in its own world on the other. This is a disaster.

I know that you have been an admirer of the work of the physicist, David Bohm (3). He begins with the principle of unity and then derives the rest – the parts and the particulars – from there. Would you say that your approach of starting from the organism and working downwards is the equivalent?

Yes, it's exactly the same principle; working from unity and recognising that unity and multiplicity are always going to manifest together. That's not quite right; multiplicity manifests, unity is there by inference. The vision of the organism as a single unit has very deep resonances with David Bohm's ideas because it starts from an integral

concept of the cosmos. The universe is primarily a unity and it generates multiplicity and diversity. Therefore, the diversity is unified in this process, and there is an order which is revealed in the particular relationships that emerge in the constituent parts – which are of course never separated, but which are nevertheless distinguishable one from the other. That's the principle of research that we find absolutely fundamental to the new biology.

One result of this is that we have had to develop 'non-invasive' techniques in our experimental work. That is, find a way of studying organisms which does not fragment their unity – to allow the organism to speak to us without seriously disrupting its states. Perturbations, yes; we can metaphorically dance with the organism and find out what forms of dynamic order it manifests, but if we destroy its fundamental unity, then we have lost the basic principle we are trying to hold, always, in our work. So we look for and use technologies that make it possible for us to study organisms in this way. Interestingly, these turn out to be amongst the most sophisticated available at the moment, and it seems that we are going to need even more sensitive instruments in order to really make more progress.

The achievement of Western science has been to demonstrate intelligibility by producing theories and models that parallel reality with great precision – quantitative, mathematical precision. Do you envisage this happening in the new biology?

Yes indeed. One way in which we have been trying to do this is through computer modelling of the process of growth and transformation in organisms – the emergence of form during embryonic development or during regeneration. When we began to do this, the most immediate thing to emerge was the need for the notion of a morphogenetic field: ie. a domain within which some characteristic spatial ordering principle exists.

Fields are essential in physics. The most familiar

example is perhaps a magnetic field whose action can be seen by the order it generates in iron filings. Another example is the spiral pattern of water as it flows down a drain. Why does it take such a form? In biology, explanations of form tend to be reduced to those of molecular composition, but this doesn't actually work. It implies that if you know the composition of the substance – say H_2O – then you can deduce the form, such as spiral flow under particular conditions. But the way that physics works is to look at water as a liquid, and to describe its motion in terms of the hydrodynamic principles – field equations – that characterise liquid flow. These were derived quite independently of any reference to the substance, because it doesn't matter if it's H_2O , benzene, alcohol or whatever. Therefore, in physics, in order to explain form, it is the principle of order that is present in the field that has to be understood.

You would say, then, that the principles of order are the same in the animate and the inanimate realms?

Precisely. The notion of intelligibility is the same in biology as in physics, and what we are trying to do is to understand the consequences of particular principles and forces as they occur in living organisms. And the main consequence is the amazing proliferation of form that occurs in the biological realm. Biology is the realm of form, and form is a quality. In other words, what we are developing is a science of qualities – of sound and shape and colour. It is not a science of quantities, although plenty of quantitative work goes into it.

Can you give us some idea of the sort of work that a 'field-based' approach involves?

Let me say something about our work on a very simple unicellular green alga, the Mermaids Cap. (See Figure 2). We have tried modelling on the computer the way in which this grows and regenerates. We start from equations that we have derived to describe processes that go on in the cytoplasm and we look at how the cell wall behaves. There is a dynamic interaction between the cytoplasm and the cell wall as they grow which can be expressed mathematically.

Biologically, the growth of this little alga is very simple, but mathematically, it is extremely complex. It grows by extending a tip, so when we programme the process onto a computer, we have to set the parameters to give this type of growth. Now to our great surprise, when we set it up like this, we found that the process also generated the little rings of hairs, called whorls, without any further programming.

Now these whorls arise during the normal growth and development of the alga, but they drop off in the adult, serving no function. So they appear not to conform to the principle of natural selection, which requires that structures generated in organisms should play some role in their survival. But in our approach, the explanation is quite simple: these forms arise naturally from the dynamics of the morphogenetic field of this organism, like spiral flow in hydrodynamic fields. They need not have a function – though of course they might have one that we haven't yet recognised!

The usual explanation for this process of growth is that genes produce particular substances at particular times

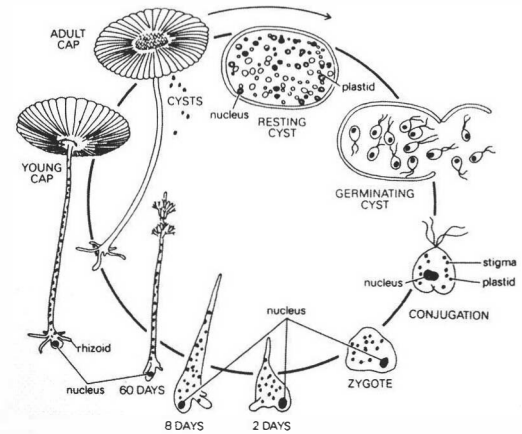


Figure 2a

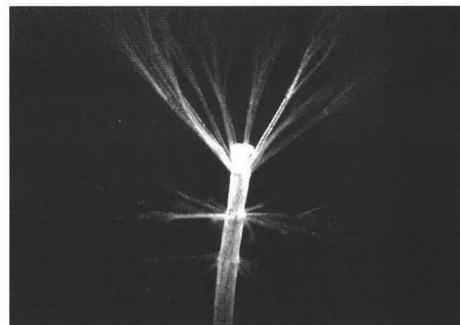


Figure 2b

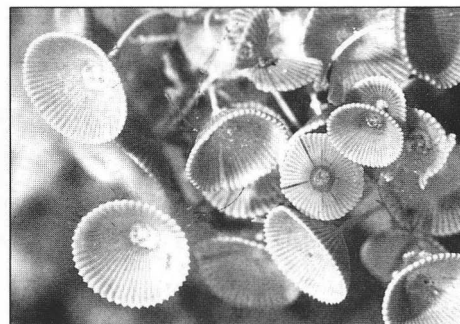


Figure 2c

Figure 2. The Mermaids Cap (Acetabularium)

The Mermaids Cap is an alga which grows in the Mediterranean. It is a single cell which grows into a giant cell with a complex form.

Figure 2a shows its life-cycle, and the sequence of transformations that it goes through as it grows. It starts off as essentially a sphere. Then two gametes come together; the nuclei fuse to form a spherical cell which is the zygote, which begins to grow. A shoot forms, resembling a root (a rhizoid), which holds onto the rocks in the shallow waters around the Mediterranean.

The shoot grows and extends. When it reaches about 1.5 cm in length – already very large for a single cell – it begins to produce structures which are like primitive leaves, called 'whorls' of leaves (Figure 2b). These grow and form a corona. Then the tip grows again from the centre of this ring and after several days, another ring is produced, and so on until several are formed. When it reaches the size of about 2.5-3cm in length, the process changes and instead of the whorls it produces a cap. This is a parasol-like structure which gives the plant its common name. Then the whorls all drop off, leaving the final organism with the form shown in Figure 2c. The single nucleus stays in the rhizoid, there is a stalk about 3cm long, and a cap, a beautifully textured structure which serves as a photosynthetic organ and a reproductive organ.

and places in the developing organism in accordance with what is called a 'genetic programme'. These gene products then interact to produce a particular structure such as a whorl. In this view, what is basic to the form produced is the specific molecular composition. What we did, in contrast, was to study the natural dynamic modes of the whole organised process, described as a morphogenetic field. A field is simply a dynamic order extended in space. We set the parameters to get growth and as a result of that we got form.

Mathematically, this type of process is called a moving boundary problem. These are not well understood, and it's a relatively new category of process which needs much more work. But we believe that these sorts of equations will be the key to making many aspects of biological form intelligible.

Most people's understanding of computer models is that they are repeatable; you feed in the equations and each time you achieve the same result. But you yourself have already mentioned the staggering diversity of biological form; living things are unrepeatable, unique. For instance, there are five billion people on earth at the moment, and yet, given the opportunity, we would have no trouble in individually identifying every single one of them.

We have to distinguish between two aspects in the process. The repeatability aspect is precisely intelligibility, because there is obviously some common factor. No matter how variable individual human beings are, we can distinguish them instantaneously from a lower primate. No trouble. This is the intelligible order which defines the species.

As to the origin of variability, one can see that either as a random process, as Darwinism does, or one can see it, as I would tend to, as a creative response to influence. No two organisms experience the same environment. If you take that principle right into the organism, one can see that every cell has a different environment, and so does every molecule in every cell. Variability arises because of the wealth of possible states in which these organic materials can exist. And because they have such an immense range of possibilities, they will respond in distinctive manners to the range of influences.

So we have both things: intelligibility because there is an order, but also an immense spectrum of potential variability and individual qualities of each organism. Now I don't see that these are in any sense incompatible. In fact it is coming out of mathematical work on complex systems, that what are now called complex, or strange, attractors have precisely this property; there is an invariant quality about them. The Rössler Attractor, for example, has a particular shape, and yet each individual trajectory that constitutes that attractor has a distinct path. So the new theories of chaos show us that these two notions are perfectly compatible – immense richness of individual expression, but a generic property which characterises that form.

Perhaps one can see this in your previous analogy with water – although water always goes down the plughole in a spiral, we now know that every time it does so with a completely unique pattern. One of the most striking features of chaos theory is that it makes intelligible an area which was previously thought of as incapable of being understood. Perhaps one could say that your work, too, is to make intelligible, by the senses and the intellect, an order and a beauty that already exists.

“There is no way in which our rationality can encompass and circumscribe the set of the possible.”

It already exists because of this primal unity, and because the ordering, generative principles are immanent in the process. Each plant makes a gesture of a characteristic type, and that gesture, which is a Goethian notion, is a witness to the immanent rationality, the

logos, and also an expression of the diversity of possibilities. So that which was regarded as mere randomness before, is now seen to have a deep kind of order within it, which is the order of progressive bifurcations, or branchings.

This can be seen in the growth of organismic form. If we look again at the little Mermaids Cap, we see that it starts off with something that is spherical. It then breaks symmetry and produces a shoot in one direction and a root in the other, and then complexity increases by a series of bifurcations. The shoot forms first, then the whorls are produced by another bifurcation, and then each of the little hairs in the whorl bifurcates and produces the beautiful corona of the cap. Then the shoot starts again, and so it goes on. This is the principle of progressive bifurcations and what they call 'the march to chaos'.

Now organisms don't reach chaos in terms of form. Not usually anyway. Sometimes you can get chaotic pigmentation patterns in particular types of gekko, lizard, snakes, so that instead of stripes and spots which are the characteristic patterns, you can get regions where it becomes chaotic. It may be that the generative process has gone through a number of bifurcations in that particular region to produce what is chaotic; but even so, it is still deeply intelligible.

As I understand it, as the plant grows, in your model, at each instant it takes its new shape from the form it had at the preceding instant, so it is constantly changing and evolving.

This is precisely the nature of these moving boundary problems. As the organism grows and develops, the new parts arise out of the form that has been generated up to that moment. So their boundaries are constantly changing, and the conditions for generating form are changing. Now this doesn't mean necessarily that you are always getting something new. In more complex organisms you do get a sequence of transformations each of which is distinctly different, although having similarities to previous processes; the formation of the gut cavity, the formation of the nervous system; the formation of the limbs, the formation of the internal organs, all seem to be different from one another. Yet they do share certain basic characteristics that we are



One of the most spectacular indications of the generative order of the living realm is the seed-head of the sun-flower. This forms a 12-fold spiral pattern which unfolds – explodes – in harmonic proportions from the centre. Each flower exhibits the basic pattern in a unique way, as this field of sunflowers in Utah, USA, shows. Photograph by David Thompson/Oxford Scientific Films.

beginning to understand. But in the case of a single-celled organism like the Mermaids Cap, it's a simpler process, and there is a cyclic repetition of certain events, such as the formation of the successive rings of whorls. This is a very characteristic gesture which is found in a lot of plants.

So it is true that the conditions that exist at any moment of time do influence what appears next. The new is constantly arising out of what was previous, and therefore it is always a process.

It also implies that in order to view an organism as a whole, you have to view it through time as well.

The fundamental process in the whole of evolution is a life cycle. All organisms, all species, exist by virtue of a characteristic life cycle. There is immense variation, individual variation, as we have just discussed, but nevertheless there is a cyclic process. The adult form is in no sense the goal of this. This is again beautifully exemplified by the alga, because the whorls that are produced during development and then drop off, serve no function in the adult. So why are they produced? The answer that we can give now is they are a natural and spontaneous expression of the order immanent in that life cycle, and are necessary in order for it to continue.

Now the life cycle is absolutely essential if the organism is going to persist. There are different types of stability. Diamond doesn't have a life cycle; it persists for a long time because it is a stable form. But organisms, because they are dynamic forms and because, going back to Goethe's principle, they must change in order to be themselves, have to constantly move and transform.

You have said that this is the age of biology, and that the metaphor of the organism is arising now in all areas of life. Would you say that it also has application to the other sciences, even the 'inorganic' ones?

Oh yes. One example of this is the way in which the biological metaphor can inform some of the conundrums that we face in relation to cosmological evolution. For example, physicists working on 'The Anthropic Principle' (4) say "isn't it extraordinary that in order to get all these beautifully coordinated aspects – the galaxies, the planetary systems, life, and finally, the emergence of humanity – the fundamental constants have to be specified to a degree of accuracy that's just unbelievable." We could say the same thing about an organism: "It's unbelievable that the lungs have this incredible fractal structure that is so efficient for air distribution and aeration"; or "isn't it amazing the way the liver and the kidney and the heart interact with one another in such a co-ordinated way". But it is perhaps not so amazing if you start, as we do, with the whole, and understand that an organism always generates its own parts.

'The Anthropic Principle' is pointing to a very, very interesting problem, but I think the way to solve it is to say: the universe at the Big Bang is like an organism starting its development, and inevitably it's going to have these properties because they are all immanent in the structure to begin with. It is not as if there is an outside intelligence that says "we will have such and such

fundamental constants". The constants are going to arise out of the process. As we go deeper into the process, I think we will find out why this particular form of cosmos exists. And I believe that we will find that it is inevitable.

That is an interesting position, because what most exercises the scientists who are advocating the anthropic principle is the arising of man – or perhaps, more generally, one should say, the coming about of an independent, objective, intelligence. If one says that the universe is a totality which has generated the parts it needs, then one must accept that it generated this intelligence of its own accord – and therefore, that there is some sense in which it needed it.

Yes, I agree – although I do prefer the metaphor of play, creative play, to the metaphor of all the parts playing a function. If we go back to the example of the alga, then what is the function of the whorls? We would maintain

“It is always at these boundaries that things happen: one could say that life itself is lived on that existential boundary between self and other.”

that they are part of the expression of the being, part of its gesture, and there is no need to – indeed, it is improper to – assign purpose, in the strictly functional sense, to every single component. So there is a sense in which the emergence of intelligence is inevitable – but not because it serves a particu-

lar function or role, but rather because this is the form of play that is most delightful to this being, the most natural form of expression. I say it like this only to emphasise that I don't think there is a *telos*, a goal, to creation. This creative play never stops.

Do you know the work of the Persian mystic, Jalalu'ddin Rumi, who says in one of his poems: “My amorous play with my favourite is the cause of all the veils I have made.”

That is lovely. You see, the trouble with teleology is that whether you have *a priori* causality or *a posteriori* causality, both are in a sense mechanical, in that they will chunter on and on and do their thing whatever happens. I don't believe the cosmos is like that. It is not a mechanism. If it had a *telos* it would know where it is going. But I don't think it's 'going' anywhere, except in the sense of expressing itself at every instant of time. It's an existential unfolding of creative potential.

Thank God it is not going anywhere. It is 'going' because it has to 'go', in the sense that organisms have to transform to be themselves, but it is totally unpredictable in the deepest sense. There is no way in which our rationality can encompass and circumscribe the set of the possible. We are sometimes accused of doing that in our work – when we talk about rationality and intelligibility people say "oh you mean there is only a finite set of forms." In the case of plants, there is a finite set of forms and we see this revealed as part of their expression, and therefore we try to understand them. But we can't make predictions about the totality.

What we can say is that whatever emerges will be intelligible, but it will also be new. This is a contradiction in the sense that if something is totally new, totally creative in every instant, it is not intelligible; but then we have talked about this mixture of the intelligible and the variable, the individual, and the two always go together.

Your work on what are called moving boundary problems seems very important in understanding this 'mixture'.

Yes indeed, the moving boundary is a good way of expressing the "unbounded potential for creative advance" that Whitehead talks about. The moving boundary is a creative advance. It carries its past with it – therefore its history is important – and its future: it has everything right on that moving boundary. It is always at these boundaries that things happen: one could say that life itself is lived on that existential boundary between self and other.

This comes back to what we understand to be the meaning and purpose of science. Neo-Darwinism sees it in terms of survival and domination, whereas Goethe's purpose in studying nature was the transformation of the one who was knowing.

We can approach this notion of the meaning of science by asking the question "What can a new biology contribute to a new consciousness and a new form of action in the world?" Well, the new biology gives us a model of a totality that is continually in the process of transformation. The organism, which is a reflection and an affirmation of this primal unity, then becomes a kind of metaphor through which we can understand process, transformation, cooperation, mutualism and subtle forms of interaction that are positive and beneficial.

The alchemical vision maintained that in the process of understanding, it is only possible to gain a deep comprehension of process if you yourself undergo transformation as you gain knowledge. This is the gnostic vision, and I have always found this transformational view to be the most relevant of all metaphors for understanding the role of science in society. Sure we use science, we use our knowledge, but in doing so we transform ourselves. We are not the detached observers, we are participants. I would agree with Owen Barfield, the writer and philosopher, who said that what we need is a participative consciousness.

It is interesting, I think, to consider that modern science and technology can be a great enabler in this process. Take the very sophisticated photography which has been developed in the past ten years which allows us to take stunning pictures of plants and animals. This has struck a chord with very large numbers

of people, because, I think, it shows us something about nature which we never knew before, something beautiful that actually enhances our awareness of the world. I felt similarly moved looking at some of your computer simulations of plant growth.

I think this sense of beauty is awakened because it is a science of qualities. The qualities of sound, colour and form are also the basis of music, painting and sculpture. The contemplation of form and its transformations excites the aesthetic sense; even deeper, it excites the sense of the sacred, because it is so beautiful and at the same time it is accessible if we approach it in the right way. So it invites participation, and that really does arouse the deepest sense of belonging. We belong in the world. As Dante said at the end of his journey in the 'Divine Comedy', we actually realise that we belong to this order of things – and from this comes our sense of meaning.

We take this long journey, separating things and trying to understand them; then we come back to where we started, to the notion of primal unity, and the sacred and mysterious quality of this process that we are all engaged in. It seems to me that is really where we end up. It leads us in the direction of a reconciliation and reunification of the arts and sciences. The science of quantities cuts us off from all those properties, but now a science of qualities brings us back much closer to that. Eventually – presuming we can drop the term science altogether – we can talk of knowledge, and we won't have separation of arts and science. We will have a truly integrated culture.

1. Organised by Scientific and Medical Network, May 1990.
2. For a good introduction to Goethe's science, see 'Goethe's Scientific Consciousness' by Henri Bortoft. Institute of Cultural Research Monograph, 1986.
3. See, for instance, 'Wholeness and the Implicate Order', Ark, 1980.
4. Cosmological discoveries over the past fifteen years have shown that the universe is extremely finely tuned. Minute differences in the values of fundamental constants, for instance, would have radically changed its nature, so that the formation of galaxies and stars, planets and ultimately life, would not have occurred. 'The Anthropic Principle' postulates that the explanation for this is the existence of observers (man, anthropos) in the universe. For a complete survey of the subject, see Barrow and Tipler 'The Cosmological Anthropic Principle', Oxford University Press, 1988.

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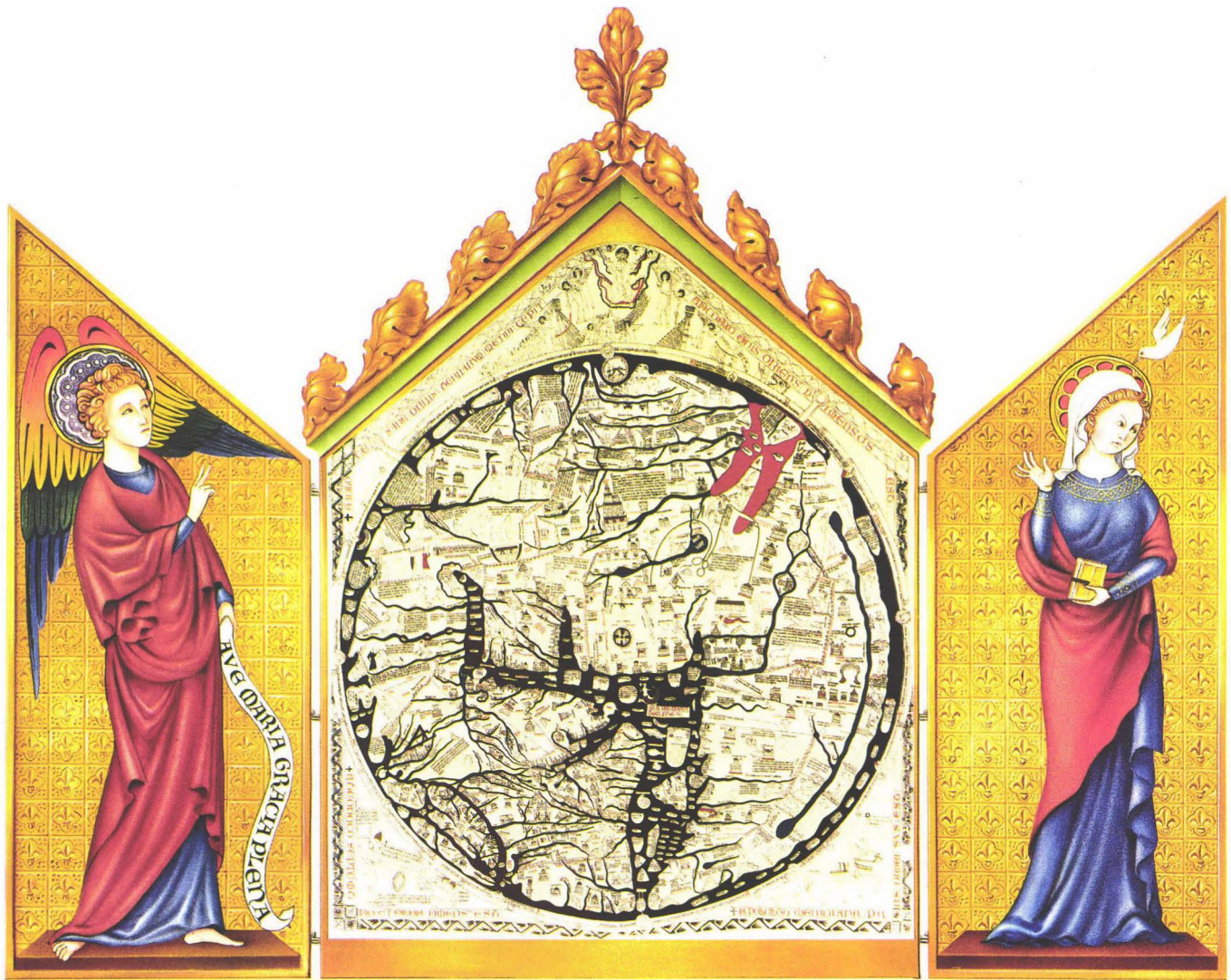
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THIS IS THE FIRE THAT BURNS WITHOUT DESTROYING. SHARE ITS WARMTH!



To be heard, read and seen

Cecilia Twinch investigates the tradition of Medieval world maps

HEREFORD Cathedral's 'Mappa Mundi' has been brought out of relative obscurity and into the public eye a great deal since 1988, when it was first announced that it was to be auctioned off to pay for restoration work on the cathedral. Public outcry has ensured that it will remain in England, following various schemes to save it. After several months on exhibition at the British Museum, the map has now been returned to Hereford where it is on display in the Treasury in the Crypt of the Cathedral. A recent Barry Fantoni cartoon showed two clerics exchanging the comment: "Perhaps we should sell off the cathedral to raise cash for the map." It appears that it is not until we are

afraid of losing a national treasure that we really come to value it. But what is so special about this seemingly quaint map, full of geographical inaccuracies and bizarre creatures, and what is its significance for us today?

History

The Hereford Mappa Mundi, valued by Sotheby's at £7 million, is the only complete surviving English medieval world wall map. Dating from the late 13th century, it represents the apogee of various traditions of world maps coming together. Other medieval world maps still exist, but they are either small versions found in books or incomplete fragments of wall maps, such as the Aslake World Map (c.1325-75)

Figure 1. Artists impression of the Hereford Mappa Mundi as it would originally have been displayed. Artist Hargrave Hands, courtesy of The Observer.

discovered in 1985, and the Duchy of Cornwall Map (c.1225-50), also recently discovered. Contemporary catalogues and chronicles mention various other *mappae mundi*, indicating that the Hereford map is only one example, perhaps not even the most skilful or outstanding one, of what is now emerging as a genre of medieval world maps (1), generated by the English who had the richest cartographic tradition in Europe, and following on from an established tradition derived from classical antiquity.

Peter Barber, deputy map librari-

ian at the British Library, who has been involved in much of the recent research into these extraordinary maps, told us that they served several purposes. "They were primarily intended for display, and they could either be displayed in royal palaces in a secular context, or they could be displayed on altars," he explained. "Nowadays, we tend to make nice, neat distinctions between the secular and the religious but people in those days didn't make those distinctions. The map's basic purpose was as a visualisation of the relationship of man to God and to the world, and at the same time it was a visualisation of contemporary human knowledge... World maps from other cultures, China, India, Babylonia reflect a similar desire to place oneself in one's universe".

The Map as Icon

As a splendid backdrop to audience chambers in palaces and castles (there is mention of such maps in the audience chambers of Henry III at Westminster and Winchester), a map of the world was probably a sort of medieval status symbol. It displayed an encyclopaedic knowledge of the world at that time so that it could also be used as a teaching aid, "to be heard, read and seen", as an inscription of the Hereford map points out. World maps were also known to have been housed at cathedrals and abbeys, and probably at other places of pilgrimage, such as the shrine of the Virgin Mary at Walsingham.

Recent discoveries have indicated that the Hereford world map was itself part of a religious icon. A drawing by John Carter, apparently commissioned in 1784 by the antiquarian Richard Gough, was recently re-discovered in the Department of Manuscripts at the British Library. It shows that the Hereford Mappa Mundi once occupied the central panel of a triptych with painted wings showing the Annunciation (See Figure 1).

A search of the former stables in the grounds of Hereford Cathedral then brought to light an ancient oak panel which clearly showed the out-

line of the map, marked out by the remains of hundreds of brass nails used to secure the vellum to the frame. The rich decoration of the frame, once covered in gesso and painted, the side panels gilded and the finely carved edges of the central panel once covered in silver leaf, indicate the importance of the work mounted on it. In a notebook dated 1770, now at the Bodleian Library in Oxford, Richard Gough remarked with reference to this, on "a very curious map, which formerly served as an altarpiece to the high altar".

Even more interestingly, in November 1989, the oak panel was carbon-dated, proving that the map and the frame were contemporaneous. So even though there is still some scepticism that the map was originally made and intended as an altarpiece, experts now agree that it was almost certainly mounted on the frame and displayed in a side chapel within a few years of its completion.

It may seem extraordinary that a map of the world should be depicted as part of the Annunciation, but a look at a facsimile of the Ebstorf World Map (Figure 2), probably

made in 1235 by the Englishman Gervase of Tilbury for a north German Duke, reveals an explanation. In this map, the world is shown as the body of Christ. His face, hands and feet protrude from the circle. Other world maps, such as the thirteenth century Psalter map, believed to be a copy of Henry III's Westminster map, show Christ's face and hands above the world, with the world as his lower body – strong reminders of the sanctity of the world, encompassed as it is by the image of Man in perfection.

The Meaning of the Map

The Hereford Mappa Mundi attempts to encompass all of creation. It shows the entire known inhabited world, illustrated and annotated with historical and mythical events throughout time – from Adam and Eve and the tree of Knowledge "eastward in Eden" to the end of time where, above the circle of the world, the resurrected Christ, stigmata still visible, sits in glory at the Last Judgement.

In the densely populated space, history, legend and belief are woven into a rich tapestry of world myth. Events vastly separated in time take place simultaneously, and references to classical legend, ancient history,

the Old and New Testament sit side by side with contemporary political events. For example, the new royal castles at Caernavon and Conway are depicted, recalling Edward I's campaigns in North Wales which were taking place in the 1280's when the map was being created. Meanwhile, Abraham's face looks out from a tabernacle in Ur of the Chaldees, the Red Sea is forever parted for the children of Israel to pass and on the other side Moses receives the tablets of the covenant.

Clearly, the place is only as important as its associations which give it a context, and geographical accuracy is subordinated to more comprehensive meaning – the place of man on earth and the history of mankind.

However, places are shown in relation to one another. The seem-

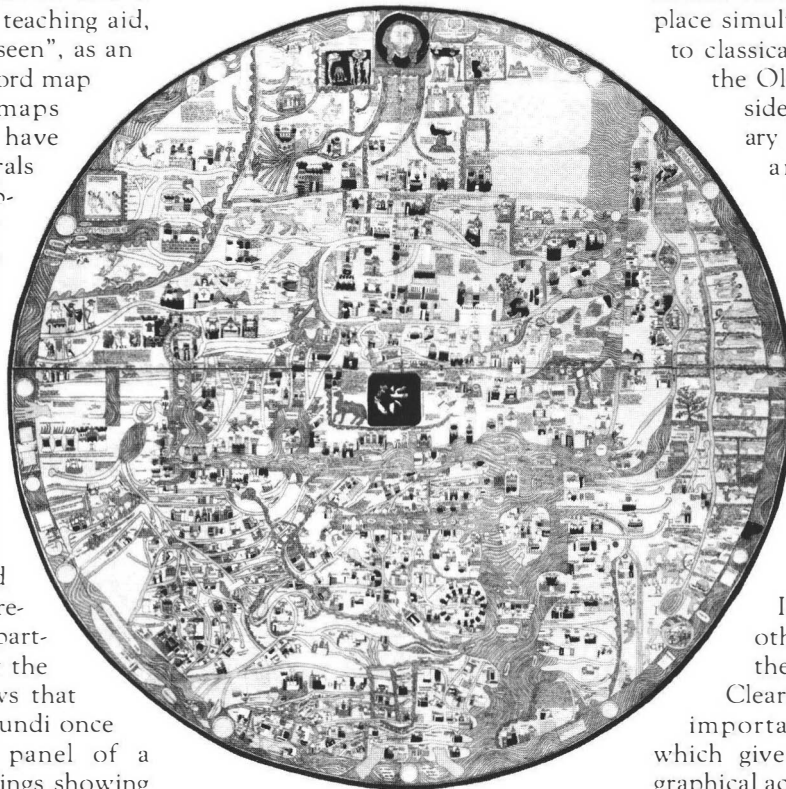


Figure 2. A facsimile of the Ebstorf world map, destroyed by fire in the second world war. Courtesy of the British Museum.

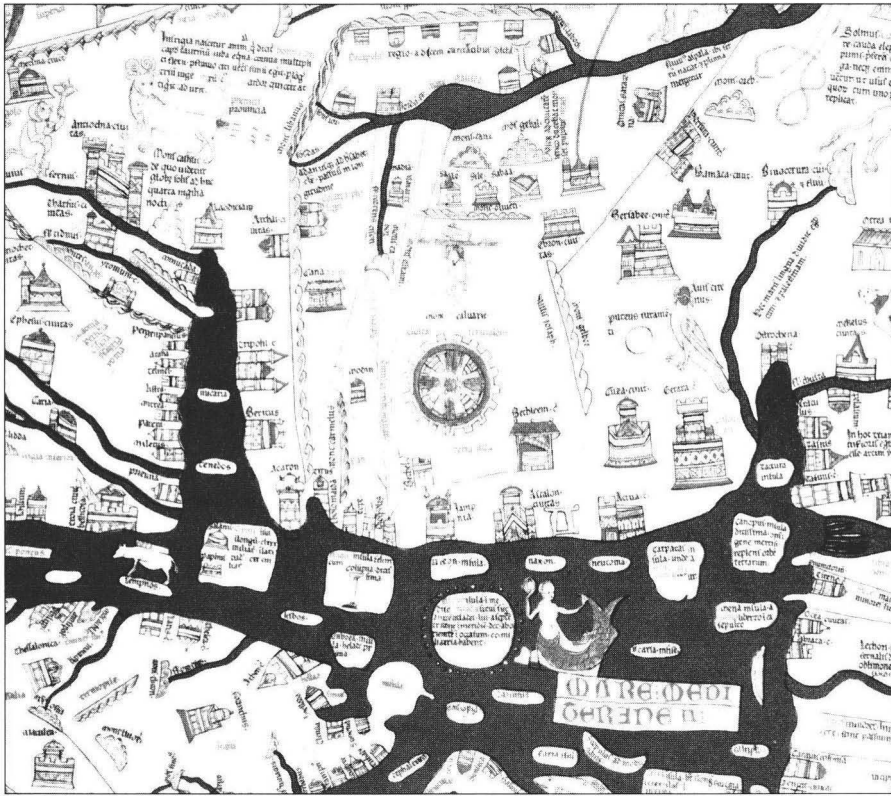


Figure 3. Detail of the Hereford Map, showing Jerusalem at the centre, and Christ crucified above. Courtesy of Wychwood Editions.

ingly arbitrary places marked often follow major military, commercial and pilgrimage routes; just as in a much less universal way, Henry Beck's world famous London tube map of the 1930s was regarded as revolutionary because it subordinated actual measured distances and directions to the meaning and purpose it was trying to achieve; ie. to make sense of the London Underground. The *mappae mundi* attempt to make sense of the world, and display the world-view prevalent in European culture at the time, although obviously with the natural bias of importance towards Christian belief demonstrated by the exaggerated size and placing of the Holy Land, and a preoccupation with the homeland beyond its actual size in relation to other countries. World maps from other cultures show similar bias.

The Hereford map is also crammed with textual information of every kind – biblical, historical, ethnographical, zoological and botanical – creating an illustrated compendium of the totality of contemporary knowledge. All the wonders of the world are shown, along with the fabulous peoples of

the East, traditionally depicted in Ethiopia at the extreme edge of the known world, beyond which, as an Anglo-Saxon Map puts it, lions abound (*"hic leones abundant"*). The educated Norman-French speaking upper class, for whom the map was intended, would have read the map much more easily than we can – and not just because their Latin and Medieval Norman-French were better, but because the symbolism of some of the illustrations would have been more obvious and immediate. For instance, a pelican stabbing herself in the breast with her beak would immediately have been recognised as the image of Christ's love – the selfless love of the pelican wounding herself to feed her offspring with her own blood. We, nowadays, with our more accurate scientific knowledge might say that the pelican is just collecting feathery down to line her nest and revealing her pink flesh beneath. Such interpretations evidently destroy the significance of the symbol and prevent us from breaking into the mystery it represents.

The World as a Circle

Apart from the re-ordering of space according to meaning, physical dis-

tortions also occur due to the exigency of fitting the world into a circle. Other medieval maps, such as the Anglo-Saxon world map of c.1100, which is set in a square, show that the coastline of Great Britain, for example, was known fairly accurately at that time. Its representation in the bottom left-hand corner of the Hereford map might give one a different impression. However, it was pointed out by Peter Barber that in a map made as recently as 1969, Great Britain suffered very similar distortions at the hands of Soviet cartographers struggling to accommodate the eastern hemisphere in a circle!

The roundness of the world held a symbolism in itself, such as the orb, representing worldly power, held by monarchs. Some of the earliest cosmological maps are on circular shields; Achilles' shield, as described by Homer in 'The Illiad', shows an early world view with the world encompassed by "the mighty stream of the ocean" – a tradition which the Hereford map continues. The world is still encircled by the ocean with the table of winds around it. This could be related in Christian terms to the creation of the world in Genesis which begins with the Spirit of God moving upon the face of the waters, and could likewise be associated with the conception of Jesus.

To the medieval mind, plagiarism and individualism were alien concepts. Building on tradition, both in structure and content, gave extra authenticity. Maps were copied, often taking from several sources, added to and embellished. Sometimes copyists' errors were compounded from map to map, as scribes did not always understand their subject matter, which would explain some of the muddled references and garbled inscriptions.

Reference to this tradition of world maps is made explicitly on the bottom left-hand corner of the decorative surround of the Hereford map, where Caesar Augustus is ordering a survey of the world (probably confused with Julius Caesar in this case although Caesar Augustus did also order a survey). This may be a reference to a large world map in a portico near the Capitol in Rome at the time of Christ, of which there are various written descriptions. It was from this tradition that the medieval English-

inspired maps were derived. The Anglo-Saxon map of c.1100 still has Delos, sacred to the Greeks as the birthplace of Apollo and Artemis, as the centre of the world but by about 1120 the Christian view prevailed, as monks and scholars struggled to reconcile classical history and learning with Christian teachings. In the Hereford Mappa Mundi, the castelated walls of Jerusalem are at the centre of the map like a cog, the spiritual centre about which the world turns. The crucifixion is depicted above and the stable at Bethlehem, representing the birth of Christ, below.

Importance

The Hereford map is thus a representation of the 'ecumen', the inhabited world. Seven hundred years on, we interpret the world in a very different way. What is significant about the Hereford Mappa Mundi is that it situates the world not just in a physical, geographical context, nor in any other context of worldly information, but in a spiritual context which points to the meaning and purpose of life on earth. It therefore

provides a comprehensive view, and is of particular interest in a time like ours, which is having to re-find such a vision.

But the national and religious bias, particular to its own time and place, render the *mappae mundi* insufficiently comprehensive for our age. We have now taken a step back, out of our previous framework – a fact which is dramatically represented in Toynbee's 1972 edition of 'A Study of History'⁽²⁾, by contrasting a medieval world map with a photographic view of the earth from space. The former, comments Toynbee, symbolised 'a partial view' whilst the latter symbolises a 'universal view' which is "opening the way for Man to achieve an 'ecumenical' vision of all the cultures he has created."

As for keeping the map in its country of origin: the latest plan is to build a library to house both the Hereford Mappa Mundi and the cathedral's collection of chained books – which is the largest medieval chained library in the world, including 227 manuscripts, dating from 700 AD onwards, and 1444 printed

books including a Caxton Bible and a Cider Bible. The project will be funded with £2 million offered by the National Heritage Memorial Fund and a further £1 million promised by John Paul Getty III. The Hereford Mappa Mundi Trust has recently been formed to oversee the project and only awaits the enthronement of the new Bishop designate, John Oliver, in December 1990, before further action can take place. The Trustees will also be concerned with raising funds for the cathedral, which is in the same financial position as it was before all the publicity began.

(1) See 'The Aslake World Map' by Peter Barber in *Géographie du Monde au Moyen Age et a la Renaissance* ed. Monique Pelletier. Publ. Éditions du Comité de Travaux Historiques et Scientifiques. 1989.

(2) Illustrated, one volume edition, Thames and Hudson 1972.

Cecilia Twinch studied Medieval French at Cambridge University. She now teaches in Ipswich and is an editor on BESHARA magazine.

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Muhyiddin Ibn 'Arabi

The Treasure of Compassion

Stephen Hirtenstein celebrates the contribution of the great Andalusian mystic, who died 750 years ago this November

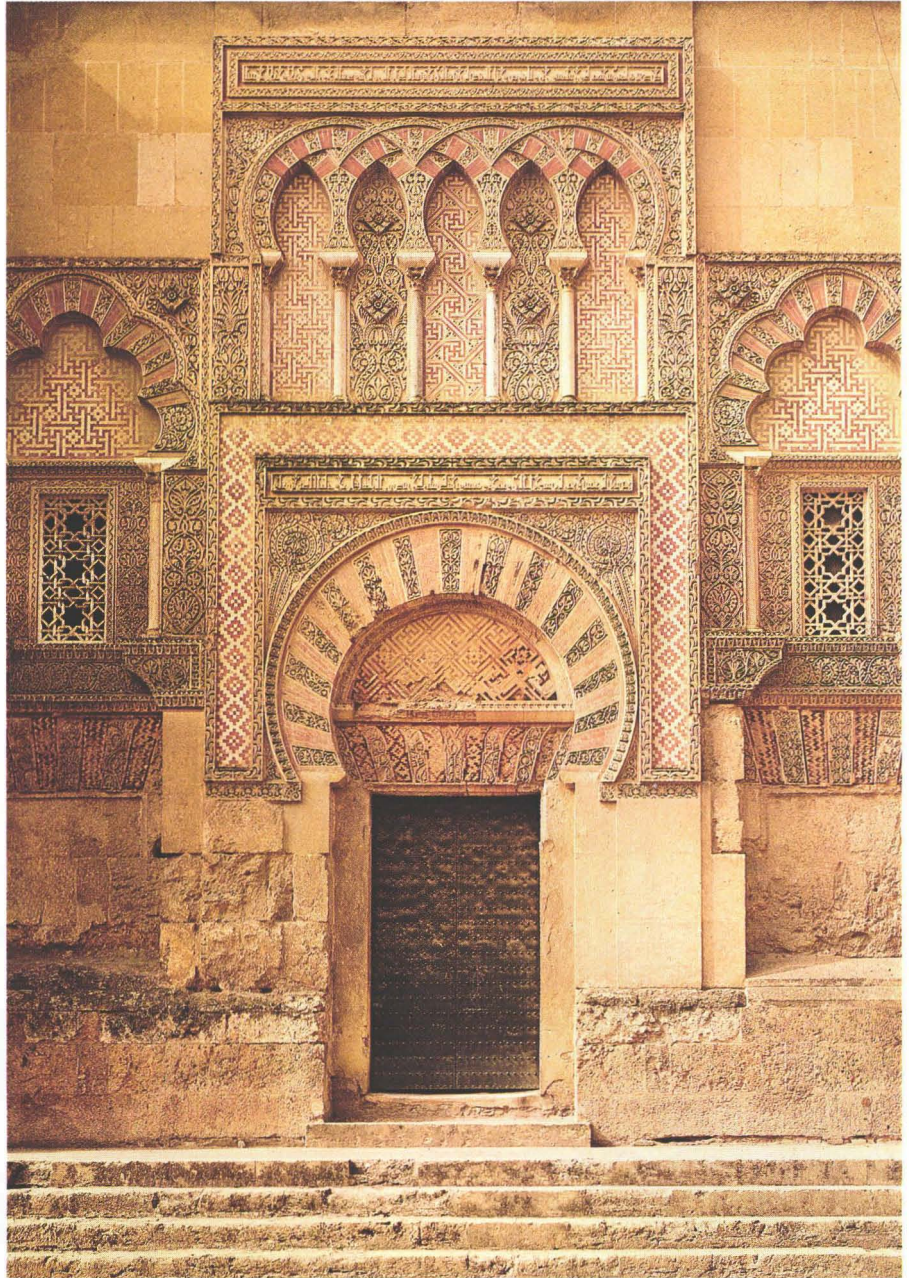
O Marvel! a garden amidst the flames.
My heart has become capable of every form:

it is a pasture for gazelles and a convent
for Christian monks,
and a temple for idols and the pilgrim's
Ka'ba,
and the tables of the Torah and the book
of the Quran.

I follow the religion of Love: whatever
way Love's camels take,
that is my religion and my faith. (1)

MUHAMMED Ibn 'Ali Ibn 'Arabi was born in Murcia in southern Spain in 1165 AD (560AH), at the time of the flowering of the Hispano-Arab culture. Since the invasion of the Iberian peninsula by the Moors in 711 AD, the southern half of Spain had been 'arabised' under Islamic rule, and Arabic became the common language of all educated people. Here in 'al-Andalus' the three major traditions of Judaism, Christianity and Islam flourished side by side in some measure of harmony, and there were many who regarded them as different roads to the same end. It was an immensely rich and talented world, as we can still see today in buildings like the Alhambra in Granada, or the Great Mosque at Cordoba; a world where the great classics of Greek literature, especially Aristotle and Plato, were translated (first into Arabic and then into Latin) and studied alongside the spiritual teachings of the three Abrahamic religions.

Ibn 'Arabi grew up in an atmosphere steeped in the most important ideas – scientific, religious and philosophical – of his day. At a time when mass communication was non-existent, this was an essential ingredient in the formation of one of the most brilliant minds in the Western world. As the poem above demonstrates, Ibn 'Arabi was not content with simply knowing about things, nor with following a particular way.



The doorway of the Great Mosque of Cordoba, where Ibn 'Arabi would have gone to worship. It was one of the masterpieces of Moorish architecture, and the interior, with its spectacular red striped columns, can still be seen today. After the reconquest, the mosque was taken over by the Christians. Courtesy of Scala, Florence.

Although many writers have characterised him as a great Sufi teacher firmly rooted in the Islamic world, it would be wrong to limit his appeal to a muslim audience or to see him simply as a great medieval thinker. His sole and overriding aim was to know reality as it is, in whatever way it is depicted. Naturally he expresses

himself within the cultural context he knew, but he takes for granted that his readers will have the same unflinching, one-pointed attitude of passion for the truth, and his writings have a very contemporary ring. "All that is left to us by tradition", he writes, "is mere words. It is up to us to find out what they mean".

This passion manifested itself at a very early age. During his teens, like many adolescents before him and no doubt since, he used to divide his time between being a serious student – studying the Quran, Islamic law and so on – and having a good time with his friends. In the middle of one of these nightly parties in Seville he heard a voice calling to him, “O Muhammed, it was not for this that you were created”. In consternation he fled and went into retreat for several days in a cemetery. It was here that he had his seminal triple vision in which he met, and received instruction from, Jesus, Moses and Muhammed – an illumination that simultaneously started him upon the spiritual way and established him as a master of it. This vision took place in the *mundus imaginalis*, the imaginative presence where God reveals Himself directly to the spiritual aspirant; and throughout his life Ibn ‘Arabi was to receive many illuminations of this kind. From this initiating insight he embarked upon the journey of his life; a journey that would not only take him from one end of the Arab-speaking world to the other, but would also reveal the full intensity of the most remarkable spiritual life, which through his writings has affected, shaped, transformed all who come into contact with it.

Principle of Unity

It is difficult to convey anything but inklings of Ibn ‘Arabi’s teachings, since from whatever point of entry one begins, with whatever point of view one holds to be true, it is like stepping into an ocean. As in the case of Bach, even the quantity of his literary output is staggering – some 700 books, treatises and collections of poetry, of which perhaps 400 still survive (one, the ‘Futuhât al-Makkiyah’ (The Meccan Openings) is estimated to run to 17,000 pages in its new edition!). But the problem is not really the sheer volume of work, which would require a lifetime or more to study – it is the extraordinarily high quality of the material which makes tremendous demands upon the reader.

We are given a key to understanding, however, in the triple vision of the three great prophets of the Western world – for to Ibn ‘Arabi these three bring the same message, the same essential religion of love. He considers all prophets

and saints to be explainers of this primordial religion:

“There is no knowledge except that taken from God, for He alone is the Knower... the prophets, in spite of their great number and the long periods of time which separate them, had no disagreement in knowledge of God, since they took it from God.” (2).

Ibn ‘Arabi’s vision points precisely to this direct taking from God, in which there is unanimity across all traditions. In the West, this has sometimes been referred to as the Abrahamic tradition, since it is from the revelation given to the prophet



مخطوط قونية بخط المؤلف النسخة الثانية للفتوحات المكية

The first page of ‘The Futuhât al Makkiyah’. Manuscript of Konya, handwritten by Ibn ‘Arabi.

Abraham that the three religions of the Western world flow. (3). The cardinal point in the Abrahamic perspective is the meaning of monotheism, which has been much misunderstood and to which too little attention has been paid. In this tradition, God is not understood to be a Being, or even the Supreme Being above and beyond the universe, for both conceptions imply that there are other beings outside Him. What is meant by God is simply Being as such. This cannot ever become an object of knowledge or contemplation or thought; it can only be known as unknowable, but simultaneously it presents itself as both knower and known, contemplator and contemplated, lover and beloved. As Ibn ‘Arabi puts it:

“... the existence attributed to the created thing is the Being of God, since the possible has no existence.

However, the essences of the possible are receptacles for the manifestation of this Being... For the verifiers it has been established that there is nothing in Being but God”. (4)

Thus the fundamental ‘Semitic’ insight is that ultimately the ground of all things, in whatever sphere, is one; and ‘things’, be they the largest mass or the tiniest subatomic particle, are a perpetual state of becoming of that One. There is immediate contact between each thing and its reality, so that each receives Being according to its degree of preparedness; a bee, therefore, determines its own creation as a bee. This is not just an ontological fact, intellectually acceptable as a premise yet without application; there is also – and more importantly perhaps – common ground, in human experience, of discovering this to be true. Each and every life, whether consciously or not, is a voyage of discovery of what this unity of being really means.

The whole of the spiritual life begins, Ibn ‘Arabi would say, in the realisation of this fact, and ends in it. What lies between is the discovery of how this is so at every instant, in the intimate heart of each individual being. So the discovery of God is equally the ceaseless self-discovery of the individual. The world is no longer static, but the dynamic theatre of the Divine manifestation, and every movement in it is essentially a movement in love of God. It is simultaneously “He and not He”, as Ibn ‘Arabi says, just like the image of a person in a mirror. The particular quality that he often employs in his writings is that of the constant interplay of paradox, similar to the Zen *koan*, to force the mind to reach its limit so that the truth may be seen without limitation.

Philosophy and Insight

It is this paradox which is beautifully described in a meeting between Ibn ‘Arabi and the chief judge of Seville, the celebrated jurist and philosopher Ibn Rushd (known to the Latin West as Averroes, who wrote a famous commentary on Aristotle).

“I spent the day in Cordoba at the house of Abu al-Walid Ibn Rushd. He had expressed a desire to meet me in person, since he had heard of certain revelations I had received while in retreat and had shown



Some of the many places Ibn 'Arabi is known to have visited on his journeys, with dates.

considerable astonishment concerning them. In consequence my father, who was one of his closest friends, took me with him on the pretext of business, in order to give Ibn Rushd the opportunity of making my acquaintance.

"I was at the time a beardless youth. As I entered the house, the philosopher rose to greet me with all the signs of friendliness and affection, and embraced me. Then he said to me "Yes", and showed pleasure on seeing that I had understood him. I, on the other hand, being aware of the motive for his pleasure, replied "No". Upon this Ibn Rushd drew back from me, his colour changed and he seemed to doubt what he had thought of me. He then put to me the following question, "What solution have you found as a result of mystical illumination and divine inspiration? Does it coincide with what is arrived at by speculative thought?" I replied "Yes and no. Between the Yea and the Nay the spirits take their flight beyond matter, and the necks detach themselves from their bodies".

"At this Ibn Rushd became pale, and I saw him tremble as he muttered the formula 'there is no power save from God'. This was because he understood my allusion... After that he sought from my father to meet me in order to present what he himself had understood: he wanted to know if it

conformed with or was different from what I had. He was one of the great masters of reflection and rational consideration. He thanked God that in his own time he had seen someone who had entered into the retreat ignorant and had come out like this – without study, discussion, investigation or reading". (5)

The difference between Ibn 'Arabi and Ibn Rushd is not that between the unworldly, unlettered mystic and the erudite philosopher. Ibn 'Arabi was neither unworldly nor unlettered in any orthodox sense. (6). He was extremely well-versed in the philosophical thinking of his time, and many of his books deal quite specifically with philosophical problems. The real difference lies in the way in which knowledge is reached, whether by reflective thinking or by mystical insight. This is graphically depicted in a second meeting, this time in a vision which Ibn 'Arabi had:

"A thin veil separated me and him in such a way that I was able to see him while he was unable to see me and ignorant of my presence. He was so absorbed that he paid me no attention and I said to myself 'He is not destined to follow the same path as me'". (7)

Philosophical wisdom, it is implied,

is based on reflection, and limited to the divided and personal realm of the 'Yes' and the 'No'; whereas mystical wisdom is founded on direct experience – often referred to as 'taste' – and is as incontrovertible as the acts of sense perception. The reality of the 'thin veil' between the two is only seen from the side of the mystical contemplation, although the possibility can be admitted philosophically. But Ibn 'Arabi would be the first to confirm that all human beings have this self-same capacity for mystical wisdom, just by the sheer fact of being human. It is not the privilege of a select few but open to all who choose it. What he strives for is the complete integration of the human being, with all his or her faculties, upon the task of fulfilling "that for which you were created".

The Spiritual Path

As a young man Ibn 'Arabi put himself under the direction of various spiritual masters, both in southern Spain and elsewhere, but always there was a slightly ambiguous relationship between master and pupil. In one way he was required to learn all he could from those whose experience of the spiritual path was greater; in another way, his innate spiritual understanding and ability to learn commanded tremendous respect. Among the

many gnostics that he mentions in his book on the Sufis of Andalusia was a woman called Fatimah:

"She lived in Seville. When I met her, she was in her nineties. Looking at her in a purely superficial way, one might have thought she was a simpleton, to which she would have replied that he who knows not his Lord is the real simpleton.

"She used to say 'Of those who come to see me, I admire none more than Ibn 'Arabi'. When asked the reason for this, she replied 'The rest of you come with part of yourselves, leaving the other part of you occupied with your other concerns, while Ibn 'Arabi is a consolation to me, for he comes with all of himself. When he rises up, it is with all of himself, and when he sits it is with his whole self, leaving nothing of himself elsewhere. This is how it should be on the Way' ". (8).

When reading this or other episodes of his life, one is immediately conscious that Ibn 'Arabi is not simply tossing out an anecdote about his own experience, but exhorting others to learn from it.

By the time he left Spain in 1200 at the age of 35, never to return, Ibn 'Arabi was already renowned as a spiritual master, and his knowledge and state were of an extremely high order. The Andalusia that he left behind was gradually engulfed by the Christian *reconquista*, and even today little is understood or appreciated of the achievements of Moorish Spain. The Middle East into which he now travelled was struggling to consolidate the apparent stability that Saladin had snatched out of the chaos of the Third Crusade. Egypt, Syria, Iraq and Palestine were united somewhat flimsily under one flag.

Ibn 'Arabi made his way via Cairo and Jerusalem to Mecca, where he performed the pilgrimage in 1202. There he spent some two years in the company of the most influential and learned families in the city, studying and writing. It was here that he was inspired to compose his famous collection of poems, the 'The Interpreter of Desires' – love poems that give astonishing insight into the moods and conditions of the spiritual path. Many people were scandalised by their apparently erotic and sensuous imagery, and he was compelled to write a commentary on them in his own defence. It is

Books by Ibn 'Arabi

Selected by Martin Notcutt

Wherever you touch upon Ibn 'Arabi's work, you are sure to find that which is fresh and original. For someone approaching his writings for the first time, *Sufis of Andalusia* (Beshara Publications, 1988) translated by Dr R. W. J. Austin, is a good place to begin. Drawing on two different works, Dr Austin has presented a series of vivid sketches of about seventy people, from whom, Ibn 'Arabi says, "I have derived benefit in the way of the hereafter". Most of these people came from Spain and Morocco, where Ibn 'Arabi lived until he was in his thirties. Each was a person of strong spiritual direction, and the book contains many thought-provoking stories which give a real taste of the 'way' which Ibn 'Arabi followed. The introduction also contains the most extensive biography currently available in English.

The recently published *La Quete du Soufre Rouge* (Gallimard, Paris, 1989) by Claude Addas is the first systematic attempt at biography. This has collected a great deal of material from his writings to produce a readable account of his life and times, including much information not published before. A translation into English may be hoped for soon. Readers with a good grasp of French may also wish to try *Le Sceau des Saints* (Gallimard, Paris, 1986) by Michel Chodkiewicz, which is an examination of the meaning of sainthood and prophethood in the works of Ibn 'Arabi inseparable from the man himself. Also concerned with his life is *The Creative Imagination in the Sufism of Ibn 'Arabi* (Princeton University Press, 1969) by Henry Corbin, a dramatic and interpretative work by a generous scholar with a special sympathy for Iranian philosophy.

MORE STUDIES AND translations of works by Ibn 'Arabi have appeared in French than any other European language. In many cases, however, the translations have been of short works, and were circulated among a limited group of people. They are hard to obtain. When it comes to the better known works, there may now be a better sample available in English. *The Tarjuman al Ashwaq* (Interpreter of Desires) (Theosophical Publishing House, London, 1978) is a book of love poetry, translated by R. A. Nicholson in 1911. It includes the Arabic text and some of Ibn 'Arabi's own commentary upon the poems, written in response to the objections of people who thought they were profane.

The 'Futuhât al Makkiyah' (the Openings at Mecca) is an encyclopaedic work which comprises four very large volumes in the Arabic printed edition. It is only in the past year that any extensive translation from it has become available in a European language, and even this only amounts to a fragment of the total. *Les Illuminations de La Mecque* (Sinbad, Paris, 1989) contains passages in both English and French from a group of five scholars under the editorship of Michel Chodkiewicz. In some cases, these are whole chapters. *The Sufi Path of Knowledge* (State University of New York Press, New York, 1989) by William Chittick contains many shorter extracts,

arranged under different themes. We stand at the edge of a big expansion of modern scholarship on this subject, and these works on the 'Futuhât' reflect the strengths and weakness of the main contributors in the field at this time. As a contrast, *The Kernel of the Kernel* (Beshara Publications, 1982) is a translation of passages from the 'Futuhât', interspersed with commentary by the 18th century Shaykh of the Jelveti order, Ismael Hakki Bursevi. It is one of the most poetic and accessible of the available books.

The 'Fusus al-Hikam' (The Bezels of Wisdom) has so far had six translations or partial translations printed in English, and, like the Tao Te Ching, it will attract more. Three of these warrant mention. The first is Titus Burckhardt's translation of 12 of the 27 chapters, originally in French, put into English by Angela Culme-Seymour as *The Wisdom of the Prophets* (Beshara Publications, 1975). This is an elegant translation which continues to provide a good introduction. *The Bezels of Wisdom* (SPCK, London and New York, 1980) is a full translation by Ralph Austin, of great value but unfortunately difficult to obtain at this time. The four-volume translation by Bulent Rauf, *The Fusus al-Hikam* (Muhyiddin Ibn 'Arabi Society, Oxford, 1985) incorporating a lengthy commentary by Ismael Hakki Bursevi, is pitched at a level which is not attempted by other translations in European languages. This is not necessarily the place to begin one's study, but conveys in a unique way the majesty of the 'Fusus'.

THE GROWING INTEREST in the West in Ibn 'Arabi was echoed by the formation of the Muhyiddin Ibn 'Arabi Society in 1977. The Society has two branches, one in England and one in America, both of which hold annual symposia. It publishes an annual *Journal*, which includes translations, studies, reviews of recent publications, etc.

Two short works which enjoy wide readership are *Mystical Astrology According to Ibn 'Arabi* (Beshara Publications, 1977) by Titus Burckhardt and *Journey to the Lord of Power* translated by Rabia Terri Harris (East-West Publications, 1981). This latter is a translation of a treatise on the practice of retreat, whilst the former is a distillation of Ibn 'Arabi's writings on astrology, which takes the matter to its root.

It would be difficult to understand a book by Ibn 'Arabi without accepting his fundamental premise – that there is in existence only one Being. A singular introduction to this theme is the book called the 'Treatise on Unity' (published as *Whoso Knoweth Himself* (Beshara Publications, 1976)). Some scholarly opinion now holds that this was not in fact written by Ibn 'Arabi, but it will serve, nonetheless, for the reader who wants understanding, for it is true to the spirit of his thought.

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fortunate for us that he did so, since his comments do much to illuminate the extraordinary depth of meaning that he brings to bear on poetic images.

Writings

Much of his time in Mecca must have been occupied in writing – several major works were completed, and a start was made upon the enormous encyclopaedia of esoteric knowledge, the 'Futûhât al-Makkiyah'. Apparently while writing this he used to fill three notebooks a day, wherever he happened to be. This process must have gone on for the best part of 30 years, since the first edition or redaction was not finished until 1231. It is interesting that all his work seems to have sprung from the same maturity of vision. There is no sense of progression in understanding from one work to the next, simply a shift of focus according to the nature of the topic and the audience. His works therefore have the rich flavours of a master chef displaying the full range of tastes in his kitchen. This may in part be explained by the manner in which he wrote. As he himself describes:

"In what I have written, I have never had a set purpose, as other writers. Flashes of divine inspiration used to come upon me and almost overwhelm me, so that I could only put them from my mind by committing to paper what they revealed to me. If my works evince any form of composition, that form was unintentional. Some works I wrote at the command of God, sent to me in sleep or through a mystical revelation... My heart clings to the door of the Divine Presence, waiting mindfully for what comes when the door is opened. My heart is poor and needy, empty of every knowledge. When something appears to the heart from behind that curtain, the heart hurries to obey and sets it down in keeping with the prescribed limits". (9).

Nowhere is this principle more evident than in the 'Fusûs al-Hikam' (Wisdom of the Prophets) which, though relatively short, has been called by one modern scholar 'the spiritual testament of the master'. It

is an extended meditation upon the meaning of the major prophets as portrayed in the Quran. Ibn 'Arabi tells us in the introduction that he received the whole book in a veridic



The tomb of Ibn 'Arabi as it is today, in Damascus.

dream from the Prophet Muhammed, who told him "This is the book of the Fusûs al-Hikam; take it and bring it out to the people who will benefit by it".

If the 560 chapters of the 'Futûhât' can be compared to an encyclopaedia, which details every aspect of the spiritual life – the meaning of Islam, events in the life of the Prophet, the Quran and Hadith, principles of jurisprudence, the constitution of the human being, the path by which human perfection may be realised, cosmology, the role of political institutions, etc, etc – then the 'Fusûs' can be seen as a single world map of Divine Wisdom, where each prophetic country is displayed in its global setting. Obviously the book treats of the Semitic heritage from Adam (who is considered in Islamic esotericism as the prototype of the human being) to Muhammed, without venturing into the teachings of the Far East. Here there is certainly a rich area of study for future generations, to see what Ibn 'Arabi has to offer in terms of the wider ecumenism of world spirituality.

Influence

The 'Fusûs al-Hikam' in particular played a central role in the succeeding Islamic tradition, and inspired several commentaries which are classics of mystical literature in their own right. Through his stepson and disciple, Sadruddin Konevi, his teachings flowed into Eastern Sufism, notably to Fakhruddin 'Iraqi, Jelaluddin Rumi and Abdul Karim al-Jili. According to some scholars, much of Dante Alighieri's writing

was influenced by Ibn 'Arabi's exposition of the spiritual quest, whilst in recent times, with the advent of several translations, his work has begun to be read more widely in the West. As Dr Austin of Durham University, a student and translator of Ibn 'Arabi' has put it:

"Ibn 'Arabi gave expression to the teachings and insights of the generations of Sufis who preceded him, recording for the first time, systematically and in detail, the vast fund of Sufi experience and oral tradition, by drawing on a treasury of technical terms and symbols greatly enriched by centuries of

intercourse between the Muslim and Neo-Hellenistic worlds... all who came after him received it through the filter of his synthetic expression". (10).

The fact that his work is situated on such a universal level is especially relevant in our own time where there is, on the one hand, a great danger of throwing the baby out with the bath water, of abandoning all religious tradition and practice in the striving for an understanding appropriate to the modern world; while on the other hand there is a tendency to remain in the bath for too long, in the apparent security of a form or belief. "The man of wisdom," Ibn 'Arabi reminds us, "will never allow himself to be caught up in any one form or belief, because he is wise unto himself". (11)

Later Years

Having travelled extensively for nearly twenty years, visiting Jerusalem, Baghdad, Konya, Aleppo, Ibn 'Arabi finally settled in Damascus in 1223 and made it his home for the last 17 years of his life. His influence and fame had spread far and wide throughout the Arab world, and he was named as the Shaykh al-Akbar, the Greatest Master. His students included people from all walks of life, including kings and beggars. One particular man lived in Egypt, but found the conditions there unbearable, so he walked all the way to Damascus, a distance of some 500 miles. When he arrived, he was addressed by the Shaykh with the following poem:

"There are places which offer but scant consolation while others offer one great delight. However, make the Lord the mainstay and refuge of your soul, wherever and however you may be". (12).

Ibn 'Arabi was by no means afraid to get involved in the social and political life around him. Not all was plain sailing, however, as he often came into conflict with the religious authorities and once was even forced to leave Egypt to avoid accusations of heresy and possible execution. Indeed this attitude has lasted until our own time as well – the Egyptian government banned his works in the 1970s, and in many Islamic countries they remain quite inaccessible. But in his own day he formed good and influential relationships with several notable rulers. One of them, Zahir the king of Aleppo, had wanted to execute a man of his court for revealing a state secret, and when Ibn 'Arabi heard about it, he said to the king: "You imagine you have the dignity of kingship and that you are a Sultan! By God, I know of no sin in the world which is too much for me to forgive, and I am only one of your subjects. How is it then that you cannot bring yourself to forgive a crime which is no transgression according to God's Law? Indeed your kingly magnanimity is meagre indeed". At this the king was overcome with shame and set the man free.

Ibn 'Arabi died in Damascus on November 16th 1240 AD (638AH), aged seventy-six. His vast achievement has had enormous repercussions throughout the Islamic world and beyond. It would belittle his greatness to limit his message to Muslims in any strict sense, unless we were to take the word Muslim in its literal meaning – as Ibn 'Arabi so often encourages us to do – ie. those who have surrendered their will to the will of God. The universal character of his teachings makes them superlatively appropriate to the present day. As one eminent professor of semitic studies remarked to me recently, after reading Ibn 'Arabi you read the Greeks differently. One might add without fear of exaggeration that for any sincere seeker after truth, after you read Ibn 'Arabi you read all things differently. The religion of Love that



A late 16th century Persian miniature, of the Safavid period, representing Ibn 'Arabi on horseback with two students. Courtesy of the Bodleian Library, Oxford.

he so ardently professes is founded on reason, but it is not just a brilliant metaphysical exposition, as some people have characterised it, nor a theory to rival or supersede other theories. It is, for Ibn 'Arabi, the essential human birthright and prerogative, and his whole life was dedicated to the verification and explanation of what it means to be truly human. In his own words:

"God appeared to me in the inmost heart of my being and said to me "Make known to My servants that which you have verified of My generosity... Why do My servants despair of My Mercy when My Mercy embraces everything?" (13)

1. 'Tarjuman al-Ashwaq'. Theosophical Publishing House, 1911. Poem XI.
2. 'Futūhāt al Makkiyah' II. 290. (Trans. W. Chittick, 'The Sufi Path of Knowledge'.)
3. The family of Abraham is meant both historically and spiritually; the Prophet Muhammed said that he had come to purify

- the religion of Abraham, and Jesus said "Before Abraham was, I am".
4. Futūhāt II. 69. (Trans. Chittick, as above)
 5. See 'Sufis of Andalusia' transl. by R. W. J. Austin, 1971. Reprint Beshara Publications, 1988. p23.
 6. The real 'unlettered' person, Ibn 'Arabi says, is someone who "does not use rational proofs to attain to the knowledge of divine things." (Futūhāt I. 644)
 7. Futūhāt I. 154. (Trans. C. Addas, 'La Route pour la Soufre Rouge'.)
 8. 'Sufis of Andalusia', p143.
 9. 'Sufis of Andalusia' p48. And Futūh I. 59. (Trans. Chittick)
 10. 'Sufis of Andalusia', p48.
 11. From 'The Kernel of the Kernel', Beshara Publications.
 12. An unpublished poem from Ibn 'Arabi's 'Diwan', courtesy of Dr Austin.
 13. Futūhāt I. 709. (Trans. Addas, as above)

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Means of Expression

Christine MacNulty talks about her work as a futurist



Photograph by John Farnham

Christine MacNulty, managing director of Applied Futures Ltd. which is based in London, has been working in futures for 23 years. "A futurist," she explains, "is somebody who looks at emerging trends and developments so that he or she can advise on what needs to be done today. Our business is to identify those issues which are going to be important in the future so that our clients know what they need to be doing in order to mould their organisation in the right way."

Applied Futures has been involved in the decision making processes of commercial and government organisations in many countries of the world. The kind of projects the staff have been involved with include: developing scenarios for the future of healthcare in the USA for a pharmaceutical company; identifying new products and services for the 'Home of the Future' for a consortium of companies; and, in conjunction with UNESCO, developing a long-term vision for Brazil.

FUTURES RESEARCH really grew out of military technology forecasting. That is how I came into it. I studied mathematics at university, and went on to work in military electronics – radar – which at that time was at the leading edge of technological development. Whilst participating in a project for NASA, I was involved in the first feasibility study for the space shuttle. Then, as Department of Defence funds began to dry up after the Vietnam War, the techniques which the military had developed began to be applied to other areas. Initially, I went into other high-tech companies – chemicals, electronics, pharmaceuticals and so on – and it was there that I began to realise that you can't forecast technology on its own. You have to look at it in a much broader context of social, political, economic and financial change. Then I realised that if people neither wanted to consume certain articles, nor work with technological processes, then the technology would not happen the way the

technologists thought. So I became interested in many other things – the whole business of social change and why it was happening and that led on to psychology, philosophy, history and so on.

We futurists are always looking for new ideas, new thoughts, new developments, and then we put them together in a way that makes a story. We are both artists and scientists, because we have to understand data and technology, and at the same time see how those things fit into society – how they fit into the business world, in which case we are looking at finance and economics, and how they fit into the political scene, etc. So we are generalists who take all these ideas, perhaps generate a lot of our own, then go to our clients and say, have you thought of this? have you considered what would happen if...? and come up with a scenario.

Because of the nature of our business, we are looking at things that are at the very cutting edge of different fields, be it science or technology or social change or psychology or economics. We are helping to inform industrialists and people in government about these things, because they are usually so blinkered or so focussed on their day to day activity that they may not be aware of them all.

And then, perhaps more importantly, we help people to use this information; we get them to think through for themselves what the implications are for their own organisation, for their own part of that organisation, for their own way of life. We also help our clients go through the process of change, because if we're working with them and they say, gosh, all this means that we need to be in a different business or we need to change our direction, then there is the question of how they are going to achieve the transition.

Every decision that anybody makes has some future to it. But most people make decisions on the basis of whatever bits of data they can get hold of and their own

intuition. What we try to do is present them with a bigger picture and help them to take into account a much, much broader range of things which they might not have seen to be inter-related.

Social Change

When we first began, we saw that political and economic factors may enable or inhibit change, but we soon came to realise that the major driving forces for change are social and technological. In fact, we saw the major driving force as being people's fundamental values, beliefs and motivations which permeate everything they do. So we found that we needed to understand these, and to help us to do this we developed a composite psychological model which shows the different levels within an individual's own self. We did this by analysing the responses to massive annual surveys of the population in the UK and, with partners, in quite a number of other countries. The result is a model which places people broadly into three groups, which are psychological groupings that go across any categories of age, sex, social class and so on. They are levels which every person has, but in some people one level may be more dominant or active than the others.

First of all there are what we have called 'the sustenance driven people', whose main motivation in life is to maintain a certain level of comfort, ease, security, food, clothing, shelter, and so on. To that degree they have nothing in their life over which they have much control. They are driven by their instinctive needs.

The second group we called 'outer-directed'. These have satisfied their sustenance driven needs, more or less, and are no longer driven by them, but instead, they are motivated by their esteem needs – the need to have the good opinion of others, to have self-esteem, to succeed in a material sense, which is how they usually measure their esteem.

The third group we called 'inner-directed people'. These have control over their sustenance-driven needs and their outer-directed needs, and are motivated by the need for personal growth, individual freedom, self-expression, are concerned about individual responsibility, etc. These are at present the trend-setters in society and are a group which have been growing enormously over the last two decades or so.

In the last few years, we have found that a fourth group is emerging, which, to ourselves, we are calling 'the meta-inner-directed group' – which isn't a very catchy name but it is very difficult to define. We would see this group as having control over even their inner-directed needs, and so they are being driven by another set of goals which are much more transpersonal. The meta-inner-directed person sees himself as part of a bigger system – a universal system if you like. He is no longer seeking development for his own personal aims, but because he realises that he has a role to play in the well-being of his family, his community, his nation, his part of the world, be it Europe or the global context. These people see themselves as something more than just an individual; perhaps, they perceive that individuals are part of a much greater interrelated whole and realise how they fit into that.

Research in most of the industrialised countries,

including Japan, indicates that the same thing is occurring there. We didn't do the work in Japan ourselves – a Japanese company, one of our partners in this business, did it. Japanese nationals prepared the survey questionnaires and conducted the research. We've also looked at South America using South American nationals to do the survey. How true the results are I don't know. When I saw the work our Japanese partners had done I really did wonder whether they had become so western that they were interpreting it our way. I have no way of evaluating that. My feeling is that the concepts, the psychological model, on which our work is based is probably good for the whole of the world, but exactly where different countries would stand in relation to that model I'm not quite sure. Unless we can find someone to fund it, we can't do the appropriate research because it's so enormously expensive.

Paradigm Shift

The main thing which emerges from our research, is that it appears that society in the western world, or in the industrialised world, is presently undergoing the biggest shift in paradigm since the time of the Renaissance (1). I use the term paradigm in the sense that Thomas Kuhn used it in his 'Theory of Scientific Revolutions' (2): a paradigm is a world-view – it is the filter through which we see and evaluate all our experiences. We in the western world share such a common filter, so that when we look 'outside' at events going on, we can communicate with each other about them because of it. It's partly a common culture, it's partly the fact that we live in a Judeo-Christian society, it's partly that we have lived through the process of industrialisation.

The paradigm change that we are in the middle of is a shift from an industrial paradigm, which is essentially a material paradigm, to a much more psychologically orientated paradigm which we have come to call the 'consciousness' paradigm. And here we use the word 'consciousness' in the sense that the physicist John Wheeler uses it (3) in terms of a conscious observer.

We have of course asked ourselves how and why this paradigm shift has come about; where did it

come from? what was the causal factor? and where is it going? There seem to be three strands of development: analytical psychology, modern physics and the perennial philosophy. Our social change programme validates the psychological strand. The philosophical understanding of quantum theory and cosmology support the shift away from materialism and reveals the inadequacy of the scientific method. Increasing interest in consciousness research and spirituality provides the third strand. Interestingly, in the UK, a lot of the spiritual ideas came from contact with the East at the turn of the century, although few people realise it.

Still, we have not found a real causal factor for the paradigm shift, except for changing values and motivations. What caused them to change is still an open question, although it may have to do with consciousness. But we have been able to look at people's values and motivations as they have shifted over the centuries. Our

“... we saw the major driving force as being people's fundamental values, beliefs and motivations which permeate everything they do.”

view is that a paradigm shift can be speeded up or slowed down, but it can't be stopped. There is no question in our minds but that widespread communications, widespread education, have all served to speed up the paradigm shift. And so when we look at other parts of the world, we can see the different countries going through similar processes, but starting from a different point.

Business

As part of this paradigm shift, we're seeing a great deal of change in business – interestingly enough, some of the biggest shifts coming in the very high tech companies. For instance, there is the idea of 'the stakeholder', which was originally an 'inner-directed' concept. A stakeholder is anyone who has a 'stake' in the business – not only shareholders or employees, but also, say suppliers, consumers and local people whose environment is affected. Any one person may have several stakeholder roles. He or she may be an employee of a company, a consumer and a shareholder of that same company. One of the effects of this is that we can no longer satisfy the shareholder at the expense of the employee because they may be one and the same person. A lot of businesses have paid lip-service to things like social responsibility, so they've put in the odd sop to the local community or the environment – because, of course, the environment is in a sense a stakeholder in an organisation. But what we're seeing now, increasingly, is that businesses are beginning to realise that it is in their own vested interests to do it properly.

Initially, people in industry thought that taking into account environmental concerns would be very costly. However, the pulp and paper industry was forced to look at the environment because it was such a high polluter. They eventually discovered new processes that were actually far more cost-effective in the long term – in fact, in a project we did for such a client we had to look a hundred years into the future because of the problem of reforestation. By being forced to take those issues into account, it benefitted the industry in the long-term. There is a real awareness growing now within industry that they are going to have to take environmental problems very seriously, and it is encouraging to find that the measures they will have to implement could well be in their own long term interests, not just those of the stakeholders.

The business of business is to create wealth, by employing people and by producing things that society wants. In the past there was a tendency for companies to try to create markets, saying, "let's develop this product because we're sure people will buy it". But now we see more businesses asking, what do people really want? how can we really satisfy people's needs? So rather than assuming that they know what's best, they are now taking into account the end-user. One has to remember that business is made up of people, and the people inside the companies are essentially the same as the people outside the companies. We have already seen changes occurring because people inside companies have refused to use certain technologies – for the reason that they don't regard them as safe or appropriate or whatever – and we have seen people outside companies refusing to buy products because they're too polluting or wasteful. It's the

people both inside and outside who will influence the direction of a company in the long run.

Hierarchies

As for the changes occurring in the internal structures of companies, I would say that there is a general move away from hierarchies. In our own company we try to practice what we preach. Lots of people nowadays are talking about network-type organisations, but we were discussing them back in 1978 and drawing diagrams of what they would look like. The basic idea was that there would be no single head of a hierarchy, so that in terms of getting work performed, little hierarchies would emerge with experts at their head, and then drop back into the organisation when that job was done and a new hierarchy would emerge. So somebody could be at the top of one hierarchy one day and at the bottom of another the following day.

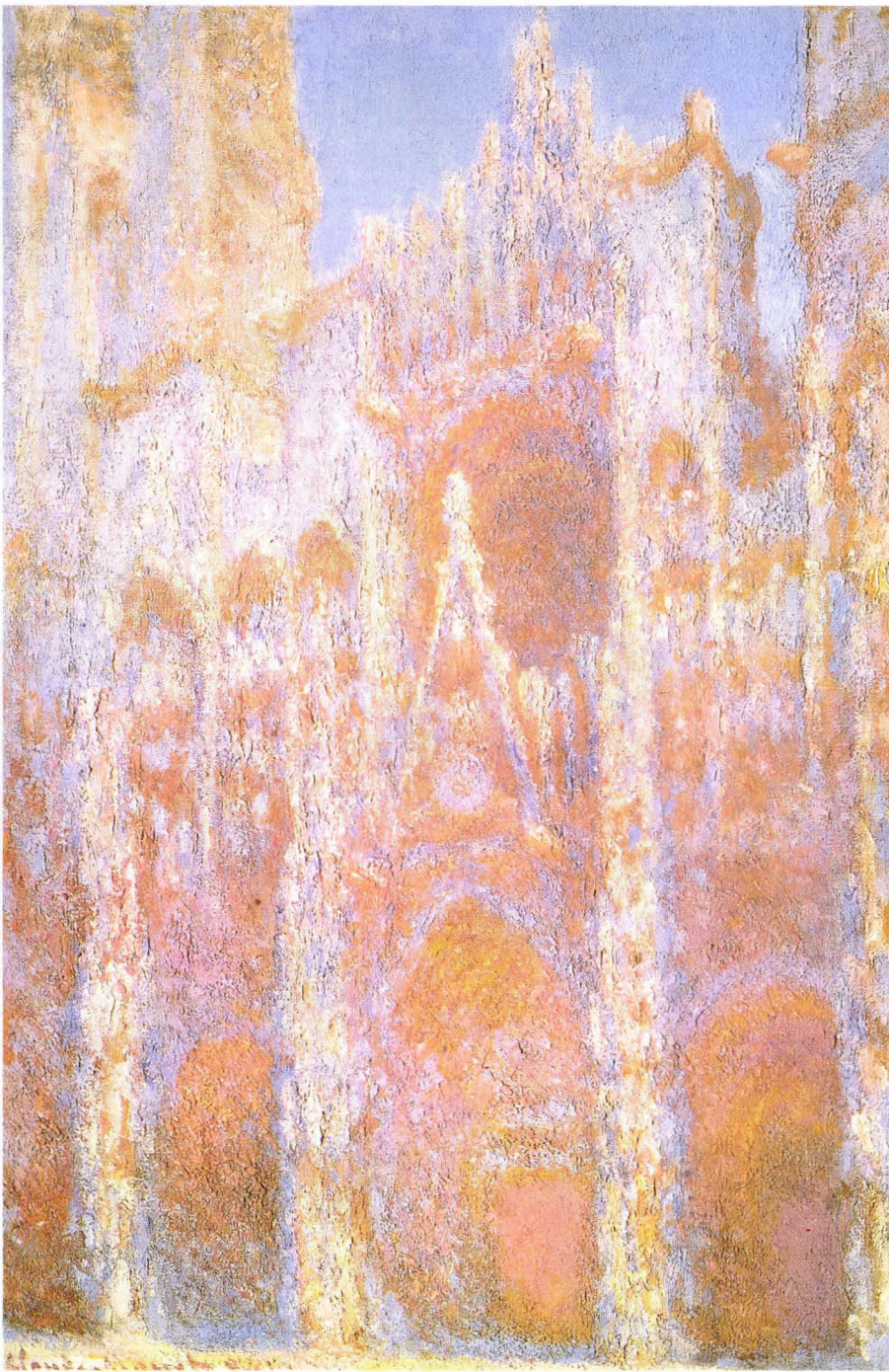
This is the way that we now operate. I'm still managing director, but in terms of getting work done, we have got some projects going on right this minute where the project manager is one of the other consultants and I'm just the general dogsbody. There are a lot of smallscale high technology companies that operate in a very similar fashion. We don't recommend this to every client, because clearly they may not be in a position to do it. But we suggest it if it appears that they have a reasonably inner-directed workforce, because this is the way that inner-directed people prefer to work, and it's often the most effective way.

People generally are wanting much more personal satisfaction from their work. They want a vision, and to be able to commit themselves to something. Previously what most people wanted from work was money, security and possibly the opportunity for advancement. But now we increasingly see psychological needs showing: people want to enjoy their job, to have fun at work, and to achieve that real personal satisfaction that comes not just from developing one's skills in a job, but developing oneself.

The human race is very good at being self-determined if it sets out to be. If it aims at a vision, it's very likely to achieve it. But one has to take the broadest possible view, so that you try to anticipate what your vision is going to mean, not just for you and your organisation but in a much broader framework, so that you can also take into account the things that are going to happen out there. The most important aspect of a futurist's work is to help people to look at their decision from an holistic point of view, so that we neither damage nor exploit, nor are damaged or exploited, by all the other things with which we interrelate.

1. Some of the research leading to this conclusion is summarised in W.K. McNulty's paper 'The Paradigm Perspective', *Futures Research Quarterly*, Vol 15, No 3. World Futures Society, Fall 1989.
2. University of Chicago Press, 1962.
3. J. A. Wheeler writes on his 'Participatory Anthropic Principle', in 'The Nature of Scientific Discovery'. Ed O. Gingerwick, Smithsonian Press, Washington DC, 1975.
4. W. W. Harman 'Global Mind Change', Knowledge Systems Inc, 1988.

Interview by Cecilia Twinch



Rouen Cathedral, Facade 1892-94. Courtesy of the Museum of Fine Arts, Boston.

Monet in the '90s

Julie Dry introduces a major exhibition, showing this autumn at the Royal Academy in London

IN 1886 AT Belle Isle, Claude Monet began with great deliberation a working method of painting and repainting particular landscapes under different conditions of weather, time of day and season. He said: "I well realise that in order really to paint the sea, one must view it every day, at every time of the day and in the same place in order to get to know its life at that particular place; so I am re-doing the same motifs as many as four or even six times". (1)

Throughout the 1890's, he developed this approach, selecting each subject – haystacks, poplars, poppy fields, the Japanese bridge in his garden at Giverny – with careful attention and painting them twenty, even thirty times – the process culminating in the great water lily canvases which were shown in the 1920s. Each of these 'series' was exhibited on completion by Monet like a single work. Later, however, many were sold, and the collections became dispersed.

About ten years ago, Paul Hayes Tucker, a Monet specialist, was working on a book about these paintings, and was persuaded to guest curate an exhibition for the Museum of Fine Arts in Boston. The result is this unique event, which comprises the largest collection of Monet's series paintings ever assembled. It took nearly five years to put together, and Tucker confesses that had he known beforehand the difficulties involved he would probably never have begun. Many of the works are now in private hands and so there were often wild goose chases before the very specific paintings required were tracked down. One, lasting three years, involved Elizabeth Taylor, who owned a series painting – but not the right one, it turned out a week before the exhibition opened. Then a surprise phone-call on the eve of the show came from someone with no knowledge of this fruitless search, offering the very painting sought! Six paintings have never been seen since the 1890s; one, a cliff study 'Headland of the Petit Ailly' has never been exhibited at all.

For me, the experience of the exhibition was of pleasant surprise. The paintings are individually extremely beautiful, and it is possible to become absorbed in each one. These powerful attempts to capture the beauty which arises from the unique qualities of a particular time and place demonstrate Monet's considerable skill and artfulness, and the superb discernment of his eye. But seen together, I became overwhelmingly aware of the forcefulness of Monet's effort and the presence of great intelligence and rigorous intent. As one of the critics of the original exhibitions, said:

"... you have to admire these feverish canvases, for despite their intense colour and rough touch, they are so perfectly disciplined that they easily emit a feeling for nature in an impression filled with grandeur".

1. From the book which accompanies the exhibition. 'Monet in the '90s' by Paul Hayes Tucker, The Museum of Fine Arts, Boston/Yale University Press, 1989.

The exhibition is at the Royal Academy (the only European venue) until December 9th 1990.

Reviews

Books

Seeing Voices

Seeing Voices

by Oliver Sacks

US: University of California Press, 1989

UK: Picador, 1990

H/back, 186pp, £12.95

Deafness

by David Wright

Faber, 1990 (Second Edition)

P/back, 202pp, £4.99

Michael Cohen

"It is all too easy to take language, one's own language, for granted. One may need to encounter another language, or rather another mode of language, in order to be astonished, to be pushed into wonder, again."

THIS QUOTATION from the introduction sets the tone for Oliver Sacks' book about Sign, the visual-gestural language of the deaf. Sacks is a New York neurologist whose earlier books of case-histories, such as 'The Man who Mistook His Wife for a Hat', have become classics. Here, in an equally fascinating and beautifully written account, he discusses Sign in all its aspects – from theoretical laboratory studies to the history of the vicissitudes of its relationship with the hearing world. In the process, he has refreshing and significant things to say about the role of language which can illuminate the subject for all of us, whether deaf or hearing.

He begins by correcting the many misapprehensions about Sign that have been

held by mainstream society. Often regarded as a rudimentary repertoire of gestures, Sign is in fact capable of all the modes and powers of expression of speech. In its pure form, it owes nothing to spoken language, having its own complex visual grammar. It has existed wherever there has been a sizable deaf community, developing according to the needs of the deaf themselves, its origins obscured by time. Thus there is not just one Sign, but as many forms as there are of spoken language – American, British, French, etc. – although they all have certain innate similarities that enable signers from different communities to pick up each other's language more easily than the hearing.

Education

The wide variation in attitude of hearing society to Sign is mirrored in the history of deaf education, which Sacks traces in the first part of this book. The first person to undertake education for the deaf on a large scale was the Abbé Charles Michel de l'Épée, who lived at a time when deaf-mutes were regarded as ineducable and often as subhuman. In 1750, while visiting a house, he encountered two young girls who did not answer when he spoke to them. Their mother told him they could neither speak nor hear. He decided to educate them, and succeeded in teaching them to read and write. His prime motive was religious – he did not want them to die ignorant of God. Subsequently he acquired more pupils, and by 1755 he had founded a school in Paris, the first to receive public support. His main teaching method was his system of 'methodical signs', his own adaptation of Sign which he learnt from the deaf themselves. He was amongst the first to realise that reading and writing could be mastered purely visually, without any conception of speech. His achievements stirred enormous public interest, in which he was aided by such ideals of the Enlightenment as the search for a universal language,



Sandi Inches Vansick and Charles Homet perform on stage for the American National Theatre for the Deaf, whose motto is 'You hear and see every word'.

which the French philosophers thought they had found in Sign. The Abbé trained many teachers, many of them deaf themselves. By his death in 1789 his pupils had founded 21 schools all over Europe, and in 1791, the Paris school became the National Institution for Deaf-Mutes under his successor, the Abbé Sicard. It was a golden age for the deaf, at least in Europe.

The impulse was carried to the United States by Thomas Gallaudet, a preacher from Philadelphia, and Laurent Clerc, a deaf pupil of the French National Institution. Together they founded the American Asylum for the Deaf in Hartford, Connecticut in 1817, and many other deaf schools followed, spawned in an atmosphere of public enthusiasm. In 1864, Gallaudet's son, Edward, became the first principal of Gallaudet College (now Gallaudet University) in Washington DC, which is still the only institution in the world for the higher education of the deaf with the right to confer degrees.

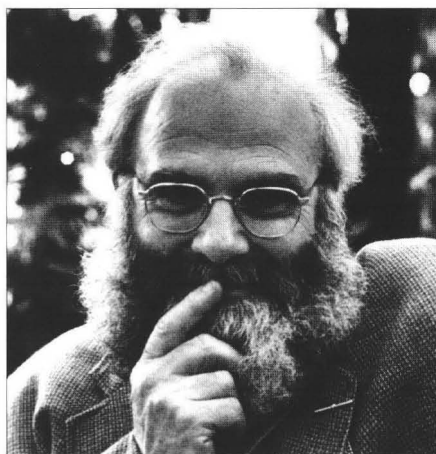
Sign and Oralism

This whole explosion of deaf education depended on the use of Sign. But there has always been a school of thought – that of 'oralism' – opposed to Sign, advocating the teaching of spoken language to all deaf, even those who have never had any hearing. Evidently, there is room for both approaches, but unfortunately the adherents of each have often displayed an unseemly fanaticism in favour of their own method. Sign became the victim of its own success, for from the mid-19th century, it began to be seen as 'old-fashioned'. Increasingly bitter debates between the two approaches culminated in the notorious International Congress of Educators of the Deaf held in Milan in 1880, which voted in favour of oralism and proscribed the use of Sign in education. Deaf teachers themselves were excluded from the vote.

The subsequent history of deaf education as detailed by Sacks makes melancholy reading. Oralist techniques are undoubtedly important for those with some residual hearing, or those who become deaf after the acquisition of speech; but for the pre-lingually deaf (those deaf before acquiring speech) with whom Sacks is mainly concerned, the suppression of Sign was a disastrous set-back, as it is often impossible for someone with no conception of sound to learn comprehensible speech. After thousands of hours of ruition, the deaf person may still only be understood in his or her family circle, and have only a limited knowledge of any language, spoken or visual. Sacks connects this insistence on attempted social integration at any cost with the general social trend of the Victorian period towards conformism and the intolerance of minorities.

The suppression of Sign had its counterpart in the suppression of other minority languages, such as Welsh.

The importance of Sign to the deaf is brought home by Sacks in a number of poignant instances of people who learnt Sign as their first language, after early childhood. Sacks tells of Joseph, an eleven-year old whose deafness was not diagnosed until the age of four. He had been regarded as retarded, and no serious attempts were made to teach him language of any sort until the time Sacks saw him, when he had just entered deaf school.



Oliver Sacks. Courtesy of Picador.

"Joseph longed to communicate, but could not... He looked alive and animated, but profoundly baffled; his eyes were attracted to speaking mouths and signing hands. He perceived that something was 'going on' between us, but could not comprehend what it was – he had... almost no idea of symbolic communication, of what it was to have a symbolic currency, to exchange meaning... I was partly reminded in a way of a non-verbal animal, but no animal ever gave the feeling of yearning for language as Joseph did." (p39)

Once Joseph had learnt some Sign, it gave him such great joy that he wanted to stay at school the whole time. His lack of any language until such a late stage had far-reaching consequences. Robbed of practically any ability to conceptualise, he had no clear sense of the past, no historical sense. For Joseph, and for others discussed by Sacks, the acquisition of language through Sign was the awakening of the core of their humanity.

Renaissance

Throughout the long period of suppression, there have still been places where Sign has been supported and encouraged. Religious services for the deaf in Sign, for instance, have never ceased. Some churches in the US even have Sign choirs

– "an awesome sight", says Sacks. There have been communities, also, where Sign has been accepted as a second language. The most famous of these was in Martha's Vineyard in Massachusetts, where a recessive deafness-causing gene was brought by the first settlers in the 1690's. By the mid-19th century, some villages in the Vineyard had an incidence of deafness of one in four. The entire community learnt Sign, and the deaf were fully integrated, their disability hardly noticed – a story which is told in a book by Nora Ellen Groce, 'Everyone Here Spoke Sign Language' (1). Even after the last deaf Islander died in 1952, the older members of the community continued to use Sign, slipping into it quite naturally in the middle of a sentence if they felt that it could convey their meaning better. Sacks tells how he was so moved by Groce's book that the moment he had finished it he jumped into his car and drove to West Tisbury, a village in the Vineyard. It was Sunday morning. Half a dozen old people were gossiping outside the general store as Sacks drove up. Suddenly they dropped into Sign for a minute or so – then reverted to speech. Later, Sacks met an old lady, in her 90's but still "sharp as a pin", who often 'speaks' to herself, and even dreams, in Sign.

The rediscovery and reevaluation of Sign in America began in the late 1950's. In 1955, William Stokoe, a young linguist with normal hearing, came to Gallaudet University to teach English. Sign was not believed to be a proper language, but its colloquial use by the students was tolerated. Stokoe became fascinated by it, but found that learning it was not so easy – it looked straightforward, but he soon saw that it had a deep and complex structure. In 1960, he published his discoveries in a seminal book 'Sign Language Structure' (2). The book was attacked from all sides, not just by the educational establishment but by the deaf themselves, for having learnt Sign instinctively from childhood, they had no conscious awareness of its visual grammar. Nonetheless, within a few years Stokoe and others had initiated a renaissance of interest in Sign in the USA and abroad. Dictionaries have now been published, and sociological and anthropological research is proceeding into its origins and nature. Arts such as Sign poetry, Sign song and Sign dance are being discovered and rediscovered, and are carried all over the world by the American National Theatre for the Deaf.

Current Work

The central section of 'Seeing Voices' gives an absorbing account of this recent work. We learn that deaf babies gesture spontaneously at six months and sign fluently at the age of three, but those who

learn Sign after infancy never achieve complete fluency. An increasing number of parents of deaf children are learning Sign; the children learn it from their parents with excellent fluency, instinctively correcting their parents' errors. Sign is processed in the same, left, side of the brain as deals with language in hearing people. Hearing children of deaf parents are also discussed – they are 'bilingual'. One such told Sacks that she often falls back into Sign and 'thinks' in it whenever she has to puzzle out a complex intellectual problem.

There is much more of great interest in this section. By opening up an area of human experience practically unknown to most people, Sacks sheds new light on matters familiar to everyone, but usually taken for granted. Through language, one discovers oneself; but this encounter does not depend upon any particular symbolic mode. In this regard, Sign lacks nothing as compared with speech. Further, it has its own dictates and particularities, which give it universal interest. Says Sacks:

"One has only to watch two people signing to see that signing has a playful quality, a style quite different from that of speech. Signers tend to improvise, to play with signs, to bring all their humour, their imaginativeness, their personality, into the signing, so that signing is not just the manipulation of symbols according to grammatical rules, but, irreducibly, the voice of the signer – a voice given special force, because it utters itself, so immediately, with the body. One can have or imagine disembodied speech, but one cannot have disembodied Sign. The body and soul of the signer, his unique human identity, are continually expressed in the act of signing" (p119).

New Developments

The theme of the last section of 'Seeing Voices' is the new self-consciousness and pride in their culture that has blossomed recently in the deaf, especially in the USA. They are now 'The Deaf' with a capital D, with the same desire to be properly valued as other minorities. A landmark in the development of this new awareness came in March 1988 at Gallaudet University, when a new president was to be appointed. The final shortlist comprised three candidates, two of them deaf and one hearing. Against the wishes of the students, the hearing candidate was appointed. The subsequent demonstrations and sit-ins made headline news, and achieved their aim – the appointee withdrew her candidature and Gallaudet had its first deaf president in its 123 year history. It was regarded as an historic moment for the deaf worldwide.

In this final section of the book, Sacks takes to the streets, as it were, and gives a first hand, day by day, diary of these events at Gallaudet. It forms a triumphant conclusion to this remarkable book. The British edition under review has a rather bleak postscript on the situation in the UK – although anyone who has seen British television programmes for the deaf, Channel 4's excellent 'Listening Eye' for example, with their complete acceptance of and pride in Sign, may feel that the situation is not as bad as Sacks makes out. British Sign, incidentally, is quite different from American Sign, having distinct origins.

'Seeing Voices' benefits from an excellent bibliography, and one of the most extensively quoted sources is a classic work 'Deafness' by David Wright, first published in 1969 and recently re-issued in a new edition. The first half of this work is a moving account of Wright's own life, describing the upbringing of a deaf

boy during the 1920's and 30's. Against all odds, Wright eventually went to Oxford and became a distinguished poet and critic. The second half is a history of deaf education, more detailed than that of Sacks. Wright did not lose his hearing until he was seven years old, and he is much more sympathetic to oralism than Sacks, although he admits that he has no more conception than the hearing of what it must feel like to be deaf-born. The new edition has some interesting comments on the rehabilitation of Sign, and all in all provides a valuable complement to Sacks' book.

1. Harvard University Press, 1985.
2. 'Sign Language and Structure' (1960). Linstock Press (Silver Spring, Md).

Dr Michael Cohen studied mathematics at Newcastle and Warwick Universities. He now teaches in London.

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Waiting for God in History

The Political Meaning of Christianity An Interpretation

by Glenn Tinder

Louisiana State University Press

H/back, 257pp, \$29.95

Jane Carroll

"There is no greater error in the modern mind than the assumption that Christ, the God-Man, can be repudiated with impunity."

THE POLITICAL MEANING of Christianity' is a book which has been widely acclaimed in America this year. Although it is, as its title suggests, a Christian perspective on history and politics, its author Glenn Tinder, Professor of Political Theory at the University of Massachusetts, stresses in his preface that he hopes to find non-Christian as well as Christian readers. The great error of the repudiation of Christ, as he examines it, is as liable to be committed within a religious dogma as within a secular ideology; just as the acceptance of Christ is a matter far deeper and more mysterious than Christian doctrine can encompass.

The magnitude of the error lies in ignoring what Christ so clearly manifested: what is called by Tinder 'the exaltation of the individual', the notion that each and every human being is of inestimable value to God. The destiny that Christ fulfilled is the destiny of every person, and this, he maintains, is the ruling purpose of history. The universe, which may appear vast and indifferent, is in fact subordinate to the ultimate ends of each one of us. The implications of this truth for politics and society are enormous, for it implies that the inherent dignity of even the least of human beings outweighs in value any social aim or political imperative. The principle of the 'exalted individual' is nevertheless behind many political aspirations – democracy, civil rights, welfare programmes for the poor and sick, and the love of liberty which allows each human being the opportunity to pursue their own unique destiny. It is a principle which is obviously accessible to Christians and non-Christians alike. This has to be so, Tinder explains, because Christ as the *Logos* is the concentrated structure and meaning of all things, so that even those who do not know him by name may still know him.

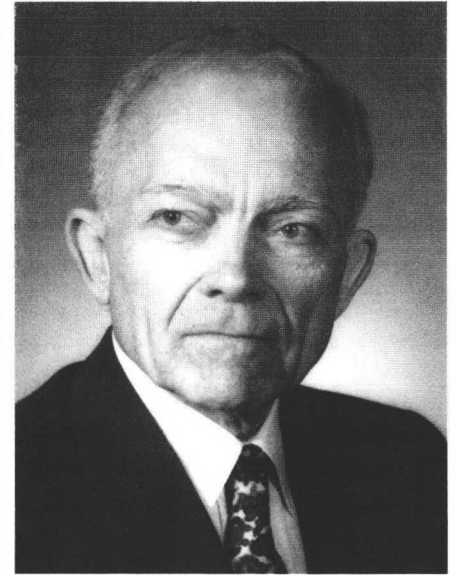
Agape and the Man-God

The recognition of the 'exalted individual' only occurs through love, *agape*: that Christian love which "bears all things, believes all things, hopes all things and

endures all things". This is the love which God bears for us. It is the love which refuses to equate anyone with their outward form or to participate in judgement upon others. It is the love which sees human beings as they are known only to God. For Christians *agape* is the highest standard for human relationships and therefore necessarily has a bearing on those relationships which make up politics.

Tinder admits in the preface of the book to a predominantly Lutheran attitude, a point which is probably most clearly expressed in his discussion of original sin, a principle which he claims is crucial to an understanding of the political meaning of Christianity. Because each human being is marked by original sin, each is therefore both fallen and exalted. The political implication of this is that the human race cannot be divided into good people and bad people, according to whatever definition, such that the former strive for mastery over the latter. Through *agape* the Christian recognises both the exaltation of the individual which comes from God, and the fallen-ness which comes from the attribution of divine qualities to the self. The correct political posture then becomes to address both these attributes appropriately. The essential exaltation requires enormous respect and also freedom to be allowed to express itself. The fallen state requires the structure and law of government and society. This Christian perspective brings a balance to a political stance which, Tinder claims, other ideologies find unattainable.

The great error of the refutation of Christ is explored by juxtaposing the idea of the 'God-Man' with that of the 'Man-God'. The God-Man is expressed perfectly in Christ, whose exaltedness is seen to come only from God. The idea of the Man-God – the human being given Divine attributes – is explored in an examination of three profoundly influential thinkers of modern times: Nietzsche, Marx and Freud. Each of these, Tinder claims, has been responsible, in different ways, for the idea of the Man-God by claiming that human beings become exalted through their own efforts, not through the grace of God. Nietzsche repudiated Christianity and its notion that the common man could be intrinsically exalted. Only those 'supermen', he claimed, who attribute to themselves the power to create order out of chaos – the great philosophers, artists and leaders – can truly justify the existence of humanity. Marx, Tinder suggests, anticipated the transformation of human beings by human beings and attributed to the proletariat the divine qualities of omniscience, righ-



Glenn Tinder

teousness and historical sovereignty. Freud is accused of seeing disorders of the human soul which Christians believe arise from original sin to be cured only by God's grace, as illnesses treatable by human therapy.

These three thinkers Tinder considers only as representatives of a movement of thought in modern times which sees ourselves in control of our own destiny. The loss of faith in the God-Man has given rise to the idolatry of the Man-God. However in this exegesis he is perhaps guilty, if not of separating men into good and bad, then of separating ideas into good and bad. The attribution of divine qualities to human beings is clearly idolatrous; but God can be revealed even in idolatry, and in each of these thinkers' work there are aspects which can be seen to reveal divine realities expressed through human action.

History

One of the most interesting aspects of the book deals with history. Tinder contrasts the Hellenistic view of the cosmos as a perfect harmonious order which, by contemplation, could be reflected in the world, with the Judaeo-Christian tradition in which realities reveal themselves in history through an ever changing series of events. The history of the world is portrayed in the Old and New Testaments as the history of the relationship of God with man and the events which occurred between them. God is engaged in history, a fact made most evident with the appearance of Christ, and so history becomes God's revelation.

If God is revealing himself through history we cannot possibly know what His intentions are; or what plans He may have for the transformation of humanity: "what God has prepared for those who love Him

no eye has seen nor ear heard nor heart ever conceived" (1 Corinthians 2). Nothing in history can be absolutely relied upon. The only historical attitude we can adopt is one of receptivity, "waiting for God in history" – an attitude which Tinder calls the prophetic stance. In the prophetic stance the individual awaits his destiny as he awaits the destiny of humanity, for *agape*, 'the love which surpasseth understanding', sees each individual in their exalted state as part of a true community. The destiny of one and the destiny of the world are not divided.

The prophetic stance, "waiting for God in history", in no way excludes those individuals whose faith in God is not explicit, but who nevertheless detect the possibility of meaning being revealed through history. Tinder equates the term to what Camus called "a hopeful modesty", a willingness to wait for signs of actions which are unconditionally required. He goes so far as to suggest that an agnostic with a genuine religious uncertainty and a willingness to hear of God might be understood to be in a state of grace. It is part of the attractiveness of his argument that the reality which Christ expressed, that the destiny of man is the 'exalted individual', can be seen, through *agape*, to be fulfilling itself in individuals of any creed or no creed.

A Solitary Stance

It is also through the prophetic stance that political obligation is understood. It is a solitary stance. The individual, in waiting for God's will to be revealed, cannot put his faith in any group, government or idea which has a plan in history. It is also a condition of attentiveness, being ready to act in service as the meanings in history are revealed. There are no pre-ordained formulas for action, not even high moral codes, which can be relied upon. Neither the doctrine of obedience to the external order nor disobedience to the external order, can be followed, for they both become idolatries if anything other than God is obeyed. Even the belief in history – that history will settle things and have the final word – is idolatrous, for history itself will end in the Kingdom of God. However, Tinder states clearly that the prophetic stance does not mean dwelling in the future any more than it means retreating from the world. The sense of destiny is the sense of the significance of existing circumstances; and responding to the invitation of God is the same as responding to the actions we are called upon to make in the world.

"To see what is coming is to see what the present time is making for and thus to see anew the situation we inhabit.

Looking ahead with prophetic hope thus means realising that in spite of all confusion and violence 'this is the day which the Lord has made'." (p 233)

Although the themes this book explores – sin, redemption, suffering, the Kingdom of God – are expressed in exclusively Christian terms, the author's hope that the book might be read by Christians and non-Christians alike should certainly be fulfilled; for he gives these terms a relevance not hard to grasp by those outside his faith. The central significance he gives to the reality of Christ as God-Man is equally true for all faiths that attest to the reality of the Perfect Man, and is very illuminating for non-believers who sense the magnitude of the possibility of man. Some of his assertions concerning modern political, cultural or philosophical movements might be questioned but they are external to his central argument. The book is remarkable for avoiding any political, religious or social prescriptions and for providing in their stead a moving description simply of the proper attitude with which to face our own lives and the world we inhabit.

Jane Carroll is an architect who lives in Los Angeles.

Truth is a Pathless Land

The Life and Death of Krishnamurti

by Mary Lutyens
John Murray, 1990
H/Back, 235pp. £16.95

Hilary Williams

KRISHNAMURTI was an exponent (like the Buddha, with whom he expressed a special affinity) of the 'direct way', as contrasted with the way of gradual evolution through states and stations of spiritual progress. He believed and taught that "human beings can transform themselves radically, not in time, not by evolution, but by immediate perception" (p120).

Krishnamurti was brought up and educated from the age of fourteen by members of the Theosophical Society, who intended him to become 'The World Teacher'. In 1929, at the age of 34, he renounced the role of Messiah and travelled the world as a teacher with his own religious philosophy, unattached to any orthodox religion or sect. He said:

"The core of Krishnamurti's teaching is contained in the statement he made in 1929 when he said: 'Truth is a pathless land'. Man cannot come to it through

any organisation, through any creed, through any dogma, priest or ritual, nor through any philosophical knowledge or psychological technique" (p149).

Mary Lutyens knew Krishnamurti from when he first came to England "as a bewildered young man of seventeen" in 1911 to the time of his death in 1986. Her account of Krishnamurti's thought is clear, readable and straightforward, although essentially uncritical. She makes no attempt, for instance, to place it in the context of twentieth century thought, or in the wider setting of the history of spirituality; nor does she consider the views of those who have reservations about his teachings.

Perhaps the most interesting aspect of this biography, which is a condensed version of a three volume work, is the way it reveals the mirroring of Krishnamurti's life and teaching. He rejected theory and conjecture out of hand and spoke simply from what he knew directly by personal experience and direct vision. Krishnamurti had little time for 'thought', which he regarded as a product of time and fragmentary in nature, and distinguished it from 'mind' which he saw as the true organ of perception. Looking back on his

life, he said of himself as a young person:

"He had no thoughts, no thoughts at all when he was alone... He has never been hurt, although many things have happened to him, flattery and insult, threat and security. It was not that he was insensitive, unaware; he had no image of himself, no conclusion, no ideology. Image is resistance, and when that is not, there is vulnerability but no hurt".

Krishnamurti had a special interest in education, and in children before their minds became rigid with the prejudices of the society in which they were born. He founded seven schools in India, California and England and stated his intention that these should be "... concerned with the cultivation of the whole human being. These centres of education must help students and educators to flower naturally". He regarded competition as one of the greatest evils in education ("When in your school you compare B with A you are destroying them both") and "expected the teachers to see that fear in any form did not arise in the students... and to help the student 'never to be psychologically wounded, not only while he was part of the school but throughout life'" (p157). Krishnamurti also carefully pointed out

the distinction between learning and the accumulation of knowledge:

“... for the latter merely dulls the mind; to know is not to know and the understanding of this fact that knowledge can never solve our human problems is intelligence”.

Krishnamurti's rigorous ability to live in the immediacy of the present led him to regard memory, except for practical purposes, as a weight that should not be carried over from one day to the next. Indeed at a certain point in his life, he lost his memory of the past almost entirely. Years later, when writing a journal at the suggestion of Mary Lutyens, he wrote of himself:

“He doesn't remember his childhood, the schools and the caning. He was told later by the very teacher who hurt him that he used to cane him practically every day... He was caned, this man said, because he couldn't study or remember anything he has read or been told. Later the teacher couldn't believe that that boy was the man who had given the talk he has heard... All those years passed without leaving scars, memories, on his mind; his friendships, his affections, even those years of those who had ill-treated him – somehow none of these events, friendly or brutal, have left marks on him... He never consciously blocked any happening, pleasant or unpleasant, entering into his mind. They came, leaving no mark, and passed away” (p145).

Krishnamurti, like Jung, who was his contemporary, stands outside of any formal religious or secular tradition. Jung towards the end of his life came to believe that it is the 'experience of the Numinous' that is the true healer, and Krishnamurti taught that the cure for man's ills is in 'direct perception', without intermediary, duality or thought. Both men passionately believed in the possibility of the transformation of man through profound contact with Essence/essence. Perhaps it is this that makes these two outstanding figures of continuing and perhaps increasing interest to our own times.

Krishnamurti concluded the last talk he gave – on 4th January 1986 – with an instruction:

“Creation is something that is most holy. That's the most sacred thing in life and if you have made a mess of your life, change it. Change it today, not tomorrow. If you are uncertain, find out why and be certain. If your thinking is not straight, think straight.



Krishnamurti with Annie Besant at Ojai in 1927. Courtesy of the Krishnamurti Foundation.

logically. Unless all that is prepared, all that is settled, you can't enter into the world of creation” (p199).

This is a thought provoking book which succeeds in giving a sense of the purity,

simplicity, sincerity and natural discipline of this remarkable man.

Hilary Williams is a therapist who lives in Cambridge.

The Cartoon History of Time

The Cartoon History of Time

by Kate Charlesworth and John Gribbin
Cardinal Books, 1990
P/back, 64pp, £4.99

Richard Twinch

BE CAREFUL NOT to leap to conclusions next time you see an adult reading a comic on a train. He (or she) may either be a collector perusing a major investment acquired at Sotheby's or

else an avid 'pop' scientist delving into 'The Cartoon History of Time', following the adventures of Junior, the Amazing Boffin Chicken, and Alexis, the 'Quantum' Cat who is able to appear in multi-universes at the drop of a Schrödinger.

This striking book is the product of the fertile imaginations of Kate Charlesworth, who drew the pictures, and John Gribbin who wrote the words of which he "swears on Einstein's socks that every one is true". Gribbin, an astrophysicist, claims that,

TEMENOS

A REVIEW DEVOTED TO THE ARTS OF THE IMAGINATION

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The price of all numbers of TEMENOS is now £9.95 plus £1 to cover postage and packing of a single copy. U.S. price: 20 dollars, plus 1 dollar postage.

TEMENOS 1, 2 and 3 are now out of print. TEMENOS is published from 47 Paulton's Square, London SW3 5DT to which address all editorial communications should be directed.

TEMENOS is available through: **Element Books**, Unit 25, Longmead Industrial Estate, Shaftesbury, Dorset SP7 8PL

In America, **Lindisfarne Press**, P.O. Box 778, 195 Main Street, Great Barrington, Massachusetts 01230, and **Phanes Press**, P.O. Box 6114, Grand Rapids, Michigan 49516.

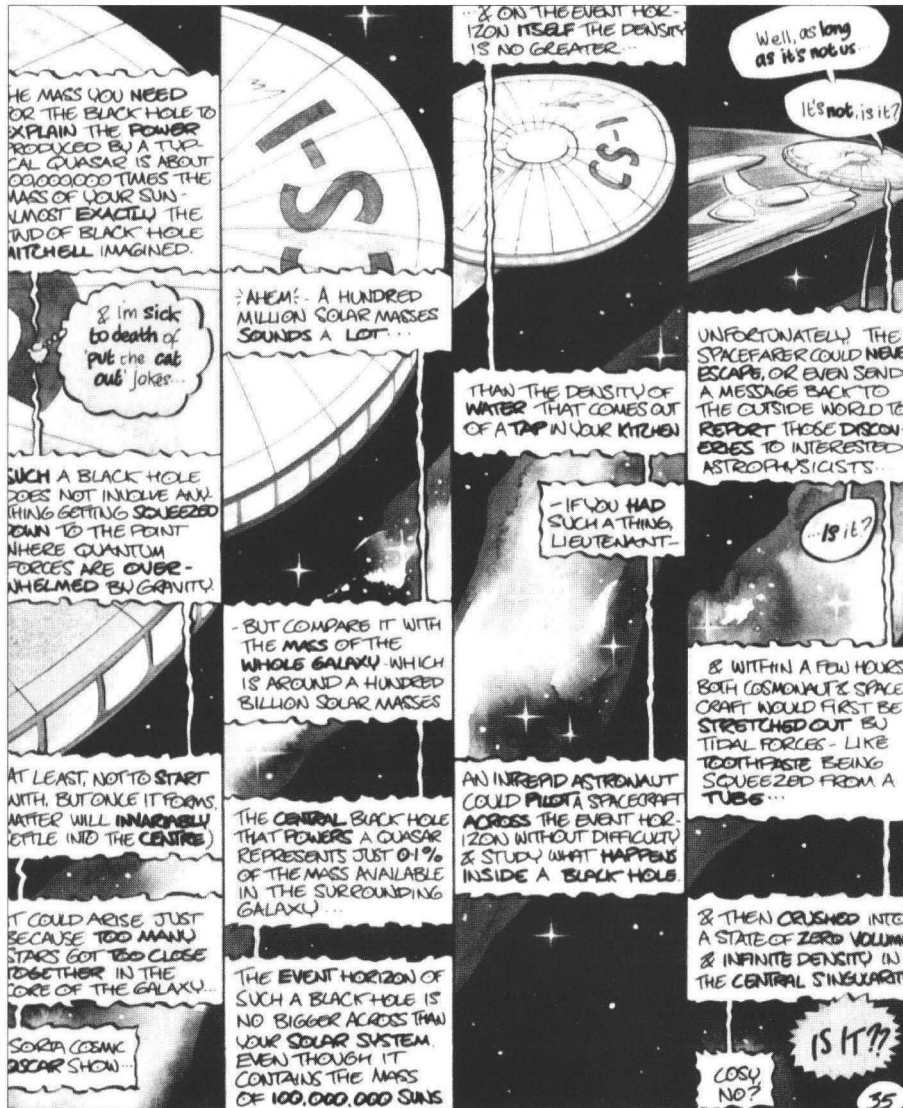
whilst at Cambridge, he worked in a different building from Stephen Hawking and missed being part of the team that discovered Quasars and Pulsars. Such trauma led him to become a writer about science rather than a researcher. Charlesworth trained as an illustrator and is best-known for her weekly cartoon in the 'New Scientist'.

'The Cartoon History of Time' is billed as 'the definitive study of Life, The Universe and (Almost) Everything', and indeed our intrepid guides, Junior and Alexis, introduce the reader to the whole panoply of Time from thermodynamics to 'wormholes'. In this they are aided by the great physicists - many of them speaking from beyond the grave; Werner Heisenberg gives a particularly impressive performance in the 'Irreversibility Show'. Throughout the narrative Junior and Alexis keep up a non-stop banter and commentary.

The back cover claims this book to be "briefer, wittier, more accessible, but just as broad in scope than the *Other* book" - meaning Stephen Hawking's best-selling 'A Brief History of Time' which it mimics closely in terms of logical progression. It is

fun to read, but requires as much concentration to understand the physics as does that inimitable *Other*. In order to gauge its level of accessibility, I tried it out on my son, who is just beginning his GCSE physics course, and was told that it was definitely "adult reading". In terms of layout it is very dense and, being a comic, is frenetic in its activity. It takes a while to work out how to read each page - all sorts of formats are used in breathless succession: one page across, two pages across, vertical and diagonal columns and what can only be termed as 'snakes and ladders' format. Maybe inhabitants of Krypton will immediately intuit the format before reading the narrative but for mere earth dwellers it is hard work. The advantage of such an approach is that once the ideas are grasped they remain firmly implanted in the memory - prompted by a recall of any facet of the total image, be it logical description, graphic illustration or ludicrous pun. Good value for Christmas.

Richard Twinch is an architect and computer consultant. He writes for 'Building Design' and 'Atrium'.



A Great, Gigantic Historian

Arnold Toynbee: A Life

by William H McNeill

Oxford University Press, 1989

H/Back, 346pp, £24.95

David Lorimer

MY COPY OF COLIN Wilson's 'Religion and the Rebel' is dated May 1974. In it, I first came across the world of the historian Arnold Toynbee, discussed under the heading of 'The Outsider in History'; it was also the starting point of my interest in Oswald Spengler, whose 'Decline of the West' I read in my Wanderjahr of 1976-77 along with the abridged version of Toynbee's own monumental 'Study of History' (1). (I do have the complete twelve-volume work, but wonder when I might find the time and place to read it properly!). The sheer scope and erudition of the work is arguably unprecedented in the field. His overall aim was to discern patterns in the growth and decay of civilisations, which would enable us better to understand ourselves in a historical context. The whole sweep of world history is examined from this organic point of view, which pointed towards the human interconnectedness of divergent cultures.

Since that first beginning, I have read most of Toynbee's other works, especially his late dialogues on human nature and human affairs. I was particularly struck by the 1975 volume (2) with Daisaku Ikeda (Head of the Buddhist Sokka Gakkai Organisation in Japan) entitled 'Choose Life' which covers the whole range of personal, social, political, religious and philosophical concerns. I still buy copies whenever I see them in second-hand bookshops and pass them on to unsuspecting friends. Another set of dialogues (3) is between Toynbee and his son Philip, with whom he was not initially on very good terms; but they came to understand each other better in later years.

In his own autobiography, 'Experiences', (4) Toynbee recalls his formative early years at Winchester College, where I taught from 1980-1986; a connection which I sought to honour by setting up the 'The Toynbee Society' as a forum for outside speakers and discussions on every topic under the sun. Toynbee's performance *Ad Portas* (a ceremony in which distinguished old boys are honoured by the whole school) had already become a legend. The event took place only a few weeks before his final incapacitating stroke in 1974, 72 years after he had first entered the school as a scholar. The Prefect of Hall made his customary speech in Latin, to which Toynbee replied with a quarter hour speech in Latin him-

self, commemorating his fellow scholars who perished in the Great War. Only the classical dons could keep up with such intellectual prowess!

Education

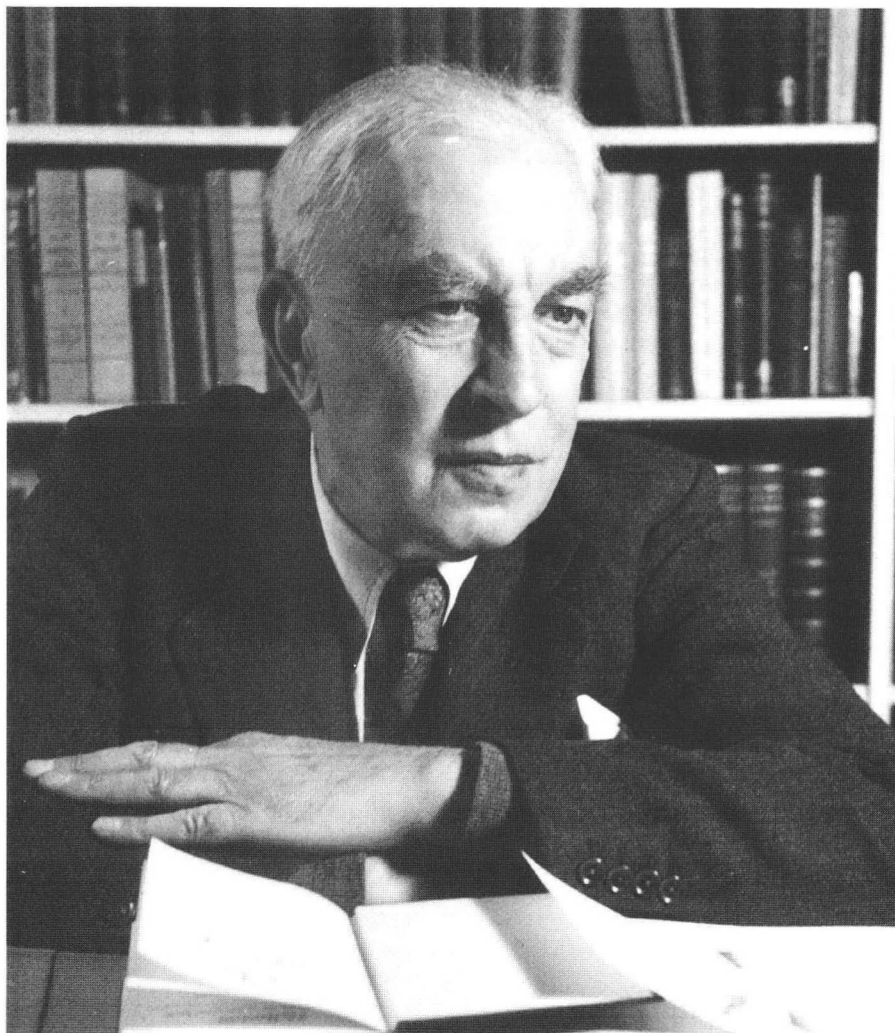
All this is by way of preamble to William McNeill's remarkable biography. McNeill is one of America's most distinguished historians, Professor Emeritus at the University of Chicago and a past author of 'The Rise of the West', itself a book on world history. He was personally invited by Toynbee's son, Lawrence, to undertake the task. He describes as a principle purpose of the book:

"...to try to establish a better balance between the popular adulation on the one hand and the professional hostility on the other that closed in on Toynbee after the mid-50's, obscuring his real accomplishment and the long-range importance of his work for the scholarly study of the past".

Much of this professional hostility can be

traced to an article in 'Encounter' by Hugh Trevor-Roper, then Regius Professor of History at Oxford, who did not so much criticise Toynbee's work as ridicule it. Professional historians are suspicious of any sweeping approach to history, preferring to concentrate on the minute details of a short period. One of the interesting question marks in the discipline is how Toynbee's professional reputation would have fared had he accepted the offer of the Regius Chair in Cambridge in 1947. He might then have been able to inaugurate the study of comparative world history in a major university department. However, his top priority always remained the completion of his monumental 'Study', so he turned it down.

In setting out to accomplish his purpose, Professor McNeill leaves no stone unturned. He has clearly read all the available correspondence and even discusses at some length the precocious qualities of a Winchester essay on 'Satire in English Literature'. His portrait of Toynbee the man is sympathetic but penetrating. He exposes some of the tensions and contradictions in Toynbee's personal and professional life as he tries to follow



Arnold Toynbee. Photograph by Jane Brown, courtesy of Oxford University Press.

the complex labyrinth of intertwining intellectual, social and spiritual processes.

We follow his glittering career at Winchester and Balliol, where he was invited to become a Fellow even before the result of Greats showed that he had achieved the best First of his year. His year in Europe immediately after Finals in 1911 proved to be a decisive influence on his later thinking, as he visited many of the sites in Greece and Turkey which were later to be crucial in his reconstruction of past civilisations. The whole trip fed his historical imagination, adding a living dimension to the growing erudition of his book knowledge. McNeill remarks that "whether alone or in company, Toynbee always excelled in the range of his curiosity, the vigour of his roving and the fullness of knowledge and imagination he brought to bear on the scene before him".

A Study of History

It was not long before the novelty of teaching ancient history at Balliol wore off, although Toynbee was already engaged in writing, trying to fulfil his aim of becoming "a great, gigantic historian". The repetitiveness of teaching bored him, as it did later in London, where he was Koraes Professor of Byzantine and Modern Greek Studies at London University from 1919 to 1924. His thinking was always racing ahead of what he had already digested.

Following work for the government in the First War, Toynbee found himself in the British Delegation at the Paris Peace Conference in 1919. He maintained his contacts with government and a keen interest in international affairs, which indirectly led to his appointment at Chatham House in the mid 20's as compiler of the Annual Survey for the Royal Institute of International Affairs. He remained in this post for 33 years, faithfully producing this prodigious Survey, a task which required an astonishing capacity to digest and process vast quantities of information.

In the early days of Balliol, Toynbee's first wife, Rosalind comes on the scene. Her father was the rationalist Regius Professor of Greek, Gilbert Murray, with whom Toynbee maintained a life-long connection after a somewhat inauspicious start. He relates that among the first things he was told at Balliol was on no account to read any of Gilbert Murray's books, as they were 'unsound'; this prompted the young Toynbee to go straight to the library and take out everything that Murray had written!

Toynbee's marriage looms large in the book over the middle years. He and Rosalind had three sons, but the relationship never seems to have been an easy one. Money was a constant worry, as

Rosalind overspent while Toynbee worked away at extra articles to bring in a little more cash. It is obvious that once 'A Study of History' (referred to by his wife as 'The Nonsense Book') was under way (the first volumes came out in 1934, the last in 1961) Toynbee's every waking minute was devoted to his work. The children were, according to Philip, considered an expensive nuisance. By the 1930's, Rosalind had begun to turn to Catholicism, and the couple drifted slowly but inexorably apart. Toynbee himself, although he had not yet come round to espousing a spiritual world-view, used to spend some retreat periods at the Catholic Monastery at Ampleforth; he was not, however, persuaded by the appeal of his friend, Fr. Columba, that he had the capacity to make a contribution to the Church of the same order as Augustine or Thomas Aquinas. While Toynbee was experiencing many intellectual triumphs in the 1930's, in particular the great success of 'A Study of History', these were balanced by some personal blows, none worse than the suicide of his eldest son Tony in 1939, which called into question his single-minded consecration to his work.

A Spiritual Perspective

In the end this tragedy, too, became an important landmark in Toynbee's spiritual development, helping him towards the perception of a spiritual reality behind material phenomena. As McNeill points out in a justifiably critical assessment, the later volumes of the 'Study' were based on a quite different premise to the earlier ones. Toynbee had started out with the firm conviction that the motivating force of history was the human race's capacity to respond to the perennial challenges of life and environment – the so-called 'challenge-response' model. He gradually came to adopt a totally different frame of reference which undermined the earlier framework by emphasising the central importance of spiritual evolution and the role of the great religions. As part of this, he saw the necessity of a spiritual revolution if the world system is to be put on a sustainable basis. One formulation echoes the Yogic perspective of Arthur Koestler:

"Individual enlightenment is the indispensable means of social reform because, in the phenomenal world in which we human beings live and act, the agents are individual human beings" (5).

Toynbee did not fight shy of discussing such topics as the purpose of human life, a subject about which most academics are conspicuously silent. He maintained that we should live "for loving, for understand-

ing and for creating". Love, he asserts, is "the only spiritual power that can overcome the self-centredness that is inherent in being alive. Love is the only thing that makes life possible, or, indeed, tolerable". Our intellectual goal he saw as seeing the universe as it is in the sight of God, whilst our moral goal "is to make the self's will coincide with God's will, instead of pursuing self-regarding purposes of its own".

This last sentence links Toynbee's personal and social concerns. His thinking was decisively shaped by his experiences in government during the First World War, at which time he developed an abhorrence for war and a conviction that its principal cause lay in idolatrous worship of nation states. Hence his advocacy, during World War II, of the eventual necessity of some form of world government under which nations surrender the right to pursue immoral courses of action. He also insisted, in a memo quoted by McNeill, that some such scheme was one of the moral consequences of "the factual interdependence to which the world has come". Such sentiments are more familiar to the ears of the 1990's, and highlight Toynbee's remarkable social as well as spiritual vision. They also help to explain why he was in such constant demand as a lecturer and broadcaster on world affairs. He made many lecture tours of the United States, where the 'Study' became a cult book in the immediate post-war period.

How does McNeill sum all this up? In his last chapter, he makes comparisons with Dante and Milton, then with Herodotus and Thucydides. Certainly, it seems that Toynbee's pioneering achievements in world history will be increasingly acknowledged, in spite of the just criticisms of McNeill and the mockery of small-minded professional colleagues. Few, though, will read his entire historical opus; many more, I hope, will read this biography and savour the breadth and depth of vision evident in his late dialogues. For those who need to start somewhere, there can be no better place than this biography.

1. Oxford University Press. Most volumes of the 12-volume version are currently out of print. There is also an illustrated one-volume version, Thames and Hudson, 1972. (Paperback 1988.)
2. Oxford University Press, 1976.
3. 'Comparing Notes', Oxford University Press, 1963.
4. Oxford University Press, 1969.
5. 'Surviving the Future'. Oxford University Press, 1971

David Lorimer is the Director of the Scientific and Medical Network. His book 'Whole in One' was published by Arkana in October.

... in brief

SCIENCE

A Journey into Gravity and Spacetime

by John A. Wheeler

Scientific American Library/W. H. Freeman, 1990

H/back, 256pp, £16.95

John Wheeler, Professor Emeritus at Princeton, and for many years Professor of Theoretical Physics at Austin, Texas, is one of the world's most distinguished and original physicists, most famous perhaps as the proposer of the 'participative universe'. This book is a readable account for the layman of the state-of-the-art understanding of gravity and space/time, based on Einstein's Theories of Special and General Relativity. Excellently presented, with coloured illustrations, good clear diagrams, interesting fact boxes and quotations, it covers the history of ideas which preceded Einstein's great insight: explains how the theory accounts for many every-day phenomena such as tides and falling stones, planetary motion and the creation of black holes: and goes on to discuss the latest work on such things as gravity waves and dark matter.

Professor Wheeler has a whimsical style; the reader is invited to join him in planning various journeys to distant planets, and on a 'boomerang through the centre of the earth'; and the text is sprinkled with poems which he has been inspired to write as he contemplates the great wonders which science reveals. But all this just adds to the fun, for the book is full of fascinating information and the physics is excellent.

The Fifth Essence

The Search for Dark Matter in the Universe

by Lawrence M. Krauss

Hutchinson Radius, 1989. (US Basic Books)

H/back, 342pp, £16.95, \$21.95.

(P/back, 411pp, £6.99, published by Vintage)

This is the fullest account yet for the general reader of the origins and history of the current belief amongst scientists that most of the matter in the Universe is invisible, and so has not been directly observed. The story is an extraordinary mixture of experiment in the realms both of the very small (particle physics) and the very large (astronomical observations) together with theoretical speculations into the origins of the universe. Krauss is a physicist, and includes his own speculations into the structure of the 'missing matter'.

Evolution of the Brain: Creation of the Self

by John C. Eccles

Routledge, 1989

H/back, 282pp, £30.00

This book sums up a life-time's work by one of our most distinguished neurophysicists, a Nobel prizewinner for his study of the mammalian brain. Here, Sir John Eccles attempts to gather together all the evidence and scientific work on the evolution of *homo sapiens sapiens* to create a coherent 'story' of its development. It is a fairly technical work, although quite comprehensible to a layman. As well as a good account of biological evolution, there are chapters on the development of language, artistic creativity, learning and memory, the mind-brain problem and the concept of the 'human person'.

Although the account is based almost entirely on orthodox theories of Darwinism, Eccles, unlike many of his colleagues, is willing to go beyond them, maintaining that "conventional evolutionary theory has dismissed from consideration the self-consciousness that came into the last stages of hominid evolution" (p239). His conclusion is that "since materialist solutions fail to account for our experienced uniqueness, I am constrained to attribute the uniqueness of the Self or Soul to a super-natural spiritual creation" (p237), and he is refreshingly unembarrassed to bring in religious terms when he enters such areas. He says, in consideration of

the message that the discoveries of evolution can bring to mankind: "Great humility is needed. We must not imagine that we are the repositories of all wisdom so early after our evolutionary origin. Sherrington (1940) metaphorically spoke of us as being 'newly hatched'" (p241).

The New Ambidextrous Universe

by Martin Gardner

Third Revised Edition, W. H. Freeman, 1990

H/back, 392pp, £15.95

This is a revised and expanded edition of a book that, since its original publication in 1964 under the title 'The Ambidextrous Universe', has become celebrated as a classic of popular science writing. The subject is symmetry and asymmetry in nature, art and culture. There are chapters on mirrors, geometry, art, astronomy, asymmetry in plants, animals and humans, and in chemistry and physics. Among much else, we learn that apart from man, primates are equally likely to be left or right-handed, or are ambidextrous. Man-made artifacts like carousels all tend to go counter-clockwise – the exception is clocks themselves.

The bulk of the book, however, deals with symmetry in physics. The discovery in 1957 of the so-called 'overthrow of parity', which indicated for the first time that the laws of physics might not be left-right symmetric, is explained, as are anti-matter and time-reversal symmetry. This edition has five new chapters,



A representation of the 'Green Man' in Lichfield Cathedral. From the illustrated book 'The Green Man – The Archetype of Our Oneness with the Earth' by William Anderson. Harper Collins, London and San Francisco, 1990. *H/back, 176pp, £14.95.*

Photograph by Clive Hicks.

bringing this material up to date and explaining the new physical theory of superstrings and Roger Penrose's theory of 'twistors', which appears to suggest that Nature is asymmetrical at a very deep level.

Particles and Forces at the Heart of Matter

Edited by Richard Carrigan Jnr and W. Peter Trower

W. H. Freeman, 1990

P/back, 237pp, £10.95

The last twenty years have seen an extraordinary series of breakthroughs in our understanding of the physics underlying the structure of matter. This book provides one of the best accounts of this revolution available for the scientifically literate reader. It comprises updated versions of twelve articles originally published in 'Scientific American', all written by working physicists, including four Nobel laureates. Topics discussed include strong and weak interactions, experiments with particle accelerators and theoretical developments such as string theory. The book is in the standard lavishly illustrated Scientific American style. A companion volume, 'Particle Physics in the Cosmos' published in 1989, discusses cosmological implications.

MYSTICISM

World Spirituality Series

SCM Press, New York, 1989

P/back, 479pp, £19.50

This new series from the American SCM Press is a major project which has the ambitious aim of presenting the spiritual wisdom of the human race in its historical unfolding. Bringing together scholars and specialists from every religious tradition and every part of the globe, the series intends to produce works which will be definitive for at least a century. Volumes are planned, and some are published, on the spiritualities of the archaic peoples in Asia, Europe, Africa, Oceania and North and Central America; on the major living traditions of Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity and Islam, plus the Sikh, Jain and Zoroastrian traditions. There will be volumes on traditions that have not survived but have exercised important influence, such as those of Egypt, Sumeria, classical Greece and Rome, plus a collection on modern esoteric movements and another on modern secular movements.

Several interesting volumes have been published during the past year. There is the first of two volumes on **Hindu Spirituality** (1989) which deals with the classical period, covering 2,000 years from the Vedas (1500BC): **Jewish Spirituality II** (1989), covering the period from the

Safed revival of the 16th century to the Hasidic movement of the 18th century to trends in modern Judaism (the first volume covered the period from the Bible to the middle ages): and **Christian Spirituality** (1990). This latter concentrates on the spirituality of the Western Church, with only one chapter on Eastern Christian spirituality (on Palamism). However the modern emphasis on the feminine in Christian theology is represented in good measure. The general level is good but, as with all encyclopaedias, one is left with a sense that far more is not covered, than can be included.

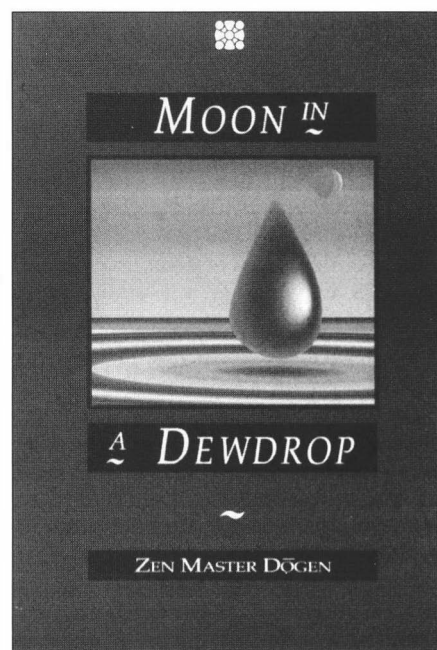
Moon in a Dewdrop

Zen Master Dogen

Edited by Kazuaki Tanahashi

Element Books, 1988

P/back, 356pp, £9.95



Eihei Dogen (1200-1253) was one of the great Zen masters. He was the first to transmit Zen Buddhism from China to Japan, and founded the important Soto School of Buddhism. This book includes an introductory essay which outlines his life and his thought, plus new translations of his works – twenty essays, drawn from his life-work 'Treasury of the True Dharma', four texts originally written as independent works and some of his poems, rendered here into English for the first time. The introduction explains that "Dogen used the image of the moon in a dewdrop to describe the state of meditation. He suggested that just as the entire moon is reflected in a dewdrop, a complete awakening of truth can be experienced by the individual human being" (p12).

The commentators all agree that Dogen has a unique and often paradoxical way of expressing himself, but many of these

extracts speak immediately to the heart. A major theme is the timelessness of the moment:

"Do not think that time merely flies away. Do not see flying away as the only function of time. If time merely flies away, you would be separated from time. The reason you do not clearly understand the time-being is that you think of time only as passing.

"In essence, all things in the entire world are linked with one another as moments. Because all moments are the time-being, they are your time-being" (p78).

Paracelsus

Essential Readings

Ed. and Trans. by Nicholas Goodricke-Clarke

Crucible, 1990

P/back, 208pp, £7.99

This collection of extracts is the first readily available English translation of the work of the renowned 16th century Swiss scientist and mystic to appear since the 1950's. It includes a useful introduction to Paracelsus' turbulent life, and to his view of medicine in a universal context, reminding us that what have come to be called holistic medicine and therapy are attributes of a view of existence which starts from the Unity of Being and has its roots in the perennial wisdom.

Inspiring of thinkers such as Jakob Böhme, Johann von Goethe, Robert Browning and Rudolph Steiner, Paracelsus wrote that "the earth is obliged to the heavens for everything being in its proper measure"; and maintained that nature and man are the manifestation of divine signature. Hence, he says, the treatment of illness must take account of the human's relation not only to its earth-located condition, but also to its cosmic and divine dimensions. The Paracelsian physician, therefore, comes to represent, in a specific, practical way, the universal responsibility of trusteeship required of man. As befits an introduction to the world of the so-called 'father of homeopathy', this anthology contains one of the earliest European formulations of the homeopathic technique of potentisation: "Make a remedy volatile, that is, remove what is earthly in it, for only then will the heavens direct it" (p75).

You looked at Me: The Spiritual Testimony of Claudine Moine

Transl. by Gerald Carroll

Cambridge/James Clark and Co., 1989

H/back, 324pp, £20.00

This is the first English translation of MS1409 of the archives of La Société des Missions Etrangères in Paris. It dates from the years of 1652-55, and is the testimony of a young woman who came to that city

penniless in 1642, a refugee from the Thirty Years War. When the writings were recently unearthed, they were immediately recognised as being of enormous spiritual value. They are of particular importance today because, although celibate, Claudine Moine lived very much in the world, earning her living as a dressmaker whilst receiving almost uninterruptedly the gift of a tremendous and intimate discourse with God. Much of the language in which she expressed herself is graphically Christian, but nevertheless, one feels that this account of a life in God will find its readers among adherents of all sects and none. Very seldom does one come across any writing, whether of modern or ancient origin, which addresses so well questions relevant to the spiritual vocation in the world, and which so unveils the inner life of one of God's friends.

ECONOMICS/ECOLOGY

Banking the Unbankable

Panos Institute, 1989

P/Back, 224pp, £5.95

This small book, published by the Panos Institute as part of its task to inform the world about development projects worldwide, consists of eleven case studies of unusual credit schemes with desperately poor people. Each piece is written up by a local journalist who takes on the task of

describing the project and evaluating its success. Most of the schemes are savings clubs and co-operatives organised within the community – many of them by women who use the money to set up small businesses – in Pakistan, South America, India and Africa. The accounts give a real 'inside' glimpse of the lives people are leading and the problems which they face. Perhaps the most moving aspect is the way these inexpensive projects are freeing people and helping them to realise their own abilities. Adolfo Granza, President of the Farmers' Association in Chile, which developed a scheme allowing tenant farmers to buy their own land, says: "We do things we never did before and will continue to do them all by ourselves without anyone telling us how. We cannot have someone organising us all our lives."

The Borderless World

Power and Strategy in the Interlinked Economy

by Kenichi Ohmae

Collins, 1990

H/Back, 223pp, £15.00

Kenichi Ohmae is a man whose knowledge, experience and insight within his chosen sphere are formidable. Managing Director of the international firm of management consultants, McKinsey & Co, his work has drawn the highest praise from the Chairmen of such companies as Sony,

Mitsubishi, Volkswagen Werk A.G., and American Express. His purpose in writing this book is to share "a perspective gained over years working as a practising consultant in the hope that readers will appreciate the view and the potential power of the new world, toward which we are heading." This new world is one which is 'borderless', because the economies of the major trading nations are now inter-linked to such an extent that they constitute "an isle that is bigger than a continent – the Inter-Linked Economy, ILE".

Ohmae feels that the new world will be re-ordered socially and politically according to the requirements of the ILE. "Traditional governments will have to establish a new single framework of global governance. Toward that end, the first and most important step is to understand the global economy accurately." Bureaucrats, politicians and the military will no longer have the same power, for 'power' will reside ultimately in the free choice of the individual to consume, produce and invent. The role of government, therefore, is to educate people to ensure that they have as much information and choice as possible.

Kenichi Ohmae unashamedly views the world and its affairs with a particular eye. "Do you write with a Waterman or a Mt. Blanc pen or travel with a Vuitton suitcase out of nationalist sentiments?" he

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asks. Nevertheless, in drawing our attention to the unifying effect of economic interdependence and of a global system of finance, he touches upon a matter which has significance beyond its immediate appearance.

ARTS

Icons and the Mystical Origins of Christianity

by Richard Temple

Element Books, 1990

H/back, 192pp, £16.95 (P/back £9.95)

As founder of London's Temple Gallery, a centre for the study, restoration, exhibition and collection of icons, Richard Temple has undertaken an enquiry into the potential relevance of icons in contemporary society – an activity which has led him, over the course of some thirty years, into sometimes obscure areas of ancient history and thought. In the first part of this book, he discusses the philosophical background to icon interpretation, including chapters on 'Hellenistic Philosophy', 'Hesychasm and Philokalia', 'Plotinus and Neo-Platonic Philosophy' and 'Dionysius the Areopagite', the latter being an "important key to the interpretation of mysticism in icon painting". In the second part, he considers the role of the artist in communicating such understandings as are not normally expressed in words; this is possible, Temple maintains, only if the "work of the artist is undertaken in parallel with the art of self-perfection". He continues with a look at a selection of icons representative of some of the more interpretative approaches, under such intriguing chapter headings as 'The Sinai Mother of God: An Image of Celestial Light and Spiritual War'. Temple's enthusiasm for his subject is clear, and he has written an engaging and accessible book.

Temenos 11

Edited by Kathleen Raine

Temenos, London 1990

P/back, 304pp, £9.95

This penultimate issue of the arts review is a mixed selection of poetry and prose, metaphysical essays, articles and reviews. The contributions and contributors are international and transcultural – there are writings on sacred dance and sculpture from India, on the Japanese Noh plays, on Aborigine culture and from native America. All these are concerned with what Peter Malekin calls in his formidable essay 'The Reality of the Future', "the unitive depths of human consciousness" and one finds running through these pages a common concern with the arts, nature, the divine theophany and the soul of man. Perhaps the most outstanding piece is Keith Critchlow's article, 'The Royal Statues at Chartres', which comments on

the unique proportions and timeless meanings of the figures on the west front of the Cathedral. There are many other contributions of great charm – the poetry of Wendell Berry, a Kentucky farmer whose 'Sabbaths 1897' transforms in us the mundane to the paradisaical; or James Cowan's 'Letter from a Wild State' describing his contact with Aborigine culture. Plus a poem by Sachchitananda Vatsyana called 'The Unmastered Lute' which includes these lines, sung by the player of 'the lute that no man had ever mastered':

"...Nothing in this is Cause for
praising me
For I myself was drowned in Nothingness
...all presence wholly
Here sang of itself, the Infinite"

Images of God

The Consolations of Lost Illusions

by Peter Fuller

Hogarth Press, 1990

P/back, 317pp, £9.99

This collection of essays by Peter Fuller dates from the early 1980's, and originally appeared in 1985. They are reprinted with a new foreword written only a month before his sudden and tragic death in April this year. They form an appropriate memorial to one of the most important art critics of our time, exhibiting his catholic range of interest, his intellectual clarity and his ability to excite. Here, the characteristic polemic is turned upon, in particular, the Marxist cultural critique and the pretensions of the second rate in the art world. But some essays find Fuller at his best as a critic, being perceptive and articulate studies of works he finds truly valuable: the Australian painter Fred Williams, Cecil Collins, Henry Moore and others. Underlying Fuller's exploration of the world of individual artists is a personal quest for an aesthetic that will accommodate what he acknowledges to be greatness in art. He writes:

"The single, dominant theme of this book is ... the plight of good art in a society, like ours, which is characterised by the absence of a shared symbolic order of the kind that a religion provides".

Since he declares himself an atheist, the attempt to derive transcendence from religious forms is for him 'the lost illusion' of the title; yet he cannot refrain from affirming the necessity of such transcendence for great art. But whatever the contradictions, his great contribution here, as elsewhere, is to take the business of art criticism away from cliques and trivia towards questions of universal human concern.

GENERAL

Empires of Time

Calendars, Clocks and Cultures

by Anthony Aveni

I. B. Tauris, 1990

H/back, 371pp, £16.95

"Because time is a universal concept, its study serves as an excellent way to better understand the world as [other cultures] see it... The goal is a comparative cross-cultural look at time." (p10)

Anthony Aveni is well-qualified for such an ambitious task, being Professor of Astronomy and Anthropology at Colgate University, USA. His well illustrated book begins by discussing the origins and development of the Western calendar, and goes on to give a fascinating account of the calendars of the Maya, Aztecs and Incas of South America, and also the Chinese. With the Maya, the impression is of a calendar of amazing accuracy with a much greater emphasis upon the cyclical aspect of time than in the West. The discussion is everywhere related to what is known of the general world-view of the cultures concerned, although in places one is led to question the extent to which Aveni has freed himself of his own Western biases. Nevertheless, a very interesting and comprehensive work.

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Exhibitions

A New Art?

The Journey
Lincoln, 17th June – 12th August 1990

George Pattison

THE JOURNEY' WAS a highly ambitious art-event. At its centre was a series of site-specific works at various locations in and around Lincoln, accompanied by what is now the customary paraphernalia of educational events, a conference and a book. The subtitle of the book – which includes essays by such distinguished contributors as Don Cupitt and Sister Wendy Beckett – summarises the aim of 'The Journey' as being 'A Search for the Role of Contemporary Art in Religious and Spiritual Life' (1). The 'exhibition' guide speaks of the event as potentially contributing to the growth of a "new language, energy and images; sharing the concerns and celebrating the joys of this moment, while reaching towards a new century in fresh forms of expression and belief".

But why 'The Journey'? For one reason, to break away from the notion of a museum or gallery 'exhibition', static and encouraging a superficial response to the work; for another, by making us move from site to site 'The Journey' recreates something of the mood of a pilgrimage, inviting a reflection on the significance of 'the Way' itself as well as on the finished product.

Inception

There is no doubt that the event was well-timed, and that it caught the rising tide of interest in this whole area of which there are so many examples in books, conferences and exhibitions. Nonetheless, it is not necessarily the case that everything which this tide brings is to be uncritically affirmed. Peter Fuller, in a posthumously published essay in the Sunday Telegraph (2) expressed grave doubts about the concept of 'The Journey', and the suitability of the artists contributing to it. In particular, he regarded the installation of a new work by Richard Long in Lincoln Cathedral (which, with Ruskin, he regarded as one of the finest products of English Gothic) as little less than artistic blasphemy. Although he did share with the organisers of 'The Journey' the conviction that nature in some way provides the key to the regeneration of an authentically spiritual art, his view of 'the transformation of nature in art' was quite

17th century South American representation of the four previous ages of the Andean world – starting with the earthy-appearing humans of primeval time and ending with the contemporary confrontation between Spanish and Inca societies. From the pictorial chronicle of Felipe Guaman Poma de Ayala, 1st edition kept in Mexico City. See 'Empires of Time'.

Sainsbury's Book of Food

by Frances Bissell
Websters International, 1989
H/back, 276pp, £6.95

This lovely book is the author's attempt at an encyclopaedia (though not, she warns, an exhaustive one) of the foods of the world. It is not a cookery book but a compendium of ingredients, many of them unknown in the British Isles only five years ago. There are sections on Meat, Poultry, Butter, etc. and also more exotic inclusions, such as 'Sea Vegetables', 'Fungi', and 'Dried and Salted Fish'.

Christine Hanscombe's simply but very effectively arranged photographs are by far the most attractive feature of the book, conveying a sense of the infinitely subtle variety of food available to us. Who could fail to be pleased and enticed, for instance, by the little arrangement on page 75 of fifteen different varieties of plum?

Short reviews by Martha Chamberlin, Jane Clark, Michael Cohen, Paul Davies, Adam Dupré, Kathy Tieman, Hilary Williams, Alison Yiangou.

dissimilar to theirs. More of this later – but what happened on ‘The Journey’?

Like any other journey, this will have varied tremendously according to the individual concerned. My own journey took place on a blazing hot July day. As I wandered among the ruins of the old Bishop’s Palace, the almost Mediterranean heat led me to fancy myself as one of those learned tourists whose itinerary leads to the monuments of Greece and Rome, rather than to the more densely populated swimming-pools and beaches favoured by the majority of holiday makers. For these ruins, and the great Cathedral itself, belong no less to a culture which is in many ways quite alien to us. It is part of our history, and yet the whole world of thought, feeling and aesthetic sense which these stones embody is so remote as to be almost unintelligible to any but the most scholarly visitors. The cult which this great edifice was built to house is as strange to most of us as are the cults of Apollo or Dionysus. We admire it all – but from the outside, as it were. And now I had come to wander among these ancient stones in order to encounter and appraise what offered itself as the stirrings of yet another epoch in the story of the human culture, the first-fruits of new ‘post-modern’ art and faith which could become as strange to the modern, technocratic, capitalistic world-order as that would be to its medieval predecessors. But this seemed somehow right. Whatever the new age is to be, it should go to, and draw from, the best of the old, as the medieval order itself drew on the remains of the classical world.

The Journey

‘The Journey’ began in Lincoln’s Usher Gallery, where there was a preliminary presentation of the work of the artists included in it, together with an opportunity to see the touring exhibition, ‘New Icons’, which provided a complementary perspective on the central theme of ‘The Journey’ itself. At this point it would probably be as well to pour out my complaints about both exhibitions. Many of these have to do with the actual organisation of the event. The first room I entered was, for instance, appallingly laid out, with the Gallery’s concert piano blocking the view of a very agreeable abstract painting by Jennifer Durrant. Later on we found that one of the major exhibition sites was not open that day, whilst another site which should have been open was locked and closed. The various out-of-town sites lay in different directions, so it was not possible to do the whole journey in a day. Several works were, in any case, very poorly sited. Keir Smith’s limestone clouds were placed in the bottom of a large dip in the Usher Gallery gardens,

where, though pleasing enough in themselves, they looked more like giant fungi or bird droppings than clouds. Richard Devereux’s ‘Temple of Solitude’, a hinged stone engraved (quite beautifully) with (on the outside) the word ‘Temple’ and (on the inside) ‘Of Solitude’ was to all effects and purposes stuck in an out-of-the-way corner of the Theological College chapel – etc., etc.

Of the works in ‘New Icons’ only Dennis Creffield’s four drawings of Madonna and Child really stood out, though Monica Chadwick’s feminist collage of Madonna with girl child had a sharply subversive humour, while Sarah Raphael’s staging of gospel texts offered a convincing update of Stanley Spencer’s favoured method of putting these scenes and stories into a modern English setting (though her chosen backdrops are sombre, northern and working-class in feeling as against Spencer’s sunnier ‘Home Counties’ world). But it was equally true of ‘New Icons’ and ‘The Journey’ that the works were so disparate that it was hard to feel any sense of overall coherence. Whether this was due to generous catholicity of taste on the part of the organisers, or to a ‘post-modern’ repudiation of unity, or to a simple failure to think the whole thing through was not clear!

‘The Journey’ set out from the particular stand-point of the Christian Church and the Church’s relation to art. This, however, raised expectations which were scarcely fulfilled by the event itself. Apart from Stephen Cox’s ‘Rock Cut, Holy Family’ and Craigie Aitchison’s ‘Crucifixion’, none of the other works in ‘The Journey’ itself had any clear connection with Christian traditions of iconography. Now there may well be good theological reasons for adopting a certain reserve with regard to the artistic representation of events or concepts which are the subject of doctrinal definitions. The sort of biblical and doctrinal realism attempted, for instance, by Holman Hunt may not be always appropriate in a place of worship, since such pictures all too easily raise the kind of questions which obstruct rather than facilitate the spirit of prayer, contemplation and praise. Nonetheless, it would have been good to have had at least some intimation that Christianity creates both particular problems and particular opportunities for art. At some point it is essential for any art which aspires to be truly Christian to come to terms with the way in which the paradoxical dialectic of crucifixion and resurrection affects our whole perception and evaluation of that human flesh which, directly or indirectly, informs all artistic making and doing. But of this there was nothing. (3)

In fact, not only did the event fail to rise to the very specific challenge of

Christian art, but some of the pieces suffered by being brought into the intellectual and architectural space of a Christian place of worship. It is perhaps no accident that the work which I experienced as most ‘fragrant with the holy mood’ (P. T. Forsyth) was the open-air work of Sue Hilder. Like Richard Long, Sue Hilder works with natural materials in natural settings. In this case the site centred on a moated island adjacent to the ruins of Tophome Abbey. These ‘sculptures’ included a number of reeds hung upside-down from the branches of the thorn trees overhanging a watering pool (once the Abbey’s sunken garden) and a spiral of dried, broken sections of plant stalks in the mud of the dried-out moat. The ambiguous relationship between artifice and what was just there keenly sharpened my total awareness of the site’s soft, melancholy atmosphere. On paper, it sounds a bit whimsical, but it really did help me to **be in** that place, and it also threw fresh light on the concept of ‘The Journey’: that if I was to get anything out of this event then it couldn’t happen without my active participation – a thought which mollified my annoyance at ‘The Journey’s’ organisational shortcomings.

Theories

In the accompanying book, both Sister Wendy Beckett and Don Cupitt offer incisive theological appraisals of the spiritual significance of modern and post-modern art – although their theoretical principles are noticeably different. Sister Wendy is firmly rooted in the Christian mystical tradition, but though she speaks of the divine as ‘Essential Mystery’ she does not see this as leading to an exclusively negative approach to the realm of finite, created, knowable and visible forms. For she finds in such forms the occasion of a sometimes frightening, sometimes beautiful vista onto that unknown Transcendence in which we encounter the love of God. “What we call this Transcendence is up to us”, she says, and she sees in the art of our time an approach to Transcendence every bit as legitimate as that of verbal theology.

Don Cupitt, on the other hand, wants to avoid all talk of transcendence – especially with a capital ‘T’. He regards the modern world as having long since abandoned the supernatural. We no longer evaluate life ‘vertically’, he maintains, but ‘horizontally’, yet within the horizontal space of modern experience there is nonetheless a continuing place for the sacred. But, he argues, it is what he calls the ‘Abstract Sacred’, a prime example of which he finds in Richard Long. Instead of trying to point us to the skies by making an art which might serve as ‘a launch pad for the soul’, Long’s works, he says, “... are not to be used as mere jump-

ing-off points; in Long's work the Abstract Sacred stays on the land surface and we must stay there too". The very impermanence of these arrangements of stones means that they:

"seem to speak to us of an enduring unnameable Background against which our brief life is acted out. But this Background, this Abstract Sacred, must not be reified... It is something for which we have not developed a vocabulary, but of which art has made us aware. It may be a starting-point for the religion of the future".

Sister Wendy and Don Cupitt are thus able to make similar affirmations about art though, as this brief summary of their views should show, their theoretical positions are far apart. The distance between them could perhaps be best described by saying that although for Sister Wendy the divine is Essential Mystery, it is nonetheless intensely **personal**: her God is love. Don Cupitt's 'unnameable Background' however is, it seems, beyond personality, and to talk of personality and love in this context would be to revert to the old language of supernaturalism. Interestingly, he concludes his essay with a 'thank you' to Peter Fuller for having made him aware of the profound disagreement between them. Yet curiously, their metaphysical positions are not really all that far apart and Peter Fuller would equally have denied the ascription of personal characteristics to the creative force at work in the universe. But Peter **did** require of art a commitment which was ethical and personal rather than mystical. It was in the light of this requirement that he took a very dim view of both Francis Bacon and Gilbert and George – and also of Richard Long, whom he regarded as totally devoid of the kind of human interest which is necessary for great art.

A Spiritual Art

Before his death, Peter Fuller had assembled a small exhibition which was shown at this year's Aldeburgh Festival. Entitled 'Landscape Visions', it looked at the East Anglian landscape through the eyes of Arthur Boyd, Maggi Hambling, Edward Middleditch, Terry Shave and William Tillyer. These ranged from the recognisable representational work of Arthur Boyd and Edward Middleditch through the strong quasi-abstracts of Maggi Hambling and Terry Shave to the almost complete abstraction of William Tillyer. Yet all these artists share a great strength, firmness of touch and self-assurance, each being totally committed to their own vision and their own way of working. By contrast, much of the work in 'The Journey' seemed tentative and self-con-

scious. Did this perhaps reflect the lack of clear ethical conception in 'The Journey'? Was 'The Journey' perhaps attempting to find a 'spiritual art' without having committed itself to the discipline of that ethical rigour which has its feet firmly on the ground and is closely attentive to the full concreteness of nature and humanity? At this point I would recall once more my suggestion that a specifically **Christian** art (if there is ever again going to be such a thing) must test itself against the terror and the beauty of the crucifixion and resurrection, the ultimate seriousness and ultimate joy of life – and the signs of such testing will surely show even in non-representational work. Oddly enough, the (apparently) secular 'Landscape Visions' seemed closer to that than the (supposedly) spiritual art of 'The Journey'. That is food for thought for both art and faith.

I should not like these comments to appear unappreciative of 'The Journey'. It was a bold venture, and many of the individual works which I have not commented on specifically had much to commend them. But the event had set

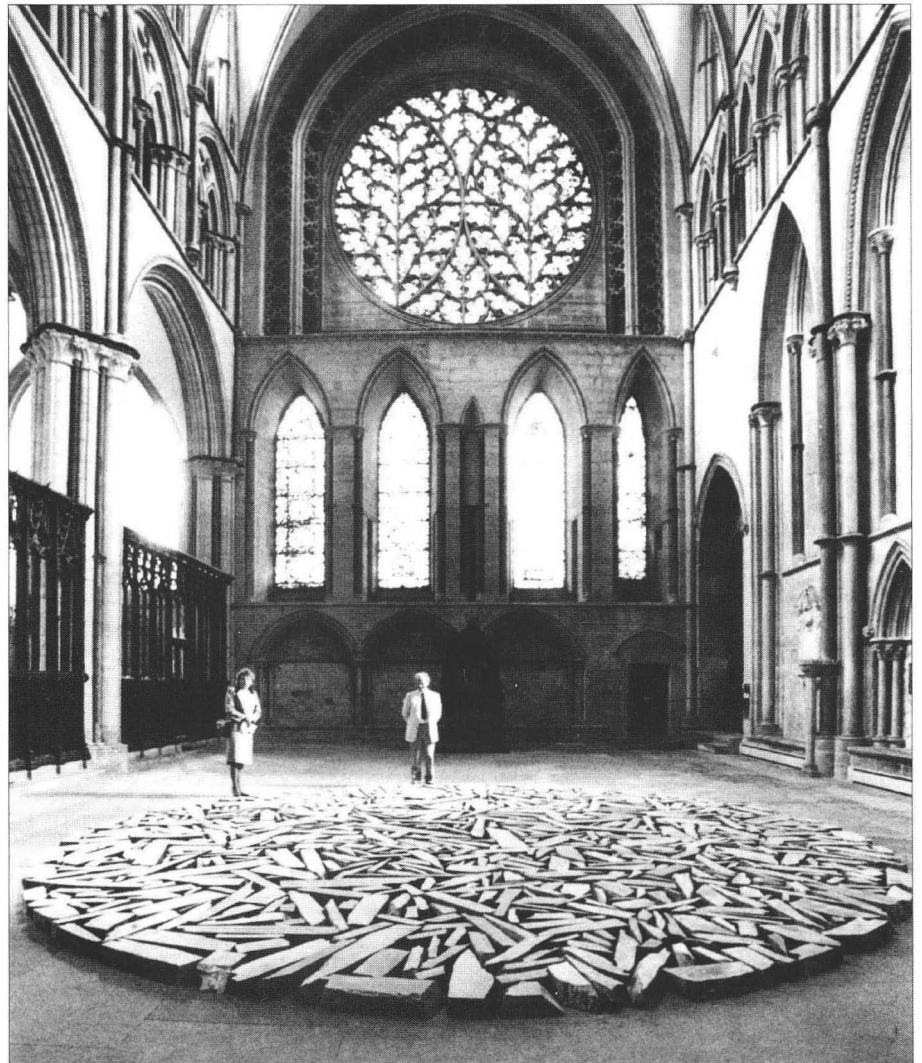
itself a formidable goal, and it was in the light of this goal that it invited us to appraise it. At the very least, however, it provoked a serious questioning of that most tantalising but elusive theme; the representation of the Essential Mystery which is beyond all representability.

1. *The Journey* (Lincoln, Usher Gallery/Redcliffe Press, 1990).

2. 17th June 1990.

3. Since writing this article I have heard that Leonard McComb's golden 'Portrait of Young Man Standing' has had to be removed from the cathedral, following complaints from the public. (The figure is naked and recognisably male.) It says a great deal about how far 'The Journey' has to go, that what was clearly an honourably intentioned piece should get that kind of response. Incidentally, I would have liked to have seen more of McComb's landscape paintings, since the single one on display was one of the best items in the event.

George Pattison is the Vicar of five parishes in Suffolk. His book 'Art, Modernity and Faith' will be published by Macmillan in late 1990.



Richard Long's 'Halifax Circle', 1989, installed in the Great South Transept of Lincoln Cathedral. Courtesy of the Anthony d'Offray Gallery.

Spiritual Kin

Impressionism, Landscape and Rural Labour

Exhibition of Paintings of Camille Pissarro (1830-1903)

Burrell Collection, Glasgow, May/June 1990

The Classical Vision of Landscape

*National Gallery of Scotland
9th August- 21st October*

Rose Hughes

THIS YEAR WOULD seem to be very much one for celebrating the Impressionist masters, for not only is the work of Claude Monet currently showing at the Royal Academy, but also Camille Pissarro (1830-1903) and Paul Cézanne (1839-1906) have seen major exhibitions around Britain. The Pissarro travelling exhibition, organised by the South Bank Centre, went first to Birmingham in the spring and then on to Glasgow, forming a central feature of the city's year as cultural centre of Europe. In the case of Cézanne, it is the creative affinity between him and Nicholas Poussin (1594-1665), the French master of the classical landscape, that is explored in a major exhibition at the National Gallery of Scotland. Although Poussin lived 200 years before Cézanne, they are regarded as 'spiritual kin', each superlatively expressing a vision of nature in "its majesty and permanence and its hidden and unassailable truths". These words of Richard Verdi, Professor of Fine Art at the University of Birmingham, the author of a companion volume which accompanies the exhibition, perhaps give a flavour of the sense of grandeur conveyed by the paintings.

The Pissarro exhibition also has a comprehensive companion volume, written by Richard Thomson, a lecturer at the University of Manchester. Both these books provide a fresh evaluation of the work of their artists, and for both exhibitions the works were carefully selected from public and private collections worldwide to illustrate a particular theme. Richard Thomson carefully explores and finally reconciles the many-faceted influences – social, political, economic and cre-

ative – bearing on Pissarro, whilst the study of Richard Verdi concerns the underlying unifying themes expressed in landscape paintings of Cézanne and Poussin.

The Unitative Eye

Camille Pissarro, called by Cézanne "the humble and colossal", is seen by Richard Thomson in a complex way; his works, he feels, "not falling into any any easily resolved patterns", for "making and meaning" were in constant re-formation throughout his painting life. The oldest of the Impressionists, a man with a strong sense of the value of the individual and an anarchist by conscience (although not politically active), Pissarro expressed an ideal of rural life, of an intimate bond between people and the countryside. This relationship – dialogue even – between man and his world is constantly explored. The paintings, mostly of rural areas bordering on the suburbs of Paris, show us the beauty of the simple, perhaps humbler, elements of life which he perceived. He frequently depicted fields, hillsides, farmyards, markets, apple-picking and harvesting, and other rural occupations, as well as river traffic and activity along the riverside. There is a delicate balance of recording these beauties of the time and a sense of wondering for the future amidst rapid social and economic change, whose far-reaching effects we now witness in a

countryside largely devoid of these elements.

Pissarro, through his vision of an order most evident to him in a setting of rural harmony, diminishes the pretentious and expresses the completeness and continuity between people, their setting and their work. Thus we get robustness in the people, a sense of relationship between them and an overall lyrical effect. This simplicity of vision has invited controversy over whether his is a 'prosaic' interpretation or possibly the romantic vision of a 'human idealist', recording less of the cruder elements of rural life and the encroaching of industrialisation. Such considerations would seem to belie the real vision expressed in his work, and the struggles that Pissarro went through to reconcile this vision in a world where everything seemed to be turning upside down. Richard Thomson points to this when he says:

"Pissarro in the mid 1870's was unsure how to represent modern or industrial elements in his Pontoise landscapes and uncertain in his treatment of the figure in rural images. Twenty years on, the Rouen paintings represent the industrial city with confidence and the late peasant images construct the country populations in stylist and moral harmony".



'The Gleaners' (1889) by Camille Pissarro. From the Kunstmuseum, Basel, courtesy of the Hayward Gallery

Certainly, there is a stature in the latter years; pictures such as 'The Gleaners' (1890), 'Peasant Women Planting Peasticks' (1891), 'Hay Harvest at Eragny' (1901) and 'Summer, Men Scything' (1903) are symphonies of harmony.

Here, another level, which defies analysis – always implicitly present in earlier works – speaks out to us 100 years later, linking us with a deep sense of value in what is natural in man and nature without imposing any moral or religious point of view. In a study some years ago, John House (2) refers to this other level as Pissarro's concern with "the unitative eye of the human spirit"; the finding of meaning or order that comes from clear and uncluttered perception – man standing humbly before nature, looking with purity of vision and re-translating meaning onto canvas. Linda Nochlin (3) also refers to something similar to this unitative eye when she speaks of being: "... free like Pissarro to trust one's own unassuming but unacerbated intuitions of truth and reality. For the old anarchist, freedom in this unspectacular sense seems to have been the essential condition of painting, of seeing, perhaps of living". In Pissarro's own words:

"One can make such beautiful things with so little. Motifs that are too beautiful sometimes appear theatrical... Happy are those who see beauty in the modest spots where others see nothing. Everything is beautiful, the whole secret lies in knowing how to interpret." (4)

Only a new link

The Impressionists revolutionised the course of painting through their desire for an expression derived directly from nature. Intriguingly, the directness of this intention draws out themes concerning an underlying unity, thus showing the universal through the fleeting impression. For Cézanne, there is continuity, or evolution in the development of art: he said of himself: "To my mind, one does not put oneself in place of the past, one only adds a new link." (5)

Although he regarded Pissarro as his chief artistic mentor, Cézanne's direction is entirely its own. The more direct quality of intimacy of Pissarro's work is not present – Cézanne rarely includes the human figure – yet, as Richard Verdi says of him:

"... his own canvases possess a solidity and seriousness which recall the monumental art of the past. In this respect, Cézanne's achievement embraces both the past and the future. Standing at the threshold of the revolutionary art of our century, it may also be seen as a synthesis of the ideals of Impressionism and of the Old Masters."

The Edinburgh exhibition guides us through a possibly unique situation in the history of art – the expression of the unifying order of nature as depicted in a strikingly complementary and magnificent way by two artists living in different eras. In the case of Poussin, this order was conveyed through the 'heroic or classical' landscape seen through the imagination, and in the case of Cézanne, directly from immersion in nature. The large, classical canvases of Poussin and the small canvases by Cézanne of Provence are placed in a juxtaposition to illustrate not just a passing similarity but a true coincidence of expression. Richard Verdi maintains that "their mature landscape paintings are amongst the most elevated visions of nature ever conceived". In describing and comparing examples of particular paintings – Cézanne's 'La Montagne Sainte-Victoire' of 1885-87 with Poussin's 'Landscape with the Gathering of the Ashes of Phocian' of 1648, for instance – he goes into the actual underlying structure of the works, and the order of symmetry which the artists have perceived, or intuited, giving expression to the monumental presence of nature and the co-existence of all things. He says:

"The essential similarities one observes between the landscape paintings of these two artists spring from a common desire to reveal the most enduring facets of creation. Because this relationship exists on so fundamental a level, it strikes one as the profoundest of all bonds between two great creative minds – one founded on a true kinship of spirit".

'Kinship of spirit' is like a key to both these exhibitions; the creative spirit expressed in nature being no other than that expressed in and through man. The popularity of such exhibitions seems to indicate a desire to be in touch with this connectedness, which must surely lie within our own awareness. Otherwise, we are relegating beauty only to a picture on a wall or solely to the sphere of the creative genius.

1. 'Camille Pissarro' by Richard Thomson. The Herbert Press Ltd, 1990. 'Cézanne and Poussin: The Classical Vision of Landscape'. National Galleries of Scotland/Lund Humphries, 1990.

2. 'Studies on Camille Pissarro', Ed. Christopher Lloyd. Routledge and Kegan Paul, 1986.

3. *Ibid.*

4. Letter from Camille Pissarro to his son Lucien.

5. Cézanne, letter to Roger Marx, 1905.

Rose Hughes is a painter who lives in Scotland



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Events

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and events from November 1990 to April 1991

LECTURES/ CONFERENCES

Ibn al 'Arabi: Life, Work and Thought

Murcia, Spain, 12th – 14th Nov.
An international conference in Ibn 'Arabi's birthplace to commemorate the 750th anniversary of his death. Organised by the Murcian government, speakers will include Dr Ralph Austin, Claude Addas, Michel Chodkiewicz, Osman Yahia and Dom Sylvester Houédard. *Details: Ministerio de Cultura, Murcia. Tel: 968 362000 ext 1095*

Goodwill in a Decade of Decisions

London, 17th Nov.
A one day seminar mounted by World Goodwill with the subtitle 'The Challenge of the 90's'. Speakers include Graham Warner, Director of the UN Information Office on The United Nations; James Robertson on 'New Economics', Charlotte Waterlow and Anuradha Vittachi. *Details: World Goodwill, Suite 54, 3 Whitehall Court, London SW1A 2EF. Tel: 071 839 4512.*

Computers, Minds, and the Laws of Physics.

Oxford, Nov. 10th
A seminar and conversation with Roger Penrose, Rouse Ball Professor of Mathematics at Oxford and author of 'The Emperor's New Mind'. One of the Beshara Trust Autumn Seminars, which also include Edward Goldsmith, editor of 'The Ecologist' on 'Economic Sustainability', (Nov. 24th) and a series of evening talks on the lives and works of great saints and mystics 'The Tradition of Love and Knowledge'. *Details: See page 59.*

Time

Delhi, 20 – 26th Nov.
A conference organised by the Indira Gandhi Arts Foundation which explores time in all its aspects. It brings together a distin-

guished group of speakers from the sciences, the religious traditions and the arts – Ilya Prigogine, Raimon Panikkar, S. H. Nasr, Kathleen Raine and Michael Shallis.

Details: Kapila Vatsyayan, Indira Gandhi Centre, CV Mess, Janpath, New Delhi 11000, India. Tel: Kalasanpada 384901

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Dartington, Devon, monthly from Jan. 1991

This new venture offers an interesting opportunity for people wishing to study in depth with leading thinkers, in a series of month-long residential courses. The first four are led by James Lovelock, Helena Norberg-Hodge, Hazel Henderson and Rupert Sheldrake. *Details: see page 55.*

Mind in the Cosmos Series

London, 17th Nov. and 1st Dec.
Two meetings focussing on current debates about the nature of mind and Artificial Intelligence, organised by the Society for Process Thought. *Details: see page 60.*

Cosmos Chaos and Transformation

Winchester, April 5–7th April
The 14th conference in the 'Mystics and Scientists' series organised by the Wrekin Trust explores the latest concepts in chaos theory against the backdrop of perennial wisdom teachings. Ian Stewart, one of the leading lights of modern mathematics, referring to Einstein's famous remark, has said that the chaos theory brings us to a point of asking "... not whether God plays dice, but how". Speakers are not yet confirmed, but on past form should be interesting. *Details: Tel: 0684 892898.*

Transformations Dartington Conference

April 3rd-7th
A major conference which explores the meaning of transfor-

mation in various contexts – political, cultural, ecological and spiritual – and seeks to discover if there are common understandings. Speakers include diplomat Sir Anthony Parsons, the former Chief Constable of Devon and Cornwall John Alderson, the American futurist Hazel Henderson, and Ursula King, Professor of Theology at Bristol University. *Details: Brenda Blewitt, The Dartington Centre, Dartington Hall, Totnes TQ9 6EL.*

Ecology '90

Gothenburg, Sweden, 27th – 29th Nov.
The second ECOLOGY International conference, with the theme 'Ecology and Transport'. *Details: Swedish Exhibition Centre, P.O. Box 5222, S-402 24 Gothenburg, Sweden.*

Eco-Philosophy Symposium

Nairobi, 21st – 25th July 1991
An extraordinary international congress of philosophy in Nairobi, with a symposium on Eco-Philosophy as a new metaphysics. Co-or-

inated by Henri Skolimowski, who has recently been appointed as Professor of Eco-Philosophy at Warsaw University, and Hwa Yol Jung. *Details: Hwa Yol Jung, Moravian College, Bethlehem, Penn.18018, USA.*

ARTS EVENTS

Israel: State of the Art

Barbican, London, Oct. 10th – Nov. 29th
The largest celebration of Israeli arts to be held in this country. Crafts, dance, events, a major exhibition and five concerts by the Israel Philharmonic Orchestra, conducted by Zubin Mehta, with soloists Radu Lupu and Mischa Maisky. *Details: 071 638 5403/4141*

Art and the Sacred

Santa Fe, 21st – 29th March 1991
A conference and festival over the Spring Equinox organised by Kairos with the Dallas Institute of Humanities and Culture. With lectures, concerts and exhibitions,

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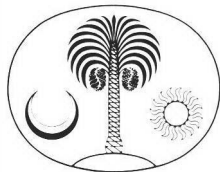
"The Perfect Man," writes Ibn 'Arabi, "is he who knows without doubt that all existence is nothing but the existence of God." "He is to God as the eye-pupil is to the eye."

Muhyiddin Ibn 'Arabi (1165-1240 AD) was born in Andalusia and died in Damascus. He left a huge body of writings (over 350 works). These have exerted a great influence both in the East and the West. They are full of variety, and what emerges from all of them is the meaning of the essential Unity of Existence. His account of this is unsurpassed in its breadth and depth of vision. It is truly universal.

The Society is an international body which was founded in 1977 to promote a greater understanding of the work of Ibn 'Arabi and his followers. It has encouraged the publication and translation of his work, and produces an annual journal. It has a library in Oxford, and organises symposia each year in Europe and Berkeley, California. Speakers at these events have included most scholars publishing in this field today, but the symposia are not solely concerned with academic values. What attracts people to Ibn 'Arabi is the meaning. Membership of the Society is open to anyone interested, and is by annual subscription. All enquiries are welcome.

The 1991 Symposium, will be held from 5th-7th April at Wadham College, Oxford under the title "Ibn 'Arabi and Light". Speakers include Dr Osman Yahya, Dr Alexander Knysh, Prof James Morris and Dr Michael Sells.

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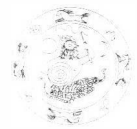
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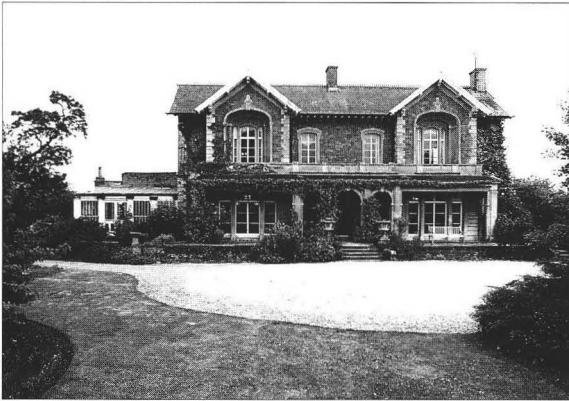
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SEMINARS

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Professor Roger Penrose (Oxford)
November 10th
10am – 1pm

Economic Sustainability

Edward Goldsmith (Editor of the Ecologist)
November 24th
10am – 1pm

Omega Point Theory

Professor Frank J. Tipler (Tulane University)
December 22nd
10am – 1pm

LECTURE SERIES

**The Tradition of Love and Knowledge
The Lives and Works of the Saints and Mystics**

Muhyiddin Ibn 'Arabi – October 7th
St Teresa of Avila – October 17th
St John of the Cross – October 24th
St Gregory of Nyssa – October 31st
St Albertus Magnus – November 7th
Mevlana Jelal'uddin Rumi – November 14th
Rabban Yohanan Ben Zakkai – November 28th
St Benedict – December 5th

All lectures start at 7.30pm and are followed by coffee.

For details on any of the above, please contact:
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USA: c/o D. Yarbrough, 7025 Clayton, Dallas, Texas 7421T4.

EXHIBITIONS

The Age of Van Gogh

Burrell Collection, Glasgow.
30th Nov. – end Jan. 1991
Centenary exhibition of van Gogh's work together with paintings by his contemporaries. "The only show of its kind outside of the Netherlands".
Details: 041 649 7151.

Archaeology and The Bible

British Museum, London
19th Oct. – 24th March 1991
Archaeological exhibits from the periods covered by Biblical narratives. Beginning with the remote ancestors of Biblical history, the exhibition includes the earliest known 3-dimensional representations of the human form.
Details: 071 636 1555.

Three New Works

Tate Gallery, London
3rd Oct. – 10th Feb. 1991
Three new installations by Richard Long which will occupy the entire length of the Tate's sculpture galleries. Based on walks made through some of the world's most remote regions, recorded in photographs, maps, text and geometrical sculptures based on natural forms.
Details: 071 821 1313

Monet in the 90s: The Series Paintings

Royal Academy, London
7th Sept. – 9th Dec.
The largest assembly of Monet's series paintings ever assembled. Grainstacks, Water Lilies, Rouen Cathedral etc.
Details: 071 439 7438

Art in the Making: Impressionism

National Gallery, London
28th Nov. – 21st April 1991
An exhibition taking a closer look at the techniques of such artists as Monet, Renoir and Pissarro, and examining how they responded to nature in their work
Details: 071 839 3321

US EXHIBITIONS

The Spendor of 30 Centuries
New York Metropolitan Museum, Until Jan 1991.

The most comprehensive survey of Mexican art shown in America for 50 years, including pre-colonial, vice-regal and 19th and 20th century works. Moving in April to San Antonio in Texas, then to Los Angeles from Sept to December 1991.

The Fauve Landscape

Los Angeles City Museum of Art
Until January 1991
Landmark landscape painting by turn of the century French artists, of which the best known exponent was Henri Matisse. In New York from February to May and then at the Royal Academy, London, from June to September.

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Society for Process Thought – Mind in the Cosmos 3rd Series

"Astrology, witchcraft, magical healing, divination, ancient prophecies, ghosts and fairies are all now rightly disdained by intelligent people." So runs the second sentence of Sir Keith Thomas's **Religion and the Decline of Magic** (1971). Along with the broader statement that mankind has come of age, the claim seems premature for, as T.S. Eliot observed, "Human kind cannot bear very much reality." Scarce out of the cave or nursery, we still chase after moon-beams, worship idols, wrap ourselves in comforting superstitions, half convinced that all science can offer is a cold machine-like world. But it is magic, not science, that is the enemy of true religion and philosophy. In Margaret Boden's words: "Wonder is a root of the religious experience, and the desire to understand drives science. If wonder and understanding are fundamentally opposed, religion and science will be also. But only if wonder is limited to the contemplation of magic or mysteries is religion in principle opposed to science. The aim of science is to explain how something is possible. Understanding how something is possible need not destroy our wonder at it. Recent scientific theories of the human mind – albeit based on computer technology – increase our wonder at its richness and power." – "Wonder and Understanding", *Zygon*, 12/1985.

The Society for Process Thought is a national philosophical society which aims to bridge the gap between academics and non-specialists, to demonstrate that the best scholarship need not be above people's heads and to illustrate the proposition that the world is a vastly more interesting place when examined in daylight. Seeking to focus public attention on the central issues of life, the Society reiterates the classical concerns of philosophy, to see life whole and to live it well.

In its **Open Seminars**, the Society reflects current thinking in the realist tradition of C.S. Peirce, William James, A.N. Whitehead, and Charles Hartshorne. In its **Open Forums**, leading authorities in a particular field discuss their subject with other experts in the same field, experts in other fields, and members of the general public, in language intelligible to all. These are not debates but attempts to come closer to truth in a spirit of friendly enquiry. All meetings are held in London on Saturdays, the BR network enabling people to come from as far afield as Devon and Dundee.

Open Seminar: Are We Thinking Machines?

17th November, Regent Square United Reformed Church, WC1. 7 minutes King's Cross.

"**Process Thought and Psychology**" – John Pickering, Warwick University. Supplementing reductionist materialism with the organicist approach of Whitehead, Bohm, and Von Uexküll – not a return to vitalism.

"**Subjective Experience, Reductionism, and Functionalism**" – Anthony Marcel, King's College, Cambridge; MRC Applied Psychology Unit, Cambridge.

Response: Aaron Sloman, Professor of AI & Cognitive Science, Sussex University.

Open Forum: The Creative Mind: Myths and Mechanisms.

1st December, Bloomsbury Central Baptist Church, 235 Shaftsbury Avenue, WC2

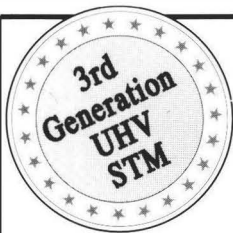
Margaret Boden, Vice-President of the British Academy; Professor of Philosophy and Psychology, Sussex University.

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Responses: **Mary Midgley**, formerly Senior lecturer in Philosophy, Newcastle.

Kathleen Wilkes, St Hilda's College, Oxford; one-time Chairman of the Board of Psychological Studies, Oxford.

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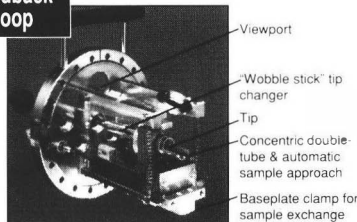
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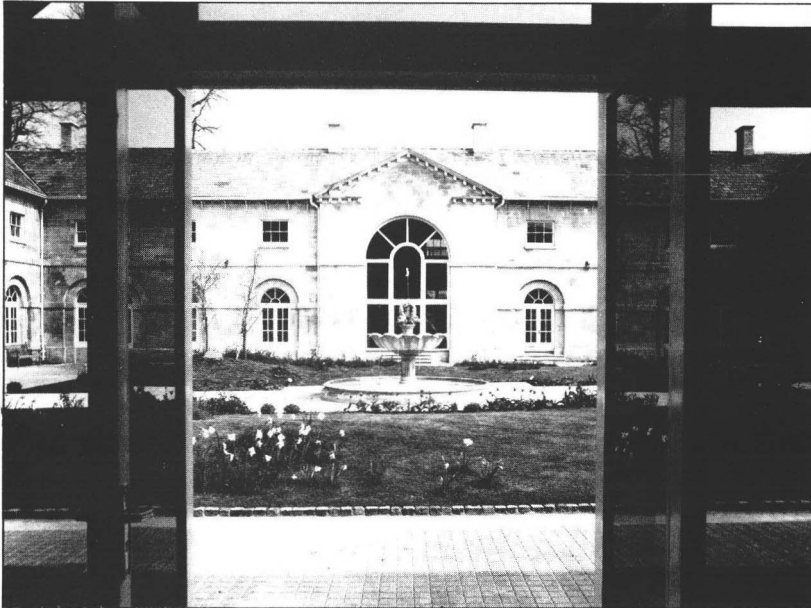
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“He also knows that the artist can spend his life in the same place and look around himself without exhausting the constantly renewed spectacle. And here he is, a stone’s throw away from his quiet house... stopping along the road on a late summer’s evening and looking at the field where the stacks stand, the humble earth adjoining a few low houses, encircled by the nearby hills and decked with the ceaseless parade of clouds. It is at the edge of this field that he stays that day, and comes back the next day and the day after, and every day until autumn and during the whole autumn and at the beginning of winter... these stacks in this deserted field are transient objects whose surfaces, like mirrors, catch the mood of the environment, the states, of the atmosphere with the errant breeze, the sudden glow. Light and shade radiate from them, sun and shadow revolve around them in relentless pursuit; they reflect its dying heat, its last rays; they are shrouded in mist, soaked with rain, frozen with snow, in harmony with the distant horizon, the earth, the sky”.

Gustave Geffroy on Monet’s ‘Grainstack Series’, from his preface to the catalogue for the exhibition held at the Gallerie Duran-Ruel in Paris, in the 1890’s.