

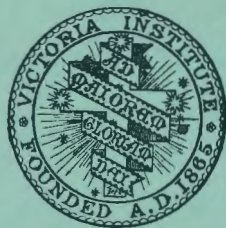
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A Journal devoted to the study of the inter-relation of the
Christian Revelation and modern research

EDITORIAL

At the recent Council meeting held on 21 May 1976 and the AGM on the following day, the resignations of Professor R.L.F. Boyd from the Presidency, Canon J. Stafford Wright from the Vice-Presidency and Professor D. M. MacKay from the Council were regretfully accepted. Professor Sir Norman Anderson, O.B.E., Q.C., who was duly elected was welcomed as the new President.

At the Council meeting Mr H.L. Ellison was elected a Life Fellow.

Langhorne Orchard Prize In our last issue (102,165) the closing entry date was given as 1 May 1976. As this issue was sent out to members later than had been expected it has been decided to postpone the closing date to 1 Sept. 1976.

News and Views. The Editor would welcome at all times short or longer notes for this section of the JOURNAL. Acknowledgement will be made.

* * *

Errata

p.196, l.12. For War read Warfare; for Prussina read Prussian.

p.197, l.13 (bot.) For Brune read Bruno.

p.202, l.23. For ref. 9 read 6a.

Pain (See 102, 176). Attention should be drawn to S.H. Snyder and S. Matthyse, *Opiate Receptor Mechanisms*, MIT Press, 1975, 9.95 dollars.

Discussion

EZEKIEL'S SPACE SHIP

Several readers have expressed interest in the review article on Ezekiel's Space Ship (This JOURNAL, 102, 114-119).

Dr. J.F. Blumrich himself, to whom we sent a copy, says "I have enjoyed reading it ... wish you the best for your magazine which seems a very worth while undertaking."

Dr. G.R. Scott Blair wonders if Ezekiel had a prevision of what was one day to come.

Dr. D.W. Lyon draws attention, *inter alia*, to the danger of rejecting ideas simply because they emanate from relatively uneducated and highly imaginative people like von Daniken.

In this connection it is worth pointing out that the thesis for which von Daniken is famed, namely that space ships from another planet visited Earth in ancient times, received a good deal of publicity long before von Daniken took up the theme. It is mentioned half a dozen times in the various books by Charles Hoy Fort (1874-1932) which appeared over the years 1919 to 1932 and were later republished in a single large volume, *The Books of Charles Fort* in 1941. The idea was revived by the Soviet physicist M. Agrest in *Pravda* for February 1960, who used it to explain Bible miracles. Thus in the days of Abraham a large space ship was in orbit studying the earth. It descended in the Lebanon mountains on one occasion and before leaving exploded surplus nuclear fuel at Sodom and Gomorrah. Later in the year the suggestion was attacked by two Russian engineers who said the phantasy was out of place as a scientific hypothesis. This attack was featured prominently in the *Western Press* - eg. 20 Oct. in the *New York Times* and in the *London Times*, the latter followed by correspondence. For development of the von Daniken theme in science fiction, see the novels of H.P. Lovecraft 1928-1936. This type of literature has recently been surveyed by David Ketterer, *New Worlds for Old*, Indiana UP, 1974 - Editor.

Mr H.L. Ellison wrote saying that he could not think Blumrich's suggestion could be right in view of the resemblance between Ezekiel's vision and that of St John in the Apocalypse (4:6f).

[There are of course also marked differences, e.g. Ezekiel's four living creatures do not speak. Do we stress the resemblances or the differences? — Editor]

Mr D.C. Mandeville sends us a cutting on "Reinventing the Wheel" by Lewis Chester from the *Sunday Times* (18 Jan., 1976).

This describes an invention which is basically the same as that of Blumrich, the only difference being that the powered rollers round the periphery of the wheel are set at an angle of 45° to its plane. There is a picture of a truck using such wheels; it is said to be in current use for handling materials in warehouses and factories. The inventor, Mr Bengt Ilon, a Swedish engineer, recently demonstrated his invention before the Swedish Academy of Engineering Sciences. The gymnastics of the 'Ilonator' proved 'unbelievable' we are told, to the assembled academicians who watched it perform.



[Perhaps the Ezekiel's description is equally compatible with Blumrich's and with Ilon's form of the wheel — Editor.]

* * *

News & Views

WHEN IS A CHRISTIAN STAND POSSIBLE?

Evidence of the ineffectiveness of nominal Western Christianity in the present century accumulates. The quite astonishing failure of the Roman Catholic hierarchy to do anything effective about the growing wickedness of Hitler and Mussolini in the 1930's is well known. The bishops blessed the soldiers who left Italy to fight the Abyssinians who threatened no one. In WW2 the Papacy was well informed about Hitler's death camps but although some efforts to save a few Jews were made, overall very little was done.

It is often forgotten that Hitler himself, though in private life he hated and loathed Christianity of all kinds, as is well shown by his repeated statements to this effect in *Hitler's Table Talk, 1941-4* (1953; reprinted Weidenfeld and Nicholson, 1973) remained a RC to the end. In the recent book *Hitler's Letters and Notes* (English trans., Heinemann, 1974) Werner Maser tells the story of Hitler's youth — the account given by Hitler about himself in *Mein Kampf* is unreliable and often completely false, especially on the subject of his supposed poverty. Born in 1889, Adolf Hitler attended a Benedictine school where he did well. He was the apple of both his parents' eyes and later in his twenties was well provided for as a result of legacies. In 1898 he became a choir boy and server, a role he liked to recall, and he gloried in the colourful church festivals. For a while he seriously hoped to enter the priesthood as did, later, several of his class mates. At this period he lived at Lambach am Traun, an Austrian Village of 1700 inhabitants, where his father had a large house and eight acres of land.

Throughout his life Hitler kept up an outward RC profession, becoming godfather to the children of his friends, including Himmler, Bormann, Göring and Götter. He paid Church dues up to 1933 and then arranged privately to have his name left off the list of those to whom demands were sent. Even at the height of his power he seems to have valued, no doubt for political reasons only, his RC connection. His *Table Talk* shows that he did not relish the idea of excommunication.

Here then were a group of men amongst the most wicked of our century. Excommunication and official opposition by the RC Church coupled with condemnation of war-mongering and Jew baiting might have altered modern history. But nothing was done.

What then of Protestantism? The subject has been studied afresh by Richard Gutteridge in *Open Thy Mouth for the Dumb, the German Evangelical Church and the Jews 1879-1950*. (Blackwell, 1976) In the period 1933-1945 the German Evangelical Church never once unequivocally condemned anti-semitism though it showed concern for converted Jews. Most of the 14,000 Protestant clergy, influenced by Luther's dangerous doctrines of the relation of Church and State (on which see P. Althaus, *The Ethics of Martin Luther*, Fortress P., Philadelphia, 1972) gave their allegiance to Hitler. Gutteridge believes that, even as late as 1938, a concerted pulpit denunciation of anti-semitism might have restrained Hitler in his madness, but despite noble opposition by a minority, the evangelical church was impotent.

These comments came to mind as a result of reading John Cairncross's *After Polygamy was made a Sin*. (Routledge and Kegan Paul, 1974), a fascinating book of refined and seemingly ivory-towered scholarship. It appears that in the whole history of mankind no laws against polygamy, other than Christian, are known: it was in the 6th century Code of Justinian that the practice was first condemned and monogamy for ordinary Christians but celibacy for priests was then introduced though without biblical warrant.

In the Reformation period the subject came to the fore. Christian leaders of the time, including Popes, Luther and Melancthon, approved of bigamy on occasions. The practice was condemned by Charles V in 1532 when polygamy was made a capital offence — but whore-mongers and adulterers, it seems, could be forgiven easily enough! In 1563 the 24th Council of Trent again condemned polygamy.

Writings supporting polygamy from the Bible appeared from time to time. Even Milton wrote along these lines.

To this day, when the law allows, Jews are not monogamous — indeed the OT law of the Levirate may compel a man to marry his dead brother's wife even though he is already married. Paul lays it down that a 'bishop' should have one wife only but not that this applies to every one. Throughout the centuries — Cairncross gives examples — the monogamy rule has been a great hindrance to mission work.

And so on. But today virtually all of us who are Christians believe that monogamy is, if not directly taught, at least *implied* in the Bible. Polygamy, like divorce, was indeed allowed, but from the beginning it was not so: God gave Adam but one wife.

Here is an issue on which practically all Christians take a united stand. How astonishing, then, when the rights and wrongs of the case were patently more obvious, that Christians made no united

stand at all against Hitler and his henchmen. "If the salt has lost its taste, how shall its saltiness be restored?" Matt.5:13.

Could it happen again? ... A dictator in England... or USA ... or ... ?

POLITICAL MORALITY

As historians rake up the past they increasingly draw attention to the Machiavelian morality which prevails in government circles. Recently the beginnings of WW2 have been discussed yet again. In an interest letter (*Times*, 8 Ap. 1976) written from Berlin Keith Dyle points out that it is more than probable that, in the British view, the evils of Stalinist Russia and of Hitler's Germany were on a par. In a military confrontation it was impossible for Britain to take on both powers at once, and it was "deemed preferable to take on Hitler." Ostensibly England was drawn into the war because of the British guarantee to Poland. When Germany attacked Poland we were therefore in honour bound to declare war on Nazi Germany. But shortly afterwards the Russians attacked Poland from the East and therefore we were equally in honour bound to attack Russia — which was conveniently forgotten.

At the present time it is highly desirable, politically, that Britain should keep on good terms with developing black African nations who might otherwise line up with Russia. Therefore the policy of apartheid in South Africa and the dominance of the whites in Rhodesia are opposed. But it is also politically desirable that we should be on good terms with Islam, seeing that Islamic countries control the supply of oil. Islamic countries have therefore been permitted, perhaps encouraged, to mount the World of Islam Festival in Britain, whereas Rhodesia and South Africa would certainly not be allowed to run similar exhibitions! Miss Elinor Parker wrote to the *Times* (13 Ap. 1976) on the subject. "In very many Muslim countries women have no votes, few effective civil rights and little personal liberty. They have limited educational opportunities and worse job prospects. All are subject to grave discrimination under Islamic law. I have lived in a Muslim country and seen many tragic and degrading consequences of these same laws myself. The report, 'Arab Women' published recently by the Minority Rights Group amply documents from Arab governments' own figures oppression on a scale beside which apartheid pales into insignificance!"

Too often the political maxim seems to be: 'Decide what is politically expedient, then find some moral issue to rally support'. As Ellul points out so forcefully in connection with the war issue, (see this JOURNAL 100, 302) the Christian must beware of being caught up in the current of political morality. It is his duty to draw attention to and expose evil regardless of political and doctrinaire issues.

STEADY STATE

A recent paper by P. T. Landsberg and D. Park (*Proc. Roy. Soc.* 1975, A346 485-495) discusses the possibility of a cyclic universe. In the opinion of many astronomers the 'Big Bang' theory of the universe was encumbered from the start with philosophical and theological difficulties. The Steady State theory seemed to offer an attractive alternative but recent observational results now make it difficult to hold. The other possibility is that of a universe which expands and collapses rhythmically, an old idea which is now attracting renewed attention.

The theoretical difficulties in treating the subject are considerable. It appears, however, that whatever reasonable assumptions are made the universe will expand to a greater size than before with each expansion and each cycle will take longer. This was true of the earlier models suggested and is still true in the new hybrid model which combines dust, gas, radiation, and gravity with statistical mechanics, and considers the rhythmic transfer of energy from radiation to matter and from matter to radiation. No problem is therefore solved by the cyclic theory for on running the calculations backwards we are still left with a pre-creation epoch. In addition, both in contraction and in expansion there will be an entropy increase and again this brings us back to the origin problem.

An interesting question is whether the universe contains enough matter to ensure that it will one day contract. Given enough matter, gravity will slow down the rate of expansion and eventually the galaxies will be pulled back. Whether this will or will not happen depends, critically, on the average density of matter in space. As far as present estimates go it seems that the actual density in space is of the same order of magnitude as that required for a pull-back so that a decision is not possible.

If the density is sufficient, it might be supposed that there have been many cycles in the past (though the present low proportion of helium to hydrogen in the universe tells against this view). However, to quote from the summary of the paper in *Nature* (259, 15) "The most obvious feature of our universe is its low entropy; as Hermann Bondi has said, 'Thermo-dynamic properties tend to be very deep and significant: the fact that our night sky is very black with very bright points, the stars, in it may be the profoundest piece of knowledge of the universe that we have'." In short the Cyclic Theory seems as difficult to reconcile with facts as the Steady State theory.

After so many attempts in the past to argue that entropy as applied to the entire universe is a meaningless concept, it is cheering to find it entering the recent discussion as if there were no question as to its meaningfulness.

INDIA

The recently published pamphlet *The Untouchables of India* (45p. Minority Rights Group 36 Craven St. London W.C.2) describes the ill-treated bottom layer, comprising from 10% to 20%, of Indian Society. Thirty years of Indian independence has not bettered their lot; the Untouchability (Offences) Act is a dead letter. To take this Law seriously said a State Police Chief, half the population would have to be arrested. In theory the Untouchable can have High Office which helps the upper castes to rationalise the present position, but in the villages the Untouchables are as untouchable as ever.

A review of the book in *The Times* (23 Feb. 1976) brought the comment (2 Mar.) that undesirable work, like disposing of human excrement, skinning dead animals, and washing dirty clothes are necessarily performed by the poor, and this has nothing to do with a caste system. In reply (9 Mar.) M. Parmer, an untouchable leather-worker from a village in Gujarat, claims that this is a typical but totally untrue claim made by upper caste Hindus who know nothing of rural India where four-fifths of the population live. "There were in our village quite a few caste Hindu families who were much poorer than us, the outcastes, but not once in the long history of the village did any caste Hindu family, however poor, ever undertake, even temporarily, any of the tasks described above".

In a recent book (*Modern Trends In Hinduism*, Columbia UP, 1974) Philip H. Ashby stresses the differences between Indian urban and village life. The religion of educated Hindus differs greatly from that of the un-educated - views on the soul, the after-life, the nature of Gods and spirits, ancestor worship, the dangers associated with evil spirits etc. are different. However, belief in astrology, palmistry, and fate are common to all Hindus.

Young people in India consist of two groups - those in the Westernised large urban areas, and those still connected with village life. The former are often culturally and religiously dis-affected, they feel at home neither in East or West. The latter, much larger in numbers, are more representative of Indian youth.

The author's study centred in the University of Andhra, called the Brahman University, in S. India in the State of Andhra Pradesh, where 204 students of the second representative type were interviewed - in the first instance by two Hindu graduates. There were only 10 Untouchables in the group, about half of the students were upper (twice-born) caste and the rest Sudras. The Department of Statistics helped in ensuring that the sampling was random.

In only nine of the homes of the students were there no images of deities kept and worshipped. Of all the students 14 made the

point that although they kept images, their prayers or meditations were not directed to the images, but 136 reported that they actually prayed to the images, 106 of them doing so daily. Only among the Untouchables did a majority reject astrology but overall 60% accepted it and 71% believed in Fate, many using it to explain success or failure in examinations, and in life generally. Six out of the ten Untouchables disbelieved in the transmigration of souls which was accepted by 57% of the entire group (70% among the twice-born). Only 3% felt that the impact of science and/or the West presented a major problem for present-day India. Though most wanted freedom for all religions, Christian mission work was criticised: it was felt that uninfluenced by the West, Indian Christians would lose their evangelistic zeal. (See also this Journal, 100, 64)

WITCHCRAFT

In a recent memoir (*Science*, 1976, 192, 21) L.R. Caporeal of California University re-opens speculation about the well-known Salem witchcraft trials in Massachusetts in 1692. Why did the hysteria break out as it did in one small area in a country markedly free from the witchcraft scares which afflicted Europe? Why the vividness of the testimony if all was autosuggestive or fictional? Miss Caporeal makes a good circumstantial case for the view that the cause was an outbreak of ergotism. The girls who testified to being choked, pinched, bitten and pricked with pins by "spectres" may have been describing ergot poisoning which causes muscle spasm, crawling and tingling sensations of the skin, and hallucinations. The weather conditions prevalent at the time, she says, are compatible with the growth of ergot fungus on rye, used in making rye bread. She has also traced continental instances in which ergotism was apparently associated with witchcraft. (Perhaps Rev. 9 is relevant here?)

A relatively recent (1951) case of an outbreak of ergotism is described by J.G. Fuller, *The Day of St. Anthony's Fire*, (Hutchinson), 1969. All the inhabitants of a small village in Provence were poisoned, some seeing bizarre and frightening spectres.

SHORT NOTES

Archaeology. The "green hill ... outside a City wall, where our dear Lord was crucified" has now been uncovered for the first time for 1600 years. It consists of a cone of grey rock, 35 feet high, at the peak of a gentle slope up which prisoners were forced to carry their crosses. In the 4th century Constantine had the 'hill', together with the adjacent 'hill' containing the garden tomb, enclosed within the Church of the Holy Sepulchre. The crucifixion 'hill' was close to the busy thoroughfare leading out of the City and sightseers on the City wall would have had a close view of crucified men. There are two small caves in the 'hill' giving it the appearance of a skull - Golgotha, "the place of a skull". (Eric Marsden, *Sunday Times* 15th Feb. 1976).

Pollution. Evidence is accumulating that polychlorinated biphenyls, (PCBs), which are much more toxic than DDT, are being disseminated widely. N. Atlantic surface waters now contain twenty parts per billion (10^{12} = the British billion) whereas the level of DDT is less than one part. Moreover, PCBs are not easily broken down whereas DDT disappears in a few years at most. Since PCBs do not kill insects they have been overlooked by the law makers. PCB Pollution is largely caused by the dumping of discarded electrical equipment, in particular capacitors and transformers (*Nature* 259, 443).

Armaments. Peter Laurie (*New Scientist* 26 Feb. 1976) puts forward the original (?) point of view that many people "intensely dislike the idea that a nuclear war can be survived".

He claims that the Armed Forces on both sides of the Iron Curtain support the notion "that civilization will not survive since it presents us with no alternative but to avoid such a War at all costs, and the only way to do that is to support them - at vast expense".

Capitalists and Communists are "in collusion to frighten the daylights out of us taxpayers, so that we contribute to heavier and heavier arms budgets" - the perfect protection racket in fact.

Water in Israel The osmotic pressure of sea water corresponds to a head of about 250 metres of water. The Dead Sea is 390 metres below sea level and there is no other lake in the world which is so low (Qattara Depression, 138 m; Caspian Sea, 28 m). It follows that fresh water could be obtained directly from the sea, without expenditure of energy, by reverse osmosis, and could be used to irrigate the land around the mouth of the Jordan river and other land below the 250 m limit. (*Nature*, 259, 444)

Arguing the Daniken way. It appears that several African tribes venerate or worship Sirius, the brightest star in the sky. One of them is the remote tribe called the 'Dogon' who inhabit an area South of the Sahara. When anthropologists visited this people they discovered to their amazement that the Dogon are well aware that Sirius has a companion star invisible to the naked eye and made of extremely dense matter. A book on the subject has now appeared written by Robert K.G. Temple (*The Sirius Mystery*, Sidgwick and Jackson, 1976, £8.95). Dr. Thomas Smartt of Cambridge comments (*Cambridge Evening News*, 26 Mar. 1976): "We are encouraged to believe that intelligent amphibians from a world orbiting Sirius crossed the 8.7 light years to earth to pass on this useless piece of information to an African tribe. Is it not more likely that the Sirius information reached the Dogon from the inhabitants of earth during the latter half of the 19th century? More probable, perhaps, but such a pedestrian explanation is not likely to blossom into a colourful paperback. Myths are more popular than facts."

The super-dense companion of Sirius was first observed through a new and powerful telescope in 1862, though the wobble of Sirius has been known since 1844.

Jargon Not long ago *Nature* quoted from a report by the Potato Marketing Board, "... the rate of movement into human consumption in Great Britain increased during the three previous seasons (and shows a provisional offtake for 1974/5 of 222 lbs per head per annum)". J.L. Lloyd of Washington DC assumes that the Editors of *Nature* will think that this strange announcement has something to do with spud-deficiency, yet "it may imply an alarming increase of cannibalism" in GB. (*Nature*, 258, 284; 259, 8)

* * *

REVIEWS

D. M. MacKay, *The Clockwork Image: A Christian Perspective on Science*, 1974, The Inter-Varsity Press, 112p, PB £0.40.

This book will be helpful to all wanting to resolve any apparent conflict in their minds between observed scientific fact and Christian belief. Thus it will assist Christians, on the one hand, whose scientific reasoning may reveal 'conflicts' between their faith and factual knowledge of the world acquired by scientific investigation and, on the other hand, it will be helpful to non-Christians who are anxious to appraise what effect Christian commitment would have on their intellectual honesty in our current era of mechanistic science.

The author, who is Professor of communications at the University of Keele, proclaims what has become known as the complementary viewpoint with regard to science and faith. This position has, of course, been very helpful to believing science students during the last twenty or thirty years. It means basically that whereas science answers questions such as 'How?' and 'In what manner?', the Bible is concerned with 'Why?' and 'By whom?'. Professor MacKay is also concerned with integrating science with living experience, thus he says (p. 57) "The essential point made in the Bible, and in a sense, I think, the key to the whole problem of the relation of science to the Christian faith, is that God, and God's activity, come in not only as extras here and there, but everywhere".

The relation between scientific thought and method to Biblical truth are dealt with in detail in the book; the central theme being the Biblical-Christian perspective of the universe. A study of the general methods of scientific approach and reasoning are first described including such topics as the abuse of mechanistic thinking, including in this context the irrelevance of Heisenberg's uncertainty principle; why the scientific way of knowing things has come to earn so much respect; and the so-called 'limitations' of science.

Whilst it is true that there are still plenty of first-class scientists to-day who are convinced Christians and who see every new discovery as a fresh revelation of God's wisdom and power there are many others for whom it makes no sense to talk in such terms and for 'scientific humanists' it is sheer heresy.

In succeeding chapters specific topics — such as evolutionary theory and creation, miracles, fundamental law, and the Christian idea of man — are considered. Dealing with conflicts that may arise between Biblical record and theories of evolution the author makes the point that the creation account, as recorded in Genesis 1, was certainly not written to answer scientific questions. Most scientists, whether they be Christians or not, will agree that the clues to the origin of the earth, and all that moves on it, seem to fit together to suggest a history of many millions of years. During this period it would appear that many species of plants and animals changed or evolved into the forms in which we now know them. Accepting this idea the Christian can say that God's way of developing has been slow and gradual, the bodies of higher animals coming into being through descent with modification from earlier species. This is all that should be conveyed by the term 'evolution' when used in science. In this technical sense the idea is, of course, theologically neutral, and is generally accepted by biologists who are also believing Christians. Professor MacKay concludes this section by saying "Doubtless the God of truth will expect us to judge this theory, like others, on its own scientific merits; and it is well to remember that, however widely accepted to-day, it is still a speculation on trial, and liable itself to evolve as time goes on!"

Throughout the book the reader will glean the essential, non-accidental, harmony that exists between biblical Christian faith and mechanistic science. "Science" says MacKay "is not an alternative to God as the source of truth, but a specialized way of gathering and discovering patterns in data which Christians believe to have one and the same Source". (p. 88)

In a final chapter the author takes pains to show how the Christian gospel may itself be examined in the same spirit of openness to evidence that prompts the scientist to conduct 'secular' investigations; he emphasizes that to be a Christian it is not sufficient for an individual to know all *about* God, he must *know* God.

IVAN M. SHARMAN

F. M. Turner, *Between Science and Religion; Reaction to Scientific Naturalism in Late Victorian England*, Yale UP & OUP, 1974, £6.25.

Hitherto historians in the field of science and religion have usually concentrated upon the two opposite sides in the Victorian conflict — religion was right *v.* science was right. The aim of this interesting book is different. There were those who, after they had abandoned Christianity for science, found in science itself all the failures they had discovered in Christianity and they reacted in different and interesting ways. This is an up-to-date theme but it is impressive to find it so well represented in the Victorian era, long before the general disillusion in science had begun to set in after WWI. For in those days science seemed harmless enough to most people and wholly beneficial. Charles Kingsley once said to an audience: "Science has as yet done nothing but good. Will anyone tell me what harm it has ever done?" (*Health and Education*, 1874, p.292).

Dr. Turner traces the development of thought in six prominent men of the period — Henry Sidgwick, Alfred Russel Wallace, F.W.H. Myers, C.J. Romanes, Samuel Butler and James Ward. He concludes, "Theirs was the protest of non-Christians against a world view that menaced ideals, hopes and aspirations which gave their lives meaning and purpose".

These men explained their loss of faith in Christianity in various ways. Only Romanes ascribed it chiefly to science. But for him, at least, it was a strange kind of science! "Science, by establishing the doctrine of the persistence of force and the indestructibility of matter, has effectively disproved the hypothesis that the presence of Law in nature is of itself sufficient to prove the existence of an intelligent Law-giver", so mind and purpose in nature are "certainly superfluous".

To us these words sound like inconsequential verbosity. Yet Romanes was a sensitive soul: — witness his well-known words; "When at times I think, as at times I must, of the appalling contrast between the hallowed glory of that creed which once was mine, and the lonely mystery of existence as I now find it, — at such times I shall ever feel it impossible to avoid the sharpest pang of which my nature is possible". In the end science failed him. He seems not to have returned to the Christian faith, but did at least return to a theistic position.

The impact of German theology coupled with the scepticism of friends combined to destroy early faith in the lives of Sidgwick,

Myers and Ward. Sidgwick, with Wallace and Myers turned to spiritualism to escape the universe of emptiness offered by scientific naturalism. Ward studied philosophy and psychology and mercilessly exposed the inadequacy of scientific naturalism. In his well-known philosophical works, he is commonly thought to have embraced Christian theism once again, but in this volume Turner denies that this is so.

Wallace's parents were Church of England Calvinists and the unfairness of the doctrine of predestination bit into his soul from a tender age. Confused by the muddled way Christianity was presented to him, he reckoned that orthodox religion "has the effect of entirely breaking away the connection between their [the common man's] religion and the duties of their everyday lives". Wallace was out of England for fifteen years of his active life and became rather isolated and highly independent in his outlook. He shocked his contemporaries by denying that natural selection could be the cause of man's higher faculties, but seemed to be concerned chiefly with brain size and phrenology concerning the truth of which he never wavered. Spiritualism, with its emphasis on salvation by works was the only religion that seemed rational to him. For all that, he wrote much of permanent value. He was one of the few who saw through the hollowness of civilised society.

Samuel Butler was an empiricist from the start. Teaching in a school he discovered that not all his pupils had been baptized as children. But he could discover no correlation between baptized children and good children, or unbaptized and bad, which meant that there "was a screw loose somewhere" in traditional Anglican teaching! So instead of seeking ordination as he had intended he emigrated, then returned to England and spent the rest of his days writing against Christianity. Later, because he found the same faults in science as he had found in Christianity, he wrote against science and scientists too. It is difficult to judge of his sincerity; he employed satire mercilessly and often seemed as determined to shock as to convince! His *Fair Haven* was a satirical defense of Christianity written so cleverly that it actually took in a bishop or two! At one time Butler identified protoplasm with God — to the annoyance of theologians and atheistic scientists alike! However, believing in some kind of God, or super-God, behind the universe he never became an out-and-out sceptic.

Myers, when young, was poetic and very sensitive. Strangely Turner does not mention his magnificent poem *St. Paul*. As a result of German higher criticism and, less importantly, of scientific naturalism, he lost his faith but kept his sense of sin. He feared, not hell, but annihilation. Once he saw the dead body of a mole and asked his mother if it would live again. No, she said, it was dead. "The first horror of a death without a resurrection rose in my bursting heart". A longing to prove an after-life by psychical research became his over-riding ambition, above all he wished to make contact again with the girl he had loved but who had committed suicide.

Though sad, this is an able book profusely referenced, scholarly and deeply interesting.

REDC

John L. Randall, *Parapsychology and the Nature of Life*,
Souvenir Press, 1975, 256 pp, £4.00.

It would be difficult to imagine a better book than this one to put into the hands of a serious but materialistically minded sceptic. It is well arranged, well written, interesting throughout and critical. Its conclusion is modest - science and religion can be reconciled but science does not at present favour one religion rather than another, though it points strongly to belief in autonomous mind as a creative principle and to the existence of God.

There are three sections - Mechanism Triumphant, Counter-Attack and Towards a New Synthesis. The first tells the fascinating but sad story of how, starting over a century ago, science seemed to be about to deal a death blow to religion. The Darwinians, if not Darwin himself, set about explaining away design in nature and the blow was later followed by attacks associated with the names of Pavlov, Freud, Watson, Skinner, Gilbert Ryle and others.

The second section, 'Counter-attack' starts with a re-telling of the story of the star-light walk of F.W.H. Myers and Henry Sidgwick in 1869 when they talked of the possibility that "ghosts, spirits," or whatever else there might be, might conceivably offer "some last grounds of hope" for man. The story of experimental psychical research with its many failures and disappointments as well as its successes, is then retold in some detail and brought right up to date with details of results obtained with the Schmidt machine (see this JOURNAL 99, 180). Spontaneous phenomena (save for premonitions, eg. of the Aberfan disaster), mediumship, cross-correspondence, hauntings, poltergeists, etc, are either not discussed at all or merely mentioned in passing. At times it seems as if the author doubts if observations which cannot be subjected to statistical analysis are more than marginally worthy of consideration in a scientific approach to the subject.

Despite these exclusions, however, Mr Randall argues that the main findings of psychical research are now so well established that no critic can now hope for a hearing unless he (1) confines his attack to work at least 30 years old, and (2) falsely assumes that the validity of psychical researchers' findings depends mainly on the result of the outdated work he chooses to attack. Throughout this section the approach is lucid, sensible and critical. The author denies, for instance, that spiritualism or reincarnation have

been established (one would like to have seen more space devoted to these topics) and is critical of work on plants and animals. He accepts miracle cures (Lourdes etc,) and suggests that miracles of healing may be of two distinct kinds: those effected by the mind of the patient himself and those effected by an exterior power such as that of God.

In the third section the author spreads his net more widely. He attacks the primitive soup theory of the origin of life and the common belief that evolution can proceed all the way from the simplest to the most advanced forms of life without the intervention of a principle alien to mechanistic thinking. Here, as elsewhere he quotes aptly from the best authorities (Waddington, Medawar, Monod etc,) and gives evidence of wide and critical reading. Various approaches to the science-religion problem are discussed. There are some interesting paragraphs (p.192f) on the view expressed by the late Professor C.A. Coulson and others to the effect that "mechanism is correct as far as it goes" but there is also another kind of reality, the supernatural, which "can only be approached through the methods of religion". These thinkers spurn attempts, by hunting for gaps or errors in the mechanistic world-picture, to find room for non-material entities such as God or the soul. All such attempts are "doomed to failure" they say, because "science continually closes the remaining gaps". The God in whom such men believe "stands *behind* all the phenomena of the physical world; He is the 'Ground of all Being', but He does not interfere with the mechanistic laws which govern the operation of the universe, so that a truly 'Natural Theology' becomes a contradiction in terms". (p.194)

This popular view, the author holds, is "totally unsatisfactory". Accept it and, "Gone is the dramatic figure of Yahweh, miraculously parting the waters of the Red Sea in order to deliver his people: in his place sits a 'demythologized' abstraction, a vague sort of cosmic mind which is supposed to lie behind all phenomena, but which is never permitted to exert any direct influence upon the observable world of science ... Of course it will not do ... Our only justification for making the assertion 'God exists' must be that we believe that he had ... revealed his existence by some kind of detectable effect, whether that effect be upon physical objects or upon the minds (and therefore *brains*) of men. The moment this is admitted, we have a 'God of the gaps', for there must be a discontinuity in the natural order at the point at which divine intervention occurs. Similar arguments can be advanced in relation to the soul theory of man ... There can be no compromise here, for if mechanism is true, religion ... must be false".

Dr. Randall reckons that the evidence against the mechanistic view of the world is now overwhelmingly convincing but he suggests plausible reasons to account for the resistance which this conclusion often encounters. One point, however, he seems to overlook.

Opposition to the new discoveries may stem in large measure, from the fear that if ESP and PK are accepted, superstitions of all kinds will be rationalised scientifically. If it becomes generally accepted in the world of science that the human mind can influence the fall of dice, manipulate the disintegration of atomic nuclei, influence the will of animals and even modify the movements of insects and plants, shall we not soon find ourselves back in the witchcraft days? The malicious old lady next door will perhaps impel me to act stupidly, or she will manipulate the internal organs of my body to make me sick, or torment me with ESP-induced cancer, or by PK remove bolts from my car and make me crash ... There is no end to it ... The book lacks a closing chapter to show, if possible empirically, that God is more powerful than the forces of evil. Only if we trust God is it safe to accept non-physical truth about our world. But as far as it goes the book is a masterpiece.

REDC

GARLAND E. ALLEN, *Life Science in the Twentieth Century*, John Wiley & Sons, Inc. 1975. PB.

Anyone, biologist or layman, who desires to understand the thinking behind modern biological knowledge would do well to read this book. The author has chosen several areas of biology (evolution, genetics, physiology, embryology, biochemistry, and molecular biology), and for each has traced the history of its development from the second half of last century up to the present time. His emphasis is less on the biological discoveries themselves (although he explains these interestingly) than on the philosophical attitudes of the discoverers and the types of enquiry which those attitudes prompted. In particular, he stresses the value of a mechanistic methodology and of experimental procedures, which have transformed biology from a largely descriptive science to a highly complex analytical one. By concentrating, in detail, on the 20th century the author has produced a highly informative work, which supplements the earlier, well-known, histories of biology (by E. Nordenskiöld, C. Singer, and F.S. Bodenheimer, which either exclude or deal superficially with this century; and by I. Asimov, which, although reaching the present time, is much more popular and less detailed than Allen's book). Despite the detailed treatment, the book is very readable, and should be comprehensible to any well-read person with an elementary knowledge of biology.

A very useful inclusion in the book is the 21-page Bibliography which not only lists a large number of works for further reading but also comments very helpfully on any valuable features they may possess.

The book does, however, suffer from a number of deficiencies. Firstly, although the Introduction includes an attempt (pp. xix - xxiii) to define certain philosophical terms (idealism, materialism,

mechanism, holism, vitalism, reductionism), the author appears not always to use these terms consistently in subsequent chapters of the book. In places I find it difficult to be sure of what exactly he means by them: in fact, a certain philosophical haziness appears to pervade the whole book. Part of the confusion results from the common mistake of failing to differentiate between metaphysics and methodology. For example, the term 'mechanism' may relate to the metaphysical concept that an organism is nothing more than an atomistic physico-chemical system — and this is presumably what Allen has in mind when he defines it (p. xxi) as a category of philosophical materialism. On the other hand, it may refer to a methodological approach to the investigation of certain aspects of organisms — an approach adopted by most biologists, including Christians and others who would not subscribe to philosophical materialism. It may be true — and this book suggests that it is — that the materialistic philosophy of some biologists has motivated their contributions to the development of mechanistic, experimental, investigations; but this does not imply that a biologist who adopts a mechanistic approach is necessarily a materialist. It is this invalid inference which appears to underlie the author's view (p. xxii) that a person who thinks both mechanistically and idealistically is guilty of inconsistencies. I think, not that the book misrepresents the thinking of the scientists discussed, but rather that it labels their thinking with misunderstood philosophical terms.

Other regrettable features of this book are (a) the many examples (I counted 34 in the eleven pages of the Introduction) of slipshod use of English, spelling mistakes and typographical errors, (b) an almost complete lack of adequate legends for the illustrations, and (c) a complete lack in the text of references to documentary evidence for the author's statements, so that the serious student would find it very difficult to check the truth, or to pursue further the implications, of any particular assertion.

Despite these serious criticisms, the book is a very useful contribution to the literature on the history and philosophy of biology, an area still far too sparsely covered.

GEB

R. D. RYDER, *Victims of Science*, Davis-Poynter, 1975, 279pp.
£3.75

The aim of this interesting book is to provide documentation on animal experiments, the main argument being summarized in the first chapter. It is more informative though inevitably less readable than J. Vyvyan's *In Pity and Anger* (1969), previously mentioned in this JOURNAL (100, 120). At the end of the book constructive suggestions are made for a reform in the law relating to vivisection.

Many of the arguments used are very telling. Thus the point is made that the case made out for vivisection runs parallel to that once made for slavery.

Suppose, says the author, that creatures from outer space invaded Earth, and proved to be vastly stronger and more intelligent than we are, would that justify them in ordering us to report for vivisection? One of them might explain to us "that they doubted whether we really could feel pain, and they would keep us in perfectly clean and hygienic cages and that they naturally regretted having to perform severe experiments upon us, but that unfortunately it was necessary for the benefit of their own species. Please don't think that I am a sadist ... I am very fond of humans and keep several as pets. ... I would be the first to criticize any experiments that were unnecessary or involved unnecessary cruelty. Fifty million humans die in our laboratories every year, but most of these are in routine experiments that do not involve severe pain. Don't let your emotions cloud the issue". Good use is made of Stnaley Milgram's findings (see this JOURNAL, 102, 108).

In the medical field, we are told, drug testing involves a vast amount of animal suffering but results are often misleading: thalidomide seemed harmless on animals; insulin causes deformities in chicks, rabbits and mice; cortisone causes deformities in mice; aspirin is extremely poisonous to some species and causes deformities in the foetuses of rats; morphine sedates most species but provokes "maniacal excitement in the cat and the mouse". Fortunately newer techniques are making it possible to test drugs in tissue cultures. A vast number of experiments are not of a medical nature at all - 68.4% in Britain in 1972.

Many experiments are horrible. Isolated heads or brains of monkeys and baboons have been kept alive in USA without anaesthetics - they seem to be conscious and respond to sound, sight and smell, even attempting to bite their white-coated tormentors. In Russia 2-headed dog preparations, each head answering to its own name, have been kept alive for up to a month. In 1943 the USA expended 30 million bats in experiments to see if they could be used to carry fire-raising devices to set cities on fire.

Vivisection, once conducted in secrecy and involving few animals, is increasing at an alarming rate. Started in a large way in France between 1800 and 1865 as a result of the scientific cruelty of Francois Magendie, Claude Bernard, Paul Bert and Louis Pasteur, it has recently "spread like a rash across the face of the earth infecting all of Asia and especially Japan. Already it is in Africa".

Kindness to animals and kindness to human beings, says the author, go hand in hand. In Nazi camps experiments on humans were continuations of those done on animals. At Auschwitz and Buchenwald

laboratory animals were kept and used to tie with human experiments. Wilberforce was a founder-member of the RSPCA and made repeated efforts in Parliament to stop bull-baiting. Shaftesbury fought for the legal protection of animals in laboratories.

REDC

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Also received

George Target, *Scenes from a War*, 1976 (Fellowship of Reconciliation, 9 Coombe Road, New Malden, Surrey), 30 pp., PB £0.25 (Short renchant sentences or bits of sentences describing a soldier's memories of the shocking sights of WW2 and their ultimate reaction on the author who became a Christian pacifist.)

E.K. Victor Pearce, *Who as Adam?*, Paternoster, 1976, PB. £1.60. We welcome the second edition of this excellent book, previously reviewed on these pages (99, 74).

Per-Olaf Sjorgren, *The Jesus Prayer*, SPCK, 1975 96pp., PB £1.60, cloth, £3.25.

K. Ward, *The Christian Way*, SPCK, 1976, 96pp., PB £1.15.

DONALD M. MACKAY

ESSAY REVIEW — BEYOND CHANCE AND NECESSITY

It is now several years since Professor Jacques Monod, Nobel Prize winner in molecular biology, joined the long list of those who have attacked religious belief on grounds purporting to be scientific. His *Chance and Necessity*¹ which proclaimed that "man at last knows that he is alone in the unfeeling immensity of the universe, out of which he emerged only by chance"(p.167), has now been answered by a symposium edited by Dr. John Lewis and entitled *Beyond Chance and Necessity*². In this a variety of specialists in science, philosophy and theology, not all by any means Christians, take apart Monod's rhetorical extravaganza, and have no difficulty in exposing it as a philosophical *non sequitur*, riddled with metaphysical self-contradictions. Indeed, the net impression one derives from the symposium is almost one of 'overkill'; but although it can be argued that Monod has richly deserved the philosophical beating he has taken both here and elsewhere, it may be questioned whether this particular assortment, published under the auspices of the "Teilhard Centre for the Future of Man", will best undo any harm he may have done.

Perhaps the clearest and most substantial response to Monod is Dr. Arthur Peacocke's chapter: "Chance, Potentiality and God". Having first lowered the temperature by pointing out that Monod's invocation of "chance" is nothing new, and that even something as dependable as Boyle's Law relies on physically 'random' events at the molecular level, he argues that rapid and frequent randomization of molecular combinations should be seen as just a way of exploring the "full gamut of potentialities" with which matter is endowed. As such, it offers no sufficient basis for Monod's apotheosis of "chance". "Biological evolution no more qualifies for description as a 'chance' process than any other" (p.17). It still leaves us facing questions such as: "What sort of cosmos is it if the original primeval mass of hydrogen atoms has ... the potentiality of becoming organized in material forms such as ourselves ...? How can we explain the existence of such a cosmos ...?" Peacocke argues that any adequate cosmos-explaining entity "must be *not less* than personal or mental in its nature". "Chance" alone (à la Monod) can offer no sufficient explanation of the cosmos.

Peacocke goes on to expound his theistic view that "God has been creating all the time through eliciting all the possibilities of the matter which he had brought into existence endowed with certain potentialities and governed by the laws of transformations ... Hence Christians have no interest in finding evidence for any form of vitalism". He does seem to overstate his case in describing the postulate of a "special creation" of species as "an error on *Christian premises*" (p.25). (The postulate may be biblically *unnecessary*; but I know of no biblical grounds, nor does Peacocke offer any, for calling it *erroneous*.) But in general he succeeds in demonstrating the emptiness of Monod's claim that science as such makes the Christian position now untenable. Peacocke is even content to have the Christian view described as "materialistic", if this implies only a readiness to trace the characteristics we call living and human to the properties inherent in matter as created by God.

What is less clear is whether this notion of inherent (and presumably invariable) properties or potentialities of matter makes a sound starting point for a biblical synthesis of science and faith. For day-to-day regularities it may serve well enough; but what of the biblical concept of the miraculous? Are we to take the resurrection of Christ, for example, as expressing just one more of the "potentialities inherent in created matter"? If so, what does this add to the bare statement that it took place? If this world is God's creation, its regularities doubtless reflect the coherence of His sustaining will; but from a biblical standpoint any departures from scientific precedent on "miraculous" occasions must have been equally coherent with His creative purpose. Even the events we term "random" take the form they do according to His creative *fiat*. There seems to be no stronger incentive in biblical theism to link every event that takes place to "potentialities of the original primeval mass of hydrogen atoms" than there is to trace every utterance in English (whether poetic or otherwise) to "potentialities of the English language".

Dr. John Lewis attacks particularly Monod's reductionism. This is no simple materialism of the old school, but rather a paradoxical desire to affirm so-called "objective knowledge" as the sole source of truth, while still recognizing the reality of human cognitive experience. The result is a series of self-contradictory moves as Monod tries to square his 'objectivist' dogma with experienced reality. Monod's mistake, says Lewis, is to confuse *translation to an equivalent* with *translation across levels* (p.37). No story about physical events in the brain can be *equivalent* to one about conscious experience; but this does not prevent it from having a correlate in the terms of conscious experience. Monod's confusion at this point leads him to brand as 'animists', 'vitalists' or the like all who insist on at least equal ontological status for the domain of mental activity.

Monod himself admits that his rejection of all sources of truth other than "objective" scientific observation is not itself based on objective knowledge, but is arbitrarily "imposed on himself". The irrational subjectivity of this 'leap of faith' is effectively brought out by Lewis and also by Owen St. John, though one has the feeling that Monod (having freely admitted and made an existentialist virtue of this) will be psychologically impervious to their criticism. Indeed in reading Monod one cannot help feeling that what he needs, and almost pleads for, is intellectual therapy rather than cogent argument. He knows he has driven himself into a cleft stick. He rages at those around him who profess to move freely and peaceably against the background of biological science which (on Monod's presuppositions) *ought* to have "blasted at the roots" the remains of their religious faith. He suspects them all, to a man, of covert desires to sully the face of science with occult 'animistic' intrusions, and of seeking dishonest comfort from a spiritual perspective that is illusory. Yet he himself feels bound to bear witness to the spiritual significance of the human condition as he knows it, and is driven to anthropomorphise even his *daemon* of "pure chance", as "free but blind".

So one is left wondering how far Monod will be touched by the rationality of all the objections levelled at him here. Needham attacks reductionism from a Marxist standpoint; Koestler from the opposite. Owen St. John needlessly offers a hostage by claiming that "the only change (a machine) can produce in itself is breaking down or wearing out" (p.74) — blithely ignoring the whole field of self-organizing mechanisms. C.H. Waddington, charmingly confessing that Teilhardism is "not to his taste", rebukes Monod for "rattling old bones", and argues with robust Whiteheadian common sense that "the basis of our knowledge is in *occasions of experience*" (p.90). Robin Monro suggests that even at the biological level Monod is not above criticism, and David Bohm avers that fundamental physics today is less mechanistic than molecular biology! Finally, Theodosius Dobzhansky rejects as 'spurious' Monod's basic dichotomy between 'chance' and 'necessity' in the theory of evolution. "The biological meaning of chance is that mutations happen regardless of whether they will be useful to the species when they occur, or ever". "Natural selection is an antichance agent, (but) its action does not amount to necessity". It might have been interesting to have Dr. Peacocke's comments on this one.

Why then, we may ask, has this confused and confusing writer gained such popularity? The philosopher Mary Warnock is in no doubt. "Monod", she declares, "is the new Teilhard de Chardin — atheistical, it is true, but with an urgent message and precise instructions for us all — and he will appeal ... to those who look always for a secret, a solution, an answer to everything" (p.12). His characteristically French rhetoric she brackets unfavourably with that of Sartre, who likewise "derives vast consequences about the nature of existence from familiar facts" (p.11). This would not be so bad if the

conclusions actually followed from the premises; but do they? Mrs Warnock is unkindly but perhaps not unfairly blunt. "The difficulty with rhetoric", she concludes, "is that you may read it late at night and think that you have the secret of life; but you may wake up in the morning, as sometimes out of a dream, and find that the secret, or at least its meaning, has escaped you".

REFERENCES

1. Alfred Knopf, NY, 1971; Collins, London, 1972.
2. J. Lewis (ed:), *Beyond Chance and Necessity*, Garstone Press, 1974, xi + 141 pp., £2.95.

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GEOFFREY WHITFIELD

PERSONAL TRANSCENDENCE IN CHRISTIANITY
AND GESTALT THERAPY

Present-day psychological therapeutic techniques often proceed without reference to Christianity. Mr. Whitfield, taking Gestalt therapy which Perls derived in part from Zen, as a case in point, shows that its basic principles can be found in the New Testament. In the last resort, however, Gestalt therapy does not provide what man needs, whereas Christianity does.

If the task of Gestalt therapy is to create a unity between thought and feeling so that organismic self-regulation may replace regulation by the environment; to make people whole is also an explicit purpose of the Christian religion. "Organismic self-regulation" sounds technically awesome. It is intended to convey the sense of the organism, the full person functioning as a spontaneous whole, unimpeded by defence mechanisms which inhibit freedom but provide a haven of safety from unpleasant levels of awareness. Christianity goes further in explicitly seeking to make people and the world whole. It states that the eternal Logos has come in the flesh — in Christ — and is to be encountered here and now. To experience Christian faith is to discover that Christ lives in human personality now, that a man may realise his true, full and developing self now. Moreover this is not an isolated personal realisation, for there is corporate organismic self-regulation in becoming a sharing member of a living body of people, i.e. the church.

To attempt to practice and work out these convictions has let the church into all sorts of booby traps, often of her own making. Some people have a jaundiced view of Christianity which, seemingly, is not entirely without foundation. As a result Christianity is discarded by many thoughtful people because they view it as a repressive rather than a liberating philosophy. At this point let me say that I am not embarking on arguments for the existence of God or the truth of Christianity, both of which I shall assume. Discussion of such a vast field is beyond the compass of a short paper.

Barriers to Growth

The founder of Gestalt therapy, Fritz Perls, is insistent that in order to transcend the self, one has first to become aware of one's own self-defeating behaviour, an awareness which often arises from a feeling of anxiety. Once established, the new sense of awareness either becomes a focus of incipient growth, or of further concentration on self-defeatism in the personality-restricting defensive levels of behaviour. In the former case anxiety leads to excitement whereby we can transcend our psychological pain barriers and complete the unresolved agendas of our earlier years. To bring about this desirable result a spectrum of techniques has been developed, which link with Moreno and his Psychodrama theory. Thus simple rituals like addressing an empty chair, or having a conversation with the image of a person, e.g., a parent, can be employed to deal with the hurt and pain of the past. However this is not the place for discussion or description of the techniques. The therapy, it is claimed, can lead to a further extension of the boundaries of life and a departure from previous restrictive modes of behaviour: an individual can now take responsibility for opening up the material buried in his psyche which formerly distorted his behaviour and relationships, and so pave the way for further growth.

For reasons best known to himself Fritz Perls turned to Zen for much of his philosophy. Whether this was a consequence of disillusionment with American Christianity I do not know, but he could have found what he needed within the pages of the Bible. However Perls misunderstood Christian faith to a remarkable degree when he said in *Gestalt Therapy*, "Christianity says nature does not count, only the supernatural counts."¹ Yet Christianity is more earthly, fleshly and natural than any of the other major religions. Jesus had a body and knew all about affliction and joy in the here and now. Did He not warn the Jews about their fantasies of the past concerning Solomon and his greatness, and their fantasies of the future *re* the Messiah? He told them in forceful ways to stay in the here and now of awareness and feeling and to take no anxious thought for the morrow (Mt.6:25-34). Certainly He set His face against many things. For example, one fundamental biblical concept is that slavery is never to be tolerated. Thus, when the Jews were in Egypt in the time of the Pharoahs the task of Moses to redeem a people from captivity was seen as the direct purpose of God. These slaves were redeemed by a whole series of events and so became a nation, yet that nation later found itself losing this fundamental biblical principle, and itself enslaved others. This development probably reached its peak or abyss in the time of Solomon when even Jews were put into slavery to achieve the ends of their own royal house, and the decline continued until Israel itself became a servile people.

The New Testament takes up the theme, asserting that everything that enslaves a man is against the will of God, whether it is a political system or a servitude to sin. Anything therefore that debases man and society is to be confronted. The Christian view is that Jesus faced all the destructiveness of evil displayed by men and exposed it for what it was. At the same time He called upon people to abandon their self-centred life style, yet He retained an attitude of empathy towards them. Always He faced reality, never for a moment, save in the Garden of Gethsemane, did He swerve from the anxiety and dread that were eventually to meet Him. The price He paid was to endure the agony of the Cross and in so doing He absorbed the hate of man in all its destructive force. The Resurrection speaks of His vindication; the significance of His death and resurrection in terms of psychodynamics and therapeutic effectiveness will be referred to in the sequel. People who are persuaded by the Christian view-point hold that mankind is created to enjoy God's world and to use it responsibly -- yet with the sense of freedom that proceeds not from coercion but from awareness. The process of human maturation must lead to a point where we go beyond commandments, where "we have to do this and have to do that", to where human activity and relationships are summed up in the liberty of agape.

The Vulnerable and Invulnerable in Therapy

Gestaltists assert similar views about man's maturation without necessarily including religious concepts; they hold that mankind is created to enjoy the world and to use it responsibly with the freedom that results from awareness. It is here, of course, that there may be the Achilles heel of the society that is not founded on spiritual values. For how is a person to know when there is liberty to love? May we not also question whether the Achilles heel of therapy does not lie precisely at this point, for from whence does a man obtain his sense of worth and value? Fritz Perls sees it in terms of a person's family, his career, his prowess, etc... Yet all this is vulnerable, for when a man loses these props on which his false sense of status is precariously perched, what then? Social workers, medical practitioners and all those in the helping professions repeatedly find themselves up against the old, old problem of neurosis. This may be dealt with in part, but how can man go on to obtain a sense of personal worth and value that is invulnerable?

The reply of the Gestalt therapist is that a man quits his self-defeating environment in favour of organismic self-regulation. Janov in his *Primal Therapy*² takes us to a position where man discovers his utter dereliction and screams his agony and protest. However, even when a man has moved beyond dereliction and experiences a new awareness, how can he establish his personal integrity objectively? It is claimed that the purpose of Gestalt and other

therapies is to undo the defects in human personality which originate in pre-verbal interactions. This may be excellent, but how can the undoing put a person in touch with any true transcendence? Where is the invulnerable certainty to be found that can provide a spring-board for the leap into spontaneous living?

The Relevance of the Gospel

The therapeutic genius of St. John's Gospel is essentially where it talks of a man's worth and value. That worth and value lies not in a man being worthless, as many Christian hymns and many Christian preachers would have it, but in the almost unbelievable fact that while a man is in a state of alienation and pursuing all types of self-destructive acts, he is seen to be precious and worth dying for (Jn. 3:16), and it is for this that Good Friday has stood for over 2,000 years. Here is the ground for transcendence, here is the status of man, here is his worth and value, for he is a son of God. He has been created a son of God. No-one can take this status away from him. It is inviolable. Here therefore is the ground of his being. Early deprivations which have sent man on a self-manipulative road where he has been dictated to by his environment and has had his real self distorted can be dealt with on this basis. It opens up the capacity for new life.

With new insight we view the words of Jesus when He said, "You need to be born again" (Jn.3:7). For a man can be born again into a life where God's acceptance and love are acknowledged. There is now the possibility that man's achievement will exceed expectations based on his normal behaviour patterns, for they will no longer emanate only from his own grasping, insecure, inadequate personality.

The Gap between Theory and Practice

Now let me say straight away that this, of course, is according to the book. In reality, things often tend to turn out differently. The Church has its fair share of neurotics. Indeed are we not all to some extent neurotic? One of the most foolish of all notions is that before a person can engage in counselling or therapy at any level he must himself be altogether mature and unblamable. Surely we share with others a common humanity which enables us to help one another. God preserve us from becoming unfeeling human automata, so put together as to be beyond the common human experience of need. As with all other philosophies and religions there is in Christianity a huge distinction between belief and practice.

The Book of Genesis (1:27-31) teaches that man is, in origin, good because he is made in God's image, but our obsessive super-egos, enemies of genuine religion, often make us see our lives as bad quite apart from any actual moral failure or religious transgression.

For example, we have for centuries been frightened by our bodies because of a mixed up confusion concerning our sensuality. Christianity sees it as belonging to God, but Christians see it as the favourite hunting ground of the Devil. To get Christians to love their bodies and to love one another is just as difficult as to get others to do the same. Alexander Lowen brings us to new fields of understanding here. Though the established theory says that when you know God loves you you can love yourself and then love others, in practice it often happens that a failure to love ourselves means that we find it impossible to believe that God can love us, and "I'm not OK, you're not OK",³ in the language of Harris, all too often operates in experience. The churches have too often demanded that needs should be denied rather than satisfied. Over against this, Christianity and Gestalt offer a freedom to fulfil needs within a responsible social context.

Facilitating the Growth of the Person

Gestalt therapy has three ground rules to enable a person to contact with his environment, the environment with all its stimuli being crucial, for all too easily we can deny God's world and so deprive ourselves of what we are meant to experience. Fritz Perls is forever to be thanked for getting us to talk about "How do you feel?"¹ rather than "Why did you do it?". This brings us into the immediate "here and now", thus saving unnecessary reflection on historic far away happenings. He delivers us also from the Anglo-Saxon, "One-does-this-and-one-does-that" and encourages us instead to talk about "I and thou". His techniques, despite their limitations, enable people to contact their environment, human and situational, instead of avoiding it. Perl's emphasis on personal responsibility for growth and development corresponds with the Christian emphasis on an individual's responsibility to be himself. To live firmly by these principles means that we can meet each other and choose to cherish and enrich them instead of avoiding each other and remaining stunted.

It would be unfair to omit reference to people like Wilhelm Reich and Alexander Lowen⁴ to whom we are indebted for putting us in touch with the language of the body, which harmonises so well with Gestalt. Janov, too, has had the courage to move to the area of primal needs and to stress the excruciating pain occasioned by the threat of non-being. However, man's dereliction need never be total because he may be accompanied by the Christ who was also forsaken, scorned and rejected and who descended into Hell and who can therefore accompany man in his extremity. Dereliction in infancy is total but in adulthood a person who rediscovers this experience behind his defences may gain access to resources not known by the baby. Indeed, the adult can know that dereliction is an experience of Christ's own pain. Janov, however, is without a companion who can come to the rescue. He provides a therapist as

an empathetic, sensitive, pain-experiencing onlooker, who with all his gifts and empathy can still only be an onlooker.

The Gestalt practice of ensuring that a person contacts his environment means that he contacts his anxieties, and as the defences are confronted the barriers are gradually brought down. The camouflage may slowly slip away and all this is the rightful process of discovering who is really there, and yet this means a man must become aware of his utter emptiness. But not emptiness only, for when the early pangs of pain have been accepted and assimilated he also recognises his strength and endowments. Certainly the world is there to affirm him, but is that enough to provide a man with sufficient belief in himself so that he can exceed his nature and move to a level of transcendence? It is at this point that Gestalt itself is at its most vulnerable, because it puts all the responsibility on to the client: in practice this is one of the least impressive aspects of the Gestalt stance and is open to serious question. Avoiding dependency and trusting in the strength of people is fine. However, it is not good enough to be encouraged to take your psychological clothes off only to be told that it is your responsibility if you soon find yourself freezing outside in the cold. This unclotting can be destructive and even highly irresponsible. However Christianity talks of another Man who was stripped and left outside a city wall who still speaks to the afflicted today so they need never be alone. In realising this a man discovers integrity and destiny.

Dealing with the Taboos

A further development and yet a further paradox is seen in attitudes to the basic human drives of lust and aggression. The Churches have long set their faces against overt expression of these instinctive drives. To exhibit anger or physical desire is to invite immediate condemnation, yet the New Testament talks about the body of the Christian being the temple of the Holy Spirit, which presumably means that he is to enjoy what he has been given, indeed to luxuriate in it — God "giveth us richly all things to enjoy" (1 Tim. 6:17). Furthermore, the violence of the Crucifixion is accepted unconditionally. Gestalt has always insisted on the need to complete an unfulfilled agenda, i.e. that where there is pent-up anger it should be expressed, and that when there is a retroflected desire for love, this should be liberated.

The New Testament does not seem to deny this but only seeks for an appropriate discharge of the needs that will be ultimately creative. To be violent does not put you beyond the pale of God. Awareness of sexual needs may horrify the saints but it does not appear to shock the Redeemer. If a man is enslaved by his retroflected needs then Christ will seek to deliver him from this slavery,

but Jesus turns his face against unreality and falsehood. To be able to tell God that you bitterly resent the way He treats you seems to be sanctioned by both Fritz Perls and the Bible (Cf. "O Lord, thou hast deceived me, and I was deceived" Jer. 20:7) because it is genuine, externalised and completed. It then opens the gateway to expressions of love and affection, but how can you tell anyone that you love them when you have so much negative feeling inside you which a social or religious contract forbids you to express? Jesus had much to say about those who said "Lord, Lord" (Mt. 25:27). He spoke about the knowledge of the truth setting men free. All too often a man is faced with his unacceptable self but seeks to create an acceptable self-image. This brings scorn from Gestalt and also from genuine Christianity. The desire of both is that they should move away from this defensive mould which produces so much manipulative and unreal behaviour. Both offer a way through to a discovery of the self as being ultimately an organised, spontaneous whole.

Personal transcendence may be costly, and indeed it may never be totally realised, but it is a road along which we may walk. Yet while Gestalt and Christianity would invite people to walk along the same road, Christianity provides a Companion for the journey who was Himself truly human as well as divine, and who reveals through Himself that which may make men individually and socially transcendent.

REFERENCES

- 1 Perls, F.S., R.F. Hefferline and P. Goodman, *Gestalt Therapy*, N.Y. 1951 (British edition, 1972).
- 2 Janov, A., *The Primal Scream. Primal Therapy: the Cure for Neurosis*, Eng. Ed. 1973.
- 3 Harris, Thomas A., *Book of Choice: Practical Guide to Transactional Analysis*, 1970. Republished as "I'm OK. You're OK", PB (Pan Books), 1973.
- 4 Lowen, A., *Betrayal of the Body*, PB 1969; *Physical Dynamics of Character Structure*, NY 1970; *Language of the Body*, PB 1971, etc.

MICHAEL POOLE

Chariots and the Cult of Credulity

Von Daniken's books now circulate in tens of millions and a film of his book "Chariots of the Gods" has attracted crowded audiences in every major city of the Western World and behind the Iron Curtain too. In this interesting article Mr. Poole examines the appeal of the views he expresses.

A first reaction to Von Daniken's *Chariots of the Gods*?¹ might be, "Well, nobody's likely to take that sort of thing very seriously", but the fact is that many have done so. Those in contact with young people tell of a disproportionate interest in the suggestion which triggered off the popular Sunday-paper serial, "Was God an Astronaut?"

The suggestion came from Von Daniken, an ex-hotelier from Switzerland, that long ago our planet received visitors from space. These erstwhile astronauts, Von Daniken argues, were regarded as gods and many of earth's hitherto unexplained mysteries can be solved by recourse to the idea. Furthermore, these visitors are supposed to have interbred with humans (with whom they just happened to be sexually compatible) and produced offspring (which just happened to be fertile) from whom our space travellers of today have descended.^{1a}

Before trying to find possible reasons for the popularity of Von Daniken's works — and it is estimated² that his books have sold more than 25,000,000 copies in over 32 languages — a few points need to be made about the content of *Chariots of the Gods*?

Various difficulties confront anybody who wants to check up on the subject matter of the book. Firstly the material referred to includes archaeology, anthropology, astronomy, biology, chemistry, geography, history, physics, theology and a good many other "ologys" and "onomys". Consequently, unless the reader has had training in a fair proportion of these disciplines, he will not be in a position to advance explanations of the phenomena mentioned, other than the one suggested by Von Daniken himself. It is significant that if you ask him about the technical training that prepared him for all

this, he begins his answer with a surprise statement: "I am a specialist ..."

He is a specialist, he says, in "my own field - which is, 'Are There Ancient Astronauts?' And for this field you can't have training in the universities, because it doesn't exist. Maybe in 10 years we'll have 'Ancient Astronaut' courses in all the universities. Then I may be the leading professor, I don't know".²

As *Return to the Stars* puts it, "Erich von Daniken is not a scholar. He is an autodidact, which the dictionary defines as a man who is self-taught"^{3a}

Any comprehensive critique of *Chariots of the Gods?* must necessarily take the form of a symposium, with contributions from experts in a variety of fields. Otherwise one merits the charge of doing just what Von Daniken has done in speaking across the board. A useful book, which is a collection of writings by sixteen specialists in various fields, is *Some Trust in Chariots*.⁴

Von Daniken, in his later book, *Return to the Stars* says, "The 'Sunday' archaeologist has the great advantage of being able to give his imagination free rein and ask the specialists disconcerting questions".^{3b} This dual exercise of "being able to give his imagination free rein" and the asking of questions just about sums up the style in which the books are written. "Without over-stretching my imagination, I get the impression that the great god Mars is depicted in a space - or diving-suit." "A cave drawing is as recognisable - without overstraining the imagination - as a normal slide-rule in a double frame."^{1b} "Let us imagine for a moment that Sodom and Gomorrah were destroyed according to plan, i.e. deliberately, by a nuclear explosion."^{1c}

Questions follow in quick-fire successions and before having read many pages of this sort of thing, one is left with the sense of a breathless world-tour of widely scattered snippets of undigested information. Questions are asked in plenty, but alternative answers to the favoured theme are dismissed lightly.

When taken for such a verbal ride, it is not at all easy to separate fact, interpretation, imagination and hearsay. Conjecture is followed by assertions of certainty with shameless jumps in the logic, "let us stick tenaciously to our *theory* (italics mine), according to which astronauts from distant planets visited the earth thousands of years ago. We *know* (italics mine) that our ingenious and primitive forefathers did not know what to make of the astronauts' superior technology. They worshipped the astronauts as 'gods' who came from other stars..."^{1d}

The doctrine that "all things are possible" features strongly in Von Daniken's writings. We are told that "NOTHING is incredible any longer. The word 'impossible' should have become literally impossible for the modern scientist".^{1d} One is reminded of a quotation featuring Alice in conversation with the Queen, about finding things hard to believe:

"'I can't believe *that!* said Alice. 'Can't you?' the Queen said in a pitying tone. 'Try again: draw a long breath, and shut your eyes.' Alice laughed. 'There's no use trying,' she said: 'one *can't* believe impossible things.' 'I dare-say you haven't had much practice' said the Queen. 'When I was your age, I always did it for half-an-hour a day. Why, sometimes I've believed as many as six impossible things before breakfast.'"⁵

I rather fancy the Queen would have enjoyed *Chariots of the Gods?* Certainly the achievements which have been made in science and technology have prepared the minds of Von Daniken's readers to believe that nothing is impossible, but I think we've got to be very careful here and tread warily between two extremes.

The first of these extremes is to deny the validity of research into unusual and untraditional fields of experience. A recent editorial in *Nature* entitled "Science beyond the Fringe" spoke strongly about "a discernable tendency for the public and even some practitioners of science to turn their backs on science and become preoccupied with the bizarre and the magical". The writer went on, "Mr. Uri Geller is only the most recent to cast doubt in the public mind on the efficacy of rational explanation. Archaeology is being plagued by a series of ideas which have achieved a following particularly among the young".⁶

Now there is no doubt that there is a good deal of antisience around which is to be deprecated. Nevertheless, strange phenomena like those associated with Uri Geller are, in principle, open to attempts to investigate them scientifically. This is in fact being done at the present time. It may well turn out that people have been led up the garden path over the so-called 'Geller effect', but the important principle to be established is that such claims are open to investigation using the methods of science.

A later issue of *Nature* included a strong letter of protest at the editorial, pointing out that "History is littered with ideas shown to be false by people bold enough to question their contemporary conventional science, often in the face of personal ridicule and even persecution." The letter concluded with the declaration, "I want no part in any science which operates with a closed mind..."⁷

The other extreme to be avoided is not the closed mind but the empty mind masquerading under the guise of an open mind. The advice given to students by Kenneth Howkins in his book *The Challenge of Religious Studies* is very pertinent when one is confronted by the appeals for open-mindedness made by people like Von Daniken. He writes,

"The mind needs to be open at the top, to let new ideas drop in, and not at the bottom, to let all former ideas drop out ... The student needs an open mind towards those things which he does not know, and a readiness to grapple with problems. But he does not need to empty his mind of those matters about which he has a sure knowledge. He should not jettison previous knowledge but, with intellectual humility, be willing to consider other views. To have an ever-open mind in everything is simply a serious neurosis ... It is not a sign of maturity to be carried away by 'every eddy in the stream of thought'. The demand for an open mind is so often in practice a demand for an empty mind. Sometimes this is overtly so. There are those who ask their students to remove all preconceived ideas from their minds, and to start thinking again. This is morally very questionable. It tends to be saying in effect in an authoritarian manner, 'Abandon your beliefs and accept mine'.

A completely closed mind on any matter is not being advocated. Indeed a modification of ideas may be demanded. But it is not desirable to consider that every question is completely open."^{8a}

Anyone reading Von Daniken's writings would be given the impression that all "experts" are closed-minded stick-in-the-muds with never an adventurous spirit to be found among them. He exhorts them to get on with investigating the possibility of extra-terrestrial life, saying, "A Utopian archaeological year is due, during which archaeologists, physicists, chemists, geologists, metallurgists and all the corresponding branches of these sciences ought to concentrate their efforts on one single question: did our forefathers receive visits from outer space?"^{1e} The simple answer to Von Daniken's charge of laxity is that a not inconsiderable number of scientists are at present working on problems allied to other forms of life. You don't need to take many issues of current scientific literature to find this out. *Nature* for May 10th, 1974 reports, "Radioastronomers are about to begin another programme of 'listening' for signals from intelligent life within our Galaxy".⁹ The following week an article appeared entitled, "How special is the Universe?"¹⁰ *New Scientist* for July 4th featured an article on the subject¹¹ and two months earlier, on May 2nd a symposium was held at the Royal Society called the "Recognition of Alien Life".¹²

No, it is not that nobody had thought of getting on with the job before Von Daniken arrived on the scene; the point of contention is his whole approach to making an investigation, and this on two counts. Firstly with respect to the way he treats existing ideas and secondly in regard to logical gaps in the presentation. The treatment accorded current ideas is, generally, to dismiss them cursorily. "Classical archeology" is accused of having created "an impressive and interesting mosaic ... the product of a pre-conceived pattern of thought"^{1f} and the accusation is made that, "As long as archeology is conducted as it has been so far, we shall never have a chance to discover whether our dim past was really dim and not perhaps quite enlightened."^{1e}

Now, no scientist will deny that from time to time various areas of science have had to undergo major 'rethinks'. New theories have been advanced which have radically reshaped the structure of the subject. Biology, geology and the physical sciences have all in their time undergone such metamorphoses and may do so again. Long-held ideas have been displaced by better theories and the history of science records both birth-pangs and growing-pains. Phlogiston, caloric, atoms and quanta are all words which are reminders of revolutions in thought. However, there is a radical difference in the development of scientific ideas and the sort of rethink that Von Daniken appears to wish upon us. In the progress of scientific thinking new theories are advanced because they give better explanations of more data and not simply a number of selected curiosities. In *Chariots of the Gods?* unsolved mysteries are selected, simply because they *are* cryptic. Some might consider the solution suggested by Von Daniken to provide one explanation of those mysteries, but that solution doesn't take into account the wealth of additional relevant material for which patient research has already advanced other feasible and consistent explanations. In short, the Von Daniken suggestion raises far more factual problems than it professes to solve.

The nearest parallel to Von Daniken's unsubstantial "astronaut gods" is the mistaken and quite unbiblical concept of the "*Gods of the gaps*". Only here it is "astronauts of the gaps". Visiting astronauts are invoked to explain anything for which there appears at present to be no explanation. Using this technique, any of the multitude of unexplained mysteries can be regarded as support for the existence of these "astronaut gods".^{4a} And lest it should be thought that it is a neat hypothesis which links a number of unsolved mysteries, let the following story act as a cautionary tale to remind us that there are other criteria of truth than neatness.

"... there were once two very perplexing mysteries, over which the wisest men in the land had beat their heads and stroked their beards for years and years. But nothing came of all this. The two mysteries continue to plague everyone.

The mysteries were that whenever anyone wanted to find a lead pencil he couldn't, and whenever anyone wanted to sharpen a lead pencil the sharpener was sure to be filled with pencil shavings.

It was a most annoying state of affairs, and after sufficient public agitation a committee of distinguished philosophers was appointed by the government to carry out a searching investigation and, above all, to concoct a suitable explanation of the outrage.

One can hardly imagine the intensity of the deliberations that went on among the august members of this committee. Moreover, their deliberations were carried out under very trying conditions, for the public, impatient and distraught, was clamouring ever more loudly for results. Finally, after what seemed to everyone to be a very long time, the committee of eminent philosophers appeared before the Chief of State to deliver a truly brilliant explanation of the twin mysteries.

It was quite simple, after all. Beneath the ground, so the theory went, live a great number of little people. They are called plogglies. At night, explained the philosophers, when people are asleep, the plogglies come into their houses. They scurry around and gather up all the lead pencils, and then they scamper over to the pencil sharpener and grind them all up. And then they go back into the ground.

The great national unrest subsided. Obviously, this was a brilliant theory. With one stroke it accounted for both mysteries."¹³

The writer gives this little story as an illustration of "the prescientific picture". "The theories which we speak of as prescientific, or magical, may be regarded as plogglie theories ... No matter what happens, it can always be explained *after it has happened* by saying, as solemnly as possible, 'Well, that's how it goes with plogglies'.

Thus Von Daniken's "astronaut gods" theory, far from being an *avant garde* hypothesis, is a "plogglie" theory, magical and prescientific.

The other point of contention, referred to earlier, is the presence of logical gaps in Von Daniken's presentation. Sentences like, "Who can produce concrete proof to show why another planet should not have provided more favourable conditions for the development of other or similar intelligences?"¹⁴ are taken to imply that because absolute proof of non-existence cannot be advanced, therefore it is very likely that these hypothetical beings do exist. Incidentally, Von Daniken would do well to read some modern books on the philosophy of science before he uses phrases like 'concrete proof'. The discontinuities in the logic follow the general pattern

of 'Can it be? ... it could ... in fact it's quite probable ... right then, so ...' Before long the casual reader is left with the impression that even if Von Daniken's idea has not been established beyond any shadow of doubt, at least the issue has been moved from the umbra to the penumbra. Following page after page of this sort of writing, it is easy to forget that there was an initial 'if'.

The technique used is one of suggestion. If the same idea in many different forms is presented often enough, an undiscerning reader may be persuaded that the idea is strongly supported. Somehow, subtly, the feeling is left that 'it can't all be wrong', 'there must be something in it', 'it seems a bit far fetched but look at all the evidence he quotes', 'I don't know much about these things but he's spent years and years studying them'.

Some may feel that the use of suggestion reaches its peak in the selection of captions for the various illustrations. Early in the book the way is paved for the very limited resemblances which the illustrations bear to what the author wishes his readers to believe; we are told, "There are no limits to the fantasy of the illustrations that result from the visit of our space-ship".^{1h} Some of the captions ask questions, some offer suggestions. For example, "The object in the centre is described as a sacred tree. It could just as reasonably be interpreted as a symbolic representation of the construction of an atom, with an astronaut in a fiery chariot above".¹ⁱ Of an 820 foot figure carved in a hillside it is asked, "Could this be an aerial direction indicator rather than a symbol of religious significance?"^{1j} Within the text it is asserted that it, this and some other similar figures, "were undoubtedly meant as signals for a being in the air".^{1k} I did wonder, as I drove past the White Horse carved in a hillside in Berkshire how Von Daniken would have interpreted this figure!

For a picture of a temple drawing, however, Von Daniken admits one, and one only possible answer to his question, "Could primitive imagination have produced anything so remarkably similar to a modern astronaut in his rocket?" His answer? "Those strange markings at the foot of the drawing can only be an indication of the flames and gases coming from the propulsion unit."^{1l} I am strongly reminded of a game which featured in a recent series in *Punch*, where, given a Victorian cartoon without a caption, one was asked to supply one. A variation of this game would be: Given an ancient carving, drawing or engraving, find a caption for it which relates to space travel and astronauts. Well does Von Daniken say of the 820 foot figure, "If you play at 'It looks like ...', your immediate reaction is ...".

There are also a number of pictures in the book which appear to be padding, since their presence there might be assumed to be because they illustrate artifacts which support the author's central idea. For example, the writing under one of them reads, "This Babylonian tablet records past and future eclipses". Another reads, "an Assyrian

crystal lens from the seventh century BC. To grind such a lens requires a highly sophisticated mathematical formula. Where did the Assyrians get such knowledge?"¹¹ An appropriate comment to the first of these might be "so what?" and to the second it is sufficient to point out that you don't need "a highly sophisticated mathematical formula" to grind a lens; you can simply grind, polish and then work on those parts of the surface which distort the image.

A different type of padding takes the form of a sprinkling of genuine scientific terms and formulae. These seem to be fitted into the text in order to lend it an air of credibility. Some of them, e.g. those relating to Special Relativity and to fundamental particles are very specialised indeed and need quite a considerable background of scientific knowledge in order to be able to understand them. Since the style of the book is unlikely to attract readers with such a background, the main purpose of including such terminology seems to be to "blind them with science".

A further way in which Von Daniken tries to attract support for his ideas is the well-worn one of "playing with numbers", used as a ploy for generating an aura of mystery. An illustration of how to play with numbers — only in this case it is humorous rather than serious — can be found in the June 1974 number of *Scientific American* under the heading of "Mathematical Games".¹⁴ It starts with a quotation which reads, "Does the Great Pyramid of Cheops enshrine a lost science? Was this last remaining of the Seven Wonders of the World ... designed by mysterious architects who had a deeper knowledge of the secrets of this universe than those who followed them?" Readers of *Chariots of the Gods?* will be excused for guessing this quotation to be taken from that book. No, actually it is taken from *Secrets of the Great Pyramid* by Peter Tompkins. The *Encyclopaedia Britannica* is emphatic that "The theories that ascribe prophetic and esoteric meanings to the measurements, angles, and proportions of the Great Pyramid are wholly devoid of scientific foundation." Despite this, Von Daniken asks, "Is it really a coincidence that the height of the Pyramid of Cheops multiplied by 1,000 million corresponds approximately to the distance between the earth and sun?"^{1k} Checking his figures with the value of the Great Pyramid's height given in the *Encyclopaedia Britannica* I discovered that Von Daniken's "approximately" is about 2,000,000 miles out!

However, if this sort of accuracy is acceptable, others can play with numbers, too; so I thought that I would try my hand. Clearly, one needs to start with some ancient monument. Since I often pass Cleopatra's Needle on the Thames embankment, as I go to work, I decided to start here. The first thing I found out was that our Cleopatra's Needle is one of a pair which originally stood before the sun temple at Heliopolis.

The other one stands in New York Central Park. Discovery number two was that the American one is bigger than ours! This time the authority quoted is the Encyclopedia Americana: "The London obelisk now measures and weighs somewhat less than its "twin" because it is more severely weathered and chipped..."¹⁶ Anyway, having found out the height of the Needle and consulted Kaye and Laby's Tables of Physical Constants, I found something which prompted me to write a Von Daniken-type sentence — "Is it really a coincidence that the height of the Needle of Cleopatra multiplied by 10,000 corresponds approximately to the distance between Mars and the sun?" Actually my 'approximately' is just a little more approximate than Von Daniken's, but what further evidence is needed to support Von Daniken's "thesis that a group of Martian giants perhaps escaped to earth to found the new culture of *homo sapiens* by breeding with the semi-intelligent beings living there then..."¹⁷ (Actually, I thought twice about including this, in case anybody should take it seriously!)

Von Daniken's second attempt at playing with numbers goes badly wrong. He asks, "Is it coincidence that the area of the base of the pyramid divided by twice its height gives the celebrated figure $\pi = 3.14159$, discovered by Ludolf?"¹⁸ Two points need to be made here. One is that an area divided by twice a height gives a quantity having the dimensions of length and therefore cannot be π which has no units. The second is that the numerical answer to Von Daniken's sum depends on the choice of units. If lengths are measured in metres the sum is $230^2 \div (2 \times 146.59)$ and the answer is 180.4 metres.

This error of fact is one of many which inevitably raises again the whole question of the factual content of the book. How many readers, after all, have the time and the inclination to check the accuracy of what they read?

For example, knowing nothing about the Piri Re'is map which Von Daniken declares is "absolutely accurate"¹⁹ and which "must have been made with the most modern technical aids — from the air"²⁰ as "A space-ship hovers high above Cairo",²¹ I obtained one of the books from which Von Daniken is supposed to have drawn his conclusions, namely, C.H. Hapgood's *Maps of the ancient Sea Kings*. Far from supporting the idea that the map was compiled as a result of aerial photographs, the conclusions drawn by its author exclude any such notion, for he writes:

"We found that some of the positions on the Piri Re'is Map were very accurate, and some were far off. Gradually we became aware of the reasons for some of the inaccuracies in the map. We discovered that the map was a composite, made up by piecing together many maps of local areas (perhaps drawn at different times by different people), and that errors had been made in combining the original maps."¹⁷

A less extravagant interpretation of the map than Von Daniken's appeared in the *Daily Telegraph* in 1959. It read:

"The section showing Antarctica was particularly interesting because it showed coastlines now under the icecap. Since modern scientists have been pulling the last Ice Age closer to modern times and pushing the age of the first civilisations further into the past, there is nothing too startling in the theory that survey teams were mapping the Southern Atlantic some 4,000 years before Christ."¹⁸

Passing from physics celestial to physics terrestrial, Von Daniken has no more success. Uzzah's death, recorded in 2 Samuel 6:7 is put down to a severe electric shock for, says Von Daniken, "Undoubtedly the Ark was electrically charged! If we construct it today according to the instructions handed down by Moses, a voltage of several hundred volts is produced. The condenser is formed by the gold plates, one of which is positively, the other negatively, charged. If, in addition, one of the two cherubim on the mercy seat acted as a magnet, the loudspeaker — perhaps even a kind of set for communication between Moses and the space-ship — was perfect. The details of the construction of the Ark of the Covenant can be read in the Bible in their entirety. Without actually consulting Exodus, I seem to remember that the Ark was often surrounded by flashing sparks ..."¹⁹

One lesson which follows from this is that it would have been better to have consulted Exodus. Firstly, no mention would have been found of the Ark "surrounded by flashing sparks" and secondly, since "The details of the construction of the Ark of the Covenant can be read in the Bible in their entirety" (Ex. 25:10;22), he might have been saved the other error of regarding the Ark as a "condenser". It is pure reading into the text to take the instructions to "overlay it with pure gold within and without ..." to imply that the inside was electrically insulated from the outside, but even if it was, the "mercy seat of pure gold" which was put "on top of the ark", would have effectively shorted Von Daniken's two "condenser" plates, if the mercy seat formed the top of the ark — or if there was a separate wooden top overlaid with gold. Quite where the electric charge on the ark is supposed to have come from in the first place we won't bother to enquire further. As to one of the *gold* cherubim being considered as suitable material to act as a magnet, thereby enabling Moses to use the ark as a transmitter, the least said, the better. One could go on, critically examining the factual content, but an important question which must have arisen in many minds is, *Why the Credulity?*

Why have the book and the film of *Chariots of the Gods?* been popular? As one film critic asks, "Can a 97-minute-long documentary film — part travelogue, part scientific tract, part wild

speculation — become one of the most popular movies in the world?

Can the same picture, at the ripe age of three years old, journey belatedly to the United States and — without sex, violence, stars, or even plot — knock 'em for a loop at the box office? Can the same picture outgross (moneywise, that is) *The Exorcist*?

If you're talking about *Chariots of the Gods?* the answer is a resounding "Yes".²

There isn't just one reason for the popularity of *Chariots of the Gods?* but many popular ingredients which have been mixed together for a recipe of success. Some of these are quite trivial; others appear to go much deeper.

For a start, considerable use has been made of the enigmatic. Earth's unsolved mysteries are always good for column space — witness Loch Ness.

Then there is the attraction which many feel for stories of space, especially when they involve the suggestion that alien life not only exists but has already made contact with our earth. After all, this is a very "hot" subject, as has been said before, both to specialist and to non-specialist. There is the possibility that we might have to adjust our thinking to accommodate a discovery that we are not unique in the universe; and for some this would be more difficult than for others. Certainly the Bible gives no grounds for saying that earth is the only planet which supports life.

Yes, 'space' is a popular subject. Our bookstalls, liberally stocked with science fiction bear a regular testimony to this. It could well be asked whether *Chariots of the Gods?* could be classed under the heading of "science fiction"? Such a question would probably call forth the Joadian reply, "It all depends what you mean by 'science fiction'", but it would be a fair retort. Lois and Stephen Rose, in their book, *The Shattered Ring* take a look at the relationship between science fiction and the quest for meaning. They enumerate the themes of science fiction "into the following categories: *technological gimmickry, space travel, time travel, future scenarios, and finally, the exploration of inner space and ultimate meaning*". "It is said to differ from fantasy because its scientific explanations make it *seem* plausible."¹⁹

Not all of the themes listed are to be found in *Chariots of the Gods?* but there is an emphasis which follows what Lois and Stephen Rose term "The New Wave" of science fiction writers, namely, "*the exploration of inner space and ultimate meaning*". As another writer puts it, "The adventure into outer space is a symbol of a more important exploration of the 'inner space' of personal freedom and social change". If this is proving, as it appears, a popular ingredient in modern sf, then it has no doubt enhanced the sales of Von Dankiken's book.

One theme which never fails to get widespread sympathy among a large section of the community — sometimes rightly, sometimes wrongly — is that of the "loner" v. the established authorities. Witness the "minority cause" appeal of some of the most widely-read, national dailies. If ever this was exemplified, it is in *Chariots of the Gods?* Archaeologists, historians, scientists, theologians etc. are all taken on single-handed at the same time. Here is the lone crusader-for-truth with the familiar, "the facts must be told", "why should the public have the wool pulled over their eyes," sort of phraseology. Certainly the sheer self confidence with which the ideas are sold is likely to rub off a little on the reader before many chapters are out. If there is an attraction for the man-in-the-street v. the "experts" type of writing, there is also the possible fillip to the ego that if the reader gives credence to Von Daniken's ideas at a time when established opinion is against them, then there is a good chance of being able to say "I told you so!" at a later stage — "It took courage to write this book, and it will take courage to read it."¹⁸ The appeal of *The Inner Ring*, so ably spelt out by C.S. Lewis²¹ is a strong one.

The as-yet-unrecognised thinker confronting the body-of-considered-opinion is good for a following. Every generation in its turn sings the song of "Trad. is bad and new is true" in some key, be it major or minor; but when what is being attacked includes the Christian message, it is especially welcomed by a section of the populace.

The spirit of Mars Hill is not confined to New Testament times: There are always those who spend "their time in nothing else, but either to tell, or to hear some new thing." (Acts 17:21) Truly did Paul write, "the time is coming when people will not endure sound teaching, but having itching ears they will accumulate for themselves teachers to suit their own likings, and will turn away from listening to the truth and wander into myths." (II Tim. 4:3,4) At a time when there is much emphasis on learning, the Bible warns us of the ever-present danger of being those who are "Ever learning, and never able to come to the knowledge of the truth." (II Tim. 3:7) As one writer puts it, "To be honest, the search is not always quite genuine anyway... You are a seeker, but you are not too keen to find; the result might be too disturbing".²² Jesus told us that the big problem is the will, rather than the intellect. Given willingness and obedience, the necessary understanding will be given, for, He said, "If you continue in my word, you are truly my disciples, and you will know the truth, and the truth will make you free" (John 8:31-32, RSV).

As far as an intellectual understanding of the universe is concerned, we've "never had it so good". Knowledge is on the up and not only scientific knowledge, although if the bulk of scientific literature published is anything to go by, it is certainly true here.

"Writing on the storage and retrieval of scientific information D.J. Urquhart, Director of the National Lending Library for Science and Technology, has described how the output of scientific literature in the next fifteen years is likely to equal the previous output in the whole history of mankind."²³

In our schools, the teaching of science over the last decade has received a major boost in syllabus reconstruction, apparatus design and finance through such bodies as the Nuffield Foundation and the Schools Council. Strong emphasis has been placed on the rationale of science teaching whilst terms like "teaching for understanding" and "the heuristic method" are reminders of the healthy re-emphases and innovations which have taken place.

It is a cause for concern that it is from young people who have passed or are passing through our school science courses that Von Daniken draws many of his followers. Furthermore, it would not be true to imagine that it is only less able pupils who become taken up with the idea of "astronaut-gods". No, those with considerable academic ability get involved as well - and some of them specialise in science. It is a sobering thought that it appears to be possible to undertake six or seven years of courses in the sciences and then to emerge with little critical awareness of powers of evaluating evidence. Fancy, at times seems to rank higher than fact in the popularity poll and there is a perceptible trend away from the rational.

Professor Hoselitz, writing in *Physics Bulletin* comments, "For some time now there has been a movement away from science and technology. Popular opinion, including a large section of the well-educated public, claims that the progress resulting from the application of science has been detrimental to society ... Fewer school leavers go in for scientific and technical education ... publicity which is critical of science and technology tends to obtain a prominent place in some media.

The many problems arising from the unlimited growth of the technological society are thought to be soluble only by recourse to nonscientific ideas ... Interest in the occult and mysterious is growing, library sections dealing with witchcraft and astrology are growing ..."²⁴

The above extract portrays a fertile soil and a favourable climate for the generation and growth of ideas like those of Von Daniken.

In 1962 a prophetically-worded editorial entitled "Science in Disrepute" appeared in *New Scientist* at about the same time as the Nuffield Science trials were getting under way. It warned of the

then recent events which are "symptomatic of public alarm about the activities of scientists" and concluded by saying that those "have sounded a warning that the scientific community will ignore only at great risk to the prestige — and consequent tolerance and support — which it at present enjoys".²⁵ That was more than a decade ago. It is left to the reader to judge how the intervening years have affected the 'prestige', 'tolerance' and 'support'.

Perhaps this growing sense of disillusionment with science and technology is, in part, an inevitable sequitur to expecting too much of it. To some, the book title *Science is God*²⁶ succinctly summarises their attitude to science. The Victorian hope and expectation that Science, spelt with a capital S, would bring in the "millenium" of peace and plenty, clung to them. Inexorably, the idol failed those who cherished it, for we are not meant to follow in the footsteps of those who "worshipped and served the created thing more than the Creator" (Rom. 1:25). Because more was expected of science than it could give, a not-uncommon reaction of "throwing the baby out with the bath-water" seems to have set in and prepared fertile soil for the ideas like those found in *Chariots of the Gods*?

However, to return to the teaching of Jesus, man's willingness — or lack of it — concerning the things of God is inextricably linked with the ideas he latches on to concerning "inner space" and "ultimate meaning", for "if any man's will is to do his (God's) will, he shall know whether the teaching is from God..." (Jn. 7:17). It is just as possible to close one's eyes and stop up one's ear to the things of God as it was when Isaiah wrote of it (Isiah 6:10) or Jesus quoted it (Mat. 13:14). There are those for whom palatability is more important than truth. Again, no new phenomenon, for Isaiah accuses the rebellious Israelites of saying, "Prophecy not unto us right things, speak unto us smooth things ..." (30:10). Tell us what we want to hear.

"Righteousness, self-control and judgment to come" have never been acceptable subjects for the unrepentant who choose not to know "righteousness, and peace, and joy in the Holy Ghost". Much more agreeable is an "intellectual Day of Judgment"^{1t} "and that man's whole spiritual duty lies in perpetuating all his efforts and practical experience. Then the promise of the "gods" of peace on earth and that the way to heaven is open can come true".^{1u} Quite what a term like "heaven" means when used by Von Daniken is open to speculation. Equally shadowy and exhausted of substance is the word GOD, for we are assured that "I myself am quite convinced that when the last question about our past has been given a genuine and convincing answer, SOMETHING, that I call GOD for want of a better name, will remain for eternity"^{1v} Whatever else can be said about this amorphous "being", one certainly can't imagine being accountable to it — nor for that matter being loved by it.

Any writing which attempts to dethrone the God of the Bible will find a following among those who try to avoid their responsibility to Him. I believe this to be a major reason for the popularity of *Chariots of the Gods?* In illustration let me draw on some data from the report of the Bloxham Project. *Images of Life* (problems of religious belief and human relations in schools) present some of the findings by using the case histories of a few people as representing "ideal types".^{27a} One of these, pseudonym Steve, recounts:

"The other day in the town some guy comes up to me and asks me if I am saved. I said 'No' and he goes in to this talk about coming to a meeting and finding all the answers with other confused people like myself. I told him I wasn't confused because I think I see my options before me. As I see it, I can accept Christ (something I however find hard to accept), accept just God (that's better but still leaves questions), or just give up and believe God was an astronaut (that makes me God as well, much easier to accept)."^{27b}

Part of the authors' comment on "Steve" runs, "The reference to astronauts is to the theory that Christ was a visitor from a technologically advanced civilisation in another galaxy. The possibility that there is no God, and the ultimate goal is technological progress, gives Steve a brief glow of pleasure, for he is now at the centre of the universe: 'that makes me God as well, much easier to accept'."^{27c}

REFERENCES

- 1 Daniken, E. von, *Chariots of the Gods?* Corgi Ed (London, Transworld Publishers, 1971) (a) pp. 11, 25; (b) p.48; (c) p.54; (d) p.47; (e) p.44; (f) p.28; (g) p.20; (h) p.26; (i) pp. 96-7; (j) p.33; (k) p.99; (l) p.155; (m) p.29; (n) p.29; (p) p.31; (q) p.30; (r) pp. 58-9; (s) p.11; (t) p.71; (u) p.119; (v) p.70.
- 2 Sterritt, D., *The Christian Science Monitor*, 30 Ap., 1974, p.F6.
- 3 Daniken, E. von, *Return to the Stars*, (1970), Corgi Ed., 1972. (a) p.9; (b) p.44.
- 4 Thiering, B. and Castle, E. (eds), *Some Trust in Chariots* (Folkestone, Bailey Bros. & Swinfen, 1973); (a) p.20.
- 5 Carrol, L., *Through the Looking Glass*, 1871, Chap.5.
- 6 *Nature*, 1974, 248, 541.
- 7 Warlow, P., "Unreal Science", *Nature* 1974, 249, 794.
- 8 Howkins, K.G., *The Challenge of Religious Studies* (Tyndale P.) 1972, (a) pp. 5, 6; (b) p.9
- 9 *Nature* 1974, 249, 106.

- 10 Davies, P.C.W., "How Special is the Universe?" *Nature*, 1974, 249, 208.
- 11 Ridpath, I., "A Man whose Time has come", *New Scientist*, 1974, 63, 36.
- 12 Davies, D., "Dimensions of the Possible", *Nature*, 1974, 249, 210.
- 13 Johnson, W., *People in Quandaries*, (NY Harper, 1946), p.76.
- 14 Gardner, M., "Mathematical Games", *Sci.Amer.*, 1974, 230, (6), 116.
- 15 *Enc. Brit.*, 1973 ed, 18, 895 Art. "Pyramid".
- 16 *Enc. Amer.*, 1968 ed, 7, 53.
- 17 Hapgood, C.H., *Maps of the Ancient Sea Kings*, (Philadelphia, Chilton Books, 1966, p.29).
- 18 "US has Charts supporting Russia's Columbus Theory", *Daily Teleg.* 13 Oct. 1959, p.17.
- 19 Rose, L. and S., *The Shattered Ring*, 1970, p.19.
- 20 Cressey, M.H., *The Debate about God*, (Christian Education Nivenebt), p.8.
- 21 Lewis, C.S., *Screwtape Proposes a Toast*, (Fontana ed., 1965) p.28f.
- 22 Crossley, R., *We Want to Live*, (IVF 1967) pp. 11-12.
- 23 Goodlad, J.S.R., *Science for Non-Scientists*, 1973, p.2.
- 24 Hoselitz, K., "On the Fence", *Physics Bulletin*, Ap. 1974, p.131.
- 25 *New Scientist*, 6 Sept., 1962.
- 26 Horrobin, D.F., *Science is God*, Aylesbury, 1969.
- 27 Richardson, R., and Chapman, J., *Images of Life* (SCM, 1973) (a) p.11; (b) p.13; (c) p.15.

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