

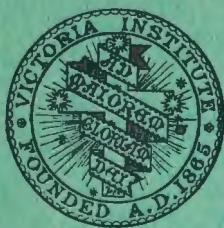
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FAITH AND THOUGHT

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

1974

VOLUME 101

NUMBER 1

EDITORIAL

Professor Malcolm Guthrie's recent death is a sad loss to the Institute of which he was a Vice-President. In 1954 he addressed the Society on "The Bible and Current Theories about Language" (**THIS JOURNAL**, 1954, **86**, 49-60; discussion, 113-120). He was an authority on African Languages and a Professor; in the School of Oriental and African Studies in the University of London.

Delay. We deeply regret that owing to circumstances beyond our control the circulation of Vol. **100** No. 3 of **FAITH AND THOUGHT** was greatly delayed.

Symposium, 19 May 1973. We hope to publish all three papers given on this occasion in due course but it has not been possible to fit them all into this issue.

Prize Essay Competitions. In 1974 the Council of the Victoria Institute is offering two prizes for original essays furthering the aims of the Institute: (a) the *Schofield Prize* of £40 for an essay on either "The Psychology of Speaking in Tongues" or "'Women's Lib' and Sexual Differentiation", and (b) the *Gunning Prize* of £50 for an essay on some aspect of physical

science and its relation to the Christian Faith. The competitions are open to all Fellows, Members, and Associates of the Institute ; but the Council is particularly anxious to encourage young writers to compete, and will take age, if under 25 years, into account in judging the entries.

Essays should not bear the name of the competitor, but should be marked with an arbitrary five-figure number. They should be accompanied by a sealed envelope marked on the outside with the same number and the words "Under 25" or "Over 25" (i.e. on 1 October 1974) and containing the name and address of the competitor. Envelopes will not be opened until after a decision has been reached.

Essays which should be typewritten and not more than 7,000 words in length, apart from documentation, should reach the Editor by the end of September 1974.

Generalities and declamation should be avoided, and references should be numbered in accordance with the usual style of this Journal. The judges are empowered not to award a prize, to divide a prize, and/or to award a second prize, if they see fit.

The copyright of the winning essays is to belong to the Institute, which will normally permit an author to embody his essay in any more comprehensive work he may afterwards compose.

It will be assumed that candidates have assented to the rules by entering for the competitions.

No entries were received for the Prize offered in 1973.

Errata, vol. 100.

p. 30 l. 6-7 for "world on view" read "world view"

p. 31 l. 4 of quotation. For "is it not absurd" read "is it absurd"

p. 227 l. 6 for "Brighton" read "Hastings".

IN THE NEWS

Rallying the Locust Hordes — Antics of Black Holes — Towards a new Bible ? — Life in the Universe — The Dolphin — Football — Tachyons and Neutrinos — 'IN THE NEWS' Updated — Short Notes.

RALLYING THE LOCUST HORDES

Locusts have long faced mankind with a puzzle. Suddenly and unexpectedly harmless grasshopper-like creatures change their appearance, congregate in swarms (100 ton swarms eating their own weight of food daily were not uncommon in the past), develop strong powers of flight and set forth, following prevailing winds, to devour the vegetation upon which man and beast depend for life. Though modern methods for locating and attacking locust swarms when they are in process of forming have proved successful there has until recently been no answer to the basic question: what prompts harmless hoppers to turn into locusts ?

A decade ago D. J. Nolte suggested that a chemical stimulant is responsible. In a recent paper (Nolte, Eggers and May, *Jour. Insect Physiol.* 1973, **19**, 1547) he described the isolation of the chemical responsible which he calls *locustol*. It turns out to be a remarkably simple compound — 2-methoxy-5-ethylphenol, a substituted guaiacol from which in nature it is formed. Young but not adult hoppers excrete locustol in their faeces and when hatching conditions are favourable (which depends upon temperature and humidity) and the air is still the volatile locustol accumulates in the ambient atmosphere and the formation of a locust horde is triggered off.

Locustol is fairly easy to synthesise and now that its nature is known it should not prove too difficult to use the new knowledge to increase man's weaponry against his age-long insect enemy. (A fluorine atom suitably positioned in the molecule might work wonders !)

What has all this to do with Christian faith? Perhaps just this, that although locusts figured in the plagues of Egypt and the minor Prophetic books of the OT, they are totally absent in our Lord's prophecies of the end of the age and in the judgment scenes of the Book of Revelation (the locusts of Chapter 9 are not of course literal locusts). Christians differ in the way they interpret the Apocalypse but those who hold the Futurist view have often pointed out that by implication locust swarms will no longer, in the last days, present the major menace to mankind that they did in the past.

ANTICS OF BLACK HOLES

According to current theory a star collapses when its fuel is exhausted. If its mass is more than 1.3 times that of the sun and if it is spinning it becomes a neutron star, perhaps solid and subject to star quakes. If it does not rotate (or does not rotate fast enough) it may collapse still further until the velocity which an object must possess to escape from its gravitational field (the escape velocity) exceeds the velocity of light at which point the star becomes an invisible *black hole*, a few km. in diameter. Black hole theory is distinctly awkward for astronomers: it is concerned with a super-dense state of matter in which the ordinary laws of physics cannot be applied. (See for e.g. *Nature*, 232, 440; 234, 382; 236, 377. Evidence that black holes exist has been questioned, 244, 542 but reaffirmed, *Astrophys. Jour.*, 185, 1. 113, 1. 117.) [Note: questioned again, *Nature*, 247, 333.]

Black holes less massive than the sun cannot be formed because insufficient matter is present to squeeze itself, so to speak, out of existence. But perhaps, when the universe was formed in the Big Bang little fragments of left-over black hole material were flung out together with orthodox matter. If so black holes, very small but massive enough to contain the matter of a fair-sized asteroid, might still be hanging around the universe to this very day.

On 30 June 1908 a powerful blast occurred at Tunguska in Siberia variously estimated as equivalent to 0.2 to 20 megatons

of TNT. There is no crater there and sizeable meteoric fragments have never been found in the vicinity. Some years ago E. L. Krinov (*Giant Meteorites*, Pergamon, 1966) described in detail the long series of expeditions to the area led by L. A. Kulip (1883 - 1942) but no final explanation was forthcoming.

Over the past decade or two one explanation after another has been mooted. A huge meteorite broke into tiny fragments (*objection*, why have none been found ?); space men in a nuclear powered vehicle were paying us a visit but had an unfortunate accident (*objection*, no local radioactivity); a small meteorite made of anti-matter encountered the matter of our world and blew up (*objection*, a test for radioactivity consequent upon the expected liberation of neutrons proved negative; there is no evidence for the existence of such meteorites); or planet Earth was struck by a comet or the tail of one (perhaps?).

A new suggestion is that we were struck by a wandering black hole of the kind mentioned above (A. A. Jackson and M. Ryan, *Nature*, **245**, 851). From the direction of the streak of light seen in the sky at the time the black hole (if it was one) should have passed straight through the earth and emerged out of the Atlantic. Alas no one was present at the correct place at the time but perhaps there are records of a disturbance there. Jackson and Ryan will look for them no doubt.

Stephen Hawking (1971) thinks that much smaller black holes ($m = 10^{-5}$ g and $r = 10^{-35}$ m) may be so common that 99.9% of the universe consists of them. This hypothesis, developed by Jack Sarfart of Trieste, suggests all kinds of exciting possibilities. Energetic cosmic rays are due to black hole encounters with terrestrial dust, mini black holes caused the Big Bang, they give to quasars their energy and their redshifts, they explain giant solar flares, they heat the earth's core . . . and so on. Sarfart finally warns us to keep our atmosphere free from charged dust in case black holes, showering us with ionising radiation after their encounters with the dust, extinguish life on Earth (*New Scientist*, 18 October 1973, p. 165) . . . All a trifle premature perhaps, when no one yet knows if mini black holes exist at all.

Invent *ad hoc* hypotheses galore and *anything* can be explained by science with the proviso that further research will put your theory to the test. But before the necessary research is under way a new batch of hypotheses will surely be forthcoming. And so *ad infinitum*. The schoolmen, by postulating interfering angels or devils explained a multitude of phenomena: speculative scientists (but *are* we talking of science?) today are quite as successful with their black holes and what not. Can we afford to ridicule our ancestors?

TOWARDS A NEW BIBLE ?

According to the UFO-people our planet is, and for thousands of years has been, under constant observation by flying saucer men. In a charmingly discerning book (*The Eternal Subject*, Souvenir Press, 1973, 200 pp., £2·50) Brindsley Le Poer Trench, International Chairman of the Worldwide UFO Movement, *Contact*, tells us all about them. As is usual in books of this kind one is left with the feeling that it is surprisingly difficult to establish whether what he says is true. For example we are solemnly told (p. 22) that every single astronaut has encountered UFOs but they have all been told never to utter a word to *anyone* about them. If this is true, how does even Mr. Trench *know* that it is true? The fact that we did not see UFOs on the moon from the live broadcasts is easily explained, we are told, because Mission Control at Houston uses a delayed tape technique and there is plenty of opportunity to delete sightings and conversations on awkward subjects. Apart from this, Trench's speculations seem novel at times. For example he seems sure that despite what he regards as the 'sluggish' speed of light, it will soon be quite possible, travelling at near infinite speed, for men to roam around the universe at will.

The book is remarkable, chiefly, for a set of eleven beautifully executed plates (they almost look like photographs!) depicting Bible miracles in which flying saucers replace conventional chariots and angels. At this rate it will hardly be long before we shall be offered an edition of the Bible containing illustrations of this kind.

Perhaps a few adjustments of the text will be incorporated (flying saucer men for *angels*, UFOs for *chariots*, etc.).

LIFE IN THE UNIVERSE

Exactly opposite to Trench's opinion is one suggested by John A. Ball of Harvard University (*Icarus*, 1973, 19, 347). He is surprised that there are no indications whatever that beings from other worlds seek to make contact with us. (Has he read J. A. Hynek, *The UFO Experience*, Abelard-Schuman, 1972, we wonder? It is much more impressive than most other UFO books.) Following C. J. Townes (*Jansky Lecture*, 1971) Ball accepts that even under ideal conditions it is statistically exceedingly improbable that life will emerge of itself. But the unlikely event has perhaps occurred here on Earth. This suggests to him that the rest of our galaxy looks upon Earth as a strange freakish place, a wild-life area, a zoo in fact, to be preserved at all costs by a mandatory hands-off policy (the title of his paper is "The Zoo Hypothesis").

A realisation of the enormous improbability that life can have emerged spontaneously has, in the past, led many to economize on the miracle. Helmholtz and Kelvin in the same year (1872) suggested that spores of living matter landed on earth in meteorites formed by the break up of another life-containing planet. Kelvin was illustrating one of his favourite ideas: though we may go back and back in time looking for causes, which is what science encourages us to do, we do not and cannot thereby undermine belief in God as Creator. Life needed a Creator but its creation need not in the first place have been on earth: perhaps it reached us from space. Yet at some time and in some place God was its Creator.

Arrhenius (1908) developed the idea, suggesting that spores of living organisms, driven by light pressure, were present in space and occasionally landed on planets. The theory did not survive: unshielded spores would be killed by radiation from stars. Shielding afforded by meteorites will not work either, for meteorites do not (it is believed) escape from the solar system.

F. H. C. Crick and L. E. Orgel have now revived the idea (*Icarus*, 1973, 19, 341). They think that perhaps it is unlikely that life originated on earth seeing that the relatively rare element molybdenum (the figure they give for its abundance on Earth, as also for the other elements they mention, is badly wrong, but let that pass) is required for photosynthesis: but perhaps there are planets where molybdenum is more plentiful. Perhaps life and a civilisation developed on one of these and perhaps, fired with missionary zeal to populate the universe, the inhabitants projected specially constructed refrigerated (to 0° K!) capsules containing micro-organisms into space, preferably directed, and one of them landed here on Earth, from the contents of which we have all evolved. It is calculated (no doubt the calculation is a little 'fishy') that micro-organisms at 0° K might stay alive for a million years and this is also, roughly, the time required for capsules to travel from star to star.

How clever can they get? Kelvin, Victorian that he was, talked better sense than we often hear today. Nor did his firm faith in God at any time curb his curiosity or ingenuity.

THE DOLPHIN

For the Christian who regards man as trustee of the animal creation there is something peculiarly horrible about the use of sea lions, porpoises, dolphins and killer whales in warfare.

According to an article by F. Hussain (*New Scientist*, 25 Jan., 1973, p. 182; see also 29 Mar., p. 734) dolphins are trained in San Diego, California. One idea is to teach them to swim in the vicinity of submarines to attract enemy torpedoes of the kind which find their targets acoustically. (Conversely some submarines carry hardware to make them sound like whales!) Dolphins are also trained for laying and removing mines and for attaching explosives to the hulls of ships. In Vietnam it is said that dolphins with knives strapped to their snouts with a special harness were used to attack suspected saboteurs. Obedience to commands is assured by implanting micro-electrodes in the pleasure and pain centres

in their brains. Large numbers of these beautiful creatures have been killed in the military experiments — the death of 70 is nonchalantly recorded in a heartless Japanese paper.

A macabre full scale novel ; (Robert Merle, *The Day of the Dolphin*, Penguin ed. 1973, £0·40, trans. from the French of 1967) describes some of the military techniques involved. The author who starts with a professor giving a lecture on the subject seemingly writes with a good deal of inside knowledge on this classified subject.

Early last year (19 Feb., 1973) the newspapers reported that according to the Columbia Broadcasting System a dolphin, trained by the US Navy, had been used to place a detection device in a foreign harbour to discover the atomic fuel the Russians use in their nuclear submarines.

Kept in tanks in dolphinarium many dolphins are so miserable that they commit suicide by refusing food and failing to collaborate with medical attempts to help them. Dr. John Lilly, a neuro-physiologist, who earlier drew attention to the dolphin's potentialities has now left the field: "I was running a concentration camp for my friends" he says.

Biologists fear that if wild species are used for military purposes a battle situation will mean the deliberate slaughter of these intelligent creatures just in case they are working for an enemy. We must not forget that the dolphin in particular is one of man's best friends. Is it too late for an international convention to ban *all* biological warfare ?

FOOTBALL

Discussion on theoretical biology continues unabated. In an interesting paper (*Jour. Theoretical Biology*, 1973, 40, 403) Eric Jakobsson compares the biologist watching the living organism with a space man watching a game of football. After watching awhile the space man discovers what are the overall rules of the game

but he fails to discover any laws to tell him where each player will be at a given moment, nor do the rules reveal the overall strategy. Indeed, Ohio State University and the University of S. Carolina use quite different strategies and both have proved very successful over a period of years.

In 130 centres in the USA major programmes are run to determine the best way to play football. The salaries of the staff run into tens of millions of dollars a year. "Elaborate statistics on the performance of individual players and strategies are kept and analysed, often with computer assistance." But still nothing like an optimum strategy emerges. The choices as to which strategy one should adopt are still essentially arbitrary or intuitive.

The same is true in constructing a philosophy of biology. Is human creativity ultimately biological in origin? Jakobsson says it is but D. Markowitz (40, 399) says it is not, each qualifying his dogmatism by adding "till the contrary is proved". Meanwhile the different opinions lead to rather different world views. In biology there may be a great many choices to be made none of which can be settled empirically so that the number of possible philosophies of biology may be very large indeed.

It is interesting to see this kind of reasoning arising in the scientific field. It is of course very familiar to Christians who have always said that *choice* is the important factor. We must decide to believe in and trust God or not; the strategy of life cannot be determined by the methods of science.

TACHYONS AND NEUTRINOS

An interesting article in the *American Scientist* (1973, 61, 201) gives an account of the experimental methods now being used in the search for *tachyons* (faster-than-light particles, see this **JOURNAL**, 99, 177). It is suggested that elementary particles are of three types: those with velocities always less than that of light (*electrons*, etc.), equal to that of light (*photons*, *neutrinos*) and greater than that of light (*tachyons*).

An interesting article on *neutrinos* by Sir Harrie Massey appeared in *Endeavour* (May, 1973, 32, 86; see also G. M. Lewis and G. A. Wheatley, *Neutrinos*, Wykeham Pub. 1970, £1·50). The particles were 'invented' (Pauli, 1930; name suggested by Fermi, 1931) to account for the mysterious disappearance of energy in beta-ray radioactive disintegrations. Thirty years ago, says Massey, it was agreed that neutrinos if they existed at all could not be subjected to experimental study: indeed their essential property was unobservability. It is calculated that on average a neutrino can penetrate one light-year thickness of lead without change.

Now the situation has completely changed. Fission reactions provide an intense source of antineutrinos and an event caused by an antineutrino can be made to occur every few minutes in laboratory-sized apparatus — even though a single antineutrino would require an average pathway of 10^{15} km. of liquid hydrogen to react. The 'unobservable' has become observable.

Neutrinos (of which there are two kinds apart from the anti-particles) are ubiquitous little fellows (*Nature*, 242, 83); so little is known about them that their properties can be "adjusted to cover a multitude of sins". We do not yet know if they possess a small rest mass of their own or even whether they are stable. Much publicity has recently been given to the failure of the sun to bombard us with neutrinos in the expected numbers. Is this because they decay on the journey, because there is something wrong with star theory, or because the sun sometimes stops producing them due perhaps to a fairly frequent periodic mixing process in its core (yet another possible explanation of geological ice ages and even, perhaps of Is. 30: 26; Rev. 16: 8, etc.).

Arthur Koestler (*The Roots of Coincidence*, 1972, p. 63) playfully wonders what the world looks like as seen through a neutrino's eye. The planets would simply be missing or at best would appear as *very* thin blobs of mist. Sun and stars would be dimly visible (though from their midst our Mr. Neutrino might recognize a stream of his mates emerging!). He would find it as hard to detect the existence of man as does man to make

contact with him, for we live in different worlds linked only by so-called "weak interaction".

The neutrino story is an interesting one. Observability has often been taken as a criterion of reality (*cf.* the common atheistic argument against belief in a spiritual world) but neutrinos face us with the fact that we *may* be mistaken in our judgments concerning what is or is not in principle observable. The neutrino world brings to mind, most forcibly, the coexistence of different realms of being linked only by "weak interaction".

'IN THE NEWS' UPDATED

Suicides in Ireland. Dr. D. G. Wigmore-Beddoes, Minister of the First Presbyterian Church, Belfast, who is highly knowledgeable on N. Irish affairs, writes critically of the views expressed by Dr. H. A. Lyons (see 100, 116) in so far as they relate to the incidence of depressive illness. He points out that in the prevailing atmosphere of terror it is unrealistic to expect sufferers to seek psychiatric help, so that statistics relating to mental disorder are virtually meaningless. "If your house is going to be burnt, you do not, even if you are a depressive, go off to see a psychologist. You stay with your family and seek physical shelter." As expected patients living in middle class residential areas where there is little violence are more often seen by psychiatrists. Nevertheless, worry, depression, anxiety and breakdown in the affected areas have never been more prevalent, even though they do not usually appear on the surface: "I know from wide experience that many people are simply putting on a brave face to cover fears and depression which they release to me when I visit them." Consumption of tranquilisers and also drunkenness (even among the very young such as 12-year-olds) are on the increase.

For the reason given many who would normally be classified as psychotic are not now so classified, and this must include many of those who practice violence. Dr. Lyon's report (which was *not* fully summarised in **FAITH AND THOUGHT**) gives the impression that many people only remain normal, or achieve

normality, because they find a murderous outlet in aggression ! The Belfast minister takes issue with Dr. Lyons for a number of reasons, and says: "Ought not the question to be raised as to whether the report, in so far as it has any validity, really demonstrates that some forms of depressive illness are 'cured' by another form of mental illness that might well be called 'aggressive illness' ? Certainly from the Christian viewpoint no one who undergoes such a 'cure' can be regarded as being made 'whole'."

Violence (see 100, 94). Discussion of the effects or possible effects of violence on the TV screen is perennial. A new (?) facet to the argument was recently introduced by Sir Michael Swann, Chairman of the Governors of the BBC: "Is it not up to us to show that what we screen does not have ill effects, than up to others to prove that it does ?" He drew a comparison with drugs: "All drugs now have to pass the most stringent tests to show they do not harm even the tiniest proportion of takers. Is violence on the screen totally different ?" (*Times*, 10 Sept. 1973).

Moses. The OT represents Israel as a missionary nation (100, 237). In this connection a scholarly book by J. G. Gager (*Moses in Greco-Roman Paganism*, Abingdon Pr., Nashville, NY, 1972) is of great interest for it shows us that some knowledge of the Jewish religion and especially of Moses was very widespread among ancient pagan Hellenistic and Roman authors. Some of the ancient ideas are, of course, very strange, e.g. that Moses invented cranes among other things and was worshipped as Hermes, while Julian, on the basis of Exod. 22: 28 (read as "... gods") argues that Moses had no objection to polytheism ! All the same many ancient authors show a first hand acquaintance with the OT.

Earthquake Prediction (99, 91). The suggestion that it might be possible in the foreseeable future to predict earthquakes, no doubt inaccurately to begin with, brings into focus the enormous problems which prediction of this kind would create (*Nature*, 245, 174). Property values would fall suddenly. The unscrupulous might well sell up before the prophecy became widely known. Attempts to

evacuate a city before a predicted disaster (which might not take place after all) would doubtless be resisted, while evacuation if carried out would encourage the criminal element. At the present time in many parts of the world cities are rebuilt in the same earthquake-prone localities even after more than one catastrophe. With society organized as it is at present prediction would prove a mixed blessing.

Talking to Animals (see 100, 315 on infant baptism). A recent (Sept. 1973) documentary on BBC 2 was devoted to the ancient city of Siena in Tuscany, Italy. There is an annual public festival in which ten horses (ridden, but it does not seem to matter if the riders fall off !) chosen by lot to represent ten of the seventeen city wards, compete for the *palio* or banner amid the frenzied excitement of the populace. The documentary showed a bishop talking solemnly, in traditional ceremonial style, to a horse telling him to run well in the race shortly about to commence !

SHORT NOTES

Attitudes among Scientists. The morals of scientists like those of other people seem to be in decline. Dr. Bernard Dixon (*New Scientist*, 5 July 1973, p. 6) draws attention to three recent cases in which scientists have taken legal action against one another "in circumstances where such action would previously have been considered unthinkable". He complains that though scientists now seem determined to exert their rights to the full they "tend to resist greater social exposure of their activities".

Last Summer the late Prof. C. A. Coulson reluctantly resigned from the British Society for Social Responsibility in Science. In a letter published in the Society's organ *Science for People* (1973, No. 22, June-July, p. 15) he urged that as humans we need to find something good in those we oppose but that all signs of this attitude seemed to be missing in *Science for People*. "On almost every page I find snide remarks about others, a sense that 'they' are always acting contrary to the best interests of 'us' and those

whom we hope to represent". He illustrates the point with examples.

Science and Religion. Issues of science and religion have recently been raised in *Physics Bulletin* notably by Sir James Taylor (1973, 24, 271, 527) who is currently writing a book on the subject. Sir James argues that as far as physics is concerned it has done little if anything to alienate man from his religious outlook. Indeed it has emphasised the limitations of human thinking for there is as yet no "general theoretical basis for physics which can be recognised as its logical foundation" (Einstein) while the concepts of infinity and of nothing, both fundamental to physical science, are replete with unresolved difficulties. There is he believes no correlation between the religious and scientific beliefs of scientists though respect for truth and integrity are common to both fields. A number of letters were published (pp., 454, 503) one of the more interesting being that of A. Healey who argues that higher species have implanted in them a way of behaviour which dovetails with the bodily characteristics. There is mystery about this, just as there is mystery about why positive and negative charges are associated with different kinds of elementary particles. Science has no answer and we must take the facts as given. Similarly we must take it as fact that moral and ethical values are implanted in man. He might have added that a desire to act against these values is also present in man.

History of Witchcraft. It is often stated that killings by RCs greatly exceeded those by Protestants in the witchcraft era, but it has been difficult to come by hard evidence. H. C. Erik Midelfort, *Witchcraft in South Western Germany, 1562 - 1684* (Stanford UP, 1972) lists details of all the known trials and shows that the statement is fully justified except for a short phase at the beginning of the period under study.

Joseph Priestley. It has long been a puzzle why JP, discoverer of oxygen and non-conformist minister, was so favourably disposed towards the French Revolution. An interesting article by Clarke Garrett (*Jour. Hist. of Ideas*, 1973, 34 (1), 51) explains the matter. JP was a fervent millennialist who thought that the ten kings on

thrones in Europe were the ten horns of the Beast. When the King of France was killed it was a sign that others would soon be killed also and that Jesus would soon return and the Millennium be set up. JP scanned the papers regularly for signs that the Ottoman empire was tottering so that the way would be open for Jews to return to Palestine. Later when he learned the truth about what was happening in France he was much saddened by the conduct of the revolutionaries. In 1796, though his faith in the Millennium was undimmed, he realised he had made a mistake: Napeoleon Bonaparte's career did not tally with the vision of the end.

Memory. Steven Rose in *The Conscious Brain*, 1973, says "I do not think there are any phenomena of memory which cannot be explained by this redundant network modifiable synapse theory." In fact, writes Keith Oatley, in a review, he hardly discusses what memory involves, let alone suggests an explanation: "It all strikes one rather as if it had been asserted that there are no phenomena of literature that cannot be explained by the 'ink marks on paper' theory." (*Nature*, 245, 393).

* * *

Scientific Pride. . . . you "who removing all former rubbish . . . do make way for the Springy Intellect . . . to unriddle all Nature; methinks, you have done more than men already, and may be well placed in a rank specifically different from the rest of groveling Humanity." Henry Powers, (*Experimental Philosophy*, 1664, p. 191) to the men of the Royal Society.

DAVID YOUNG

Ethology and the Evolution of Human Behaviour: An Introductory Review¹

Behaviour patterns of animals vary so much from species to species that extrapolation to man is misleading: only the methods, not the results, of animal behaviour study are relevant to ourselves. Writing as a Christian and as an evolutionist (see Note 2) Dr. Young shows that a proper understanding of ethology destroys a number of popular notions, among them 'evolutionary ethics' and evolutionary 'explanations' of religion and theism. Dr. Young warns us also against what he calls 'biological intimidation'.

It is with some hesitation that I offer the following contribution on the evolution of human behaviour but the intrinsic fascination of the subject makes it worth discussing and recent biological research has provided fresh material for discussion. Few are likely to dissent from the view that the nature and origin of man is an important subject, especially in the context of Christian theology. It is not possible to tackle all the relevant considerations in so short a compass and so I shall keep as close as possible to my own subject, the biology of the nervous system and behaviour, and offer an introductory account of its scope and limits in contributing to the study of human evolution. In particular, I shall try to assess the contribution of ethology, the study of animal

behaviour, to our understanding of the transition from ape to man.²

It is just over a hundred years since the connection between animal and human behaviour was first systematically explored by Charles Darwin in two important books. In his well known *Descent of Man* (1871) Darwin presented the evidence for the evolution of man from lower animals and grappled with the difficulties which man's mind and morals presented for this thesis. This was followed by his *Expression of the Emotions in Man and Animals* (1872) which is less well known but no less important. In this book Darwin presented the first comparative study of particular behaviour patterns in man and other animals. Darwin had to contend with the view of the distinguished anatomist, Sir Charles Bell, that certain muscles in the human face had been specially created for the purpose of expressing the emotions. By contrast, Darwin showed that the muscles used in expressing emotion are also involved in other activities, that corresponding muscles exist in monkeys and apes, and that certain general principles regulate the expressions used by both man and animals in communicating emotion. Thus a sound basis was made for the comparative study of human and animal behaviour patterns.

The intervening years since Darwin wrote have not been as fruitful as might be expected. Darwin founded no school of behavioural study and it is difficult to find any work that was *directly* inspired by these two books. Recently a number of developments have brought a vigorous renewal of the subject, particularly the expansion of a zoological approach to behaviour study. This in turn has prompted popularisers to present their own versions for the benefit of the general public. Notable among these have been the biologists Desmond Morris (*The Naked Ape*) and Konrad Lorenz (*On Aggression*). Amateur biologizers such as Robert Ardrey (*The Territorial Imperative* and *The Social Contract*) and Leonard Williams (*Man and Monkey* and *Challenge to Survival*) have also written similar books. All are assertative, dashing and brilliant in style and some have been justly successful as popular literature.

Now it will be as well to be clear about the significance of these popular books at the outset. On the one hand, it is good to see the biologists' contribution to an important topic receiving widespread attention and support. On the other hand, these popularisations are unfortunate in certain respects and suffer from a number of shortcomings. Firstly, they all present the subject in too cut and dried a fashion, as if most of the matters discussed were beyond dispute. Combined with the use of outmoded motivational concepts (discussed below) this leads to a misleading oversimplification of the whole topic. Secondly, none of these books offers a balanced survey of the field; rather each is essentially polemical, being designed to present a particular case without adequate regard for wider study or contrary evidence. Both Ardrey and Williams combine biology with a blatantly political bias (at opposite extremes of the spectrum, as it happens!). Thirdly, they present as knowledge many statements which are after all no more than likely guesses. Therefore none of these books should be taken too seriously but may be read for what they are: entertaining mixtures of fact and fancy. However, in some ways these books represent a ghastly caricature of what ethology is about, which is a pity because ethology does have an important contribution to make.

Having said this, it must also be said that the reaction to this popularisation has often been needlessly violent. The anthropologist, Ashley Montague, wrote an almost hysterical attack on the views of Ardrey and Lorenz on aggression entitled "The new litany of innate depravity or original sin revisited", which contains statements quite as fundamentally absurd as any of the popularisers, e.g. that except for the reaction to sudden noise "the human being is entirely instinctless".³ Again the psychologist, Eisenberg, combines in one article some sensible points with a bitter personal attack on Lorenz, ostentatiously recalling Lorenz's sympathy with the right wing politics of Nazi Germany.⁴

Whenever scientific debate reaches this pitch we can be sure that clashes of personality and ideology are involved as well as scientific issues. I mention this only to set it aside: behavioural analysis is quite difficult enough without these extra burdens

involving the behaviour of the investigators ! But these examples offer a warning of the depths of feeling which may be evoked unexpectedly by discussion of this topic even in purely scientific terms.

Origins of Ethology

Ethology has now come to be used as a general term for the biological study of behaviour but it had its origin in a particular school of thought. This has very much a zoological tradition and orientation and its modern flowering, especially in application to man, represents a cashing of the cheque drawn by Darwin many years before. A number of zoologists had independently studied animal behaviour since Darwin but their efforts tended to be fragmentary and unco-ordinated. In the 1930's Konrad Lorenz gave impetus to the new work by criticising the earlier psychologists and welding a variety of concepts together to form a new overall theory of animal behaviour.⁵ Because of this, Lorenz is rightly considered "the father of modern ethology",⁶ even though some of his formulations are now outmoded (I suspect that Lorenz's name will be remembered after those of his critics).

In retrospect, two particular characteristics may be singled out as significant in the ethological approach. One of the main features of the work of Lorenz and Tinbergen was their emphasis on the description and analysis of the normal behaviour of animals in their natural surroundings. This led to the discernment of natural behaviour structures or episodes, which largely seemed unaffected by the environment and so might reflect genetic programming. This in turn rejuvenated the experimental study of behaviour, for as Medawar has succinctly put it, "it is not informative to study variations of behaviour unless we know beforehand the norm from which the variants depart".⁷ The other special characteristic of this ethological approach was an interest in the evolution of behaviour, which was studied by means of the comparative method. Just as the comparative anatomist may infer the course of evolution from the comparison of skeletal and other structures, so the ethologist could infer the course of evolution from the study of behavioural structures in related species.

Of course this new approach did not make its way unopposed. It met with strong criticism especially from comparative psychologists who expressed strong differences of theoretical standpoint, as well as differences of interest.⁸ Much of this criticism was soundly based and has led to the abandonment of any unified, grand theory of animal behaviour. Suffice it to say here that this period of mutual criticism has passed into a period of interaction and to some extent of co-operation and synthesis. There is often little difference in the actual work done by people with these different backgrounds.

Ethological Analysis of Behaviour

The modern biological analysis of behaviour resulting from these developments covers a wide range of problems which may be considered under four main categories. The following instances are intended only to illustrate the general approach and current concepts. By way of example, the much discussed case of aggression may be selected.

Firstly, observing animals in as natural surroundings as possible, the ethologist studies the normal behaviour to see when particular behaviour patterns occur and the extent to which different actions are correlated. In some cases it is possible to study this quantitatively and to group different actions objectively by means of statistical analysis. In the case of aggression (that is patterns of threat or attack between one animal and another) such study shows that these occur in definite contexts such as competition over food, defence of offspring, dominance disputes or territory. In these contexts aggressive patterns are almost invariably linked with other elements such as retreat because threatening attack also involves the risk of being attacked (the resulting compound behaviour is termed *agonistic*). Moreover, aggressive encounters are terminated by definite cues involving linked sequences of aggression, submission and sometimes reassurance. The details naturally vary very widely in different species and larger animal groups.

Secondly, the ethologist attempts to probe the causation of such behavioural sequences. Thus in the case of aggression, this is usually triggered by the proximity of another individual in one of the above contexts and sometimes only by certain features of another individual. The threshold and degree of response are evidently determined by a great variety of factors such as hormone level, feedback effects from previous activities, arousal of the central nervous system, etc. The upshot of a great deal of work during recent years in this area of animal behaviour is that the unitary drive concepts of behaviour, originally formulated by Lorenz and others, have been abandoned and it is recognised that the causation of any one type of behaviour is multifactorial. Drive concepts have proved useful at a preliminary stage of analysis for relating dependent variables in behaviour, but as physiological analysis proceeds, drive constructs cease to be relevant. Nowadays therefore it is positively misleading to talk about an aggressive drive, sex drive, etc. particularly where it is implied that these are internal forces that must find expression.⁹

Thirdly, analysis proceeds to the study of the development of behaviour in the individual. Here again, considerable changes have occurred in our concepts over the last few years, not without a certain amount of confusion. The concept of instinct has gone the way of drive and in particular the dichotomy of instinct versus learning is no longer useful. Individual behavioural characteristics result from a continuous interaction between organism and environment at all stages of development ; genes produce their effect only by virtue of the environment in which they act and the environment affects behaviour only by virtue of the genetically determined susceptibility of the organism. Hence modern studies on the development of behaviour try to unravel the influence of the internal and external sources of programming in the actual developmental sequence. One of the most fully studied examples is the development of bird songs which has turned out to be far from simple and illustrates the complexity of processes underlying apparently straightforward behaviour patterns.¹⁰

Fourthly, it is also possible to study the functions, that is to say the survival value, of behaviour. This has been done especially

by Tinbergen and his co-workers. The animal's behaviour is viewed as an integral part of its equipment for survival. The function of particular behaviour patterns can be studied both by the comparative method and by experimental analysis. One can elucidate the adaptive features of the behaviour patterns and begin to suggest the selective forces which may have shaped their evolution.¹¹

Application of Ethology to Man

In considering the application of this biological study of behaviour to man, one must begin by noting that the popularisers have often provided good examples of how *not* to do this. Thus their liberal sprinkling of phrases like "innate spontaneous action" or "territorial imperative" reveals the hasty use of concepts of instinct and drive, which are no longer adequate for dealing with animal behaviour, much less the more complex behaviour of man. Tinbergen has pointed out the central weaknesses: "Most writers who have tried to apply ethology to man have done this in the wrong way. They have made the mistake, to which I objected before, of uncritically extrapolating the results of animal studies to man. They try to explain man's behaviour by using facts that are valid only of some of the animals we studied. And, as ethologists keep stressing, no two species behave alike. Therefore, instead of taking the easy way out, we ought to study man in his own right. And I repeat that the message of the ethologist is that the methods, rather than the results, of ethology should be used for such study".¹²

As a result of the hasty popularisation, the ethological study of man currently finds itself in a false position, overacclaimed by some, shrugged off by others.¹³ On the one hand, the popularisations have led to an uncritical acceptance in some quarters of their bold but unsubstantiated extrapolations to man. On the other hand, some professional students of human behaviour have, in rejecting the claims of popular ethology, unwisely rejected the ethological approach as a whole.

The constructive application of ethology to man may be

undertaken along two main lines and one of these is the proper use of the comparative method. For this one should study man's closest relatives, the anthropoid apes and some monkeys, for resemblances and differences in behaviour patterns, rather than extrapolate from widely different animals such as birds and fishes in spite of their elaborate social behaviour. In fact one of the major recent developments is the detailed study of several primate species under natural conditions and this has yielded much data relevant to such a comparison. It is difficult to select from the many interesting findings that have emerged but the work on chimpanzees is particularly relevant.¹⁴ Wild chimpanzees are able to make simple tools, that is they not only use an object for a purpose but can modify it to suit that purpose. Further, the younger individuals can acquire this and other habits through observational learning in a social context. And again they can collaborate to achieve a common purpose, such as a group of adult males combining to hunt a monkey for food. Thus studying chimpanzees in their natural habitat has revealed previously unsuspected capabilities and ones which have at times been thought unique to man. Altogether, chimpanzees and other primates have an elaborate social life based on an extensive system of communicative sounds and gestures, having elements in common with man. This then is the sort of data on which a proper comparative study can be made.

The second main way in which ethology may be applied to man lies simply in employing ethological methods to study particular examples of human behaviour. Eibl-Eibesfeldt has employed the technique of high speed filming, without the subjects' awareness, to make a comparative study of human facial expressions. He has been able to show that many basic gestures, such as greeting with the eyes, agree in the smallest details in people from widely separated cultures, including isolated primitive tribes. This is an important demonstration since the existence of culture-independent expressions has often been denied.¹⁵ Ethological methods are also being applied to the study of non-verbal communication among children. In a study of autistic children, the Tinbergens have been able to provide strong evidence for the hypothesis that many cases of autism are social reactions caused

by a hostile social environment and are not due to brain damage or to genetic factors.¹⁶ Again on the subject of children, a series of controlled experiments, involving direct observation of behaviour in the experimental situation, is providing strong evidence that children of pre-school age can learn aggressive patterns of behaviour by watching film or television (even cartoons) and enact these in their later play.¹⁷

It is still very early in the ethological study of human behaviour but the examples given look promising. One can see that a serious biological account of human behaviour patterns, such as aggression, should be possible. The comparative primate studies can indicate how far man's primate heritage predisposes him toward certain types of behaviour, as well as highlighting significant differences in behaviour. The experimental studies can indicate how the biological predispositions to particular behaviour may interact with specific social learning situations to produce great individual differences.¹⁸ It seems legitimate to conclude that ethological methods may be applied successfully to the problems of the evolution and causation of human behaviour patterns, including some of medical and practical importance.

Ethology and the Evolution of Distinctively Human Behaviour

The applicability of ethological study to human behaviour naturally leads to the question of how far such a biological approach might be able to throw light on those forms of social behaviour which are uniquely human and whose origins are at present something of a mystery. Human behaviour is distinguished from that of other primates chiefly by man's culture — the ability to learn and transmit information from one generation to another through the medium of tradition in the widest sense. However, culture is still a biological phenomenon which is not unique to man, and cultural changes occur in the behaviour of primates and other species. Man is distinguished by the very much greater development of culture and the greatly accelerated pace of cultural change compared with genetical change in human evolution.¹⁹

Consider, for example, the origin of human moral behaviour. In his useful book, *The Ethical Animal*, C. H. Waddington advanced the thesis that evolution has endowed man with a certain innate capacity to acquire ethical beliefs, but without any specific beliefs in particular, and that during the early life of the individual processes go on by which these potentialities become realised. Recent studies enable us to make some suggestions about how such a course of events could have come about. We can begin to see that, especially in the primates, a species' cultural inheritance and genetical inheritance must interact in a complex way in the process of biological evolution. For an animal living in the kind of social environment now known to exist in primates would be exposed to the selective effects of the surrounding environment in a less direct way than would a member of a nonsocial species. Natural selection will affect the individual through a social filter. And so during evolution it may be expected that the genetic programming of the behaviour of the species will tend increasingly to be influenced by the social behaviour of that species.

Now field studies of the higher primates show that individual animals are capable of highly independent actions involving individual initiative. This capability is employed in the maintenance of dominance hierarchies, in co-operative hunting and other important social activities. It is also occasionally employed in what it is tempting to call antisocial activities, where one individual gains some immediate advantage at the expense of another. But in a complex society, a consistently antisocial individual would be likely to reduce its success in leaving offspring through its failure to follow the normal patterns of social behaviour. And so a genetically programmed predisposition to accept norms of conduct and to be receptive to instruction in such matters could be of selective advantage to the individual animal in a social context. Thus it is conceivable that the earliest development of primitive ethical capacity could have been originated through natural selection.²⁰

Waddington and some other biologists have proposed that the course of this behavioural evolution as determined by natural selection might itself be used as a criterion for judging modern

ethical systems. Such 'evolutionary ethics' represents a philosophical position, which is open to damaging, and in my view fatal, criticisms. For one thing there is the general difficulty of how any matter of fact, such as the course of evolution, can be translated into an ethical imperative. This has been made clear by several philosophers²¹ and the biologists have not succeeded in overcoming their criticisms. Secondly, evolutionary ethics blurs the distinction between genetical and cultural inheritance. It will be generally agreed that the particular ethical beliefs which we hold are the product of our human culture, and the course of cultural evolution, by which these concepts have changed and developed, is evidently determined by factors other than reproductive success. Hence in so far as the modern flowering of ethical beliefs is a cultural phenomenon, it cannot be fully judged, or explained, by the process of natural selection that may have led to its inception.

At the same time, I see no need to maintain that there is a conflict between natural selection and moral values (as persuasively argued by David Lack²²) so long as one can be clear about the distinction between genetical and cultural inheritance. Just as our genetical inheritance determines our ability to develop language but not which language we shall speak, so the particular ethical systems we accept come not from our genetical but from our cultural inheritance. And this cultural inheritance includes certain influential episodes such as that on Mount Sinai.

This is an area of discussion in which it is particularly easy to overlook the limitations of the biological approach. For instance, in *The Naked Ape*, Desmond Morris attempts to explain religious behaviour in man by the disappearance of the dominant male social structure, which he supposes was present in our immediate ancestors. This may have nurtured a certain psychological orientation in the individual, as well as giving advantage to the group and these features became maintained by the invention of a supernatural dominant male in the sky. Now what needs to be called in question about such an explanation is not its accuracy so much as its adequacy. It may be granted that some such account of the origin of religion is possible (even if this particular

one is not correct) but to the extent that developed religion, like ethics, is a product of cultural evolution, it cannot be fully explained as a phenomenon in terms of its distant origins in the social structure of early man and his primate ancestors. In general, it is meaningless to explain a behaviour pattern which is highly evolved within a species as nothing but a survival of the incipient stage of the behaviour in that species or its immediate ancestors.

Explanations of this general kind are often accompanied by the supposition that belief in the existence of God (philosophical theism) must be false because it is merely a survival from the primitive delusions and psychological needs of early man. But once again this extension of the discussion takes us out of biology and into philosophy with an argument which Bevan has aptly termed "the method of anthropological intimidation".²³ As Bevan points out, the fact that modern theism is connected by a process of gradually changing beliefs to primitive notions, is equally compatible with the view that belief in God is false, and with the view that belief in God is true and so does not provide evidence for either. Modern biological beliefs are also similarly connected back to man's primitive notions and needs with respect to animals and plants but no one on that account supposes that biology is nothing but a survival of primitive fancy! The important point here is that discussion about belief in God involves a genuine philosophical issue and one that is not to be foreclosed by the method of anthropological intimidation.

Ethology and the Nature of Man: Conclusions

We have seen that the modern study of animal behaviour has made fresh progress recently in the refinement of its methodology and in the actual results achieved. In particular these methods have been applied to our close relatives among the primates with results that are of special interest for human origins. If the gap between animal and human behaviour seems less large than it used to, this is because modern comparisons have upgraded our estimate of animal capabilities rather than downgraded man, as the Victorians feared.

The biological methods of ethology cannot provide all the answers concerning the causation and evolution of human behaviour. This is an area where the biologist needs to be specially careful of inadvertently slipping from biological into philosophical discussion. But bearing the limitations of the biological approach in mind, ethological methods do provide the tools to do the job and I consider that we can be cautiously optimistic about achieving a biological understanding of the origins of human social life. The rapid development of primate studies over the next 10 to 20 years may be expected to yield models of social evolution which are factually plausible. If this work is taken in conjunction with the increasingly satisfactory fossil record, it should become possible to outline the probable course of human behavioural evolution.

J. Z. Young has spoken of our new knowledge of the brain and behaviour effecting a revolution in our understanding of ourselves.²⁴ But it is rather confusing to describe our growing knowledge as revolutionary: while there is much that is new and important, there is little that is strictly revolutionary in the newer biological work. I rather take the view that the application of ethology and neurobiology within their area of competence can serve to render more definite and to clarify much that previously could only be the subject of speculative guesses, however philosophically expressed. The steadily increasing interest and importance of this approach is reflected in the fact that courses in human biology, including the sort of material reviewed here, are becoming commonplace in universities as interdisciplinary or bridge courses available to students from the arts and medicine as well as the sciences.

Viewed in this way as an integral part of our overall study of man, there is no need to precipitate a sense of conflict between the biological study of man and other approaches such as the theological. But on account of the great differences in aims and methods, it is natural that a certain tension should exist between these diverse approaches. For this reason, it is difficult to envisage any unified study of man emerging in the foreseeable future. Nevertheless, it should be possible for these diverse approaches

to interact in a constructive and useful way and it is in this spirit that the present essay on the biological approach to man is offered.

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An asterisk (*) indicates that the full reference is given in the bibliography above.

1. This essay is based on an earlier talk delivered to the Canberra Society for the Study of Religion and Theology.
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GEORGE CANSDALE

Human Understanding of Animals — A Historical Survey

Mr. Cansdale, television personality, collector of animals and author of a well known book on animals of the Bible, here reviews man's relationship with the lower creation over the millenia.

Man's relations with the rest of the animal world have been of a developing and cumulative type ; since there are no written records for the greater part of this development, man's understanding of animals in the formative periods must largely be inferred from these relations. The following is likely to be the order in which man's attitude towards animals progressed:-

1. *Prey* — flesh as food, skins as clothing and shelter, bones, etc. for weapons and tools.
2. *Enemies* — many animals regarded man and, later, his stock, as their prey.
3. *Competitors* — for the game hunted by man, or for the grazing that he needed for his stock.
4. *Objects of veneration* — with animals seen as the dwelling place of supernatural beings.
5. *Potential servants* — domesticated stock.
6. *Companions* — a special use of (5).

This is a logical order and seems to be confirmed, at least in part, by archæology, but it is clear that the earlier aspects mostly

continued concurrent with the later.

It is relevant at this point to consider some Biblical implications. First, my reading of the early chapters of Genesis convinces me that man differs from the rest of the animal world not just in degree, for certain qualities cannot be explained on a purely biological level. I am therefore compelled to believe that man has a new 'dimension', but this is not the place to expand on this statement.

As regards man's working relations with animals there are two 'creation' statements; the first is well enough known, that man should have "dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth" (Gen. 1: 28). Dominion here translates a Hebrew word elsewhere used for describing tyrannical rule. The only direct New Testament reference to this is for comparison (with the human tongue) "For every kind of beast and bird, of reptile and sea creature, can be tamed and has been tamed by humankind" (James 3: 7). Here a much milder word is used, suggesting domestication rather than exploitation.

The other comment is seldom considered "So the Lord God . . . brought them to the man to see what he would call them" (Gen. 3: 19). Today the naturalist makes progress when he recognises, by their correct names, the animals he is studying, for without doing this he cannot begin to understand them or to compare his findings with those of others.

The copious biblical teaching on the humane treatment of animals is also frequently overlooked. This is considered in detail and with full references by Major C. W. Hume.¹ The following are some examples. The ox was included in the Sabbath rest (Exod. 23: 12). A straying ox should be taken to safety (Exod. 23: 4 and Deut. 22: 1). It was legal to water stock or rescue it from a pit on the Sabbath (Luke 13: 15 and 14: 5).

This attitude seems to be a monopoly of Judaeo-Christian belief. It is true that extreme reverence for life, based on belief

in the transmigration of souls, is found in Buddhism and Hinduism, though some devotees of these religions sacrifice animals and kill for food. However, oriental reverence for life leads to much suffering, through overstocking and resultant starvation or chronic ill-health.

Perhaps man's concern for animals has run more or less parallel with that for his fellow men, but the O.T. and N.T. injunctions have always been there as a guide.

In the Middle East today Israel affords an interesting example of this higher regard for animal life, for two traditions combine; the Mosaic law comes through the Jewish line, while many recent immigrants from countries like Germany and Austria are fine naturalists who have been influenced by western, i.e. basically Christian, ideals of animal welfare. As a result Israel is a haven for passing bird migrants in spring, and the Nubian Ibex (the wild goat of the O.T.) flourishes in such reserves as Ein Gedi, while the Palestine Gazelles have become so plentiful in parts of the Judaeen Hills and the central plains that numbers have been translocated. This contrasts with the general attitude in nearby Arab countries, where it is usual for all clean wild animals to be killed ruthlessly; Muslim fatalism encourages this, on the basis that Allah has provided and will continue to provide. However, it is good to note that the Kingdom of Jordan has now effectively constituted a desert National Park while at an individual level the desert nomad has always regarded his camels' welfare as paramount.

It is general experience in Zoos and elsewhere that the increasing violence of the 1970s is directed not only against fellow men, and it is hard not to associate the whole of this phenomenon with the general rejection of Christian standards.

One further content of the Mosaic Law merits comment. The animal catalogues of Leviticus 11 and Deuteronomy 14 are not easy to follow, especially in the AV translation, but they give an interesting insight on Moses' understanding of animals. The problem is to provide simple rules of thumb for use by the ordinary

people to identify those animals that are safe to eat. The great majority of mammals fit for food are cloven-hoofed ruminants and this characteristic provided the rule. It was sound to exclude the pig at that period for it can transmit several diseases, the most unpleasant being trichinosis, caused by the adult stage of a round worm ; however, careful inspection and thorough cooking make pork safe today.

No such simple rule is suitable for birds and the problem is solved by naming those groups that may not be eaten, mainly scavengers and birds of prey. Aquatic life is treated very broadly and only animals with both scales and fins were regarded as clean ; this allows the main food fishes but wisely excludes crustaceans and shellfish, with their potential dangers. All reptiles were probably banned, though this section of the lists is the most difficult to translate. Of insects only the Saltatoria, primarily the locusts, were allowed ; the AV description is attractive — “ which have legs above their feet to leap withal upon the earth ” (Lev. 11 : 21) — but the meaning is clear enough. Although this is not expressly stated it is likely that locusts at times provided large amounts of useful food on the desert march, as they have done until recent years in and around the deserts of North Africa and the Middle East.

Naturalists in history

A comprehensive survey of the literature would probably reveal much information about the early biologists, who fall into one of two vague groups ; on the one hand the systematists, anatomists, etc. and on the other the ethologists and field naturalists. The following are a few :-

Jacob was an able geneticist, manipulating his father-in-law's flock to produce what he wanted, though apparently attributing success to the theory of maternal impression, resulting from the pied patterns presented to the gravid ewes and she-goats.

Solomon, in his collection of Proverbs, singled out several remarkable phenomena for mention — the social organisation of the

harvester ant ; the locomotion of a snake and the flight of an eagle. (The large birds of prey, including about a dozen species of eagle, still fly north in spring in large numbers, riding the thermals for most of the way.)

Jeremiah was a bird-watcher, referring (Jer. 8: 7) to the migratory habits of stork, turtle dove, swallow and crane. Here "swallow" perhaps includes all the martins, swifts, etc.; the translation "crane" is possible but not certain. These four widely assorted species clearly emphasise the pattern of Palestinian bird fauna, for some 80% of the 350 species are migratory, including members of all families except four rather small and specialised ones each represented by only one species.

Aristotle was considered by Darwin to be one of the world's great biologists; he was a systematist and physiologist rather than a field man.

Pliny the Elder wrote a series of 37 natural history books, of which 5 dealt with zoology, but these are full of freaks, etc. and his best work is copied from Aristotle.

St. Francis has attracted various legends and facts, hard to establish, but he certainly seems to have had "a way with animals". This quality may be hard to accept scientifically but it seems equally impossible to deny. A good modern example is the late Mrs. Len Howard, author of a valuable book "Birds as Individuals", whose house and garden became the headquarters of many tits of 3 or 4 kinds, as well as other species, all of which she recognised individually.

The past few decades have produced many fine zoologists/naturalists such as Lorenz, Tinbergen, Thorpe and the late David Lack, F.R.S., of robin and swift fame, while we must not forget the non-professionals whose accurate and charming books still bring pleasure — Ernest Thompson Seton, Jack London, Henry Williamson and others.

Two areas are of major interest in assessing man's under-

standing of animals. In both domestication and captivity animals are brought under human control in a particular fulfilment of Gen. 1: 28, the basic difference being in the permanence of the relationship. It is general experience that wild vertebrates, even the largest carnivores, usually shun man and seem to regard him as an enemy, even in places where they seldom encounter him. There are exceptions, such as the scaly anteaters of the tropical African forests; also, in spite of regular predation by man, some of the fur seals, sea elephants and penguins. So it is hard to avoid concluding that man is regarded instinctively as an enemy, which means that before any animal can be tamed it must be taught.

Domestication

First some general comments:-

- (a) All important species were domesticated in the Late Stone or Early Bronze Age, before the time of written records, and it almost seems that there was a series of spontaneous surges of creative energy.
- (b) There were several widely separated centres of origin for at least some major species, e.g. cattle, pig, horse and goose, with the work proceeding more or less concurrently.
- (c) Domestication is the permanent taming of part of a species, usually with change of size, colour and proportions, but the essential feature is a change of temperament.

A riding pony can hardly be compared with a Mongol wild horse; at the other end of the scale, and among the latest recruits is the laboratory rat, absurdly docile and safe — but derived from the Norway or brown rat which is notorious for its intractability.

- (d) Many orders of vertebrates are represented, but no reptiles or amphibians, though the clawed toad (*Xenopus*) once seemed likely to qualify. At least three insects are included.

(e) We have no information how any large mammal was actually brought under control. It was a huge task calling for understanding of animals and a skill rare today ; it was a far more remarkable feat than darting a rhinoceros and taking it half across Africa, for this is largely technology.

(f) Some breeds are so changed by man that they are not viable unaided, and it is an indictment of human greed and folly that breeds of dogs are ruined by setting wholly artificial standards.

(g) All larger species have some degree of herd organisation, so man may be said to become the leader, but that does not explain how it was done.

(h) The only possible comparison is with ants, also social animals ; aphids are kept like cattle, sometimes in underground stalls of precise size ; some ants capture colonies of other ant species and use them as slaves.

The following brief and typical species histories, which owe much to the work of Zeuner,² who was both archæologist and zoologist, give some idea of the range of animals in human service and the problems involved in enlisting them. (For a less full treatment, with special reference to the history of each in Palestine, see Cansdale.³)

Dog. The earliest to become domesticated, the process being complete by c. 7,500 BC, which is before any farm settlement. The golden jackal may have been involved but the probable ancestor was the northern wolf. Possibly it began by wolves clearing up the remains of a kill, then helping to make it, later hanging around the rough encampment, which became defended territory ; all this must have been with increasing encouragement by man, who saw the potential benefits. After this would come tracking, herding and guarding. Or was it much simpler ? Did it all begin when a Stone Age man took some wolf cubs home to rear them as pets ? The dog is more liable to mutation than any other species, allowing man to 'create' some 100 breeds, ranging from about 5 to 200 lb. and used for many different

purposes.

Camel. The two types — the one-humped or Arabian and the two-humped or Bactrian — are anatomically very alike and are considered geographical forms from a wild ancestor that has long disappeared. A Ist Dynasty carving of a loaded camel is proof of early domestication, then it largely disappears from the records and there is not even an Egyptian name for it. The camel came into widespread use during Abraham's lifetime, except in Egypt where it was not fully used for a further 1,500 years. It is a multi-purpose animal giving labour, milk, meat, dung for fuel, hair, etc.

Goat. Deriving from the Greek wild goat it is known from the 6 – 7,000 BC levels at Jericho. The grazing sheep came rather later and was largely non-competitive, since goats prefer to browse. The goat has probably caused more depredation of habitat than any animal other than man himself, who has persistently refused to recognise the potential danger of animals introduced to a new region.

Ox. There is good evidence that cattle were domesticated in several different areas c. 3,000 BC, bringing food and skins, and above all, working capacity. All forms are descended from the aurochs, which became extinct c. AD 1600, and which is wrongly translated unicorn in AV. The massive bull stood over 6 feet, and it is impossible to imagine how Neolithic man tamed it. Who had the patience, skill and vision?

Donkey. Known until less than 200 years ago as the ass it is derived from the Nubian wild ass and dates, with little change, from the third millenium BC. The so-called asses of c. 3,000 BC in Mesopotamia are now known to have been partly tamed onagers; domestication was never completed, for both donkey and horse proved more useful.

Horse. The latest of the important Old World animals, it was an animal of the grassy plains and always demanded better food than the ass. The arrival of the horse in the Middle East,

c. 1,700 BC, revolutionised ancient warfare as radically as the invention of the tank changed conditions in World War I.

All these, and most others large and small, were brought into service in lands that were to become, or already were, cradles of civilisation. A complex human social organisation was impossible without an assured food supply and, above all, the extra working and carrying capacity of domestic stock. Did any of those early men realise what far-reaching effects their work would have? The converse also seems to be true — no domestic stock, no civilisation — and it is notable that no contribution came from south of the Sahara.

Animals in Captivity

Zoos are no new phenomenon but have been a feature of civilisations in many periods. Records in early Egyptian Dynasties show that many species were kept, possibly deriving from their pantheon; of these some were of kinds now reckoned as difficult Zoo subjects, and many were trained to a high degree. Later, in the XII Dynasty (c. 2,750 BC), hyenas, hunting dogs, lions and cheetahs were actually trained for hunting, and vast herds of antelopes were held in enclosures. These activities were discontinuous; several times interest seems to have been lost for many centuries and then revived, to reach its height under Ptolemy II, whose collection including giraffes, elephants, ostriches and many others in harness, took all day to pass through the stadium.

The picture was similar in China and Mesopotamia, but on a smaller scale. The Romans also kept — and killed — great numbers of larger animals in appalling exhibitions of ostentation and blood lust. More recently the Aztecs and Incas showed themselves expert ornithologists, building flight aviaries for insectivorous birds, many of which are kept only with difficulty today. This whole subject is covered in great detail by G. Loisel.⁴

As with domestication, man has shown, in different civilisations

and at long intervals, an ability to handle animals implying an understanding of them that is rare today, and which has nothing to do with technical facilities or scientific knowledge. Again, this fact is hard to explain.

The past two decades have seen a world-wide increase in Zoos in response to popular demand. Some foremost authorities, including Professor Hediger (see below) relate this to urbanisation, and it seems likely that divorce from nature leaves a gap which close contact with animals may fill, however nebulous such an idea may appear to a cautious scientist.

Human understanding of animals is shown to perfection in good Zoo design. An expert like Hediger, Director of the Zurich Zoo, almost becomes the animal whose quarters he is designing, and the result is excellent. Hediger has written widely on this subject and his latest book⁵ is by far the best on the subject available. In contrast, some Zoos have handed over such work to experts in fields other than animal; functional quality may then be sacrificed to novelty of design, so that a flight aviary may have proportions more suitable for birds equipped with VTO (Vertical Take Off) and be both difficult and expensive to maintain. Such is one result of failing to understand animals.

Zoos may foster, incidentally, the misunderstanding known as anthropomorphism, when conditions are judged subjectively, without realising that animals have infinitely differing needs which seldom resemble those of man, or that the word freedom, to be meaningful to man or beast, must be qualified.

Personal pet-keeping is a particular aspect of animals in captivity and though less documented has a long history. It is widely practised in developing countries, though the range of species kept is often narrow. There are several biblical mentions. Nathan told David the story of the pet lamb, presumably a hand-reared orphan (2 Samuel 12). Tobias had his faithful dog (Tobit 5: 16 and 11: 4). The Syro-Phoenician woman spoke of the pet dogs under the table (Mark 7: 28).

Whether or not this implies any true understanding of animals, pets continue, in this atomic age, to give satisfying companionship different from but complementary to human friendship. To folk living alone, especially the old, a cat or a talking budgerigar can be very important.

Conclusion

From the beginning man survived by understanding the rest of the animal world ; this was a matter of necessity, but perhaps there were always a few true naturalists. From time to time there were geniuses, perhaps only very few of them, among our early ancestors who achieved miracles of domestication and cleared the way for civilisation.

Great numbers of people in developed countries enjoy animals at many levels, and facilities for such enjoyment expand with increasing leisure. There are also a few with exceptional understanding of animals large and small. Comparisons are clearly impossible, but surely the prize should go to the first Neolithic man who took a wild bull by the horns !

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DAVID D. BRODEUR

Christians in the Zionist Camp : Blackstone and Hechler

Part ii

This concluding part of Dr. Brodeur's paper tells in the main of the unremitting efforts of W. E. Blackstone (WEB) on behalf of Zionism despite opposition from Gentile and Jew alike. It finishes with a comparison of Blackstone and Hechler both of whom lived to see the beginnings of the exodus of Jews to Palestine as a result of Hitler's persecution.

The year 1891 proved to be one of great shaking and awakening for the fledgling Zionist Movement. In February the *Shave Zion* ("Colonizers of Zion") was inaugurated in New York City, a society patterned after the *Dorshe Zion* founded a short time before in Russia to effect land acquisition and colonization in Palestine. In March came the presentation to President Harrison of the 'Blackstone Memorial', called "Palestine for the Jews", and signed by over 400 prominent American Jewish and Christian leaders, high Federal officials and office holders. In April came the expulsion of Jewish tradesmen and merchants from Moscow, precipitating a new wave of Jewish emigration to Palestine, Poland and the US.

In Chicago, where William Blackstone (WEB) resided, his Memorial received considerable support from Jewish leaders, inspiring also a mass meeting of the local *Chevre Choveve Zion*

("Lovers of Zion") to form an auxiliary. On May 1st the parent society declared that its object "was to aid in the restoration of Palestine by assisting refugees who got to that country."¹

By August of 1891, it had become widely known that Baron Maurice de Hirsch's bold agricultural colonization project in Argentina had failed. The crisis prompted the Hungarian Baron to close ranks with the Parisian Palestinian colonizer, Baron Edmond de Rothschild. The two barons, in a September conference, agreed to work for the establishment in either Syria or Palestine of a colony of Russian Jews with a farmer's bank to finance them. According to Zionist historian Marnin Feinstein the real achievement of this conference was to concentrate Jewish colonization activities in a "united management to be directed by an international central committee" (Feinstein). Thus did Zionism take its first steps toward the pooling of the resources of its diverse groups — in 1891.

When after several years of negotiations the Baron finally succeeded in acquiring (in 1893) title to some 10,000 acres of arable land on the Hauran Plateau east of Lake Galilee he was prevented from carrying out a planned colonization by the enforcement of the Turkish edict of 1888 banning Jews in groups from settling in new lands. Recently discovered Blackstone correspondence reveals that on March 15th, 1893, Adam Rosenberg, a New York lawyer, Secretary of the N.Y. *Choveve Zion* society and representative of the Baron, wrote to Blackstone urging him to postpone the 'international side' of his slated Hebrew-Christian friendship conference, calling this aspect of the conference 'premature', and asking WEB to *continue* his efforts to help Rothschild acquire land in Syria and Palestine for Russian Jews to settle as 'Turkish subjects'. A later letter from Rosenberg repeats the request for help in acquiring the trans-Jordan tract which the lawyer states Turkish and local Roman Catholic interests ("for some unholy reason") were opposing. He then bluntly asks WEB to use his rapport with Secretary of State W. Q. Gresham (the Chicago judge with whom Blackstone had been corresponding since the days of the 1891 Memorial) to influence the Turkish Government to cease from its harassment of Rothschild.

In the fall of 1894, Blackstone attempted to interest the Cleveland Administration in reviving the 1891 Memorial. His efforts failed due in no small part to his own failure in 1891 to secure from Grover Cleveland his signature on the Memorial at the latter's New York law office. On December 31st, 1894, Blackstone wrote to President Cleveland in the White House urging him to search for the Memorial which failed to turn up either in White House or State Department files despite repeated searches in the following months. In the same letter Blackstone invoked a poignant plea which he had used with President Harrison and which he was to invoke again with President Wilson, in 1916. He offered that he believed that there had "not been such an opportune time to show kindness to Israel since the days of Cyrus King of Persia." In March, 1895, the President's secretary returned to him his correspondence with former President Harrison and the current Secretary of State, stating that an additional search of both White House and State Department files had not revealed the 1891 Memorial. Therefore, President Cleveland considered the matter closed !

In 1895 Bernard Horwich, a Chicago lawyer, organised the Chicago Zion Society which in October, 1897, became the *Knights of Zion*, described by Max Schulman, a former official of the Zionist Organisation of America, as "the first interstate Zionist organisation in America." Writing in 1929, Schulman also claimed that Chicago was the first American city to respond to Herzl's First Zionist Congress at Basle (August, 1897), the Chicago Zion Society sending as delegate to the Congress Leon Zolotkoff.² Among the Society's principal organizers were Wolf Schur and Bernard Felsenthal, both Blackstone Memorial supporters. However, Chicago's rabbis, both Reform and Orthodox, expressed very strong opposition to Herzl and his London co-worker Max Nordau because of their agnosticism.

Back in October of 1891 Blackstone had published a lengthy article which summoned several rather novel legal arguments to justify an American support of a Jewish state in Palestine. WEB attempted to demonstrate also that such a support would not be violation of the Monroe Doctrine. He insisted also that Jewish

autonomy in Palestine under international protection would be supported especially by Christian nations. With keen insight he added that "Protection for private and corporate property, the adjustment of claims, and possession of Christian holy places, can as well be arranged under Jewish as under Turkish rule. Indeed, so small a state . . . would of necessity realize the importance of justice, righteousness, and moderation."³ The prognostication reads like a synopsis of Israel's compassionate policies since the birth of the State in 1948.

Blackstone climaxed his appeal with a plea that the US should for "entirely unselfish and purely philanthropic" reasons lead the "peaceable movement to give exiled Israel a settled permanent home." In light of this it is indeed fitting that America was the first nation to recognize the State of Israel. The article signalled the birth of Blackstone the international 'jurist', as Hechler's biographer, Duvernoy, has called him. Blackstone's researches into international law to support his claims on behalf of Zionism led him in 1893 to circulate at the Columbia World Exposition a petition calling for the peaceful arbitration of international disputes. Although only a private citizen in retirement, the persuasive Blackstone managed to secure the signatures of the heads or representatives of some 36 nations attending the Exposition. While it is difficult to assess with any accuracy the effect of this action, it most likely helped to advance the cause of international arbitration which in 1900 saw the establishment of the first International or Permanent Court of Arbitration at the Hague, Holland.

The month President Harrison delivered his message to the Congress (December, 1891) acknowledging the plight of the Russian Jews, an exhausted Blackstone, suffering from a recurring chest condition, moved temporarily to California where, after a domestic tragedy, he undertook in 1892 a complete revision and expansion of his popular *Jesus is Coming* which contained a description of the Jewish expansions in Jerusalem.

During the winter of 1899, burdened by respiratory problems and an ailing but devoted wife, Blackstone took up permanent

residence in California, first in San Diego, later in Los Angeles and Pasadena.

In 1899, referring to a pamphlet that he had written several years before that had been hailed by Orthodox Jews the world over, he wrote: "Numerous requests have come for the leaflet *Jerusalem from Jews in Hungary and Roumania . . .* This had led to many most interesting conversations . . . I have not hesitated to tell them that I believe serious consequences will follow Zionism's success, because there is no humiliation or prayer to seek the help and guidance of Israel's God . . ." ⁴

Even as WEB was writing these words, Orthodox rabbis in many countries of the Diaspora were expressing misgivings over the direction of Zionism, calling attention to the agnosticism of its leaders Theodor Herzl and Max Nordau. In those early years of the Herzlian Movement the Zionists were wracked by all kinds of factional and doctrinal differences. There were at least three major philosophies — and many minor ones. There were those who wanted *only* Palestine; those who would settle for Palestine or any other suitable land, and those who felt that the first priority, if not the primary purpose of Zionism, should be for the relief of the persecuted and impoverished in Russia, Rumania, Palestine (or wherever) and the fostering of national pride or community amongst the Diaspora Jews.

Apathy and Alarm

Many American Jews — and even many American Zionists — were apathetic to Herzl's cause before the pogroms of 1903. Many of these were Reform group assimilationists who were not united but whose outstanding spokesman was Rabbi Emil Hirsch ⁵ of Chicago, the man who had publically expressed misgivings about Blackstone's Zionism.

Many of the Reform rabbis and others opposed to a sovereign Jewish state in Palestine did not reckon with the moral suasion that sheer numbers of people can have on molding public opinion

in America. Between 1880 and 1905 "A Jewish population numbering less than a quarter of a million . . . and comprising a high percentage of Jews of German extraction, increased to close to a million and a half . . . Mostly through the arrival of thousands of Jews from *Eastern Europe*." ⁶

At the very time the Russian delegates to the Basle Conferences were annually vetoing a national home in Palestine because of their well justified fears that the Czar would interpret any other stand as a sign of disloyalty to Mother Russia, thousands of Russian-born Jews in New York and other cities of the US were becoming more and sympathetic to a Palestinian Zionism because of what they had seen or endured in Russia and continued to learn from letters they received.

But something was to happen that would at once undermine the rationale of the Russian delegates and jolt awake American Jews still apathetic to a Jewish state in Palestine.

The place was Kishinev (the foreign papers had at least a dozen ways of spelling its name), a city of Bessarabia in southwest Russia, today the capital of the Soviet Socialist Republic of Moldavia, situated somewhat northwest of Odessa the scene of the 1881 - 82 pogroms. When the news of the Kishinev outrages reached New York on April 20th, 1903, they ". . . aroused the direct interest of American Jews more than any previous foreign event in which Jews were involved", according to historian Feinstein who adds that "Beyond question Kishinev marked the turning point in American Zionism. It brought home the realization that anti-semitism was an ever-present menace, stalking Jews everywhere and making the existence of a Jewish State in Palestine a very urgent necessity."⁷ As in the days of Moses, a stubborn, protracted gentile persecution had served God's purpose and the God of Israel proved willing once more to turn a curse into a blessing. The Zionist Congress deadlock weakened and began to dissolve.

April, 1903, found WEB preaching and lecturing on 25 occasions in Santa Barbara on subjects that ranged from "Israel the

Center of God's Plan" and "Our Lord the Center of Israel" to "The Kingdom" and "Satan his kingdom and its Overthrow".⁸ The last topic was a favorite of WEB. When he learned of the Kishinev disaster, he must have indeed been convinced that Satan was again up to his worst. Finishing his lectures, he decided that the time had come to re-issue his Memorial to the Jews. This was done on June 15th, 1903, a resolution adopted by the Chicago Methodist Preacher's Meeting being attached to the original 1891 document with all its signatures. Neither Christian nor Jewish sources appear to have had anything to say about the second presentation which was apparently made with none of the publicity of the first.

Virtually the only comments to be found are by Blackstone himself, writing in the July 15th *Jewish Era*, the journal he founded in 1892.

"It has also been my privilege to revive the memorial in behalf of the Russian Jews, which was some years ago presented to President Harrison, and with the endorsement of the Methodist Preachers Meeting of Chicago, secured its presentation to President Roosevelt. . . . All will recognize that it is futile for any nation to protest against or interfere with the internal affairs of Russia. But it is possible that the Czar, as in the case of the peace congress, might take the initiative in calling an International Conference to consider the worldwide Jewish question."⁹

As in 1891, nothing specific was done by the US Government in response to the Memorial. A possible key to the apathy may have stemmed from the effects of an unpopular decision that Secretary of State John Hay had taken in 1899 when he upheld a seven year old Turkish Government ruling which limited visas stamped upon the passports of US Jews visiting Palestine to just 90 days. The ruling was deemed a serious setback by the Zionists to the plans of American Jews desiring to settle in the Holy Land. In 1900 the storm it had aroused led to the resignation of the US Minister to Turkey, Oscar Straus. Having succeeded unexpectedly to the Presidency in 1901 on the assassination of William McKinley (an 1891 Blackstone Petition signer), Teddy Roosevelt

may have been reluctant to open up again the Pandora's Box of Palestine, particularly in view of the fact that he had as his Secretary of State the same John Hay who had issued the 1899 ruling upholding the Turkish restriction.

The Memorial was to lie dormant for another 13 years. Although an ex-President of the United States, Grover Cleveland, was the principal speaker at one of the many indignation rallies held to protest the Kishinev massacres, it must be sadly admitted that Presidents out of office have little political force in America. However, William Blackstone, the man of faith, was not to be permanently rebuffed. He would try yet a fourth time.

The Dispensationalist view of the prophecies of the Old Testament could at times display remarkable prescience with respect to happenings to Israel. A good example were the "Notes on Prophecy and the Jews" which appeared in the July, 1903, (Vol. 10, p. 40) issue of *Our Hope*, a Christian monthly edited by Arno C. Gaebelain. A brief commentary began with a quotation from Zechariah 2: 6 ("Ho! ho! Flee from the land of the north, says the Lord; for I have spread you abroad as the four winds of the heavens, says the Lord."). The piece then offered: "This word is spoken in connection with the vision of restoration. Surely the land of the North which contains so many Jews is Russia.¹⁰ There will be a great exodus of Jews from Poland and southern Russia. Even now thousands are preparing for it. Zionism holds out the solution of the difficulties for many orthodox Jews . . . Zionism has profited wonderfully by these outbreaks of persecution in Russia, and will here [the US] show a great advance on account of it." The piece went on to note that the Jews of the Russian ghettos, in particular those of Kiev, had organized armed defence leagues for instant mobilization to combat future outbreaks of violence.

Following the Kishinev program Plehve, the Russian Foreign Minister, sent an extraordinary letter to Herzl which urged Zionism to "return to its programme of action", meaning Palestine, and in effect accused the Movement of stirring up nationalist or separatist feeling among the Russian Jews. The intimidating missive

closed with mention of recent measures that his government had taken to "enlarge the rights of [Jewish] residence", asserting that they "will serve to ameliorate the condition of Russian Jews, especially if emigration diminishes their number".¹¹

Plehve's equation was preposterous and cruel because the Turks had long since placed strict limits on the number of Jews who could settle in Palestine. A few weeks after the Sixth Zionist Congress (August 23rd, 1903) Plehve issued an order prohibiting public meetings by Jews, the collecting of money for the Jewish National Fund and in general forbidding all Zionist activity, even compelling its leaders to pledge to transfer existing funds to the "Odessa Society for helping the Jews in Syria and Palestine".¹²

That Christians who believed the *whole* Bible unfettered by ecclesiastical interpretations continued to adhere undauntedly to the Jewish promises of the Scripture and the nation Israel was poignantly revealed by a portion of a letter printed in *Our Hope* at that time. The writer was Alexander Milowidow, a monk, of the Mackrischza Monastery. He was protesting to the Russian journal *Novosti* against what editorials of the Pan-Slavic *Swjet* and other Russian papers had alleged about the nature of Zionism. The monk asserted:

The *Swjet* forgets the word of God which He spoke through the prophet Amos. There it is plainly written that God will unite all dispersed Jews and will bring back again the nation of Israel to her country, where the devastated cities shall be built up again, etc. We should not only believe this prophecy, but also pray and work for its realization. The adversaries of Zionism do not know what they are doing.¹²

So wrote the obscure but spiritually enlightened monk, a voice crying out in a political wilderness. His plea went unheeded if not unnoticed.

The fall of 1903 found Blackstone resuming again his grueling speaking tours, ranging up and down the east coast from Old Orchard, Maine, to Salem, Virginia. At a Chautauqua assembly,

he became acquainted with the incomparable hymn writer Fanny J. Crosby and no doubt told her of his humble Adams, New York, origins which he shared with Charles Finney.¹³ He spoke again and again in defence of the Jewish State, supporting his arguments with painstaking Scriptural documentation. At the beginning of 1904 his wife's health failed and between lecture tours he spent three trying years faithfully looking after her until a final illness took her away from him in July, 1908.

In June of the following year William Blackstone sailed to China as a representative of the Distribution Fund, an affiliate of the Bible House of Los Angeles. It was a case of a father following in the footsteps of a son. For "after years of rebellion" Harry Blackstone had sailed from San Francisco to China, some three and a half years prior to the departure of his father, settling first in Kuling, Nanchang, and ultimately Nanking. The father settled in Nanking, engaging in both missionary and relief activities. But he would not neglect Israel; his letterhead had imprinted *Object: Distribution of the Scriptures to Israel and the Chinese*. Until his return to the States in July, 1914, the elder Blackstone would travel incessantly over vast reaches of China, Manchuria, India and Korea co-ordinating the various works of the Fund.

Some months before Sarajevo, Blackstone foresaw that a great conflagration was imminent. While Hechler was making a bee-line from Athens to Berlin, Blackstone was steaming back to the States, via Europe, his Asiatic missionary days over at the age of 73. But in spite of frequent bouts with his weak lungs, he was bursting with energy and anxiety for the western nations opposing Germany and the Central Powers. Like Hechler he saw the danger of the Jews being caught between the upper and nether grindstones; he was even more convinced, however, that the War would also effect the final disintegration of the Ottoman Empire thus fulfilling the long cherished Zionist objectives in Palestine — provided the United States act on behalf of the Jews. Indeed, had not Prime Minister Asquith told the House of Commons on November 9th, 1914, "It is the Ottoman Empire and not we who have rung the death-knell of Ottoman Dominion, not only in Europe but in Asia" in reference to the Turks siding with the Central Powers

instead of their old protectors ?

When the War broke out Blackstone began a four year correspondence with President Wilson and members of his staff. The earliest known of these letters is dated November 4th, 1914. In it WEB expresses concern for the survival of the British Empire whose failure to suppress more completely the opium trade in Hong Kong disturbed him. But in the letter he also refers to "the coming redemption of Israel" to its land. He asks Wilson "Is it not remarkable to see how the benign activity of our Department of State, since the incumbency of Secretary Blaine, in behalf of the Jews of the world, trends toward the possible accomplishment of this great event, so prominent in the Word of God?" Attached to the letter was a copy of *Jesus is Coming* which he begged the President, the son of a Presbyterian clergyman and a known believer in the Bible, to read for information concerning Israel's prophesied Redemption. On November 10th, the President thanked Blackstone for his book through his personal secretary, Mr. Tumulty.

Blackstone and Balfour

On April 5th, 1916, Blackstone sent a note to the President enclosing his brochure *The Times of the Gentiles and the War in the Light of Prophecy* which predicted a return of the Jews to Palestine in 1917 or 1918. While no sample of the Wilson brochure survives it is believed to have been of similar structure to an article that WEB wrote for the *Sunday School Times* some years later.¹⁴ The calculations espoused in the paper reflect the unmistakable influence of H. Grattan Guinness, the English expositor whose calculations were seen to have influenced William Henry Hechler.

During the first months of 1916 Nathan Straus, a younger brother of Oscar Straus, 1891 Memorial signator and US Ambassador to Turkey, became deeply interested in Blackstone's work on behalf of the Jews. It was at the instigation of Nathan Straus, probably Blackstone's most uncompromisingly ardent admirer, that the Memorial was revived in May, 1916, for the final time, a

revival that included at least two private presentations by Zionist representatives to President Wilson and its adoption by several denominational and ministerial conferences. But for reasons not yet completely understood, all through 1916 and 1917, and even to the end of the War, the planned public presentation to the President was repeatedly postponed by Blackstone at the suggestion of the Zionists whose chief spokesman was Supreme Court Justice Louis D. Brandeis, chairman of the Provisional Executive Committee for General Zionist Affairs. Among the many and complex factors that robbed Blackstone of the White House reception he enjoyed in 1891 were the intricacies of Zionist negotiations in England for rights in Palestine, the hesitancy of the President burdened by pressures to get the United States into the war, and Blackstone's delicate health which worsened during the latter half of 1916.

The Memorial to President Wilson, dated May 5th, 1916, attached the original 1891 Memorial with its 413 signatures. Like the earlier one it commenced with a statement respecting the sanctity of Russia following the opening "Whereas the civilized world seeks some feasible method of relieving the persecuted Jews . . ." but goes on to aver, after three more paragraphs, that:

Whereas the environment of the Jews is so fraught with alarming danger in many quarters of the world that humanity and the Golden Rule demand speedy action, and

Whereas the Jews, when expelled from Spain, were given an asylum in Turkey and have, since then, until the breaking out of the present unprecedented war, received such comparatively kind treatment in the Sultan's Dominions as to give assurance that some satisfactory arrangement can now be made for their permanent resettlement in Palestine . . .

Now Therefore, we the undersigned, representative individuals, societies, organizations and public officers in the United States, most respectfully commend the Memorial aforesaid . . . to the Honorable Woodrow

Wilson, President of the United States, and the Officers of our Government for consideration of the action therein prayed and such measures as may be deemed wise and best for the permanent relief of the Jews.

The list of signatories attached to the 1916 Memorial was only a fraction of the number attached to the 1891 original,¹⁵ a mystery that was not solved until discovery of additional Blackstone correspondence on the period in 1973. Among the new letters found is one by Nathan Straus who, on May 16th, 1916, advised Blackstone:

I think it would be a good thing to send the Memorial as you propose to President . . . It would be most unwise to draw Mr. Brandeis into the matter now that his appointment to the Supreme Court is pending . . . He read the pamphlet,¹⁶ and I never heard any man praise another's work more than he did yours. In any case, I would not care to have my name connected with the work. Being such an ardent Zionist myself, it would not be helpful to the cause, or to you. The fewer Jewish names appear in the Memorial the more it will appeal to the prominent gentiles.

In March, 1973, the original of another letter by Straus, dated May 8th, 1916, and originally published together with Oscar Straus's letter of March 6th, 1891 (also recently discovered) in the June 23rd, 1916, issue of the *American Hebrew*, came to light in California. It reads:

I am just in receipt of your esteemed favor of May 1st. I need not tell you that I am always glad to hear from you, and the work you have undertaken has my heartiest appreciation and approval.

Mr. Brandeis is perfectly infatuated with the work that you have done along the lines of Zionism. It would have done your heart good to have heard him assert what a valuable contribution to the cause your document is. *In fact he agrees with me that you are the father of Zionism, as your work antedates Herzl* [italics added].

I want to assure you again most heartily that the work you have done and are doing is highly appreciated by

people everywhere who believe in fair play.

May, 1916, was hardly the most propitious month in which to attempt to capture the undivided attention of the public and the President for the Blackstone Memorial. For in that month the ferocious battle of Verdun, which had been raging since late February, piling up casualties unprecedented in warfare, was reaching its climax. The May 22nd *New York Times* reported 300,000 Germans lost; before the five month battle died away it was estimated that the French and Germans together suffered some 600,000 casualties.

Still the Zionists not only made the news that month, but managed to provoke a controversy that would have caused a man of more acute perception than Woodrow Wilson *acute* embarrassment. On May 20th, the then recently resigned US Ambassador to Turkey, financier Henry Morgenthau, Jr., made a speech in Cincinnati in which he hinted that Turkey should consider the sale of Palestine — he did not say specifically to whom — as a means of paying off its huge international debt. The idea was one that went back at least to the 1870's and enjoyed at one time or another the support of such Christian Zionists as Edward Cazalet, Sir Laurence Oliphant, William Hechler and even Blackstone himself who wrote in 1891 that the Jews might be willing and certainly were able to purchase the whole Palestine region.

But the Morgenthau speech, coming as it did when both England and the United States were casting about for diplomatic means to entice Turkey to retire from the conflict, aroused the Turk's antipathy¹⁷ and made Zionism more suspect than ever to them. However, assimilationist Jews and others also voiced criticism of the speech and on May 22nd, in Chicago, Morgenthau had to improvise a rather ingenious (but not too convincing) explanation of what he had intended by his remarks of the previous eve. "What I said was that Christians and Jews jointly should unite in the purchase of this sacred land . . . once purchased Palestine should be turned back into a small free Republic or an international park; in whose government the Christian nations of the world would participate."¹⁸ In June, 1917, following the entry

of the United States into the war, President Wilson sent Morgenthau upon a secret mission to Turkey, the purpose of which was apparently to sound out the Ottomans on their price for retiring from the War. But it seems that Morgenthau had only the haziest idea of the feasibility of such a scheme. An alarmed Weizmann (learning of his mission through the Zionist apparatus) headed Morgenthau off during his stop at Gibraltar and talked him out of proceeding any further. Instead Morgenthau detoured to France to await the arrival of the first American military advisors. It is obvious that Weizmann, on behalf of the British Zionists, feared that such a scheme as Morgenthau's could only upset their delicate negotiations with the British Government. What the British also knew was that Palestine could only be wrested away from the Ottomans by force of arms; indeed, it took the forceful General Allenby and a large Allied army more than a year to effect Palestine's liberation, the Turks capitulating only on October 31st, 1918, just twelve days before the Armistice on the Western Front.

In late June, 1916, WEB received a personal invitation from Justice Brandeis¹⁹ to address the Zionist Congress to be held at Philadelphia, July 2nd - 5th, 1916. There, according to one source, Blackstone was acclaimed amidst the assembly the 'Father of Zionism'.²⁰ Later in July, Blackstone wrote to Nathan Straus, a faithful correspondent, acceding to the latter's recent request that he postpone for "a few weeks" arranging the public presentation of his Memorial at the White House.

This was to be the first of many such postponements.

Although disappointed, Blackstone worked through the summer months attempting to convince leaders both in and outside the church that they should sign the Memorial. He found initial support from the Federal Council of the Churches of Christ of America in Washington, DC. For several months it appeared that the Council might even form a special committee which would sponsor the White House presentation. However, on November 24th, the Council's Associate Secretary, H. K. Carroll, informed Blackstone that certain of the Washington office's Advisory Council objected to the Memorial's second goal, restoring the Jews to

Palestine. Three days later he wrote that the presentation had been rejected, citing the fact that Dr. Roberts had already sent the petition, as adopted by the General Presbyterian Assembly, to the President. This is somewhat strange reasoning, for Carroll had signed the Memorial as Secretary of the Washington headquarters and the New York branch of the Federal Council had also been a signatory. Therefore, the real motive for the ultimate rejection of a public presentation by the Federal Council appears to have been *interdenominational jealousy and anti-Zionism*. Blackstone tried until December to persuade the Council to change its mind — to no avail. It was a bitter blow for him. As late as November 17th, finding that the President had returned to Washington from the rest following his re-election triumph over Hughes, Blackstone had written to Wilson apologizing that his illness would prevent him from making the long train trip from California to be at the forthcoming White House presentation by the Federal Council.

In February, 1917, Blackstone expressed his confidence in the work of the Zionists by way of making a no strings attached \$5,000 donation to their Emergency Fund for the relief of Jewish refugees. In his reply of February 21st, which warmly acknowledged the contribution, Justice Brandeis closed by saying that Dr. Wise and his associates were “merely holding back its [the Memorial’s] presentation until such time as they believe he will be free to give his mind to this special issue.”

Stephen S. Wise, the well known and eloquent Rabbi of the Free Synagogue in New York, had been one of the original committee that formed the Provisional Executive Committee for General Zionist Affairs (the Brandeis committee) and the Rabbi served also as the Committee vice-chairman. In the following months, Rabbi Wise would write frequently to Blackstone in the capacity of co-ordinator for Brandeis, faithfully corresponding with WEB on a number of Jewish related matters as well.

While, as earlier stated, the exact motives for the US Zionist Committee’s repeated postponement of the public presentation of the Blackstone Memorial, month by month, may never be

completely unravelled, there is little doubt that the vagaries of the Zionist situation in England had considerable influence on their decision. For in early 1917 the British Zionists received a serious (but fortunately only temporary) setback in the form of powerful opposition from various Jewish quarters. An open letter from the Jewish spokesmen, carried in the May 24th, 1917, *London Times*, vigorously attacked the whole scheme of a Palestinian Jewish settlement, the anti-Zionist sentiment suddenly finding a powerful ally in the Jewish Secretary of State for India, Edwin Samuel Montagu.²¹

The sudden, but long awaited, collapse of the Romanov Dynasty in Russia on March 15th constituted a severe blow to the Allied cause and introduced another element of doubt into the Zionist negotiations and their outcome. Although Russia continued to fight on sporadically against Germany another year, before the Treaty of Brest-Litovsk removed the new Soviet regime from the conflict, both Turkey and the Central Powers no longer had anything to fear from Russian arms following the Czar's abdication, so successful was Soviet infiltration and agitation among the officers and soldiers at the fighting fronts.

The Russian crisis proved to be the key to President Wilson's agonizing decision to bring the United States into the conflict in April. It was obviously no time for the Zionists to signal Blackstone to push for the long postponed public presentation of the Memorial. Moreover, on May 23rd, 1917, Robert Speer of the Board of Foreign Missions of the Presbyterian Church in the USA informed WEB that "Justice Brandeis had seen President Wilson with regard to the Memorial, and that the desirability of making some changes in it had been suggested." On June 1st, Bishop Bashford, Methodist Bishop to China, wrote to Blackstone from New York confirming that Wilson wanted "slight changes". Specifically, Bashford related, Wilson wanted the Memorial to drop the request to place Palestine (or the New Zion Commonwealth) under "international control and leave the control undisputed." Then, he averred, the President would "consent to give us an open hearing and make a reply for presentation which probably will be favorable . . . in late June or July."

This letter reveals the remarkable extent of the influence that Brandeis had on the President; for the request for a change to “undisputed control” undoubtedly reflected progress in the constant stream of communications that Brandeis received by cable from Chaim Weizmann.²²

Several times in 1916 Blackstone had made clear in letters to Jacob de Haas and Louis Brandeis that he was willing to defer to their judgment on the timing of the public presentation of the Memorial. Still, he must have been surprised to receive from Rabbi Wise a letter, dated June 30th, 1917, which began:

I had the honor of presenting in *informal fashion* [italics added] to the President at the White House yesterday, a copy of your petition. The President accepted it, *but he felt in agreement with Justice Brandeis that this was not the best time for the public or even the private presentation thereof* [italics added]. I think I have the right to say that the President is prepared to leave to Justice Brandeis the decision with respect to the most opportune time in which formally to present the petition to him. *We must therefore wait on events* [italics added], and you will agree with me in permitting our friend and leader, Justice Brandeis, to decide what is the most favorable hour in which to offer to the President the notable petition which you have made possible.

Wise's frank communication left no doubt then that Brandeis was in control of the situation and that the ‘events’ that he was waiting upon were the negotiations in England for the Balfour Declaration favoring a Jewish national home in Palestine. If Blackstone was then yet aware of the fact that he was being gently manipulated he does not show a trace of it in any of his voluminous correspondence from the period. Indeed he might have learned also of the informal presentation some days sooner had his health enabled him to take up Jacob de Haas's invitation to attend the June 27th – 28th Zionist Convention at Baltimore.

A mystery that remains from the revelation of Rabbi Wise is precisely why Wilson (or Brandeis) would object even to a private presentation by Blackstone of his Memorial in view of the

fact that the President had already received in private the same document from various church groups a full year before. A little light is thrown on the matter from a note that WEB sent to Bishop Bashford on July 2nd, acknowledging the latter's recent card informing him that Brandeis would present the Memorial to the Secretary of State, instead of making a public presentation to President Wilson.

In his July 2nd reply, Blackstone informed the Bishop that he approved of this strategy, "presuming that Judge Brandeis has good reason for this". Another ray of light is thrown over the paradox from another Bashford communication to Blackstone (July 2nd). Referring to Wilson's predilection for hesitation and vacillation he states "at times he seems to want the public hearing and at other times he requests it to be postponed."

On July 9th, a weary and most probably completely bewildered Blackstone confessed to Bashford, "From all of this it seems to be God's providence that the time for the presentation of the Memorial, at least in the public manner, should be decided by Justice Brandeis . . . and hence, we will await Justice Brandeis' action in the matter."

As it was to turn out, Blackstone was to wait on and on until the Allied Armies had swept Palestine clean of the Turks, which did not occur until ten months after the public announcement of the Balfour Declaration, and still the American Zionists were advising him to postpone the public presentation.²³

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On less information on Blackstone's dealings with the Zionists than is now available, in 1971 the *Encyclopedia Judaica* (vol. 4, p. 1,969) offered that the 1916 Blackstone Memorial ". . . may have influenced his (Wilson's) attitude to the Balfour Declaration" which was announced to the world on November 2nd, 1917; and historian Kobler mentions that "in the last stages of the campaign,

help came from non-Jewish quarters. Letters of sympathy and support were received from President Wilson in the USA and from Monsieur J. Cambon of the French Foreign Office. Indeed, in those days, men in many lands were stirred by the spirit of Cyrus.”²⁴

Balfour Declaration

Five weeks after publication of the Balfour Declaration, General Allenby made a penetration of the Turkish defence line that hinged on Beersheva-Gaza and entered a Jerusalem freshly evacuated by the Turks. In Allenby's army of 160 nationalities there fought bravely a Jewish brigade attached to a Royal Scottish regiment, the Jewish soldiers distinguishable by the Star of David sewn on their tunics. With Allenby's formal entry into Jerusalem on December 9th, 1917, 400 years of Turkish occupation of the Holy City officially terminated. Some forty years prior, strange to say, H. Grattan Guinness had published the year 1917 as the termination date of Turkish rule (which continued in northern Palestine until September, 1918).

The Balfour Declaration, though watered down by compromise, was still an astonishing document. It read as follows:

His Majesty's Government, after considering the aims of the Zionist Organization, accept the principle of recognizing Palestine as the National Home of the Jewish people and the right of the Jewish people to build up its national life in Palestine under a protection to be established at the conclusion of the peace . . .

His Majesty's Government regard as essential for the realization of this principle the grant of internal autonomy to the Jewish nationality in Palestine, freedom of immigration for Jews, and the establishment of a Jewish National Colonizing Corporation for the *re-establishment* and economic development of the country.

The conditions and forms of the internal autonomy and a Charter for the Jewish National Colonizing Corporation should, in the view of His Majesty's Government, be

elaborated in detail and determined with the representatives of the Zionist Organization.

Key phrases of the document generated much discussion among parties that were pro-Arab or simply anti-Zionist. Ironically, few seemed concerned with the inclusion of the word "re-establishment". However, the recognition of the prior Jewish history in *Eretz Yisrael* constituted in many eyes a most powerful moral claim, one which Blackstone in his writings of a quarter of a century before insisted even gave the Zionists a legal claim to the land.

The elation of the American Zionists was every bit as keen as that of their British counterparts. Blackstone was invited to address the Zionist mass meeting held in Los Angeles (January 27th, 1918) where he asked the audience of Jews and Christians: "Why am I an advocate of Zionism . . . for over thirty years?" answering, ". . . because I believe that true Zionism is founded on the plan, purpose and fiat of the ever-living and omnipotent God, as prophetically recorded in his Holy Word, the Bible."²⁵ After quoting several Old Testament verses he added: "Numerous other prophetic passages . . . confirm the divine promise that Israel shall yet inhabit their home in Palestine in perfect peace and security. How then can I, as a true Christian, be anything else than a true Zionist?"

As the World War was still more than nine months from its conclusion Blackstone lamented:

. . . it seems as though sorrow had reached its greatest depths today, as we see hundreds of thousands of Jews fighting each other in the ghastly trenches of Europe and Asia. But this is only the beginning and there would be no hope except for those last words of prophecy, "But he shall be delivered out of it."²⁶

This was a reference to the awesome Jewish Tribulation long known to expositors as the 'Time of Jacob's Trouble' (Jeremiah 30: 6-8), a time that most interpreters of the Bible believe is yet to come in the affairs of Israel.

Final Labours

The Balfour Declaration and the establishment of the Weizmann Commission did not end Blackstone's usefulness to the Zionist Movement. On December 19th, 1919, he received a telegram from Jacob de Haas which read: "Please mail by return or direct us to New Yorker holding your list of signatories to your nineteen seventeen petition we need to raise ten million dollars for Palestinian work." Formerly Secretary of Brandeis' Provisional Executive Committee for General Zionist Affairs, de Haas was then Secretary of the Palestine Development Council. Like Nathan Straus, he was to maintain an appreciative correspondence with Blackstone until well into the 1920's.

In the years immediately following the end of the World War, Blackstone took up the cudgels once again for Jewry and Zionism, combatting in vigorous letters Henry Ford and his associate the editor of *The Independent*, a newspaper of Dearborn, Michigan, that parroted Henry Ford's fantastic anti-semitic theories which included the thoroughly discredited "Protocols of the Elders of Zion". Ever vigilant to warn pastors of unscriptural views of the Jews, Blackstone also wrote (April 19th, 1921) a letter to Rev. Samuel W. Purvis of Philadelphia, taking exception to Purvis's article in *Pipp's Weekly*, "The Romance of the Jews", in which he stated "America is the Jew's Palestine and Washington, D.C., his Zion."

Blackstone was then 80 years old. He lived long enough to see Adolf Hitler consolidate power and initiate massive discriminations and persecutions of the Jews. When the great millenarian Zionist died, on November 7th, 1935, at the age of 94, he had also lived long enough to witness the rapid build-up of the Jewish community in Palestine which came about after 1930 from the refugees fleeing the insane German policies.

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Postscript

There is no evidence that William Blackstone ever met William Hechler. Yet quite remarkable are the similarities in their respective careers of advocacy of the return of Israel to Palestine. Early in their ministerial work each had performed services of one kind of another to Black Africa. Each was profoundly influenced by the Biblical prophecies applying to the Final Return of the Jews and in particular by the prophetic numbers of Daniel and Revelation which pointed to the years 1897-98 and 1917 as significant benchmarks in the re-establishment of the State of Israel.

Both men believed in the sponsorship by Great Powers of the Jewish acquisition and settlement of Palestine. But they hoped that such a sponsorship would be inspired by Christian compassion — the doctrine of the Sermon on the Mount — and not by purely political motives. Each man dedicated the last half of his life — forty to forty-five years — in the pursuit of demonstrating a Christian heart's love for the advancement of Israel. Finally, each demonstrated the genuine humility that can only spring and sustain itself from a spirit of genuine sacrifice:

In October, 1920, Blackstone wrote: "Yes, I would be willing to perish this minute and be ground to powder if thereby I could help Israel to see and believe the truth as it is recorded in their own prophetic word."²⁷ And the eulogy that Hechler wrote on behalf of Herzl, in 1929, began with: "It was God's will that I should help my dear friend Dr. Theodor Herzl" and ended with "God bless you all. The eighty-three-year-old pilgrim from the earthly to the heavenly."²⁸

While Hechler's indefatigable efforts in Germany on behalf of Herzl bore limited fruit, the prior publicity and prestige that the Zionist Movement gained by his introductions and audiences proved to be invaluable when Zionist hopes eventually became focused upon England.

Of particular significance today is the recognition and emphasis given by Israel to the Biblical motivations of Hechler and the

latter's reception by statesmen whose interest was spurred on by their own Biblical prophetic interest and convictions.

Alexander Bein, Herzl biographer and chief State Archivist of Israel, wrote in 1961 concerning the Hechler-inspired correspondence and actions of the German princes: "The intermingling here, of Christian calculations of the end of days, the second advent, and the return of Israel to the Holy Land, is to our minds astonishing . . . From the letters we see that it was this religious approach . . . that appealed most to the Duke. It was upon this basis that there developed between the Grand Duke and Herzl a relationship, which ascended into the lofty spheres of universal benevolence, to which it returned after every political setback. Because of his status as a quasi-prophetic messenger Hechler could intervene again and again even when Herzl, because of his pride and his desire not to be regarded as a troublesome Jew, hesitated to do so."²⁹

A tribute to Blackstone's historic contribution to the Zionist Movement was the acceptance by the Jewish National Fund of a subscription raised by American Jews and Christians for the planting of the Blackstone Forest, dedicated in Israel in 1961, the year Bein wrote his eloquent appraisal of Hechler's contribution. However, perhaps the greatest tribute accorded to Blackstone's influence comes from the pen of the historian Oscar Handlin: "The ten years after 1890 were not only free of anti-semitism, they were actually marked by distinct philo-semitism."³⁰ Thus in that last decade of the nineteenth century did the tree of world political Zionism, liberally watered by Christian compassion and constructive action, take firm root until eventually it became as unshakable as a cedar of Lebanon. Blackstone and Hechler died firmly convinced in their minds that one day ". . . the Lord will inherit Judah as his portion in the holy land, and will again choose Jerusalem" (Zechariah 2: 12) and that all nations would one day honor the God of Israel and find peace administered in perfect justice from the Holy City (Zechariah 14: 16).

REFERENCES AND NOTES

1. Meites, *History of the Jews of Chicago*, p. 167. In England the Choveve Zion societies were the platform for the first public discussions between Jewish and Christian Restorationists, according to Franz Kobler (*The Vision was There*) (London, 1956, p. 103-04).
2. Weisgal, Meyer, edit. *Theodor Herzl: A Memorial*, 1929, p. 223. Feinstein (American Zionism 1884-1904) claims that the Baltimore Zionists dispatched Shepsel Schaeffer to Basle where he was recognised as "America's sole delegate" which appears to contradict Schulman's claim for Zolotkoff.
3. WEB, "May the United States Intercede for the Jews" (*Our Day*, v. 8, October, 1891, p. 242-43). At the suggestion of Nathan Straus, who personally bore the cost, this article was reproduced together with the 1891 Memorial in a special booklet which Straus distributed via the Provisional Executive Committee for General Zionist Affairs throughout 1916 at the time that the Balfour Declaration principles were being discussed in England.
4. Beth Lindberg, *A God-Filled Life, The Story of William Eugene Blackstone*, Chicago (pamphlet, n.d.).
5. Rabbi Hirsch did not endear himself to the Zionists. As early as October 19th, 1892, Adam Rosenberg, the New York Choveve Zion society official, could write to Blackstone that "Dr. Hirsch is known to me as an ultra radical Jewish minister. A pamphlet of his on the heathenish origin of the Sabbath was published . . . by the way of a plagiarism from some German scholar."
6. *Feinstein*, p. 277.
7. *Feinstein*, pp. 242, 286.
8. Unpublished research paper by Sandra Keck, Chicago, December, 1972.
9. All of his personal papers left in 1914 at Nanking with his missionary son were burned along with his house by Chang Kai-shek's nationalists in 1927 as they swept north. Novelist Pearl Buck was forced, with her family, to hide from the soldiers who found and burned the manuscript of one of her earliest novels. For 24 hours the soldiers were ordered to search diligently for all foreigners in the city. Miss Buck never attempted to reconstruct the novel. ("The Mission of Pearl S. Buck, *Chicago Daily News*, March 7th, 1973).
10. Perhaps even truer today than in 1903. There are estimated to be 3 million Jews in Russia, slightly more than in the State of Israel in 1973, though Russian Jewry is diminishing now through migration, mostly to Israel.
11. *Our Hope* (Vol. X, No. 4, October, 1903), p. 276-77.
12. *Our Hope* (Vol. X, No. 1, January, 1904), p. 460.
13. The Federal Census of 1850 shows that WEB was the son of a 'tinner' or tinsmith. He was a direct descendant of William Blackstone the long immortalized first resident of Boston (1629) and Sir William Blackstone (1723-1780), the English jurist.
14. *Jews Past Present and Future*. The brochure, following Guinness's rationale, measures the so-called 'times of the gentiles' employing a cypher of 7 x 360 (lunisolar) years based upon the verses, Numbers 14: 34, Leviticus 26: 18 and Daniel 4: 16. Assuming a beginning date of 604 or 603 B.C. the addition of 2520 years produced (p. 46) an end date of 1917 or 1918, allowing for the omission of a year to correct the B.C.-A.D. fiction of "0" B.C. Whether this was the intention of the Scripture or only a coincidence cannot be proven. But 1917 witnessed the fall of Jerusalem and the Balfour Declaration on behalf of the Jews; while 1918 witnessed the complete evacuation

- of Palestine by the Ottomans and the start of the British and Jewish co-operative administration until the League Mandate was ratified at San Remo in 1922. The influence the Guinness calculations may have had on high governmental officials both in England and the United States cannot be completely ignored or overlooked.
15. Among the prominent signers of the 1916 Memorial were Andrew D. White, President of Cornell University, Newton W. Thompson, Acting Governor of California, John Wanamaker, and Judah L. Magnes, Chairman of the *Kehillah* (Jewish Community) of New York. It was also signed by several bishops and the rabbi Solomon Hecht and Isadore Myers of Los Angeles. Dr. Magnes later became the first president of the Hebrew University, Jerusalem.
 16. Straus persuaded Blackstone to produce a special booklet (*Palestine for the Jews*) which contained the 1891 and 1916 Memorials together with WEB's 1891 article from *Our Day*. On May 23rd, 1916, Straus remitted to WEB payment for 1,000 of these booklets for his own distribution.
 17. May 21st, 1916, *New York Times*.
 18. Adler, Joseph, "The Morgenthau Mission of 1917" in the *Herzl Yearbook*, vol. 5, p. 258.
 19. Letter of June 23rd, 1916. Louis D. Brandeis (1856-1941), chairman of the Provisional Executive Committee for General Zionist Affairs from its inception in August, 1914, was a Boston lawyer converted to Zionism by Jacob de Haas in 1911 or 1912. Brandeis was Chaim Weizmann's principal American contact and apparently had, along with fellow Justice Felix Frankfurter, also a Zionist, considerable influence with President Wilson.
 20. Beth Lindberg, *A God-Filled Life, the Story of William Eugene Blackstone*, Chicago, n.d.
 21. Kobler, *The Vision was There . . .* p. 122. Kobler relates that pro-Zionist forces within and without the Cabinet then rallied and "some 250 Jewish institutions, communities and organizations all over the country rallied in favor of a National Home for the Jewish People."
 22. In June, Weizmann received from Brandeis a cable informing him about the U.S. (Morgenthau) mission to the Near East whose aim was to detach Turkey from the Central Powers (Weizmann, *Trial and Error*, v. 1, 1949, p. 195. See also pp. 203-208).
 23. On June 15th, 1918, we find WEB writing to Brandeis and asking if it is yet the "auspicious time" to present the Memorial to Wilson. And on September 17th, 1918, Rabbi Wise wrote to WEB informing him of Wilson's public expression of sympathy of the work of the Weizmann Committee on Palestine, adding "The petition which you prepared was in my hands when I saw the President and I spoke of it to him." The patient Blackstone replied (October 25th, 1918) noting that he was still waiting for the signal to present the petition publicly to Wilson.
 24. Kobler, *The Vision was There . . .* p. 123. President Wilson's message to Rabbi Wise, encouraging the Zionists, was published in the *Sentinel*, September 6th, 1918.
 25. W. E. Blackstone, *Address at the Zionist Mass Meeting, Clune's Auditorium, January 27th, 1918*. (pamphlet).
 26. Jeremiah 30: 6. Earlier in the War, Hechler told a gathering of Jews: ". . . as you have bitterly realized the folly of European politics obliges you to fight each other. This is one more sign pointing to the Promised Land where no one can force the children of Israel to fight each other." (Duvernoy, *Le Prince et Le Prophet*), p. 131.
 27. Lindberg, *A God-Filled Life*, p. 20.

28. Weisgal, edit., *Theodor Herzl, A Memorial*, pp. 51 - 52.
29. *Herzl, Hechler, the Grand Duke of Baden, etc.* (ix, Introduction).
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F. H. CLEOBURY

Subjective Trends In Contemporary Theology

Much modern theology has become subjective to the point of absurdity : God is variously identified with our idea of God, with feeling or with depth of experience. As a result natural theology, which assumes God as an object of thought, is suspect. In this article Dr. Cleobury, writing as a philosopher, seeks to bring wayward theologians back to a sense of responsibility, reality and common sense.

Anyone acquainted with the history of theology in the 19th and 20th centuries will be aware of the great influence of the philosophy of Kant on a succession of German theologians. This influence was not confined to one school ; it extended to writers as diverse as Schleiermacher, Ritschl, Barth, Br nner and Tillich. I shall not attempt here a general discussion of this ; I must confine myself to some assumptions in which the hand of Kant can be seen. To what extent that very great thinker would have agreed with them does not concern me here. It *is*, however, my concern to show their falsity. The propositions I shall examine and reject are the following :-

1. There is a clear-cut distinction between the way in which we arrive at beliefs about the physical universe and the way in which we arrive at beliefs about our 'inner' lives.

2. Our beliefs about God are connected exclusively with this 'inner' experience. (I use the vague expression "connected with" because these theologians have differed widely in the way in which they have traced the emergence of God-awareness from self-awareness.)

3. True beliefs about the physical universe may rightly be called 'knowledge'. This is because these beliefs have *objects*, i.e. objects-of-knowledge, whether these are physical objects or physical facts. Beliefs about our inner experience, and therefore beliefs about God, have no objects, since they are concerned exclusively with cognising *subjects*. Theological discussion takes place entirely in this realm of 'subjectivity'.

4. These two realms, the inner and the outer, are distinguished by the fact that we can find words to describe directly the objects of our outer *knowledge*, but can use words only in an indirect way, e.g. symbols, metaphors, evocative language, and so on, when we try to talk about our inner experience and about God.

5. The way in which we arrive at scientific knowledge of the physical universe is to trace the mechanical laws by which it works as a 'closed' system. Science has largely accomplished this task, and we do not need, therefore, to 'bring God in' in order to complete the process of explanation. (The attempt to do this is usually referred to pejoratively — as regarding God as "the God of the gaps".)

These five propositions are obviously closely inter-related. I shall not, therefore, try to deal with them in order, one by one, but shall discuss the reasoning which led to them.

The event which we call 'knowledge' is one in which a subject, indicated by a personal pronoun, cognises an object. The verb 'cognises' covers perception, in which case the object is a physical object, and also thinking, or mentally judging, in general, in which case popular language refers to the object in a large variety of ways — e.g. 'fact', 'proposition', 'the objective situation', and so on. Popular language subsumes perception under knowledge, by substituting "We know that trees exist"

for "We perceive trees".

It would be generally agreed that a cow can perceive a tree, but that it is incapable of saying to itself, or even thinking to itself "I perceive this tree", still less "I know that I am perceiving this tree." In other words, a tree can be an object to an animal, but itself as a cognising subject — an "I" — cannot be an object to itself. A cow, that is to say, is aware of a tree but is not explicitly aware of itself as a cognising subject. But a mature human being *is* aware of himself as a cognising subject. (One could here raise the question of how we can possibly know what goes on in the minds of other conscious beings, but that would deflect me from the point before us. Suffice to say that most of us would justify such knowledge by analogical arguments. But in any case we all actually *do* assume that we have *some* knowledge of other people's thoughts. If we did not, conversation would be absurd.)

We can now consider the third proposition, and in particular the statement "Beliefs about our inner experience . . . have no objects, since they are concerned exclusively with cognising subjects." It is important to realise exactly what is meant by those who deny that a mature human being, when he is aware of himself as a cognising subject, has himself-as-cognising-subject as an object. They are not denying that when he thinks of himself as a *physical organism* he can be an object of his knowledge. What they are denying is that that cognising subject, to whom his own body is as truly an object as is the moon, can be an object to himself. They claim that he is aware of himself as a cognising subject but that this awareness is not awareness of an *object*, and cannot therefore be called knowledge. I shall contend that even as cognising subjects we are objects to ourselves, and that we can have *knowledge* of our inner states.

This is no mere matter of splitting hairs, as we shall see. The only reason I can think of for its appearing obvious that the cognising subject cannot have itself as an object of knowledge is that one is relying on a spatialised mental picture. If one symbolises the subject-object relation by an S on the left-hand

side of the page and a lot of O's on the right-hand side, with a good space between, then the subject can never be object. But there is no reason to suppose that this picture, or any spatial picture, is adequate. A cardinal sin, in metaphysics, is to argue from mental pictures. The subject-object relation is admittedly unique; no other relation is completely analogous. One of its defining characteristics — part of its *differentia*, as the logicians say, — is that in the case of mature human beings the cognising subject is object to itself. I do not mean that we can easily state in words all that we are aware of in our inner lives; I merely mean that when we *do* make statements on the basis of our inner experiences, the nouns stand for thought-objects exactly as they do when we make statements about the physical world. This applies, too, to the pronoun "I", even when it is followed by a verb of cognition such as "know".

I am not unaware of Hume's attempt to deny that there *is* any cognising self. He was completely answered by Kant. Professor H. J. Paton,¹ one of the greatest of modern Kantian scholars, remarks that Kant's reply to Hume has been "not so much rejected as ignored by modern empiricists", and he adds that Kant's argument for the subject-self appears to him sound, and, if sound, obviously important.

Proposition 3 states that not only is the cognising subject not an object to itself, but that our inner experience is not an *object of knowledge*. With this I disagree. The affirmation in which I refer a sense-datum to the outer world, and say "This apple is green", is logically co-ordinate with the affirmation in which I refer an emotion to myself, and say "I am angry". Indeed, the very distinction of subject from object is logically co-ordinate with the distinction between north from south or circle-centre from circle-circumference.

The canons of reasoning, revealed in the study of logic, apply to the "inner" realm in the way that they apply to the material world. Consider the paradigms of syllogistic reasoning. For example, "All M is P; some S is M; therefore some S is P." The variables can be given either physical or psychological values;

for example “All acids contain hydrogen ; some of these liquids are acids ; therefore some of these liquids contain hydrogen.” “All sad experiences can be outlived ; this is a sad experience ; therefore it can be outlived.” Similarly with relational inferences — say a transitive relation. “Lead is heavier than iron ; iron is heavier than wood ; therefore lead is heavier than wood.” “Love is better than indifference ; indifference is better than hatred ; therefore love is better than hatred.” These are obvious and trivial instances, but they serve to illustrate the point that the canons of reasoning apply equally to the physical and to ‘inner’ discourse.

Propositions 1 to 3 must, therefore, be rejected. Human reason operates on inner experience in much the same way as on the outer world, and in both cases we have objects-of-thought. There is no sound reason, therefore, for limiting theological discourse to the alleged realm of ‘pure subjectivity’, especially when we realise that proposition 5 is also false. With regard to this last, it never has been proved, and it never will be proved, that the physical universe is a ‘closed’ mechanical system. For one thing, inductive reasoning can be taken as valid only if we assume as true a principle of induction which itself is incapable of proof.² For another, no crucial experiment or series of experiments could, in the nature of things, be devised to demonstrate that our sense of freedom of choice is illusory. (I have dealt with this fully in chapter 9 of my book *A Return to Natural Theology*.)³

With regard to proposition 4, 20th century philosophical analysis and theoretical physics have considerably blurred the sharpness of the alleged distinction between the outer and the inner realm in the matter of describability in words. The analysts have emphasised that *description* is only one among the functions of language, even where language about the material world is concerned. The positivists have gone further and have proposed to interpret the laws of nature not as categorical description of what goes on ‘out there’ but as hypothetical and inner ; for example, “if I have percept A I can expect percept B to follow”. And the truth of the basic equations of relativity theory and of

quantum mechanics can be tested only by their reliability as guides to the course of perceptual experience. Physical language is "as-if" language, and when we insist — as we must — that in the final analysis true statements must be categorical — must relate to an Object — then that Object must be the Divine Thought. In short, over the *whole* realm of human discourse, not merely in an alleged realm of pure subjectivity, we have to resort to symbols, metaphors and evocative language.

I now come to the task of showing the influence of these propositions on the thought of some of the theologians I have mentioned. I shall not, of course, be denying that our inner states reveal far more important knowledge about God than does the physical world. I merely insist that we do not have to engage in fantastic and unintelligible ways of talking in order to limit God-talk to an alleged realm of pure subjectivity.

Let us begin by noticing a fallacy of which some contemporary theologians can be accused. They have failed to notice the essential difference between saying that beliefs about God are *derived from* experiences A, B and C and saying that talk about God *is really talk about* experiences A, B and C. We must examine this.

First, let us generalise, and ask whether talk about *anything whatsoever* can be said to be *really* talk about our experiences. When we are talking about material objects, or are engaged in the physical sciences, a plausible case can be made out for the view that we are really talking about those of our experiences which we call sense-data or percepts. Broadly speaking, this was the contention of the positivists and of Ernst Mach. (The post-Kantian idealists, F. H. Bradley for example, did not fall into this error, but to explain their position in the matter would interrupt our argument.) But there is one realm of discourse in which no-one makes this claim, for it would land us in solipsism. Statements about a person other than myself are clearly *not* reducible to statements about those of my experiences which witness to his existence. Even if I were to concede that statements about snow were really statements about the sensations white, cold and sparkling, I cannot concede that talk about the Prime Minister

is really talk about how I feel about him. This is because the Prime Minister is not merely a physical organism but a conscious being. It is clear, then, that if we use the word 'God' for someone who, however more He may be, is at least personal, God-talk cannot be exhibited as man-talk. The only person who can consistently reduce God-statements to man-statements is a confessed atheist, e.g. Feuerbach.

Before I apply these general considerations to the theological writings I have in mind, I must call attention to another fallacy to be found in writings of persons hostile to natural theology. Hendrik Kraemer⁴ insists, quite rightly in my view, that Christianity is not merely one religion among others — not one of the fruits of the human spirit — but was born of a Revelation from God in particular historical acts. But he tells us that "for philosophy . . . God can never become anything else than the most comprehensive Idea, the highest thinkable value, the highest object in a system of thinking." Later he sums up Kant's view of the transcendental philosophy as the view that God "is a man-made idea." This he contrasts with the Biblical conception of God as He or It which transcends all being and all Idea as primordial reality, and "not as a hypothesis".

This seems to me quite confused. It is one thing to say "I have an idea, i.e. a certain conception, of God." It would be quite another to say that God *is* my idea or conception of Him. This would be nonsense. To say that I have an idea of God is not necessarily to deny that He is Objective Existent. It would be quite significant — quite valid language — to contrast Barth's idea of God with Bultmann's, and it would be quite irrelevant to reply that Barth did not regard God as an Idea.

Kraemer also affirms that an attempt to make a case for the rationality of the theistic hypothesis has to end in a confession that the final tribunal for the justification and verification of religious faith is "the forum of the individual mind or person" — the personal opinion of a sincere philosopher who has the leisure to rack his brains and exert all his faculties. This is a travesty of the real position. It is no mere question of leisure; people *make*

time to think about what they care about. If we hunger for God as the hart pants after the water-brooks we shall find ourselves engaging in natural theology in the course of a country walk. The natural theologian recognises that his faculties are God-given and assumes that God intends him to use them. He regards the Logos, who was with God and who was God, as the immanent source of human rationality.

There are two ways of reconciling the validity of natural theology with the acceptance of Barth's and Kraemer's thesis that God revealed Himself in particular events in history, as recorded in the Bible. The first is the common-sense view, held by Catholic and Anglican theologians in the past, that rational theology leads us to a point where we realise our essential cognitive limitations and therefore *expect* to find evidence for a historical revelation. The second is the view, which Barth himself favoured, if I am not mistaken, that once the transcendent revelation has been accepted by faith, it supplies us with fresh data for a *deeper* rational theology. These two views are not alternatives; we can accept them both.

* * *

Let us now look at the influence on some well-known theologians of the propositions which I have designated as false.

When Schleiermacher turned from natural theology and sought to derive faith in God from a feeling of dependence he did not, I think, go to the length of saying that God was our feeling of dependence. But Tillich, in one oft-quoted passage, does come very near it. He said that 'depth' is what the word 'God' means; he enlarges on this by speaking of "the depths of your life, of the source of your being, of your ultimate concern, of what you take seriously without any reservation."⁵ Now one of these offered alternatives is different from the others. To define the word 'God' as the source of our being is to offer an intellectual construction, and is quite orthodox. The notions of 'source', 'ground' or 'creator' are metaphysical, and 'God' is clearly an objective Being. But my concerns or my seriousness, and even

my depth, if it means deep experience, are subjective states, and cannot function logically as synonymous with the word 'God'. David Jenkins⁶ tells us that Tillich^{6a} "is trying to describe the 'shape' of faith (what it is like to be a believer) but he is no more prepared than Schleiermacher or Bultmann to allow that faith is basis for, or even has the nature of, *assertions*. That is to say that faith cannot be taken to be about anything in any sense akin to that in which knowledge is about something." Hence Tillich's liking for the passive mood. We are alleged to be aware that "we are accepted" — without saying *by Whom* we are accepted. Jenkins rightly sees that faith has either to go further or to cease.

Let us now come to Bultmann. Jenkins^{6b} defines "existential questions" as questions arising not from empirical experience of the outer world but out of subjective experience. Bultmann, he says, holds that "no amount of data about the world can settle the question of what it means to be me or assuage my concern over what it is like to be me. Indeed, the existential effect of data about the world is to threaten me in my existence, to make me see how much I am at the mercy of chance and how inexorably my existence is under sentence of death . . . The question of existence, therefore, is whether I am simply a determined object in the closed system of the world or whether I am a subject who can be set free from the threatening determinations of the world for freedom and fulfilment as a person with persons."

This existence which sees itself threatened and unfulfilled is labelled by existentialist writers "inauthentic". Authentic existence is the existence of a being who realises himself to be free from the past and open to a future no longer felt to be subject to mechanism or chance.

We need not quarrel with the existentialist's pessimistic, even tragic, diagnosis of the human situation. It is, indeed, a welcome return to realism after the groundless optimism of the so-called Enlightenment. But the Christian must reject the suggestion that the question whether I can have authentic existence *is* the question of "the existence of God as the transcendent existential possibility,

not part of the world as a system, which gives fulfilment to personal living." ^{6c} This identification of God with subjective feeling is apparently, in Bultmann's view, the only way to de-mythologise talk about God. The brief answer to this is that to think of God as active in, and evidenced by, the physical world is not mythology but sound metaphysics. If, and only if, we have faith in God as revealed in Scripture — and finally in Christ — can we have "authentic" existence in the fullest sense of that word. But the God of the Bible is the Creator whose glory the heavens declare. The question that really matters is whether I can *trust* my "subjectivity" — whether my sense of authentic existence is illusory, because it results from a technique of *escape* from reality, or whether, on the contrary the subjective and the objective alike — feeling and knowledge alike — can reveal the God Who is One God, the Creator of heaven as well as of earth.

We now come to Barth. From Jürgen Moltmann ^{7a} one gathers that Barth was influenced by Hermann, who had held that God is revealed only in our subjectivity. I find this hard to follow. How can we talk meaningfully about what goes on in "the non-objectifiable subjectivity of the dark defenceless depths in which we live at the moment of involvement." Moltmann does, however, say that Barth "puts the subjectivity of God in place of the subjectivity of man which Hermann means by 'self'", and he means by this that whereas Hermann starts from self, and has to show (in words which do not have thought-objects!) how we come to subjective awareness of God, Barth insists that "Man asks about his 'self' only because, and if, God is pleased to give him knowledge of his (i.e. God's) Self." The direction of Hermann's mental process (we are forbidden to speak of *reasoning* in this connection) is from self to Self; that of Barth is from Self to self. I do not understand this. As I have tried to show in my published works, there are valid *rational* arguments from human self to Divine Self — arguments in which both these words stand for thought-objects — but I myself have never had, and cannot see how anyone else can have had, an 'immediate' awareness of God. For by "immediate" is meant an experience as yet not interpreted — not yet an assertion. I can coin a *name* for such an experience, but before it issues

in an existential proposition ("this chair exists"; "God exists") there must be an intellectual construction. We have this to bear in mind when we read the language of the mystics about union with God and Barthian language about confrontation by God.

Moltmann^{7b} states definitely that Barth completely re-cast his commentary on *Romans* in the second edition of 1921, one of his reasons being that he was indebted to his brother Heinrich for "better acquaintance with . . . the ideas of Plato and Kant." Moltmann says that "the concept of the self-revelation of God developed by Barth corresponds with Anselm's ontological proof of God as interpreted in his book *Fides quaerens Intellectum* (1930)." ^{7b} It would seem that, far from turning his back on philosophy, Barth was influenced by the line of philosophical thinking which I have summarised in the five propositions from which I started, and which I regard as false. I should be the last to criticise Barth for philosophising; I merely think it a pity that he did not start from sounder philosophy.

It would not, however, be true to say that Barth was a party to what Jenkins^{6d} called "the unholy alliance of Schleiermacher and the scientists (or men of modern culture) to which Bultmann also acceded, in taking it for granted that knowledge has as its objects only that which is or can be the object of science."⁶ For in spite of Barth's philosophy of theism being, as we have noticed, an attempt to see God in our "subjectivity", and in spite of his denial that men can arrive at a conception of God from other human concepts, he nevertheless insisted that the faith awakened in those who have been regenerated by the preaching of the Word is faith in God as Object. He would have been the last theologian to identify God-talk with man-talk — humanism with theism. But I cannot agree that God — defined as Cosmic Mind — is *inconceivable* apart from the revelation of God in Christ. The early Hebrews, and some of the Greeks, had conceptions of God which were valid as far as they could reach. The final revelation in Christ was concerned with *what* God was; they already believed *that* He was.

There always has been, and there always will be, a place for

natural theology. Admittedly it was not stressed in the Pauline and Johannine writings, but this is because some form of theism or near-theism was intellectually respectable in the Roman Empire at that time. But the Western world today is largely sceptical — not because the intellectual basis of theism has been under-mined (it certainly has *not* been) but because with the current demand for specialization, very few people outside the churches, and, for that matter, very few people inside them, including dogmatic and Biblical theologians, appear to have any real grasp of the strength of the contemporary metaphysical case for theism. I can conceive of no factor more damaging to the Christian witness to the world, in an age when the masses are vastly impressed by the practical achievements of science, and are simple enough to believe that science ‘explains’ the universe, than the surrender of the whole intellectual field signalled by the quite common pulpit utterance “Of course we can’t prove the existence of God”. This statement, *tout court*, is completely misleading. For to justify it you would have to restrict the meaning of ‘proof’ to ‘logical entailment’, in which case there is a vast variety of statements which everybody believes but which no-one can prove. But if to prove a proposition is to show that it is a rational interpretation of experience, then we most certainly *can* prove the existence of God.

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ESSAY REVIEW

Coincidence

The flavour of this book by Arthur Koestler¹ is best conveyed by a few quotations: our physiological limitations “may condemn us to the role of Peeping Toms at the keyhole of eternity”; “What is causality up to?”; “The odour of the alchemist’s kitchen is replaced by the smell of quark in the laboratory”; “The hunting of the quark begins to resemble the mystic’s quest for the cloud of unknowing”.

In the first of two rather long chapters Mr. Koestler deals with “The ABC of ESP” which he interprets to include all psychical phenomena here outlined somewhat uncritically.

The second chapter makes the maximum possible mystery of physics. The stuff of the world is mind-stuff; neutrinos are like ghosts; positrons are electrons which move backwards in time. On this chapter *Nature’s* Reviewer comments: “Koestler shows a very thorough and very deep misunderstanding of modern physics, of randomness and of the use of statistics” (237, 411). *Mindons* (suggested by V. A. Firstoff) are introduced as elementary particles of mind-stuff which hit delicately poised neurons and so transfer thoughts — but wait, this idea is too primitive, for we ought to have outgrown atomistic interpretations by now. Adrian Dobbs, introduced as a genius, postulated *psitrons* with imaginary mass to fulfil much the same role as mindons. And so on.

The purpose of these two chapters is to argue the case that the confused muddle in which psychical research finds itself is paralleled by similar confusion in physics. Where there is no theory, no beginning of understanding, critical comment is difficult. Yet it ought to be pointed out that physics may not, after all, be as muddled as Koestler believes. There is now a strong back reaction from the mind-stuff theory of matter while Popper argues

strongly that if we bear in mind that physical theory is intended only as an answer to the problems with which a physicist is faced, theory becomes less bizarre (see Mario Bunge, Ed., *Quantum Theory and Reality*, Springer, 1967).

In the second half of the book Koestler tries to sort out the muddle. Things will seem plainer, he says, if we can discover an acausal principle at work in the universe.

Kammerer, the Lamarckian biologist of mid-wife toad fame, had the same idea. He spent much of his time sitting on benches classifying people as they passed (man? woman? carries an umbrella? or a parcel? etc.) and was for ever on the look out for coincidences which he found in plenty. Kammerer talked of the Law of the Series, or Seriality, conceived as an anti-chance constituent of reality, but he had no place in his thinking for psychical research.

C. G. Jung, the psychologist, who dabbled in spiritualism from an early age had a similar idea. His archetypes were endowed by him with the power to make ghosts and uncaused detonations (loud bang in Freud's bookcase: another's coming, says Jung, and it did! Poor Freud, speechless, merely stared!). His archetypes were psycho-physical entities (*psychoids*) but were a non-starter from the first as Wolfgang Pauli, his physics friend, must have known full well.

Koestler attempts to improve on these theories by cross-linking them with ideas from psychical research writers (especially Carington, Tyrell and Sir Alister Hardy) and believes he has produced something much more satisfying.

His world is filled with *holons*, Janus faced entities which display both the independent properties of wholes and the dependent properties of parts. Sponges and hydra; bees and termites; everyday coincidences; above-chance guessing in ESP; looking into the future; mental control of matter (dice, radioactive decay) — all show the same "integrative tendency" and are grist for his mill. Holons provide the universal acausal principle of

the universe and bring about “confluent events”.

Hitherto we have been faced with much that was inexplicable but “instead of several mysteries we are now faced with a single, irreducible evolutionary tendency towards building up more complex wholes out of more diverse parts” and “the picture becomes greatly simplified” (p. 122). “One ultimate mystery is easier to accept than a letter box of unrelated puzzles” (p. 128).

The next objective must be to make “confluent events academically respectable” and their study “an optional subject at university level”.

Where does this get us? Granted that there are many puzzling features about our world, it is difficult to see in what way Koestler has progressed a single step towards unifying let alone explaining them. The ‘Roots of Coincidence’ remain as mystifying as ever they were. The invention of pantechnicon words to unify widely different facts does not unify them. “If a tail is counted as a leg, how many legs has a dog?” is a well-known riddle. The answer of course is *four*, because though a tail may be called a leg, words cannot turn it into one. Similarly it is hard to see how impressive chatter about holons and confluent events can bring unity to the mysteries of our world.

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SHORT REVIEWS

Theology

Paul Helm, *The Varieties of Belief*, Allen and Unwin,
189 pp., £3.75.

To understand why this *kind* of book has to be written, and why it deserves close attention, one must know something of the course of twentieth century philosophy. When the later Wittgenstein insisted that, contrary to what had been more or less assumed in the past, talking is not exclusively — perhaps not even primarily — a matter of *describing* an objective situation, but is an activity with a variety of motives, he opened the door to new approaches to the analysis of theological language. We can here, as often, see a general trend more clearly if we take an example of its taking an extreme form. Such an example in the matter before us was the well-known proposal to interpret “I believe in God” not as a reference to an objective Being but as registering an intention to live an agapeistic life. A number of writers have since adopted mediating positions, and there were German theologians in the Victorian age who anticipated the recent trend. In this book we are given a clear analysis and an acute criticism of the most outstanding of these.

It is impossible in a review to offer an adequate summary of what is itself a closely reasoned analysis of the views of many writers. Perhaps it is best for a reviewer to ask himself what is the general impression left on his mind. My answer here is that it has confirmed my conviction that although it was inevitable, and right, that we should try to apply Wittgenstein’s insight to Biblical language and to our everyday language about the Christian faith, and although it was right to analyse carefully our use of such words as ‘believe’, ‘know’, ‘evidence’, ‘experience’, and so on, we cannot intelligibly — let alone truthfully — deny descriptive or factual reference in our talk about God, His revelation in Jesus, the Resurrection and Immortality, and interpret it as referring only to human emotions and intentions, and even, as with the ‘secularisers’, use it as a means of generating moral fervour for social programmes.

One very good feature of this book is that the closely reasoned criticisms are interspersed with pithy summaries. For example, on page 138 he brings together Ritschl, Bultmann and Bonhoeffer as offering analyses of God-language in terms respectively of ethical values, existential decisions, and secularity, thus leaving us with religious beliefs which, because non-cognitive, are invulnerable to attack!

Readers will find other summaries of this sort, and they will help him to take a synoptic view of the book, which, in spite of its concern with detailed analyses, has a real unity of aim.

F. H. CLEOBURY

H. H. Price, *Essays in the Philosophy of Religion*,
(Sarum Lectures for 1971), OUP 1972, 125 pp., £2.25.

Professor Price's concern is to relate Christianity on the one hand with philosophy and psychical research on the other. In this well written book he discusses such topics as — how can we both love and fear God?; is morality based on theology? (he decides it is not); what do we mean by saying that God is good or righteous?; how can the unconscious be brought into consciousness?; symbols; opposing wishes to believe or not to believe in God or immortality; petitionary and 'as if' prayer (help! by the drowning man is a sensible request even if he does not know there is a hearer!). Often the problems raised prove difficult and the author does not pretend to know the answers but, as he wisely remarks, unless we risk sinking we shall not learn to swim.

The testability of God's existence is discussed with apt reference to the verse:

There are men in the village of Erith
Whom nobody seeth or heareth;
And there looms on the marge
Of the river a barge
Which nobody roweth or steereth.

(Logical positivism denies the existence of men who cannot be detected; men of Erith = gods of religions; Erith = observable

universe.) In the NT sense (seek and ye shall find) God *is* testable. The seeker is already in touch with God at the unconscious level: in this sense we can only seek God when He has already found us.

The book ends with a discussion of the nature of the life to come. Professor Price here enlarges on views he has previously expounded. He imagines an after-death state like that of dreaming with its own space dimensions which differ from those of the waking world and it is argued that a 'spiritual' world and a world in which spirits are incarnated in some kind of quasi-physical bodies merge into one another. There is an appendix on the resurrection of Christ which is shown to follow no pattern encountered in psychic science.

There is much fine reasoning in this book which will certainly prove helpful to many. But it seems a pity that the author has nothing to say about Christ as the Conqueror of death.

J. W. Wenham, *Christ and the Bible*, Tyndale Press, 1972, 206 pp., PB, £0.75.

The historical trustworthiness and the authority of the Bible are two closely connected questions which lie very much at the heart of differences of opinion with regard to the validity of its message. Perhaps to some extent the irritant differences between 'fundamentalist' and 'non-fundamentalist' which have for so long bedevilled Biblical and theological scholarship have disappeared. Most scholars, at any rate, agree that Jesus' view of the Old Testament must in some way be important.

Happily, Mr. Wenham makes very few assumptions of the kind that are usually found in 'evangelical' writing; instead he sets out from a somewhat 'open' position to investigate Jesus' attitude to the Old Testament, His authority as a teacher, and the criticisms that have been customarily raised against conservative views on these matters. A crucial issue has been raised in the past by the idea that Jesus in some way or other accommodated himself to the traditions of His time regarding the inspiration of

the Old Testament and the connection between this and the authorship of certain psalms, for example. On this the Author is pretty adamant. He rejects both the idea that Jesus accepted uncritically the traditions of His contemporaries and the idea that He allowed Himself, for whatever reasons, to toe the line regarding matters concerning Biblical inspiration and the like.

However, in my view whilst we can see possible pitfalls that are inherent in the 'accommodation' theory it would be surprising if the Gospels reported any interest on the part of our Lord in historical and literary criticism. Perhaps it was the fact that Jesus so carefully distinguished between what was local and temporary in the Old Testament as a whole and what was permanently valid which necessitated His taking the Bible of the Jewish people as it stood in their thinking for the purpose of bringing home His own message with the force that it undoubtedly had without encumbering it with 'extraneous' questions such as the historicity of Jonah.

Mr. Wenham however believes that our Lord's attitude to the Old Testament was taken up without question by his earliest followers. He re-affirms the conviction that both the nature of the apostolic writings and the extent of the Canon alike indicate the hand of Providence. In a concise final chapter the author traces the transmission of the text, the progress and the *rationale* of textual criticism and the place which this discipline has in a positive approach to the Bible as a whole.

This book is well written and is an informative introduction to a difficult subject from a moderately conservative point of view.

DAVID J. ELLIS

John Wenham, *The Renewal and Unity of the Church in England*, SPCK, 1972, 69 pp., £0·80.

"Put quite bluntly, the dominant school of theology throughout the world does not believe in the teaching of Jesus Christ." In

this lies the basic cause of our disunity: it is vastly more important than inherited denominational differences. The Ecumenical Movement forgets that most of its theologians doubt the authenticity of our Lord's words, "that they may be one" central to its thought.

These are the facts we must keep in mind, says John Wenham, when we discuss church unity. If there is to be unity at all it must be genuine unity — not a repetition of the Anglican–Wesleyan farce where each side sought to devise a formula to which both sides could give assent whilst leaving themselves free to interpret it differently.

Is the way ahead hopeless? Not so, thinks Wenham, for there are many encouraging signs. One of the chief stumbling blocks, the 'pipe-theory' of ordination, has now been repudiated by two prominent Catholic Anglicans (Dr. Mascall and the Bishop of Willesden) and there is increasing willingness on all sides to examine the Scriptural basis of other doctrines and practices. In the New Testament we find systems of church organisation developing in different ways but without rivalry: we need not seek greater conformity today if we remember that it is not outward conformity which matters but the reality of the spiritual life within. As one practical step Mr. Wenham suggests that all churches should organise regular study groups over say three years so that re-education may be achieved among the laity.

This is a valuable study written in Mr. Wenham's usual pellucid style. Let us hope that his suggestions will not fall on deaf ears.

F. A. Filby, *With Mind and Heart*, Pickering and Inglis, 1972, 96 pp., £0·45.

This short book by the late Dr. Filby is packed with information bearing on the veracity of the Bible and the relationship of science to faith, all of it of a kind likely to be of interest to students. The literary form, suggested to Dr. Filby by others, is unusual:

we are regaled with imaginary conversations between Christian Union members and other students as in the traditional school boy novel. Where information would be difficult to impart in this way, adults are introduced into the 'story' (there is no plot!) to provide the more 'facy' material.

We are assured in the Preface that words put into the mouths of non-Christians are not Aunt Sally's but near quotations from letters received by the author. The ground covered is considerable and the standard of scholarship is high. The book should prove valuable at student level though there is a risk that after glancing at a page or two serious readers may fail to recognise its value. "Ahem" said George and "Let's have a cup of tea" seem strangely out of place in a work of serious apologetic!

HUMANISM AND ATHEISM

Hector Hawton, *Controversy: The Humanist/Christian Encounter*, Pemberton Books, 1971, 258 pp., £1·25, PB, £0·60.

This is a good, comprehensive, if unoriginal presentation of the atheist position written by an enthusiastic humanist. It shows considerable acquaintance with the writings of Christians. As is only to be expected, great play is afforded by the writings of Bishop Robinson, John Macquerrie and others, to say nothing of the Pope on birth control.

The author thinks that "those Christians who reject the possibility of proving God's existence throw away a useful weapon" (p. 24), they are now thrown back, he says on to the shaky foundations of personal experience or the blind leap of faith.

Speaking of the First Cause he says that "many people vaguely feel that there must be an explanation on these lines and God seems to fill the gap. It is because of this inarticulate feeling that explicit atheism is confined to a small minority" (p. 25). He seeks to undermine the basis of the feeling — the

design argument, or the argument based on order in the universe — in the usual way: “There is an infinite number of possible systems of Nature, but some type of order could always be abstracted by an observing intelligence” (p. 32). Dr. Hawton seems not to have noticed that his argument might be applied to a collection of letters of the alphabet, yet it would fail to convince us that the book we see has no author. The point is of course that nature *works*, its parts are so arranged that *functioning* wholes result. No amount of observation by exterior beings would make this happen. Nor will it do to repeat the now hackneyed and quite untrue statement that “the theory of natural selection made the assumption of a plan superfluous” (p. 34; see this JOURNAL, 99, 63).

Like all good humanists Mr. Hawton does not take kindly to the word *sin*. He considers the basis of ethics and agrees with Stebbing that “love, kindness, tolerance, forgiveness and truth are so unquestionably good that we do not need God or heaven to assure us of their worth” (p. 48). Quite so, but when a man *knows* what is good but finds himself doing the opposite does it help to tell him that there is no such thing as sin? What, in fact, is he to do? Mr. Hawton does not attempt to face the issue.

There is a good deal in the book of course, about which Christians and humanists will think alike. With the humanist the Christian of today wonders what sort of a man Aquinas must have been to write, “in order that the happiness of the saints may be more delightful to them . . . they are allowed to see perfectly the sufferings of the damned . . . The blessed in glory will have no pity for the damned” (p. 64). On general matters of ethics, too, there will be wide agreement but the Christian will raise his eyebrows at the section headed, “The Immorality of Faith” (p. 72). Here Mr. Hawton follows T. H. Huxley, “It is wrong for a man to say that he is certain of the objective truth of any proposition unless he can produce evidence which logically justifies that certainty,” and Richard Robinson, “Faith is not a virtue but a positive vice.” This doctrine, if taken seriously, would undermine not only religion but human relationships and

science. Indeed, it is the power to exercise faith in new directions as much, perhaps, as any other faculty, which differentiates man from beast. Civilisation depends on the ability of people to trust, or have faith in, one another (husband and wife, business partners, foreigners); even the most desultory reading in the history of science and technology suffices to show that discovery and invention often depend upon positive faith.

The chapter on Freewill is a clearly written survey of a difficult subject. The later chapters attempt to explain the origin of religion, the unoriginality of Christianity (but here it is pleasing to be reminded of Edwyn Bevan's view that Christianity only bears a superficial resemblance to Mithraism) and the harm that Christianity has done down the ages. But as might be expected the selection of material is highly partisan. Despite the wickedness of self-styled Christians, the world owes an incalculable debt to Christianity which secularists are too apt to forget.

Biology

Michael Ruse, *The Philosophy of Biology*, Hutchinson 1973, PB, £1.85.

The scope of this book is much narrower than its title suggests. V.I. members looking for a discussion of some of the fundamental metaphysical problems which have concerned the Institute over the last century will be disappointed if they look for them here. It is, however, not unrelated to the interests of the Institute, inasmuch as it attempts to assess the logical status of biological explanations.

The Author sets out to examine the question of "whether or not biology is a science like the sciences of physics and chemistry" (p. 10). But 'like' in what features? He identifies four, which he regards, with some reservations, as characteristic of physical sciences: (a) these sciences deal with both theoretical entities (e.g., electrons, wave functions) and observable entities (e.g., pendulums, prisms, planets); (b) they involve both necessarily true statements (i.e., logical inferences) and empirically true

generalizations (i.e., laws); (c) their theories (often relating to hypothetical entities) serve as axioms from which other statements (often about observable entities) can be deduced; (d) their explanations of particular phenomena are in terms of the out-working of one or more laws.

In order to answer his question, Ruse chooses the theory of evolution for examination, because, to quote him, "There can be little doubt that modern biology dates from the publication in 1859 of Charles Darwin's *Origin of Species*" (p. 9). This statement is debatable. One cannot deny the great influence of Darwin on modern biology, but to see him as inaugurating a new type of biology is, I think, to misunderstand modern biology. Darwin was essentially in the naturalist tradition, which has spanned the centuries from Aristotle to today; and even his contribution to the theory of evolution, important though it was, was only one stage in a long development from Democritus to modern times. If there are characteristics that distinguish present day biology from that of earlier epochs, they are, I suggest, the application of experimental methods to biological systems and the attempt, increasingly successful, to explain those systems in terms of physics and chemistry. This biology dates from the seventeenth century, with its Harvey, Borelli, Perrault, Steno, and others.

Now, had Ruse chosen experimental biology for examination, his task of demonstrating its scientific respectability would have been easy — in fact, he might have decided that it was so obvious that there was no need to write the book. So we should be grateful that he has, probably mistakenly, seen the theory of evolution as the *sine qua non* of modern biology; for it is this theory, more than any other part of the discipline, which has been challenged as unscientific.

In this book Ruse examines the mechanism of evolution, the evidence for evolution, and some consequences of accepting the theory of evolution. As to the mechanism, this is firmly based on Mendelian and population genetics, which, he argues, have all the features mentioned above of the physical sciences. As to the evidence, this is derived from many different branches of biology

(e.g., palæontology, comparative anatomy, geographical distribution), any one of which is incapable of establishing the theory, but all of which taken together place its truth "beyond reasonable doubt".

In discussing the evidence he examines the oft-made allegation that the synthetic theory of evolution can explain anything, so that it is impossible to specify any conditions which could falsify it. Thus if, for example, a morphological feature is obviously adaptive it can be explained by natural selection; but if it appears to be non-adaptive then it can still be explained by natural selection, provided one postulates genetic drift, pleiotropic genes, recently changed environmental conditions, or allometric growth. This criticism of the theory is perfectly valid so long as the postulates, as so often happens, remain purely conjectural. But they need not so remain, for they are all, in principle, open to empirical test.

As for the consequences of the theory of evolution, Ruse considers its implications for taxonomy and teleology. The two chapters on taxonomy clarify the issues between evolutionary and phenetic (or mathematical) taxonomy, and should be of particular value to the biologist concerned with classification. Of wider interest is the discussion of teleology; but this section I found disappointing in that what appears at first to be a penetrating and promising argument leads to a conclusion which is unclear, if not self-contradictory. Ruse is, I think, saying that, although it is possible to replace teleological statements (e.g., about the functions of organs) by causal statements based on the theory of evolution, in so doing one is surrendering an important aspect of biology, in which it differs from physics and chemistry. But what is far from clear is why it is important in biology to give teleological explanations when these are, on Ruse's own showing, merely shortened forms of more long-winded explanations using natural selection.

This book is presumably aimed, not at biologists, who hardly need convincing that they are engaged in respectable scientific pursuits, but at those few philosophers of science who have expressed doubts on the matter. Nevertheless, biologists would do well to read the book if only to stimulate thought about the

conceptual framework to which their activity has been, usually unconsciously, linked.

It is a rare pleasure to find a philosopher of science who is concerned, and can speak knowledgeably, about the biological sciences. Ruse is such a man.

GORDON E. BARNES

Psychology

Max Schur, *Freud: Living and Dying* (Int. Psycho-Analy. Lib., No. 92), Hogarth Press, 1972, 587 pp., £7·00.

Paul Kline, *Fact and Fantasy in Freudian Theory*, Methuen, 1972, 406 pp., £5·00.

Books about Freud and Freudianism are now very numerous. Max Schur was the physician who attended Freud in the later part of his life. His book is based on personal memories and previously unpublished correspondence as well as published material. It tells the story, in particular, of Freud's fight against death. It is remarkably well written, free from jargon, and kindly in tone.

The story is sad. Freud returns again and again to the theme of "dæmonic power". For him the "compulsion to repeat", characteristic of instinctual drives, leads to frustration, unhappiness and tragedy. Man is like the insect, lured to death by the sight of a flame.

In his closing years Freud suffered dreadfully from cancer in the throat and at the back of the nose. When a lesion first appeared he did nothing about it for two months. In part he feared being advised to stop smoking but Schur thinks that his notion of Fate was also partly responsible. In *Beyond the Pleasure Principle* Freud says: "It is easier to submit to a remorseless law of nature, the sublime Anake, than to chance." After his first operation in 1923 he was never free from discomfort or pain.

Smoking always irritated the area: from 1926 to 1936 thirty minor operations, all painful, proved necessary. Then in 1936 one lesion was malignant again: it was no longer reachable by surgery.

Freud started smoking at 24: so addicted did he become that, even with more lesions threatening, the sacrifice of *not* smoking did not seem worth while (p. 412). He smoked incessantly and attributed his own genius to tobacco (p. 32). In 1897 he wrote with his usual fearless honesty, "I have gained the insight that masturbation is the one great habit that is a 'primary addiction', and that the other addictions, for alcohol, morphine, tobacco, etc., enter into life only as a substitute for and a withdrawal from it" (p. 61). Masturbation was the 'original sin' and both it and its substitutes brought self-punishment (p. 193): in Freud's own case this could not have been more cruel.

Throughout the book Freud's antipathy to Christianity keeps appearing. After a visit to Rome in 1901 he wrote "I did not tolerate very well the lie of the salvation of mankind which rears itself to the skies". Though a Jew by birth, Judaism suited him no better. Religion for him was man's great illusion. He spun theories about it, not very plausible ones, but would not take it seriously, thus rejecting what would have delivered him from "dæmonic power" and perhaps cancer too. Original sin, in which he so firmly believed, seems to have kept him from the truth.

Dr. Kline starts by reminding us that psycho-analysis is (or was) an impervious religious system. In this form he has no sympathy with it. The man who opposes its doctrines is told that disagreement is a defence mechanism against the unpalatable truths it contains. Die-hard analysts hold that no one who has not himself been analysed by a reputable analyst who has been analysed . . . (as in the pipe theory of apostolic succession) . . . by Freud himself can truly understand its doctrines. In recent decades Eysenck, Medawar, Karl Popper and others have drawn attention to the unscientific nature of these views. But can analysis be placed on a more rational foundation?

The Author's aim is to investigate what parts of Freudian theory can be tested by objective scientific research. Quoting Freud freely he sets out the theories involved. He then summarises the implication of each in so far as it might be empirically verifiable. Finally he summarises the experimental work which, however remotely, might be taken to bear on the theories involved.

Tests are not always easy to find. How do you test if there is an unconscious mind, if the *id* and the *super-ego* are having a skirmish in some remote region of the psyche, or whether there are two and only two basic instincts, the death and life instincts respectively? However, tests *can* sometimes be applied: for example, is it true that unpleasant events tend to be forgotten or that unpleasant stimuli tend to remain unperceived?

Even so, the results of tests are often far from satisfying. In his study of motivation R. B. Cattell (1959) thought he could recognize five factors involved: three or four of them seem to be related to Freud's *id*, *ego* and *super-ego* though it is difficult to be sure of their equivalence. Nevertheless Kline takes this to be one of the best confirmations of Freudian theory. At the low end of the spectrum of evidence G. B. Johnson (1966) reported that of 300 university students more men than women returned pencils at the end of an examination — possible support for Freud's theory of penis envy among girls!

Turning to therapy, Kline argues that Eysenck's contention that analysis is not more likely to cure than no treatment at all is unfair. Nevertheless the evidence that analysis *does* cure has not been proved and even if analytical concepts are correct, it by no means follows that straight-forward relearning therapy is not better as well as vastly less costly in time and effort.

The conclusion Kline reaches is that psycho-analysis does not fare too badly when put to the test. There is support (see above) for dividing the mind into three parts (though none for anatomical dissection of the brain into three corresponding areas), for repression, for the oedipus complex (incredible to some of us as this may seem!) and for symbolism in dreams. But it is

obvious says Kline, that though Freud was often on the right track, he went far beyond the evidence available to him.

Though it will seem to many readers that Dr. Kline is often too easily satisfied with the evidence he offers, the great value of his book lies in its very clear *statements* of Freudian terms and theory. It would be difficult to find a better guide through the outlandish gibberish of the Freudians !

S. J. Segal (Ed.), *Imagery: Current Cognitive Approaches*, Acad. Press, 137 pp., 1971, npg.

Chas. McCreery, *Psychical Phenomena and the Physical World*, Hamish Hamilton, 138 pp., 1973. (Proc. of the Inst. of Psychophysical Research, vol. 4), £2·30.

Professor Segal's book is more specialised and shorter than that of Horowitz on the same subject recently reviewed (100, 218). It describes, *inter alia*, experiments in which subjects are asked to imagine forms on a screen at the same time as images are (or are not) projected on the screen from the back without their knowledge. Generally it proves impossible to decide if an image has a physical reality behind it or not. Recent work on *eidetic images* (vivid picture-like memory-images) is well described. Two patterns of dots are prepared so that when combined a figure (face, etc.) appears. A subject is shown one pattern then, after hours, weeks or months, the other: some people can combine the memory image with the visible pattern so that the figure appears. There is also an interesting section on the impossibility of defining an image.

Recent work on images dates only since 1964. Older attitudes to the subject were typical of the past. Galton found that "eminent men of science" cannot create vivid images in their minds. Therefore, said Galton, abstract thought reduces this power which is not therefore to be included among the higher cognitive functions ! J. B. Watson, the behaviourist psychologist, went further: "The behaviorist . . . founds his system upon the belief

supported at every point by known facts of physiology *that the brain is stimulated always and only from the outside by a sense organ process*" (*The Ways of Behaviorism*, 1928). Creation of mental images in the mind did not fit well into this procrustean approach and for psychology images ceased to exist.

McCreery's fascinating if somewhat disconnected book starts with a discussion of how I know that I am awake and not asleep. All the usual criteria are shown to break down, for example I can pinch myself in a dream to see if I am awake, or cover my eyes (also in my dream) to see if all goes dark and find that it does. The conclusion reached is that it is the special 'feel' of being awake which convinces us. Chapter 2 discusses out-of-the-body experiences. It is argued that there is no good philosophical reason for taking 'seeing' with the aid of the eyes as a more valid experience than 'seeing' in an out-of-the-body experience. The author playfully imagines a world in which what we call 'seeing' with sense organs is the exception rather than the rule. Chapters on apparitions, materialisations and psychokinesis follow *suite* and this closes Part 1, the theoretical section.

The author wisely stresses our extraordinary ignorance about our relationship with the world around us. We imagine psychokinesis is impossible to explain and forget that movement by contact is an equally difficult conception. "It is just as inconceivable that I should be able to move my arm as that I should be able to move the moon in its orbit. It is merely that you are familiar with the phenomenon of moving your arm" (p. 65): if a child did not know how to move its arm you could not even tell it what to do.

Part 2 gives the facts on which Part 1 is based. The Author's views led him to expect that success in ESP would depend on birth order in a family: the experiments described (Ch. 6) confirm that this is so. In Chapters 7-8 lucid dreams are described; Chapter 9 gives cases of ecsomatic experiences and Chapter 10 summarises the relation between ESP and the alpha-rhythm.

The discussion throughout is maintained at a high level; it is matter of fact and empirical. There is no reference to religion, survival, or 'Spiritualism' and no trace of jargon, yet the relevance to religion is obvious. If a man can, even in this world, 'see' his wounded body lying on the ground after a road accident, and feel that he must return to it in time to avoid death, then it can hardly be held to be irrational that on the judgment day we shall 'see' Christ our Judge and experience the 'feel' that what is happening is real.

Einstein

Ronald W. Clark, *Einstein: the Life and Times*,
1973, Hodders, 670 pp., £5·50.

There are few more colourful personalities than Albert Einstein. His tremendous faith in his ideas even before their scientific verification, his sponsorship of causes (pacifism, Zionism, war against Hitler) his popularity, his periodic announcements on deep philosophical issues, his indifference to wealth and criticism and his willingness to help the underdog, all mark him out as one of the most outstanding men of his generation.

Ronald Clark, a brilliant writer, is here seen at his best. There have been many biographies of Einstein but none so detailed and well documented as this. The book deserves to be in every library.

There is no doubt that Einstein, when young, liked shocking people never more so than in connection with his beliefs about religion. Though he would sometimes use the language of the agnostic or say that he believed in Spinoza's God (to horrify his Jewish friends) and though he always abhorred conventional God-talk, he probably had a fairly strong faith in God at least in the earlier days. Indeed on at least two occasions he confessed that the motivation behind his work was theological. Talking to Buber he said, "What we (i.e. physicists) strive for is just to

draw His lines after Him” and walking to his Berlin office with a woman physicist he declared that he had no interest in learning a new language, nor in food, nor in new clothes: “I’m not much with people and I’m not a family man. I want my peace. I want to know how God created this world. I’m not interested in this or that phenomenon, in the spectrum of this or that element. I want to know His thoughts, the rest are details” p. 33).

His basic ideas of God, often repeated throughout his life, were twofold:- “God is subtle but He is not malicious” meaning that God or nature conceals His or its mysteries by its essential grandeur not by intention as if to make things too difficult for man to understand, and that “God does not play dice with the world” meaning that no events can take place in a purely random manner (he opposed indeterminism to the end). Remarks of this kind attribute at least a quasi-personality to God even though when asked Einstein would deny that God was personal.

The story of Einstein is in many ways a sad one. Lacking a firm foundation in religious faith he vacillated. Within ten years of his pacifist pronouncements he was helping in WW2 by giving advice on war weapons. He was easily persuaded to lend his name to causes in which he disbelieved, or only half believed: notably he urged research on an atomic bomb. After the war he forgot, even denied, that he was implicated.

The story of his rise to popularity and of his change of domicile from Germany to the USA is well told. The public in the USA loudly proclaimed that they did not understand relativity even when Mr. Relativity himself tried to explain it to them in broken English — and they cheered him the more for his attempts. He became the symbol of science and, after the war, the keeper of the nation’s conscience. The responsibilities that he was called upon to shoulder were perhaps too great for any man to bear.

Innovation

M. J. Mulkey, *The Social Process of Innovation: a Study of the Sociology of Science*, 1972, Macmillan, 64 pp., £0·60.

Early Christians, filled with the joy of their newly found faith, banded together and experienced the sense of freedom. The future was open. As time passed, however, it became more and more necessary to define the issues upon which Christians were agreed. Credal statements were suggested and subjected to criticisms: formulations which survived became part of the legacy of the church. Thereafter the intellectual freedom of a Christian was confined to domains which had not been settled once and for all by a teaching church. But every now and again novel 'heresies' were proposed and sections broke away from the church forming rival religious systems.

In our own day we are witnessing the repetition of these events in science. Rejecting Bacon's theory of scientific advance (the 'bucket theory' as J. T. Davis calls it — collect all the facts you can and base a theory on them) together with Whewell's inductive theory (put faith in a guess which goes beyond the evidence and test its truth), Karl Popper argued that we test theories in a negative sense only, by attempting to disprove them. In 1962 T. S. Kuhn showed how, within each scientific group, paradigms, that is authorised ways of thinking akin to Christian dogmas, are established. But by and by rebels enter the fold and rend the old paradigms setting up rival systems of scientific thought which, when they have outlived their usefulness generate reaction among followers and are in turn deposed.

Mulkey starts where Kuhn finished off. He asks who it is that starts a rebellion and why. His conclusions if not wholly original are definite and valuable. Paradigms are attacked by young scientists who have nothing to lose if they are wrong and much to gain if they are right: less drastic attacks may also come from the top of the scientific hierarchy where there are men who can still rest on their scientific laurels if their new

theories prove wrong. Innovation is rare from the half-way-ups.

Turning to the 'why', an established paradigm always wears badly with age: new discoveries within its terms bring less and recognition to discoverers. Therefore incentive to attack and start up on a new track is always present. The primary motivation in science is recognition: it is *not* the enjoyment of the work itself as is proved by the bitterness of priority claims.

There is a short but well selected bibliography at the end of the book: it gives brief but useful summaries of the conclusion reached by each author mentioned. Many interesting points of view and the evidence supporting them are given: the book should be of value to students in this field.

Also Received

J. A. Thomson, *The Bible and Archæology*, Revised edition, 1973, Exeter, Paternoster Pr. £3·40. (Beautifully illustrated this is one of the most comprehensive surveys of Biblical archæology available.)

F. F. Bruce, *The Message of the New Testament*, Paternoster, 1972, PB, 120 pp., £0·75, Christian Students Library No. 10. *Israel and the Nations*, Paternoster, PB repr., 254 pp., £1·00. (Historical up to the war with Rome.)

A. A. Hoekema, Pasternoster Pocket Books Nos. 17 – 20, *Christian Science*, £0·30; *Jehovah's Witnesses*, £0·60; *Mormonism, Science*, £0·30; *Jehovah's Witnesses*, £0·60; *Mormonism*, £0·45; *Seventh Day Adventism*, £0·45. (These ably written booklets are based on the author's *Four Major Cults*, Paternoster Pr., 1963.)

Rosemary Houghton, *Tales from Eternity*, Allen and Unwin, 1973, 191 pp., £3·65. (A study of fairy tales and legends which are taken to be "the secret messages of the human race to its less perceptive self" and to have much in common with Catholic Christianity.)

R. T. Forster and V. P. Marston, *God's Strategy in Human History*, Send the Light Trust, Bromley, 1973, 236 pp., £0·60. (A biblical and scholarly study of election.)

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