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Faith and Thought

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of the Christian revelation and modern research

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EDITORIAL

The three articles in the present Number, which were submitted to the Editor, represent a few of the many interests which have been taken up by contributors to the Journal of the Victoria Institute. The Council expressed the opinion, some years ago, that the Institute, in encouraging younger writers, should, so far as its terms of reference will allow, widen its scope. Earlier Numbers of the *Transactions* eloquently testify to the many and varied matters upon which speakers and writers contributed. Yet whilst there may not be so great a call today for publication and discussion of all the kind of topics which seemed to absorb members of the Institute in the past, there definitely is room for a wider area of study and discussion than has sometimes been presented in more recent years.

Dr Gareth Jones, who recently addressed the Institute at its Annual General Meeting in May, writes on *The Phenomenon of Teilhard De Chardin* and is the first to devote a complete article in this Journal to his work and thought. Though it is generally agreed that the 'pure and simple' dialogue between the ambassadors of 'creation' and 'evolution' is now over, De Chardin shows that the evolution question is still high on the agenda for discussion concerning faith and science. In De Chardin the matter is more concerned with a fresh and serious look at man's place within God's creation. From a standpoint which is radically different from other contemporary minds, De Chardin has

pleaded for a deep and thorough consideration of the many new questions which arise out of evolutionary principles, and that have been conscientiously raised by devout Christian thinkers. Those who turn the proverbial 'blind eye' may succeed in keeping the problems away from the inquiring minds of the younger generation, but they will succeed also in alienating them from the leadership that they should find in Christianity. As Dr Jones says, De Chardin was 'a man to whom evolutionism is the central pivot of the universe'.

We are very pleased, also, to be able to publish a lecture formerly given to the Tyndale Fellowship by Mr Alan Willingale on *Time in the Bible*. This lecture has not appeared in print before, and we hope that its examination of the Biblical concept of Time in relation to philosophical ideas as well as lexical questions will provide adequate material for comment and discussion.

Professor James O. Buswell has kindly submitted his paper read to the Conference arranged by the Research Scientists' Christian Fellowship at Oxford in July 1965. In this article Professor Buswell takes up his subject with reference to former contributions in *Faith and Thought*, and it is hoped that the prospect which the author sees for further discussion on the antiquity of man will be realized in this Journal.

JAMES O. BUSWELL, III, M.A.

Genesis, the Neolithic Age, and the Antiquity of Adam*

I.

In 1954 Bernard Ramm in the chapter on anthropology in his *The Christian View of Science and Scripture* wrote: 'The chief problem with an origin of man at 500,000 B.C. is the connection of Genesis iii with Genesis iv . . . In the fourth and fifth chapters of Genesis we have lists of names, ages of people, towns, agriculture, metallurgy, and music. This implies the ability to write, to count, to build, to farm, to smelt, and to compose. Further, this is done by the immediate descendants of Adam. Civilization does not reveal any evidence till about 8000 B.C. . . . We can hardly push it back to 500,000 B.C. It is problematic to interpret Adam as having been created 200,000 B.C. or earlier, and civilization not coming into existence till say 8000 B.C.'¹ At the close of the chapter he wrote: 'We have now surveyed Genesis and anthropology and found the problems more severe than Genesis and geology. The most uncomfortable problem is the relationship of the antiquity of man, the Fall of man, to the advanced state of culture in Genesis iv'.²

Four years earlier, Smalley and Fetzer in their anthropology chapter in the American Scientific Affiliation volume *Modern Science and Christian Faith*, had written: 'The Scriptures seem to

* Expanded from a paper read at a Wheaton College Faculty Meeting, 2nd March, 1965. Prepared for the International Conference on Science and Christian Faith held at Regent's Park College, Oxford University, 17-26th July, 1965, sponsored by the Research Scientists' Christian Fellowship. An abridged, popularized version appeared in *Eternity*, Vol. 18, No. 2, February, 1967, under the title 'Adam and Neolithic Man'.

¹ Ramm, 1954, p. 327.

² *Ibid.*, p. 342.

indicate a fairly complex culture for man immediately after the Fall. . . . Cain and Abel are shown with domesticated plants and animals respectively. In the present understanding of culture history such domestication comes relatively very late in time. If it is true that the earliest indications of agriculture are about 8000 B.C. or later in the Mesopotamian Valley we have a major problem that deserves careful study in the light of the age of man'.³

II

The Neolithic age was named by Sir John Lubbock in 1865 to signify the polished stone tools which were of a more refined type than those of the Palaeolithic, or Old Stone Age. But it is not for the type of stone tools that the Neolithic is important. The Neolithic period of prehistory remains as a crucial transition time which saw the rise of the incipient and then full-blown domestication of plants and animals – the dawn of agriculture and herding – the economic bases for the simplest forms of sedentary life. V. Gordon Childe refers to this as the 'Neolithic Revolution'.

Now the earliest Neolithic indications anywhere have been known for some years to be represented by two or three incipient village sites in what Robert Braidwood calls the 'hilly flanks' of the fertile crescent, notably in what today is Iraq and Iran. Generally dates of from 7000 to 8000 B.C. have been given for these earliest indications of domestication.

The earliest horizon of Neolithic or incipient Neolithic culture yet reported comes from an open village site, Zawi Chemi Shanidar in Northern Iraq.⁴ A charcoal sample from layer 'B' of this site which correlates with an early Neolithic layer at nearby Shanidar Cave as well as with similar material from Karim Shahir about 160 km away, was dated by carbon-14 at 10,870 ± 300 before the present, or 8600 to possibly over 9000 B.C.

Now, it is important to remember that, between these two Shanidar sites, the open village, and the cave, in the words of

³ Smalley and Fetzer, 1950, p. 134.

⁴ Solecki and Rubin, 1958, p. 1446.

its chief investigator, Dr. Ralph Solecki, we are given 'a long preface to Mesopotamian history'. 'Thus far,' he continues, 'the cultural sequence for Shanidar Valley is outlined on a relatively firm basis by carbon-14 dates from about 50,000 years ago . . .'⁵ ' . . . The chronology was fixed by sixteen carbon-14 dates from all four layers at Shanidar Cave and by one from Zawi Chemi Shanidar. The samples were dated by four different laboratories in studies of which several were duplicate checks. The dates range from about A.D. 1750 for layer "A" to about 48,000 B.C. for layer "D".'⁶ Six adult Neanderthals have been recovered from Shanidar Cave whose datings range between 44,000 to over 48,000 B.C.

Thus 'The significance of the Shanidar Valley investigations is that here, in this one locality there is an almost continuous sequence of human history dating from the time of the Neanderthals'.⁷

Neolithic culture was formerly believed to have been disseminated to Europe about 4 or 5 thousand years later than Middle Eastern Neolithic, or about 3000 B.C. Now, the Neolithic picture in Europe is radically changed as a result of reports pushing back the date of the earliest Aegean Neolithic settlements more than 3000 years and those in Central Europe nearly 2000 years.⁸ A date of 6220 ± 150 B.C. is reported for an early Neolithic site in the Plain of Macedonia. An important village site in central Bohemia dates from approximately 4500 to the beginning or first half of the fourth millenium B.C. Harvard archaeologist Marija Gimbutas claims that 'It thus bears eloquent testimony to the long Danubian chronology now established and supports the C-14 dates for this culture, which, in the initial stages of the application of this method, seemed to be incredibly high'.⁹ Regarding these and other discoveries, Gimbutas concludes: 'These new dates seem to accord with the many new strata of Neolithic habitations which have recently been uncovered in the Balkan mounds. Evidence of a long

⁵ Solecki, 1963, p. 179.

⁶ *Ibid.*, p. 184.

⁷ *Ibid.*, p. 179.

⁸ Summarized from Gimbutas, 1963.

⁹ *Ibid.*, p. 78.

Neolithic chronology and the constant appearance of new cultures or new chronological phases have made research in the Neolithic period of Europe one of the most exciting fields of archaeological studies'.¹⁰

Now, to bring the statement of our problem to a focus: even with the latest archaeological techniques, and the increase in activity and breadth of range, *the Neolithic is still to this day contained within an order of magnitude of ten thousand years*. Furthermore, disregarding more ancient human remains, we have clear and unequivocal evidence for the existence of man – man who walked completely upright, who had human society and human culture, who buried his dead with ceremony; man who, in the opinion of many must have been the descendants of Adam – at least 50,000 years ago. The Shanidar material seems to present in even clearer light the differential orders of magnitude of Neolithic culture and the age of man. The disparity between them grows increasingly clear from the strides taken by prehistoric archaeology even though, in one sense, based upon negative evidence. The distressing part is that theological opinion regarding the interpretation of the apparent dilemma of the antiquity of Adam on the one hand, and the comparative recency of his culture pattern and that of his immediate descendants on the other hand, does not incorporate the scientific developments uniformly into its interpretations, but rather, ranges itself on quite another level of abstraction, upon a continuum of orthodoxy vs. liberalism. The liberal views most widely held generally discount the necessity of taking Adam seriously as the first man and head of the whole human race. Thereby the dilemma, whatever their particular version of his significance, does not usually exist for them.

* The orthodox, however, do not face the problem. In fact, it is most difficult to find any author of conservative, evangelical stripe who even so much as acknowledges the problem. One either has a recent Adam with no discontinuity between him and the culture of Genesis iv, or else one is found to be sliding down the continuum towards theological liberalism! Of course, there are a few exceptions. We shall attempt to consider the

¹⁰ Summarized from Gimbutas, 1963, p. 72.

problem from the position of biblical orthodoxy which takes seriously the facts of science and the exigent contradictions and interpretative puzzles that inevitably arise for the believer in every age.

III

The fact that a dilemma has been defined at all rests upon certain important assumptions which it is our purpose to examine. A brief consideration of how these assumptions are treated from different points of view will then yield a number of alternative ways in which the components of the problem have been or may be juxtaposed, and will, in turn, allow us, with a choice of conditions, to ascertain which of several interpretations would seem to be the most tenable.

The dilemma, then, rests upon the following assumptions:

1. that, for theological reasons, Adam must be considered the first man, anthropologically and biblically; all men are his progeny.
2. that Cain and Abel were individuals and the immediate offspring of Adam, and that those described in Genesis iv. 17-24 refer to the immediate progeny of Cain.
3. that what is described as 'a keeper of sheep' and 'a tiller of the ground' constitutes the Neolithic complex of domestication, (Genesis iv. 2), and that city building (Genesis iv. 17), tents and cattle (Genesis iv. 20), harp and organ (Genesis iv. 21), artificer in brass and iron (Genesis iv. 22), refer to at least Neolithic level of civilization.
4. that the Neolithic culture complex was developed only after Palaeolithic times.
5. that the function of the Flood of Noah was to inundate all other living mankind.
6. that the data of fossil men and the methodology for ascertaining their antiquity are reliable.

(Other factors implied within these basic assumptions are the initial perfection and the fall of Adam; the unity of the human race as a whole in terms of the fall; and the nature, purpose, and duration of Eden.)

IV

Focusing at first upon assumption I we may commence with a consideration of theses expressed in recent issues of *Faith and Thought*, the Journal of the Victoria Institute. J. M. Clark, in a refreshingly original presentation of the problem, is at some pains to accept ancient man but a very recent Adam: 'Thus when Adam was created and placed in Eden, the human race was already long established, and it is possible that quite advanced civilisations were already in being'.¹¹ To arrive at this position Clark makes a distinction between the creation of the first men (Genesis i. 26) and the creation of Adam (Genesis v. 2). His entire thesis rests essentially on this distinction. He examines all of the Genesis references to Adam and reads separate meanings as necessary, 'Adam' as 'man', and 'Adam' as *the* man put into Eden. Both of these meanings he finds in Genesis v. 1-2 holding that since God called the name of the first created men 'Adam' they shared the nature of the 'Adam' of Eden. Clark thus concludes: 'We may therefore take Gen. v. 1 as applying to the couple in Eden without in any way committing ourselves to the view that they were the first human beings on earth, from whom all others are descended'.¹² With reference to the first or original man, for Clark, 'The expression "called their name Adam" indicates that original man, like ourselves, was reckoned to share in the nature of Adam, and therefore to share in his sin and in his condemnation to spiritual and physical death'.¹³ Clark must assume, however, that 'the results of Adam's sin may operate backwards in time as well as forwards, in the same way as the saving work of Christ. Thus men who lived long before Adam would be under the same dominion of sin and death as those who have lived since'.¹⁴ After examining the New Testament references to Adam, Clark comes to the conclusion that '... we cannot anywhere find a clear and definite statement to indicate conclusively that Adam was the first man on earth, nor can we find a clear and definite

¹¹ Clark, J. M., 1964, p. 146.

¹² *Ibid.*, p. 152.

¹³ *Ibid.*, p. 153.

¹⁴ *Ibid.*, p. 154.

statement that all men now living are descended from him'.¹⁵ The distinction between original man and Adam on these bases seems an artificial method for solving some knotty problems, which, frankly, it would solve, if hermeneutically legitimate. Clark abandons not only the orthodox Protestant view of Adam, but also runs counter to the Encyclical *Humani Generis* which insists that 'No Catholic can hold that after Adam there existed on this earth true men who did not take their origin through natural generation from him . . .'.¹⁶

J. Stafford Wright in 1958 concluded that the evidences of burials, art, and the like in connection with Palaeolithic man, usually interpreted as indications of religion or at least a belief in an after life, do not, in fact, necessarily signify this at all. He concludes that ' . . . there is no evidence of religion in any fair sense of the word, nor of the beginnings of religion, in Palaeolithic times, say down to 10,000 B.C. Indeed it would be safe to come down several more thousand years'.¹⁷ Elsewhere he questions the 'spiritual capacities' of 'man-like creatures' before about 6000 B.C.¹⁸ From his conclusions we may infer that Wright also holds to a very recent Adam, and calls all fossil men before Neolithic times 'pre-Adamic' creatures which 'do not have the status of men in the Biblical sense'.¹⁹ However, he does allow for the possibility of these being 'Adamic' men who 'had the knowledge of the true God, and worshipped Him without any image, picture, or visible means'.²⁰

T. C. Mitchell has reviewed the possibilities and problems of various positions of antiquity for Adam in the framework of our first assumption. He tentatively adopts the position that 'only the fossil remains which have been unequivocally described as *Homo sapiens* (namely the men of the Upper Palaeolithic)' are 'to be called "man" in the Biblical sense'. Non-*sapiens* fossil forms 'would not be pre-Adamite men, for they would not be men'.²¹

¹⁵ Clark, J. M., 1964, p. 151.

¹⁶ Cotter, 1951, p. 43.

¹⁷ Wright, 1958, p. 14.

¹⁸ Wright, 1956, p. 27.

¹⁹ Wright, 1958, p. 14.

²⁰ *Ibid.*

²¹ Mitchell, 1959, pp. 47, 49.

James Murk holds a view²² very similar to Mitchell's, but preferring to designate the more chronologically precise Late Pleistocene as the time for Adam. Murk's position rests heavily upon a well-documented thesis that previous hominids did not have true language, thus were not true men.

Personally, I, as well as many others, have always held assumption 1, and believe that Adam must be considered to be as early as the unequivocally 'human' remains that are found. Since spiritual criteria do not fossilize, and since morphological criteria are irrelevant, all that the anthropologist has to go on is cultural criteria for the definition of 'man'.

It must also be pointed out that no particular date in antiquity is necessary to quote for this position since, if accurate dating techniques in places like Shanidar Cave take us back at least 50,000 years, those who accept this would not quibble about the difference between this and the hundreds of thousands of years ago for the antiquity of fossil men like Swanscombe, the Pithecanthropoids and others. For the analysis of biblical data and language the difference is not pertinent: if an order of magnitude of 50,000 years for man's creation is allowed, as B. B. Warfield pointed out in 1911,²³ any figure well into the hundreds of thousands or more can also be allowed, as far as scripture is concerned.

We find, then, from the consideration of these expressions that Wright and Mitchell make assumption 1 if we leave out the word 'anthropologically'. Murk makes assumption 1 as it stands, but Clark makes no such assumption. All four put Adam at such a position that pre-existing fossil hominids must be accounted for somehow on the assumption of Adam's relationship to all of mankind in the fall. Clark does this by assuming their humanity and by an exegetical and theological device; Wright by discounting their religious capacity; Murk by discounting their linguistic capacity; and Mitchell by simply assigning them a non-human status. Thus Wright and Mitchell agree that Adam must be the first man biblically but not anthropologically, while Murk would claim that pre-Adamic

²² Murk, 1965.

²³ Warfield, 1911, p. 247.

hominids were not even 'man' anthropologically without true language. Clark does not maintain that Adam need be the first man on any count.

We move on to a consideration of assumptions 2 and 3 before concluding our evaluation of the previous positions.

V

First concerning 2, it has been suggested that references to Cain might have been to more than one man, possibly to one much later than Adam. F. K. Farr, for example, in his article on Cain in the *International Standard Bible Encyclopedia* writes: 'The indications in [Gen.] iv:1-16 of a developed state of society and a considerable population may go to show that the narrative of the murder was not originally associated with the sons of the first man. Thus there is room to suppose that in the process of condensation and arrangement Cain, son of Adam; Cain, the murderer; and Cain, city builder and head of a line of patriarchs, have been made one'.²⁴

The crux of the problem, as far as the available literature by those who assume the historicity of Genesis is concerned, seems to be with assumptions 2 and 3, namely, (a) that Cain and the people of Genesis iv all lived within the lifetime of Adam, and (b) the unquestioned assigning of the cultural indications in Genesis iv to the Neolithic, *thus acquiring its archaeological limitations in time*. With few exceptions the treatment of this problem has been fragmentary and has suffered from either theological or scientific inconsistencies. Most works on Genesis make at least the tacit assumption, as plainly stated by Mitchell, 'that Adam and his descendants were farmers'. The restrictions of this assumption clearly exercised Clark as well as Mitchell, and with its implications, plagued Ramm, and Smalley and Fetzer as indicated at the beginning of this paper. The suggestion is made, however, that perhaps Cain and Abel were not really *domesticators* of plants and animals but rather in the language of Moses, and particularly our translations, would only appear to be such when their respective concerns with vegetable and

²⁴ Farr, 1915, p. 539.

animal provision might have been vastly more primitive and like the economies of remote peoples of today. Suggestive is my father's insistence that Moses' description of Cain and Abel is comparatively meagre and does not demand any Neolithic connotations. This view is reflected in his handling of the subject of antiquity in his recent *Systematic Theology*.²⁵

Suggestive also is Mitchell's discussion of an alternative consideration of the references in Genesis ii. 5 which may be applied elsewhere. He points out that 'The word "field", *sadeh*, which is frequently used elsewhere to refer to arable land, occurs here for the first time, and may indicate that the *siah* [plant] and *eseb* [herb] were particular types of plant suitable for human use. The general use of these two words suggests that in the present context they may perhaps be understood as indicating respectively low bushes bearing berries, and the natural grasses from which cereals might be obtained'.²⁶

Regarding the interpretation of the status of culture indicated in Genesis iv, Mitchell's observations are pertinent enough to quote at length: 'The passage in chapter iv telling of Cain's descendants is usually treated as an account of the origins of the arts of civilisation, but an examination of each of the component elements shows that these features could be interpreted as appropriate to almost any period from the Upper Palaeolithic to the Iron Age. Each point can only be mentioned very briefly here. Enoch's "city", *ir*, need not be more than a small settlement, and could suggest equally a village farming settlement of the Near East, or one of the Upper Palaeolithic mammoth-hunter type, and the lot of Cain as a wanderer would seem to bear this out. Jabal is described as the "father" or "originator" of those who dwell in tents and have cattle, but *migne* need not mean more than "possessions", or even possibly, if the Masoretic vocalisation is ignored, it might be a form of *qaneh*, "reed", [*sic*] with a prefixed *mem* local, and have some such meaning as "who dwell in tents and places of reeds", that is reed, or wattle huts. This situation could relate to nomads in the hinterland of civilisation, or Upper Palaeolithic hut dwellers.

²⁵ Buswell, Jr., 1963, Vol. 1.

²⁶ Mitchell, 1959, p. 41.

The same could be said for the other four elements. *Kinnor*, could mean basically, "a stringed instrument", and the presence, now generally accepted of the archer's bow in the Upper Palaeolithic opens up the possibility of the simple musical bow in that period. Simple wind instruments mostly of hollowed bones, which could come within the meaning of *ugab*, are known from the same period. The statement in iv. 22 can legitimately be translated to mean "the sharpener of every cutter (or cutting implement) of copper and iron". Since both native copper and meteoric iron have presumably occurred on the surface from Palaeolithic times, and both can be worked by grinding (being softer than stone), it seems unnecessary to regard this as evidence of metallurgy'.²⁷ Regarding the 'city' of Enoch, Davidson, Stibbs, and Kevan likewise suggest that 'The place itself was probably no more than a defended centre of organized social life'.²⁸

Regarding assumption 4, another element of potential importance is simply that the earliest domestication of plants and animals might be much more remote in time but just has not yet come to light. Mitchell, arguing against viewing archaeology always 'in the light of an evolutionary hypothesis' suggests the possibility of agriculture 'in existence at times much earlier than we have supposed'.²⁹ Of course archaeological discoveries have surprised us before, but from the present outlook it seems very unlikely that the Neolithic culture pattern will turn up on any horizon whose antiquity is radically different in order of magnitude.

VI

On assumption 6 regarding the reliability of the scientific evidence for fossil man and the dating techniques, much time could be wasted. It should not be necessary to go into the geochemical technicalities nor into the palaeontological details for purposes of validation in this paper any more than it should be necessary to argue down the past or current expressions of

²⁷ Mitchell, 1959, pp. 41-42.

²⁸ Davidson, Stibbs and Kevan, 1954, p. 82.

²⁹ Mitchell, 1959, p. 49.

the hyper-traditionalist views of the Bible-science 'radical right'. Of interest, however, is one viewpoint which is stated in one of the most recent and thorough works in the ultra-conservative Flood-geology tradition, even though it is patently impossible for its authors to operate within it consistently. John Whitcomb and Henry Morris claim to provide a 'system of historical geology' which 'finds its basic rationale in a frank recognition of the uniquely revelatory character of the Judaeo-Christian Scriptures'. However, for early geophysical and biological history they insist that conventional scientific method 'not only has not but *cannot* provide a scientifically correct explanation...' The proposition to which I wish to call attention is then stated: ' . . . we recognize that any *genuine knowledge* of these matters must necessarily come by way of some form of divine revelation'.³⁰ Again, they state: 'After all, special revelation supersedes natural revelation, for it is only by means of special revelation that we can interpret aright the world about us'.³¹ Elsewhere Morris has stated that 'revelation is absolutely required for any genuine knowledge. Science can only deal, really, with the present and with the historic past'.³² Thus one of the most widely heralded works in creationist circles since the days of Harry Rimmer would seem to eliminate for itself any further consideration of prehistoric matters not revealed in the Bible. The entire extra-biblical picture of human prehistory is automatically beyond the powers of human analysis and understanding for those who hold this position. We may only look with tolerant regret at such unnecessary obscurantism which cloaks an obviously sincere labour for the preservation of the Faith we share.

VII

At this point we shall consider what I believe to be the most important but most neglected aspect of the whole problem area under consideration, namely, the antiquity of man in the Western Hemisphere. There are five important elements in the

³⁰ Whitcomb and Morris, 1961, p. 331.

³¹ *Ibid.*, p. 458.

³² Morris, Henry, personal communication, April 5, 1963.

picture: (a) how long ago man entered North America, (b) how long it took to populate the two continents and differentiate linguistically and racially, (c) the antiquity of individual sites, (d) the continuity of cultural sequence, and (e) the significance of the modern physical type.

Professor Mischa Titiev states that 'nearly everyone accepts an entrance date of around 20,000 B.P.'. ³³ There are those who would push it far beyond that, but we shall work with the consensus which will serve adequately for our purposes. Most of the reasoning for such estimates are based upon the scattered C-14 dates which are plentiful this side of 20,000 years. There are a number of sites dated near the 10,000 year range taking a New World antiquity of that magnitude completely out of controversy. R. J. Mason states that 'Human occupation of parts of North America has been conclusively demonstrated for as early as 13,000 years ago'. ³⁴ Grahame Clark, after examining various estimates, writes: 'What we do know for certain is that Paleoindian hunters were active on the High Plains of North America by a period assessed by radio-carbon analysis at the tenth millenium B.C.: immediately prior, that is, to the final glacial episode of major importance'. ³⁵ Jacquetta Hawkes describes an important site indicating that the age of Paleo-Indian western tradition is 'now realized to be earlier than was once thought. Danger Cave, Utah, for example, was probably first occupied by 9000 B.C. At this site basketry was already being practised at this time, the oldest known example of it in the world'. ³⁶

Inferential evidence is about as persuasive in estimating how long ago man entered North America as carbon-14 dates. Again Jacquetta Hawkes points out that 'the extremity of South America was reached by 6000 B.C.'. ³⁷ Some have reported this as 7000 B.C. In other words, to have populated the extremities of the two continents, assuming that entrance was via the Bering Straits from the Old World, by 6 or 7 thousand years B.C.

³³ Titiev, 1963, p. 331.

³⁴ Mason, 1962, p. 228.

³⁵ Clark, G., 1961, p. 212-213.

³⁶ Hawkes, 1963, p. 94.

³⁷ *Ibid.*, p. 92.

and by normal population expansion, requires the postulation of an immense amount of time from the starting point. Furthermore it has been estimated that to differentiate into the 160 linguistic stocks and 1,200 or more dialectic subdivisions that the Indians had when Europeans arrived, would have taken 'at least 20,000 years, perhaps three times that';³⁸ and to adapt physically to as many environmental extremes with as much racial variety as the American Indians exhibit, one authority believes 25,000 years hardly long enough.³⁹

Crucial to our whole analysis are the fourth and fifth elements of the picture mentioned above. The continuity of culture revealed by series of archaeological sequences, continuous dwelling sites in some places, and general patterning of regional expressions of Paleo-Indian life testify to but a single, sustained indigenous population from early to recent times. The significance of the last element is that as far back as there are any skeletal evidences in the Western Hemisphere at all, we find only the recent *Homo sapiens* type.

A good example of this continuity of a regional expression of Paleo-Indian culture is the so-called Desert Culture. R. J. Mason's account will give some idea of the extent to which it is known: 'The area occupied by Desert Culture peoples is enormous and ecologically varied, extending from at least Oregon to the Valley of Mexico and from the Pacific coast of California to the eastern foothills of the Rocky Mountains . . . The range of the Desert Culture is as great in time as in space. Radiocarbon dates show it had developed *in situ* by about 11,000 years ago; *in some areas, it persisted virtually unchanged into the ethnographic present as witnessed in southern California and the Great Basin*'.⁴⁰

VIII

By now, no doubt, the implications of the New World picture are coming into focus. Stating the point directly, were Adam to be assigned an antiquity of merely Neolithic times, this would

³⁸ Harrington, John, quoted in Macgowan and Hester, 1962, pp. 5, 6.

³⁹ Macgowan and Hester, 1962, p. 6.

⁴⁰ Mason, 1962, p. 231, emphasis added.

leave the entire aboriginal population of the Western Hemisphere, and probably large portions of eastern Asia and Oceania, out of the Adamic line and out of the judgment of the Flood of Noah. Bernard Ramm reminds us: 'Adam must be as old as the migrations of the Indians'.⁴¹ And also that 'Any thought about the origin of man must keep in mind the date of the arrival of the American Indian in America . . .'⁴² I would go a step further and say that *Noah* must be as old as the migration of the Indians, and that any thought about the date of the Flood must keep in mind the arrival in America. Of course, if our assumption (5) that the function of the Flood was to be a punishment upon all mankind is not taken, then the Indians might be considered excluded. Ramm does seem to leave room for this possibility since he recognizes that a universal destruction of man would have to be before the American entry, but he is not willing to consider the flood that early. He simply states that 'there is hardly an evangelical scholar who wishes to put the flood as early as 8000 B.C. to 10,000 B.C.'.⁴³ Nevertheless, if the American Indians were to be included it would have had to be a long time before that to allow time for population dispersion to reach eastern Asia by 20,000 years ago.

It need hardly be pointed out that the lack of any marked or widely correlated hiatus or discontinuity in racial type or cultural sequences in the Americas would seem to preclude the possibility that the Flood had inundated a human population in the Western Hemisphere after which the continents were repopulated. If such a thing happened the evidence is totally lacking.

IX

We now have a problem of some complexity which may be clarified somewhat by isolating its components. There appear to be ten:

1. The theological significance of Adam: the fall, and his relation to the rest of mankind.

⁴¹ Ramm, 1954, p. 317.

⁴² *Ibid.*, p. 327.

⁴³ *Ibid.*, p. 336.

2. The antiquity of Adam.
3. Adam's relationship and temporal connection with the people and culture of Genesis iv.
4. Cain and Abel, their culture, and the culture of Genesis iv.
5. The antiquity of No. 4.
6. The archaeological Neolithic.
7. The antiquity of No. 6.
8. The nature of the fossil hominids as 'man'.
9. The antiquity and distribution of No. 8.
10. The purpose of the Flood of Noah.

Perhaps clarity can be further achieved by itemizing some of the alternative ways in which the components may be put together, specifying certain theological or interpretative conditions, and ascertaining which positions seem to be tenable.

For the purposes of simplifying the process we shall set the following conditions upon our concluding discussion: (*a*) that the data and dating techniques for fossil man are considered reliable, (*b*) that we assume the orthodox position regarding the historicity of Adam, and the consequences of the fall upon the whole human race, and (*c*) the judgment of the Flood upon all mankind except Noah's family. Anyone not wishing to have these special conditions imposed upon his interpretation may, of course, work out for himself whatever interpretation the data permits.

Under these conditions we may eliminate a late or Neolithic date for Adam, unless, of course we are willing to adopt the rare position of J. M. Clark with reference to the sinful nature of man before Adam. If the position of J. M. Clark is theologically tenable, I see no problems with the anthropological data. If not, then we will have to push Adam back or we would find the condition already stated, of excluding the American aboriginal population from not only Adam's line but the Flood as well.

In my view, Adam would have to be well back into Palaeolithic times at least as early as 40-50 thousand years ago, and the Flood put well before the dispersion of *Homo sapiens* to eastern Asia.

But what about the eighth component, or the nature of still earlier or Lower Palaeolithic fossil men? It seems to me that whatever solution of the Neolithic-Genesis iv dilemma suits an

Adam of 50,000 years ago would also allow an Adam early enough to include the men of these remoter times. It would seem to be a matter of one's judgment as to what objective criteria to use for biblical 'man'; not a matter of theological concern as to his antiquity. B. B. Warfield pointed out that 'The question of the antiquity of man is accordingly a purely scientific one, in which the theologian as such has no concern'.⁴⁴ So much for his antiquity. Nevertheless, Adam could not be the head of a race that did not have human language nor religious capacities. If James Murk's and J. Stafford Wright's theses are reliable then Adam could not be before *Homo sapiens*. Wright's claim must be revised, however, in view of the necessity to extend Adam certainly beyond 10,000 years. Both views, of course, would be contingent upon the antiquity of *Homo sapiens*. This picture is currently in a state of quite extensive re-examination in anthropology. With consideration of tool-making and its relation to brain capacity, language, and truly cultural man is the area of keenest focus for an opinion as to how early the creation of Adam could be reasonably supposed to have occurred.

A consideration of our third through the seventh components would be somewhat as follows: Adam would be quite separated from the archaeological Neolithic. I would guess that he would have to be somewhat earlier than either Mitchell or Murk are willing to go, to even antedate the Neanderthals, in fact. This seems warranted upon the basis of the continuity at Shanidar, as well as the American entrance date.

How to settle with the third, fourth, and fifth components is a question contingent upon further discovery and study. My feeling is that Cain and Abel were not Neolithic, and that probably there was considerable time between Adam's day and the generations described in Genesis iv. 17-24. However, the theologians will have to sort out the positions reviewed above and tell us which interpretations are warranted in this area.

If Adam *must* be early enough to allow for man in America, and if Genesis iv. 17-24 *must* be interpreted as Neolithic or later we need a new interpretation of Genesis iv. 1-16. However, if

⁴⁴ Warfield, *loc. cit.*

Genesis iv. 17-24 can be referred to a Palaeolithic date, or at least, be legitimately interpreted as disassociated with any specific temporal or chronological signification, our dilemma is resolved in much the same fashion as the resolution of the genealogies of Genesis v. and xi. That is, it would be resolved upon the same *principles* as set forth by William Henry Green in his famous 'Primeval Chronology' in 1890, if not supported by the same conclusive detail.

Assigning Genesis iv. with Adam back into the Palaeolithic would not only resolve our dilemma but would cause no consequent difficulty with what follows in Scripture. With reference to the precariousness of assuming 'that any Biblical genealogy is designed to be strictly continuous . . .' Green writes: 'The creation, the Flood, the call of Abraham, are great facts which stand out distinctly in primeval sacred history. A few incidents respecting our first parents and their sons Cain and Abel are recorded. Then there is almost a total blank until the Flood, with nothing whatever to fill the gap, and nothing to suggest the length of time intervening but what is found in the genealogy stretching between these two points . . . So far as the Biblical records go, we are left not only without adequate data, but without any data whatever, which can be brought into comparison with these genealogies for the sake of testing their continuity and completeness'.⁴⁵ Green then enunciates the principle which I would like to emphasize for this enquiry: 'If, therefore, any *really trustworthy data* can be gathered from any source whatever, from any realm of science or antiquarian research, which can be brought into comparison with these genealogies for the sake of determining the question . . . such data should be welcomed and the comparison fearlessly made. Science would simply perform the office, in this instance, which information from other parts of Scripture is unhesitatingly allowed to do in regard to those genealogies previously examined'.⁴⁶

X

This has been an exploratory excursion among the biblical and scientific elements of a problem which may be viewed most

⁴⁵ Green, 1890, p. 295.

⁴⁶ *Ibid.*

profitably from a number of focal distances. Individual problems may be pin-pointed, such as the definition of 'man', specific Hebrew meanings or usages, or the exact nature of the archaeological evidences for domestication. Enlarging our focus we may concentrate upon the relation of these to each other, with broader concerns such as the interpretation of Genesis iv. by itself. Enlarging our focus still more we gain further perspective upon the significance of the antiquity of man's creation in relation to Genesis iv.

In a still larger sense, we may find a study of this kind implicitly directing itself to the broader consideration of the canons of interpretation, both of Scripture and of scientific data.

The purpose of this paper, then, has been not to discover or hand down a solution to any problem, but rather to examine the relevant factors involved, some basic assumptions implied, and some alternative viewpoints in light of the data at hand. It is hoped that this method of presentation will offer enough leads, suggest enough alternatives and stimulate enough ideas, within as well as tangential to the chosen problem area, that others will be able to improve upon and reformulate these questions, clarifying the aspects which remain obscure, providing a foundation for greater precision of thought and increased areas of consensus among Christian scholars.

Addendum

As this paper was about to be mailed off, Brian S. Mawhinney's important article, 'Man - His Origin, His Nature and His God' (*Faith and Thought* 95:2 (1966) pp. 54-71) came to my notice. Although he does not develop precisely the same problem, there is sufficient common ground to make it worthy of mention here.

1. Generally we agree on the proper position to take with regard to the relevant chapters in Genesis, as expressed by Mawhinney on page 67.
2. We disagree on the necessary interpretation of the Old Testament genealogies in view of his statement that they place Adam between 6 and 10 thousand years ago (page 67). Thus in connection with his four possible solutions to the problem which is precipitated by such an interpretation of

the genealogies, our positions are contrasted with reference to number 2 in which 'we can say the genealogies are wrong and place man, with science 5×10^5 years ago'. Mawhinney rejects this position because he believes such an age 'contravenes scripture'. I don't believe the genealogies are wrong, nor that their interpretation need conflict with the indicated age of man, for reasons mentioned above. Mawhinney perhaps now holds this position, too, if one may read into his footnote 39 an acceptance of Professor Wiseman's communication to the same point.

3. I should have great difficulty accepting Mawhinney's interpretation of Adam as discussed on pages 68-69 in which he expresses a liking for the idea of J. M. Clark regarding the retroactive function of the fall. Perhaps I am inclined to be a bit more conservative regarding Adam's theological relationship to sin and the whole human race. Furthermore these seem to me to be wholly theological considerations which encounter no conflict with anthropological data whatever.
4. Perhaps Mawhinney tends to over-estimate, at one point, the significance of the fossil finds as 'powerful evidence for a physical link' between non-man and man (page 63). When we examine the tremendous discontinuities in the fossil patterns between even the earliest of the East and South African forms attributed to man, and the presumably ancestral forms plotted sparsely throughout the rest of the Tertiary period the evidence for the assumed derivation of man from any line of non-human hominoids or primates is anything but powerful.

Mawhinney has raised many thought-provoking matters upon which there is no present time or space to comment. I feel a kindred spirit with much of what he writes. We both desire a sharing of views on these problems from readers who care to comment, I'm sure.

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Time in the Bible

I. Barr's Embargo

Whoever now wishes to state the significance of time for biblical theology must reckon with the strictures of Professor James Barr. In two books¹ he lays an embargo on the attempt by the so-called 'biblical theology' school² to distinguish a peculiarly biblical concept of time. His statue of prohibition contains three clauses: the first forbids internal traffic in spurious philological theories, the second the import of philosophical contraband, and the third the export of theological articles manufactured from their combination. The market researcher must first decide whether to accept or reject the restraint on the commerce in biblical word studies, to observe or breach the blockade on the biblical coastline.

By section one of his interdiction Barr the exciseman seeks to bring to book those who evade their correct linguistic dues. Committed to a dogmatic belief in the coherence and distinctiveness of the Bible for which they are determined to invent evidence if they cannot find it, the 'biblical theologians' have been moonshining a heady concoction of linguistic fallacy for the theological market, and bootlegging it through such discreet channels as Kittel's dictionary. They imagine they can reach a uniquely biblical concept of time on the basis of a comparison of the lexical and syntactical structures of classical Hebrew with other languages, Semitic and Indo-European. But their basic assumption is erroneous that without regard to date, context and author, the key words in the Hebrew Old Testament can be allotted a meaning uniform for each and every occurrence by reference to the vocabulary stock from which they sprang; and further that where an equivalent may be discovered in the

¹ *The Semantics of Biblical Language*, O.U.P., 1961 – *Biblical Words for Time*, S.C.M., 1962.

² Barr lists the culprits in a bibliography to the second work.

Greek New Testament its meaning is likewise controlled from the same original word -herd. This semantic technique infringes the elementary philological rule that usage and syntactical environment take precedence over etymology. A metalinguistic extension of the method attributes ontological status to the concept supposed to lie like a Platonic form behind the verbal counter or group of counters by which it is represented;³ a hypostatizing of linguistic phenomena aided by the deception of denoting the concept by a transliterated (but craftily untranslated) Hebrew or Greek word.⁴ This piece of lexical *legerdemain* is a speciality of O. Cullmann and G. Dellings, using, for example, the words *kairos* and *chronos*. The alternative jugglery with syntax is the mainstay of T. Boman⁵ who tries to demonstrate that the Hebrew verbal system encouraged a view of time as a spatter of critical incidents or pregnant events in contrast to the smooth unrolling of a horological ribbon. Built into the very structure of the Hebrew language was a tendency to regard time in terms of concrete content (what happens at any point) rather than in terms of abstract form (what order the points fall into and what distances lie between them). God let the Greek language, and thought that corresponds to it, run wild during the classical period but the Hebrew language and the religious insight which it evoked he made the object of special cultivation.⁶ Barr subjects both the lexical and syntactical claims to a thorough examination and emphatically rebuffs their pretensions; a valid biblical theology can be built only upon the statements and not upon the words of the Bible.⁷ The primary object of his study of the biblical words for time is not in order to reach any very firm conclusions on that subject but to bring into disrepute a faulty procedure for theologizing from individual word studies which has for too long dominated the exegetical scene. I do not need for my present purpose to decide whether or not he has succeeded in this enterprise, and knocked a lot of pretentious twaddle on the head. It is enough that I judge he

³ *Semantics*, pp. 209ff; *Biblical Words*, pp. 50ff.

⁴ *Biblical Words*, pp. 58f.

⁵ *Hebrew Thought compared with Greek*, (ET) S.C.M., 1960.

⁶ *Semantics*, pp. 72-80.

⁷ *Biblical Words*, pp. 147-8.

has proved the case against a peculiarly biblical concept of time synthesized inductively from purely linguistic data. For this reason I propose to respect his embargo to this extent and forgo the attempt to extract a sanctified theory of the temporal from the study of biblical words.

II. *Alien Theory*

In the second article of his ordinance, Barr bans the import of philosophical categories. Not content with taxing illicit linguistic liquor he sets out, in the rôle now of customs officer, to smash the stills in which the stuff is made. The 'biblical theologians' whom Barr attaches have not derived their descriptions of the biblical idea of time solely from the collation and classification of Hebrew and Greek words for time and their cognates. In order to arrive at their desired end-product of a single, distinctive biblical theory of time they have had to boil down, reduce, concentrate, filter, refine, blend and mature the extremely diverse material which the biblical library provides. To do this processing they needed other tools and plant than purely philological ones; and therefore they brought in philosophical categories. Barr does not enquire systematically into the sources of this equipment because it is not directly germane to his aim. He is more anxious to stop the stuff reaching the consumer than to prevent the producer installing his distillery. Theologians may use their stills and vats and casks constructed from philosophical categories for other things if they please, but they may not poison the study of language with them. All the 'biblical theologians' have resorted, to a greater or less degree, to categorizing biblical material by theologico-philosophical formulations.⁸ Some admit it; others do not. John Marsh, for example, promises in his study to be Reformed in theology and Platonist in philosophical method.⁹ By contrast Cullmann leaves his pre-suppositions unconfessed. Barr resents in particular three distinctions, philosophical in origin, which all modern investigators of time in the Bible seem to accord axiomatic status; the commonplace opposition of Hebrew and Hellenic thought, the

⁸ *Biblical Words*, p. 149.

⁹ J. Marsh *The Fullness of Time*, Nisbet, 1952, p. 18.

well-known difference of opinion between Plato and Aristotle on the relation of time to eternity, and the popular Bergsonian antithesis between timeless idealism and the reality of temporal activity.

It has become a truism in philosophical theology of the last thirty years that Hebrew and Greek thought stand in antithetic relation to each other and archetypal relation to modern Western thought. The stark simplicity of the disjunction and the derivation will not survive much critical examination; it is little more than a convenient mnemonic device for the theological examinee. The supposed opposition has been characterized in so many contradictory ways that it can no longer be taken seriously. The labels Hebrew and Greek stand only for ideal polarities and do not correspond with any known historical discussion. The Greeks are supposed to have had a circular or cyclic view of time and history, according to which the cosmic process repeats itself endlessly like the rim of a wheel turning on a stationary axle. By contrast the Hebrews struck out with a rectilinear image of time, conceiving history as onward-moving, upward-pressing and irreversible. Hence the Greeks could not think of history as a vehicle of God's revelation but quite the opposite, a flashing of revolving spokes behind which the static reality of the axis remained hidden. Whereas the Hebrews could and did perceive the action of God in the thrust of actual historical events. I shall return to this antithesis shortly. It is sufficient here to notice that Barr wastes no powder and shot on it because the linguists have not used this particular tool to define the meanings of Hebrew and Greek words. It is the sort of distinction drawn by T. Boman and elucidated with the aid of Bergson which has wrought linguistic havoc. This is the alleged difference between a Greek and Hebrew view of time according to which the former knew how to reduce time to the bloodless category of sequence whilst the Hebrews did not. Oddly enough in this distinction the exponents seem to have switched seats. In the former distinction the Greek could not get off his fairground big-wheel whilst his Hebrew cousin was scooting along his switchback; in the latter the Greek had reduced time to mathematical measure whilst the Hebrew remained all knotted up in occasions of critical encounter.

Why is it, if the antithesis is invalid and contradictory, that it is persisted in? The 'biblical theologians' are not likely to undertake or agree to its demolition for two reasons. The first is that if some modes of thought in the Hebrew Old Testament are repugnant to the twentieth-century Westerner and difficult to defend from his presuppositions it will be a theological godsend to find a whole thought-world of comparable antiquity set in ostensible opposition to which this repugnancy and this difficulty can be traced. Greeks and Hebrews can be imagined as hard at it long before the modern wrangles between religionist and secularist were dreamed of. God, it may be devoutly thought, had set his seal on the incompatibility of two thought-structures, one pagan and perverse, the other sanctioned by his imprimatur. What theologian worth his salt could witness the destruction of so powerful a dogmatic and apologetic tool without a tear? Yet the truth is that for most of the formative period of Hebrew and Greek thought the thinkers in each language and culture were soliloquizing without contact about totally different questions. The validity of the contrast depends on the existence of a dialogue; but this was not taken up until long after the master thought of each race had crystallized, when the best part of the Old Testament had already been written. The second reason for the wish to retain the antithesis is its exegetical usefulness in affording apparent exactness in the definition of biblical ideas. Definition by contrast is a legitimate device, provided the thing opposed has been justly characterized. Barr begs leave to doubt whether, in the matter of Time, it has.¹⁰

He protests against the unholy alliance of aprioristic thought-forms with selective linguistic data. The Hebrew-Greek contrast wedded with lexical trickery produces monstrous progeny. He devotes one chapter to an alleged distinction between *kairos* and *chronos* and two more to a rebuttal of a supposed contrast between *kairos* and *aion*, the first a contrast of two kinds of time and the second a contrast between time and eternity.¹¹ John Marsh is the named perpetrator of the first and Oscar Cullmann

¹⁰ J. Marsh *The Fullness of Time*, Nisbet, 1952, p. 137.

¹¹ *op. cit.* chaps. ii, iii and iv.

of the second offence.¹² The Greek word *chronos* denotes calendar time, chronological time, clock-time, chronometer time, time by mathematical measure; the word *kairos* stands for realistic time, time with content, time of opportunity and fulfilment, critical, pregnant time. The former represents Greek thought and the latter Hebrew. 'History', says John Marsh in reference to the Hebrew view, 'consists of times bringing opportunities . . .'.¹³ 'It is typical of Scripture not to locate an event by defining its place on a chronological scale, but to identify it by its content'.¹⁴ Naturally enough the test contexts for the validity of the distinction between the two Greek words are those in which they stand side by side apparently synonymous e.g. Acts. i. 7; I. Th. v. i. (AV, RV and RSV 'times and/or seasons', NEB. 'dates and times'). Barr has little difficulty in showing that whilst in some instances *kairos* does carry over from classical Greek something of the meaning of 'critical' or 'opportune' time, for the most part it has taken on a neutral meaning indistinguishable from *chronos*, and is never re-sharpened to its classical meaning in contrast with *chronos*. The other distinction between *kairos* and *aiōn* is stated thus by Cullmann¹⁵: "The two ideas that most clearly elucidate the New Testament conception of time are those usually expressed by *kairos* (*kairos*, "a point of time"), and *aiōn* ("age") . . . The characteristic thing about *kairos* is that it has to do with a definite *point of time* which has a fixed content, while *aiōn* designates a *duration of time*, a defined or undefined *extent of time*'.

The details of this contrast may be reserved for consideration in connection with the thought of eternity. The point I am concerned with at present is the legitimacy of the procedure by which it is drawn. Barr does not object to philosophizing and theologizing about time as such, but protests against the spurious lexical method. Is Barr's embargo to be backed or opposed on

¹² J. Marsh *The Fullness of Time*, Nisbet, 1952, pp. 19ff.

'Time' in A. Richardson (Ed.), *A Theological Word Book of the Bible*, S.C.M., 1950, pp. 258-67.

O. Cullmann *Christ and Time*, (ET) S.C.M., 1951, pp. 61ff.

¹³ *Theol. Word Book*, p. 263.

¹⁴ *Fullness*, pp. 20-21.

¹⁵ *op. cit.* p. 39.

this score? Certainly lexically he is entitled to set up a no-trespassing notice to keep theologians and philosophers off philological preserves. But I see no reason why a theologian should not be free to resort to philosophical categories, to definitions drawn from extraneous sources, as hermeneutic tools to the manipulation of biblical material, provided that on the one hand the biblical material consists of whole sentences and paragraphs and not disconnected words and on the other hand the adopted category is not used as a strait jacket or mould to force the material into shapes incompatible with the idiom of its medium. After all many philosophers, even the more mathematically minded, have spoken of time in visual images. For example Plato's definition of time as the 'moving image of eternity'¹⁶ and Dora Marsden's various descriptions: 'Time is measured motion, mobile extension, shifting room, flying magnitude'.¹⁷ Why should not the theologian use his geometrical figures of circular, linear and the like? Norman Snaith, in a stimulating little paper,¹⁸ chooses to understand time in the Old Testament by distinguishing three kinds, circular, horizontal and vertical, the former two of which are invaded and transformed by the third. He joins issue with Barr over his lexical prohibitionism but avoids a head-on clash by making his approach topological rather than etymological.¹⁹ I shall take another glance at this route into the problem in a moment. What matters now is that the distinction provides Snaith with an interpretative key which turns independently of the meanings of individual words. Cullmann likewise attains a control over the biblical material by his imagery of rectilinear advance, water sheds, and puckered points. I am not saying that the chosen ideas of time are the right ones or necessarily correspond with anything entertained by the original writers of the Old Testament or the New Testament, but only that talk of different shapes to and kinds of time may nevertheless allow the exegete to do justice to the biblical message. I think that Cullmann's

¹⁶ *Timaeus*, 37 d.

¹⁷ *The Philosophy of Time*, O.U.P., 1955.

¹⁸ 'Time in the Old Testament' in F. F. Bruce (Ed.) *Promise and Fulfilment*, T. and T. Clark, 1963, pp. 175-186.

¹⁹ *op. cit.* p. 175.

great book *Christ and Time* is going to survive as a work of theological insight even though his methods and most of his individual exegetic results may be shown to be riddled with holes. And the reason is that he does not seriously misrepresent the essential message of the Bible. Barr goes out of his way to disclaim any intention of rolling Cullmann in the dust; he endorses his organization of the material in his work on Christology and quarrels only with the lexical procedures in the work on Time.²⁰

As regards clause two of Barr's embargo, therefore, I accept his rejection of the use of any particular philosophical categories in the manipulation of linguistic data and indeed of any such employment of any such tool to distort the basic facts, but refuse to advance to a general proposition that all use of philosophical forms in interpretation is debarred. At the same time I do not feel terribly defiant about this. There is a great deal of talk of kinds and types of time, quite apart from specific lexical representation, which I think would be best dropped. What matters is what happens in time and not the nature of time itself. I would not absolutely ban, but certainly seek to avoid qualifying the word 'time' with such epithets as *primaeval*, *redemptive*, *dream*, *non-historical* and the like, if they are going to suggest the existence of a special kind of time before, after, beyond, outside or within time instead of simply an identifiable point or period of time which has certain definable characteristics. I never know whether the German words *Urzeit* and *Endzeit* are supposed to signify simply the beginning *of* time and the end *of* time or some non-temporal existence or form of being vaguely felt to frame the real time we know.

III. *Indigenous Concept*

Under clause three of his enactment Barr decrees that no finished theological article on time manufactured by processing the raw material furnished by the languages of the Bible in illegally-imported thought-forms shall be free of a severe export duty. This tourniquet on the export trade represents his final

²⁰ 'Time in the Old Testament' in F. F. Bruce (Ed.) *Promise and Fulfilment*, T. and T. Clark, 1963, p. 81.

bid to check what he seems to regard as a species of rum-running. I have already alluded to his insistence that a valid biblical theology can be built only on the statements and not on the words of the Bible. He goes on to point out with some satisfaction that there is a serious shortage within the Bible of the kind of actual statements about 'time' and 'eternity' which could form a sufficient basis for a Christian philosophical-theological view of time.²¹ Such statements may be found as 'God has promised times of restoration', 'Jesus said that His time had not yet come', 'Christ is alive unto all eternity', 'The gospel claims that the coming age has already arrived'. But there is another class of statements which is conspicuously rare in the Bible e.g. 'Time is the same thing as eternity', 'Paul teaches that eternity is not timelessness,' 'Time is the field of God's action', 'God created time', 'There is a time, other than our time, which is God's time'.²² The apostles, so far as we know, never enunciated in their preaching a doctrine of time²³ and it is, therefore, an intolerable presumption on the part of the 'biblical theologians' to rank a theory of time alongside and on the same level as the articles of faith by which we stand or fall. Not only is there no biblical concept of time, or even a group of biblical concepts differing from Old Testament to New Testament and from author to author; neither is there a biblical doctrine, or the material for, a biblical doctrine of time.

Having overthrown an established linguistic technique for arriving at a specially biblical view Barr will allow few alternatives. Possible starting points he lists are: (a) an examination of the implications of the creation stories;²⁴ (b) an attempt to discern a thought-structure as distinct from a lexical-structure in the Bible;²⁵ (c) an exegesis of Qoheleth 'the only book in the Bible consciously exercised by the *problem* of time';²⁶ (d) a literary study of biblical literature in its approach to historical

²¹ 'Time in the Old Testament' in F. F. Bruce (Ed.) *Promise and Fulfilment*, T. and T. Clark, 1963, pp. 131-2.

²² *Ibid.*

²³ *op. cit.* p. 157.

²⁴ *op. cit.* p. 145.

²⁵ *op. cit.* p. 146-8.

²⁶ J. A. T. Robinson *Theology*, lvi, 1953, p. 107 cited at *op. cit.* p. 148.

narrative.²⁷ He does not hold out much hope from the first; it might be (no more) the starting point for a discussion of eternity as something other than time. The other possibilities have in his view, distinct limitations. The upshot is the finding that 'if such a thing as a Christian doctrine of time has to be developed, the work of discussing and developing it must belong not to biblical but to philosophical theology'.²⁸ W. Eichrodt reaches substantially the same view.²⁹ He suggests that there may be no biblical conception of time substantially different from our own arising from a quite different understanding of reality. The important thing for the Bible lies not in the idea of time itself but elsewhere, in the use made of the historical sequence for the presentation of an encounter with God. If Eichrodt is right, Barr thinks³⁰ there may be good reason here for theology to avoid being forced into developing such a theological doctrine of time, or at any rate to avoid claiming that any such doctrine developed rests on a certain biblical basis. I accept both these judgements as eminently moderate and sensible, but remain unconvinced that the Bible must be held to yield so little. Barr grants grudging permission to take something out of the Bible on other than a linguistic basis but promptly vetoes the enterprise before it can be set on foot. His third section of prohibition would effectively sever the connection between the description of the teaching of the Bible and the subsequent theological-philosophical construction put upon it. If the formulation of a biblical attitude to time proves to be impossible then the expedition into dogmatics ought never to set off. I am not thinking of a biblical concept but of an attitude. If there is an apologetic demand on theology from the other end to adopt a stance regarding the temporal, the nature of history, the meaning of the eternal, such as was thrust upon it by Gnosticism in the second century and Existentialism in the twentieth, then the biblical theologian must try to express, if he can, the time-implications of the vital biblical doctrines, and seek to determine how far the question of time is a necessary hermeneutic key. He may well conclude that

²⁷ J. A. T. Robinson *Theology*, lvi, 1953, p. 149.

²⁸ *Ibid.*

²⁹ W. Eichrodt *Th. Z.*, Vol. xii, 1956, pp. 102-3.

³⁰ *op. cit.* p. 149.

he cannot say much, that the material is too scanty and patchy, but he is bound to make the attempt to provide a foundation for defining a biblically-based Christian theology over against a speculative philosophical theology. He must say to the dogmatic theologian, 'You can say this but you must not say that'.

Barr himself draws attention to the fact that substantial dogmatic treatments of 'time' have been made by e.g. Barth and Brunner, with very little reference to Hebrew and Greek words.³¹ And yet both men have tried, not always successfully, to submit their theology to the authority of the Bible. I am persuaded that it is impossible to express the message of the Bible, the Old Testament gospel of hope and the New Testament gospel of fulfilment, without temporal reference. The call of Abraham from Ur of the Chaldees, the summons to Israel from the bondage of Egypt, the suffering of Jesus under Pontius Pilate must all remain in their historical settings. I look on Barr's last embargo with a piratical eye to assess the prospects of evading the blockade. I abide by his lexical law, pay due heed to his regulations on philosophy, but mean if possible to infringe his export restrictions. There is no need to break his cordon and sail through the few mean gaps he has conceded. It is only necessary to skirt his blockade entirely and look afresh at such indications as the biblical material itself gives for development. Some of these indications are the supplanting within the Old Testament of non-historical by historical thinking, the elaboration of a sacred view of history, the sub-division of time into progressive acts of a single cosmic drama, the completing of this schematization of history by a climactic *dénouement*, the apparent enclosure of the temporal process by a start-finish framework which does not trap within it the whole activity of God, the possible drawing of the corollary that God is independent of and Lord over time, the projection of religious aspiration in future hope, and the discovery of finality in a past event. If the Bible cannot be made to yield a theory or concept of time, it may nevertheless by such considerations as these evince an utmost seriousness about the temporal.

³¹ W. Eichrodt *Th. Z.*, Vol. xii, 1956, p. 155.

IV. Mythical Time

The cyclic view of time never was an exclusively Greek view. Only some few (very philosophically minded) Greeks held it and they derived it from equally sophisticated thinkers further East. The commonly contrasted rectilinear view of the Hebrews never derived from it nor arose in explicit contrast to the Greek version but had an independent source. The time contrast is not between a Hebrew and a Greek view of time but between what H. Frankfurt has called a primitive mythopoeic view held generally in the ancient Near East and the sudden unprecedented emergence among the Hebrews of a historical awareness. 'The mythopoeic conception of time is, like that of space, qualitative and concrete, not quantitative and abstract . . . Early man does not abstract a concept of time from the experience of time'.³² The evidence for this opinion is not lexical but is culled from a comparative study of ancient texts. Barr's ban is therefore no bar. As I understand it mythopoeic or mythical time, as B. S. Childs prefers to call it, is not a special kind of time, but a denial and disparagement of time; or, better, a refusal to recognize time, the inability or refusal to face up to its unarrestable and irreversible nature. Nothing new ever happens. The whole content of history was determined long since in some primaeval epoch vaguely felt to precede time but still mysteriously pervading the present, a golden age in which the final and persistent character of things emerged. All that now happens is repetition. The cyclic view was perhaps a rationalisation of this much more primitive non-temporal consciousness. Time is unreal or if real worthless. Time is a fading away, a decline, a deterioration, a degradation. The strength and vividness of the world's youth can only be recaptured and sustained by the ritual repetition of the myth of its origin and birth, the myth of the eternal return, at once recounting and effecting the perpetual recurrence and renewal, astronomic, cosmic, mundane, agricultural, political, social, personal. Before ever man expressed his attitude to time in terms of an individual and social teleology amid the phenomena of change, he discovered himself

³² H. and H. B. Frankfort in *Before Philosophy*, Pelican, 1949, pp. 32-5.

temporally in the ritual perpetuation of an archetypal past.³³ He could not yet commit himself to temporality and historicity but learnt to come to terms with time ritualistically. It would be a bit odd if expressions of this kind of mentality did not crop up in the Old Testament which harbours much primitive material. I accept the findings of the myth-and-ritual scholars that they do. The problem is what are they doing there. Snaith and Childs³⁴ both conceive the situation as one in which a general ethnic concept of time is overthrown by a special enlightened Hebrew view. Note immediately that this is not that idiosyncratic Hebrew view expounded by Marsh of which Eichrodt and Barr complain, so different from our own, but simply the ordinary modern progressive understanding inherited from Israel. Both Snaith and Childs regard the overthrow as the key to the theology of the Old Testament. For Snaith the Old Testament is the record of the invasion by Vertical Time of both Circular and Horizontal Times. By Vertical Time he means the idea of visitation from God at opportune moments. Circular time is seen not only in the circular motion of the heavens, wheeling round annually and in the Platonic Great Year, but also and more immediately in the annual pastoral and agricultural programmes which are subject to seasonal recurrence corresponding to the cyclic movement of nature. In a more urbanized setting this time becomes 'religious' time, 'cult' time, and with the development of religious institutions it becomes 'ecclesiastical' time.³⁵ The Agricultural Feasts belonged originally to this kind of tempo. Very little effort of the imagination is required to see that in the right geographical setting, the great river basins of the Nile, Tigris, Euphrates and Indus, and at the right stage of cultural development, the great food-producing societies which emerged in the ancient Middle East, there was little, apart from invasion, to induce a strong sense of time. Indeed, if the evidence of the Australian aborigines has any bearing on the question the weak sense of time goes back into the food-gathering stage as well.

³³ Brevard S. Childs *Myth and Reality in the Old Testament*, S.C.M., 1960, pp. 72-3.

M. Eliade *The Myth of the Eternal Return*.

³⁴ Vide notes (18) and (33).

³⁵ *op. cit.* pp. 75-83.

By contrast, Snaith's Horizontal Time signifies chronicled time, annalistic time, measured by dynasties, invasions, natural disasters and the like. Snaith's thought is that the Vertical Time invades the other two, an inbreaking of the Divine upon the naturalistic, an intersection of both nature and history by revelation. The irruption of Vertical into Circular Time registers not merely in the historicizing of the cult Festivals (that would only be the Horizontal ironing out the Circular to which thought I must return) but in their reinterpretation as commemorations of salvation history. For example, the originally apotropaic Spring. Passover for the exorcism of evil spirits is recruited to celebrate the Exodus rescue. The trail of the invasion of Horizontal by Vertical Time appears in the use of the primitive myth of a divine struggle with and conquest of the chaotic Deep to describe both the rescue from Egypt and the rescue from Babylonia. This is not just Horizontal Time being recurled by Circular but a perpendicular interruption in redemption. Childs expresses similar ideas in different terms. The biblical category of time is qualitative and quantitative. The mythical conception of time with its *Urzeit and Endzeit* scheme whereby the conclusion of history is expected to repeat the commencement is not just breached, as Gunkel thought, by a 'linear history', for this would be simply the substitution of one rationalization for another.³⁶ The Bible does not just replace cultic re-enactment of primaeval acts by a chronological succession of significant events, not even one leading to an immanent eschatology, but treating chronological time with all seriousness, portrays God as injecting novelty on the way in a series of personal interventions in historico-redemptive acts.³⁷

Both these writers treat the Old Testament as the product of a polemic situation in which the spiritually enlightened of Israel are contending for true faith in Yahweh against heathendom either trapped within the heritage of Israel or exerting pressure from without. The critical question is whether the Old Testament writers themselves were conscious of the tension between a Nature Religion and a Historical Revelation. If

³⁶ *Myth and Reality*, p. 75.

³⁷ *op. cit.* pp. 75-83.

there was a debate, a dialogue of theologians, in Israel on the subject of time, with Baalists lined up on one side and Yahwists on the other, conservatives and radicals respectively, the precise contentions advanced by each party have now been lost or deliberately suppressed and no final communique records the resolution of the problem. The situation is not polemic but post-polemic. The older mythical ideas have not been expelled but subjugated by the newer. The cosmos-chaos myth does service for the Egyptian Exodus and the Babylonian Deliverance, the archetypal event has been historicized. It is difficult to be quite sure whether the allusion is intended to correct the myth or whether the myth has so lost its potency that it has been demoted to a merely poetic standing. What Snaith and Childs have done is to take an aerial photograph of an archaeological site to throw into high relief features not visible from the present or even the contemporary ground level. Is it legitimate to draw in all these old buried contours on a modern map of the country? Surely yes, so long as nobody pretends that the Old Testament writers themselves knew so exactly what was under their feet, or that the question of time was more than incidental to their real struggle for religious supremacy.

The obverse is true of the New Testament. There the situation is pre-polemic. Irenaeus has not yet come to blows with the time-drained mythology of the Gnostics. Paul and John have scarcely begun to define Christology and Soteriology over against germinal Gnosticism and have not yet had to spell it out that the Gospel is not about timeless truths or an ever-present potential in man for existential decision but about an act of grace by God in time at a specific point of time. The 'Εφ'απαξ, once for all, of Paul and the writer to the Hebrews³⁸ is not, as Brunner³⁹ would have it, directed against a non-temporal revelation through Nature instead of history but against the indecisive and inconclusive repetitiousness of the Jewish ceremonial and ethical system. We must beware in interpreting Scripture of ascribing to biblical writers the polemic postures we imagine they

³⁸ 'απαξ Heb. 6.4; 9.7, 28; 10.2. 'Εφ'απαξ Rom. vi. 10; Heb. vii. 27; ix. 12; x. 10.

³⁹ *The Mediator*, (ET) Lutterworth, 1934, pp. 25-35.

would have adopted to problems which trouble us but never disturbed them. But at the same time when we have to adopt these stances ourselves we need not be ashamed of turning to the Scriptures for ammunition. Brunner's 'Ἐφ'απαξ is exegetically false but dogmatically sound. Paul did the same sort of thing in the outrageous applications he sometimes made of Old Testament texts. The Scriptures were originally the product of protestation, an outgrowth of the struggle for truth and loyalty, and if no explicit teaching on time has crystallized from the overlaid tension between myth and history within the Bible itself the attitude of the Bible can soon be brought to utterance in the words of the Bible as soon as the conflict arises. In a clash about the importance of time the Bible remembers its roots and its fundamental repudiations and declares itself time-minded.

V. Salvation History

Snaith and Childs try to locate the birth of an endemic Israelite attitude to time in a ideological conflict within the Middle East of the two millenia before Christ, the settlement of which is recorded in the Old Testament from the standpoint of the victor. Their treatment builds on the form-critical method of Gunkel and discovers a contrast between the static, mythical presuppositions of the indigenous agriculturalists of Palestine and the dynamic historical experience of the invading nomads. The disadvantage of their method and the field of their review is that they have to tackle the text of the Old Testament piecemeal digging bits out of their present context and enquiring into their sources in maybe earlier millenia. A more productive method would be one which took the whole text as it now stands and looked for some orientation which betrayed a special time interest. This is the kind of approach taken by S. G. F. Brandon⁴⁰ who, relying more on the older source-criticism, attempts to reconstruct the stages in the development of Hebrew historiography. This way he gets nearer the nib of the pen of the biblical writers than Snaith and Childs who are rather trying to reconstruct a thought background. In contrast to the gods of the

⁴⁰ *Time and Mankind*, Hutchinson, 1951, chaps. iv and v.

Ugaritic texts, Yahweh, the God of the Hebrews, demonstrated his providence for his people on the stage of political affairs rather than in the fertility of crop, flock and family.

The relationship between Yahweh and Israel was not natural but conventional. He became God of Israel not by natural affinity or kinship but by artificial adoption, on the ground of election and on condition of covenant.⁴¹ The marriage of God and his people took place for Israel not annually in recollection of some aboriginal, unoriginate union but at a definite remembered point of time, viz. the Exodus. The sacred writings of the Hebrews were therefore concerned with *Heilsgeschichte*, salvation history, all stemming from an interpretation of the founding of the nation at the Exodus. Brandon, following Von Rad, seeks to show that triggered by the Exodus experience, a school of Yahweh loyalists produced the Old Testament in stages to serve an ideology of revelation through history. The Hexateuch, which forms the kernel of the Hebrew conspectus of history, sets forth the essential pattern. The Exodus rescue and its attendant covenant are read back by the Yahwistic historians into the Patriarchal Sagas (e.g. Noah as Bringer of Salvation and the election of Israel forecast in Noah's oracle).⁴² The historicizing programme is not deliberate and artificial but, in the earliest stages at least, probably unconscious and spontaneous. The germ of the Salvation history probably lay in the credo of the ancient amphictyonic festival at which the Israelitic tribes celebrated their league of political alliance immediately on settlement in Palestine which according to modern theory for some tribes preceded the Exodus; but it was the Exodus event which gave a new status to the recollection of the past.

The Yahwistic writers initiated in literary record the concept of aetiology relative to the flow of events and took the first step from the intuitive to the explanatory stage of thought in a ratiocinative account of historical action.⁴³ The result is no mere annalistic chronicle but a highly selective and tendentious manifesto.⁴⁴ The writers of Hebrew literature set out to combat

⁴¹ *Time and Mankind*, Hutchinson, 1951, p. 95.

⁴² *op. cit.* pp. 62-83.

⁴³ *op. cit.* pp. 82-3.

⁴⁴ *op. cit.* p. 62.

Baalization and therefore interpreted the Exodus and the settlement as salvation history.⁴⁵ They were the first people to give a meaning to history and therefore to recognize the seriousness and the reality of the onward march of time. Brandon works the theme out in other books besides those which form the Hexateuch. The prophets of the eighth and seventh centuries had to maintain the scheme and extend it in the face of all the contrary evidence of national apostasy and evident Divine displeasure, some of the Psalms popularize the idea of sacred history in their liturgical rehearsals of past deliverances, the apocalypsisists eventually schematize the whole thing in numerical divisions. Between them over the whole time of the production of the Old Testament they shaped a propaganda myth, a justification of the religious revolution against the apostate *status quo*. They were not defending the existing politico-religious structure of Israel during the monarchy and beyond, creating for the support of the kings an apologia, a kind of Tudor myth, but on the contrary were vindicating God against them. Now there may be a lot wrong with the detail of Brandon's argument. He is, for example, too dependent on a theory of sources which is generally thought to be crumbling. The Hexateuch is not the obvious entity it was once thought to be. Moreover, his thinking is on a low naturalistic level. I do not mean that he fails to recognize the hand of God; he is not writing that sort of book. I mean that he does not give enough weight to the religious as distinct from political motivation of the Old Testament writers. But for all that he does perceive the intense sense of destiny in the Old Testament and the difference between this and any other actual historical view of history. A man with a cyclic view of history might advance from conceiving a wheel turning about a static axis to conceiving the wheel as rolling and the axle-tree in motion. The distinction of the Old Testament writers is to have discerned direction and goal. Hesiod thought the wheel was moving but he imagined it was rolling downhill. The Yahwists believed that God was pushing and drawing the wheel. But this sprang not from a special idea of time but from a special idea of God. I believe it is

⁴⁵ *Time and Mankind*, Hutchinson, 1951, p. 97.

a mistake to reduce the offence, the scandal of the biblical message to that of historical particularity but there is no denying that it is there, ineradicably, in the idea of a salvation-history, a recorded series of events in which God has peculiarly acted. There is much more to the offence than that but there is also at least that.

VI. *Divided Time*

D. S. Russell warns against the grave error of regarding the literary phenomenon of Apocalypticism as an aberration from traditional Hebrew thought. He quotes⁴⁶ Sabatier's dictum 'Apocalypse is the prophecy what Mishnah is to Torah' and T. W. Manson's judgement that Apocalyptic is 'an attempt to rationalize and systematize the predictive side of prophecy as one side of the whole providential ordering of the Universe. The other side of the systematizing process is the scribal treatment of the law leading to the codification of the Mishnah.'⁴⁷ The practically pathological curiosity about time in the Apocalyptists is not a wholly alien element, though it must owe something to Persian influence from the similar attitude in Zoroastrianism, but is largely a natural evolution from the simpler idea of Salvation History. The unity of history as a corollary of the unity of God was already adumbrated in the canonical prophets Amos, Deutero-Isaiah, Ezekiel and Jeremiah. All that the Apocalyptists were to do was to take the process a stage further by arranging history systematically and sub-dividing it into periods and epochs predetermined by divine decree.⁴⁸ Most Apocalyptic lies, of course, outside the canon, but since *Daniel* and the New Testament *Book of Revelation* are generally regarded as marking respectively the first and last great products of the tradition the fantastic developments in the interim must to a large extent control our understanding of the canonical works.

No interpretation of the message of the Bible can be correct which cuts out this wedge. The thought-forms of the Old Testa-

⁴⁶ D. S. Russell *The Method and Message of Jewish Apocalyptic*, S.C.M., 1964, p. 86.

⁴⁷ T. W. Manson 'Some Reflections on Apocalyptic' in *Aux Sources de la Tradition Chrétienne (Mélanges offerts à M. Maurice Goguel)* Neuchâtel and Paris, 1950, pp. 139ff quoted by D. S. Russell, *op. cit.* p. 84.

⁴⁸ *op. cit.* p. 218, 223.

ment do not reach their mature development within the canon but beyond it. The same goes for the New Testament the categories employed in which are denuded of their proper significance if the inter-testamental literatures are left out of account. I am not saying that the ancient Hebrews had a distinct concept of time which the Apocalyptists recut and polished, but only that the way the latter handled questions of time rebounds teleologically upon the meaning attached to time by the intra-biblical writers. Russell lists the special temporal features of Apocalyptic as (a) pessimistic historical surveys (b) the division of time into periods (c) the doctrine of the two ages (d) the unity of history (e) the notion of primordially.⁴⁹ All these elements are to be found at least germinally within the Old Testament itself. The feature that I want particularly to draw attention to is that of the division of time into periods. The final judgement on Apocalyptic may well have to be that its message is vitiated by the spurious precision of its prediction, a charge from which *Daniel* and *Revelation* may not entirely escape. Daniel, elaborating a hint in Jeremiah (Jer. xxv. 11-12; xxix. 10) divides up history, from the time of the Captivity onwards into seventy weeks of years or seventy heptads of years (Dan. ix. 21ff), and again apportioned the world empires between four ages ruled by four beasts and signified by four metals (Dan. ii. and vii. 3). Extra-canonical works wax far more extravagant and carve up world-history from the Flood to the Final Judgement. The Apocalyptists deserve to be disbelieved for such pretence and for their bizarre idiom, but at the same time they were asserting something about God and his relation to time, and that not obliquely but quite directly. God was Lord of time. He had determined all things beforehand according to his good will and set in train their occurrence in order to fulfil it. He had rolled history flat and thrust it in a discernible direction towards an apprehensible goal. Of course, the conflicting schemes were mechanistic rather than organic and misconceived God as a kind of fate. Of course, much of the detail was theologically dangerous, some of it, e.g. Daniel's theory of deterioration, only

⁴⁹ T. W. Manson 'Some Reflections on Apocalyptic' in *Aux Sources de la Tradition Chrétienne (Mélanges offerts à M. Maurice Goguel)* Neuchâtel and Paris, 1950, p. 105.

partially baptized paganism. Too much of this kind of thinking represented human presumption and a draining away of religious mystery. But for all that the Apocalyptists were still seeking to give God the glory for the high destiny he had thrust upon Israel. If they boasted of being able to take in the whole of history at a glance and allocate the times and seasons of God's purpose, they meant only to rejoice in his dominion of time. But for my present purpose their importance lies in their taking the next logical step in the development of a biblical attitude to time. They succeeded to a tradition in which a group of men had originally broken with a Nature Religion in favour of a Historical Revelation and their successors had recounted the series of events in which the revelation was thought to have occurred, handling on the idea of a salvation history. I think of those little framed charts found in the vestries of some churches in which the whole of world history is marked out in ages. The Apocalyptists have their successors still and he would be a rash man who thought that they had seriously misunderstood the Bible. Whether literally or symbolically history is planned by God. How otherwise should he know the fulness of time when he should send his Son? The Apocalyptists represent in an extreme form the naïveté which lies at the heart of the biblical message. In the New Testament when asked to locate himself on such a time-chart Christ did not deny the existence of such a chart but declined for lack of knowledge (Mark. xiii. 32 cf. Acts. i. 7). All those modern endeavours to relieve Jesus and Paul and John and all but a minority in the earliest church of the shame of belief in the time-schemes of Apocalyptic are to my mind misconceived. The only eschatology the contemporaries of Jesus knew was an apocalyptic one saturated with time references. The Christians, following Jesus, certainly pruned back the rank growth and simplified the scheme but they did not repudiate it (*pace* T. P. Glasson, J. A. T. Robinson and others).

VII. Climactic Time

The burden of the earlier salvation history of the Old Testament and of the later quantified version of developed Apocalyptic was that all times were not equal. God himself distinguishes times and events: in some he manifests himself but in others he

remains hidden. Within the series of events which constitutes salvation history again some times are more valuable than the others, more numinous. Such was the time of deliverance from Egypt, the 'classic' time of redemption, which become the base and model for all salvation times. The creators of the tradition took the Exodus as their starting point not only to extrapolate into the past (so that Israel's ancestors are shown as receiving the call that came to the nation) but also to project into the future (so that all God's deliverances and his final Deliverance will follow the pattern of the Exodus). For the Old Testament writers the Exodus is definitive, normative and final, answering the what, how and when of God's redemptive action. It is definitive because it reveals God's salvation as a deed of rescue from actual evils within real time and is not merely a conceptual escape at no particular time. It is also definitive because it identifies the God henotheistically. It is normative because it establishes a pattern or model for all such rescues. It is final because it is pivotal; all such rescues being ultimately the same rescue, not because though repeated in time it is only one intervention for God but because God never acts in any other way; his last act will be in the same mode as his first. This I take it is the proper interpretation to put on the description of the Exodus in terms of the old myth of the overthrow of the ancient dragon of destruction,⁵⁰ the re-enactment of the Exodus in the cultic celebration of the Passover⁵¹ and the expectation of a latterday Exodus.⁵² Clearly here mythopoeic conceptions are submitting to historical. It is not that an originally historical event has been progressively assimilated to a cultic happening but that ritual and mythical motifs have been requisitioned to serve a scheme of salvation history. Admittedly there are elements in the Old Testament which seem to conflict with this, e.g. the extensive motif of a correspondence between the Beginning and End of the World. N. A. Dahl⁵³ distinguishes

⁵⁰ Isa. li.9; Ps. lxxxix.10.

⁵¹ Exod. xiii.14.

⁵² Isa. xi.11, 15, xvi; 10.24-6; Jer. xxxi.31-33; xxxii.39, 40.

⁵³ 'Christ Creation and the Church' in *Background of the New Testament and its Eschatology*, edited by Davies and Daube, 1956, pp. 422ff of Russell *op. cit.* p.282.

seven main types of correlation between Creation and Re-creation. They are (i) analogy; (ii) restitution; (iii) transformation; (iv) identity; (v) reservation (i.e. of certain aspects or elements of the old); (vi) perfection; (vii) pre-existence or pre-destination. The idea is that the Paradise of the End will match the Eden of the beginning. No climax or critical occurrence comes in between them. None of these correlations is directly dependent on the idea of an intervening, irreversible, temporal process, and might therefore be taken as a proof of a non-temporal view of God's relation to the world. But against such a conclusion must be set (a) the fact that this symmetrical kind of thinking probably preceded true historical thinking and is therefore vestigial in its present contexts; (b) the fragmentary nature of these allusions in contrast to the unity and coherence of the historical tradition; (c) the fact that all seven correlations are capable of being fitted in to a time-scheme and have in their present contexts been so fitted; (d) the existence of other correlations with a historical base, e.g. the modelling of the Messianic Age on the Davidic reign; (e) the historizing of the cultic festivals. As to this last some, e.g. the Passover, the Unleavened Bread, the Feast of Booths still retain the marks of their Pastoral and Agricultural source and are clearly in process of being historized; and there may well be others which have become completely historized. Such may be the case in the idea of the Day of Yahweh which from being the climax of the agricultural year in a New Year Festival has been applied by the prophets to a climax of Divine intervention in history (Amos. v. 18).

Although the Exodus is regarded by the Old Testament writers as definitive, normative and final it turns out in the New Testament to be no more than the foreshadowing of the Exodus which Jesus accomplished at Jerusalem. Marsh draws the numerous parallels in the New Testament in detail.⁵⁴ I confess that I am always initially sceptical when typological references are being collated in the New Testament to show that, e.g. one of the four Gospels has been modelled on the Pentateuch and Jesus given the rôle of a second Moses, but in the end I usually have reluctantly to concede that the cumulative weight of evi-

⁵⁴ *Fullness*, p. 81.

dence is irresistible. So it is here. Too many lines point to the conclusion that the primitive Church regarded the Advent of Christ as a second Exodus or rather the event that the original Exodus was really all about. The coming of Jesus is conceived as occurring at a moment of ripeness or maturity, in the fullness of time.⁵⁵ The fullness is not the fruition of a process immanent within history but the fulfilment of the overriding purpose of God. The ripeness is not determined by the seeding of promise but by the plucking of fulfilment. An objective reader must admit that the Bible as a whole reveals an extraordinary attitude to time as a medium in which a selective series of special times of divine activity (the successive Callings of God and the promises made by him for the future in connection with them) adumbrates and points to a climax within time which sheds its quality on the rest. The Exodus held this privileged position in the Old Testament but the whole event of Jesus takes over the role in the New Testament. Now there may be more or less satisfactory ways of stating the thought (with or without resort to spurious lexical techniques) and undoubtedly the idea is hideously problematic logically and philosophically. However it is put, the idea of a privileged time, a uniquely revelatory time, a period of maximum numinosity containing the quintessence of redemptive action, is bound to be at odds with the plain-man's view of time. Marsh⁵⁶ is critical of Cullmann's image of the midpoint of a rectilinear line of selective salvation events. Christ, he says, is not only the midpoint, he is the beginning and the end, the first and the last, the alpha and the omega. True enough, but then Marsh is only substituting for Cullmann's crude and admittedly defective temporal concept another crude and equally faulty temporal concept. And neither can claim to be more or less Scriptural than the other. Cullmann's D-Day illustration, his midpoint, his watershed, his puckered up or crinkled point, Tillich's *kairos*, are all in the end logically nonsense, but they still seem to me worthwhile symbols of the biblical witness to the climactic nature of the redemptive event described by Paul in the words 'Christ our Passover was sacrificed for us' (I Cor. v. 7).

⁵⁵ Gal. iv.14; Eph. i.10 cf Heb. i.1, 2.

⁵⁶ *op. cit.* p. 177.

VIII. Time and Eternity

If you asked a child to characterize God's relation to time by asking the questions which Barr disapproves of, viz., Did God create time or create in time or with time whilst he himself stayed outside of it? Is there a time other than our own which is God's time and which will survive when ours is worn out? He would probably not expound a dualism of time and eternity on the Platonic and Idealist model unless he were a remarkably precocious brat. He would more likely fish up the idea of perpetuity, of God's going on for ever and ever and having been there all the time even before the start. The concept of timelessness is much more sophisticated and presupposes both a certain disaffection with mutability and a degree of mathematical grasp. That is why the idea arose in India before ever it was taken up by the Greeks. For this reason it is *prima facie* improbable that the concept of timelessness finds expression in the Bible, which never negates time in the Far Eastern fashion.

The lexical disputes between the experts over the exact significance of the Hebrew *ōlam* and the Greek *aiōn*, their cognates and the standard phrases containing them, are not likely to yield any positive results for the simple reason that there is no special word for eternity in either language and the concept has therefore had to be expressed in words whose primary connotation is temporal. Barr and Cullmann who take opposite sides on the issue seem to me not to be arguing so much about the meaning of the words used as rejecting each other's picture of the relation of time and eternity. Cullmann looks to the doctrine of the two ages for his clue and concludes that for the Bible eternity is the entirety of time. Eternity is not other than time; it is the totality of time sharing in the same character which pervades and constitutes both. The edges of time, so to speak, do not lie at the beginning and the end but at the middle where the 'present age' and the 'age to come' overlap, and the decisive event of the cross cuts in at the midpoint to mark the beginning of the age to come before its expected time.⁵⁷ James Barr, on the other hand, fixes his attention on the Bible as it stands and sees the apparent framework of an absolute beginning at

⁵⁷ *Fullness*, pp. 62-93.

Genesis i. and a final conclusion at *Revelation xxii.* from which he is prepared to entertain the idea that eternity may be other than time. In his opinion the natural reading of *Genesis i.* is that the beginning of time was simultaneous with the creation of the world. And whilst he admits that Rev. x. 6. as it stands does not refer to the abolition of time and its replacement by timelessness but to the reduction of delay, he still harbours the suspicion that 'delay' was not what the angel originally said.⁵⁸ Both men are to my mind more right in what they affirm than what they deny. Cullmann is right to see that biblically the connection of time and eternity lies in the decisive interventions by God within time and not in any vague drift before or after the raising and lowering of the curtain on the cosmic drama. Barr is right to insist that the reduction of eternity to unlimited time does not recognize sufficiently the presence of the start-finish framework of Hebrew eschatology.

Neither gives sufficient attention to the fact that both for the Old Testament prophets and for the apostles (particularly John) the age to come, i.e. that which is or which issues in eternity is not merely the completion of the present age, but is altogether different from it. Some indication of the difficulty the Hebrews had within their tradition of conceiving timelessness appears from the diverse views taken in Apocalyptic of the duration of the Messianic age. For some this had a term and was to be succeeded by the everlasting reign of God himself; for others it had no end and was coextensive with God's eternal reign. The millennial reign of Christ in Rev. xx. belongs to the former school of thought. Thinkers whose main concern is to understand and do the will of God are not going to be very precise about a thing like that. If time has a term but God's purposes turn out to be the richer and more varied than they had at first thought, then time will be regarded as extensible to fit those purposes in. Paul evinces the same cool disregard of apocalyptic schedules in his apologia for the delay in the Parousia. All that he was sure of was that if there was to be a guillotine on time, God held it. If you had asked a Jew contemporary with Jesus and Paul what eternity was like he would

⁵⁸ *Fullness*, footnote p. 26.

have been like the child we imagined and would have thought naïvely of a transcendental order going on for ever but temporally starting from a decisive intervention by God. The only difference in the Christian was his belief that the decisive act had already taken place.

IX. Christ and Time

What is the relation of Christ to time? Can the message of Jesus and the Kerygma about Jesus be stated with our reference to time? Can the Gospel of Christ crucified, risen and expected be torn from its mooring in a past event in history and cut from its anchor in a future hope? The older attempt by the nineteenth-century liberals summed up by the achievement of Adolf Harnack is now generally repudiated. Jesus was regarded as an expositor of timeless truths about the permanent relation between God and all mankind who just happened to have flourished at a given historical era. More recently men like R. Bultmann, T. F. Glasson, C. H. Dodd and J. A. T. Robinson⁵⁹ have sought to show that whilst the time element ought not to be removed from Jesus' message in principle nevertheless the real meaning can be stated without resort to conceptions such as a decisive act of God in time, a definite hope for the future, and an end to time. They have been satisfactorily answered by W. G. Kümmel⁶⁰ who does not, in my view, go quite far enough. The key to the matter is the centrality of Jesus' eschatology and the irremovable futurist element in it. If Jesus was prophetic without being predictive, if his eschatology was uncontaminated by Apocalyptic, then it might be possible to say that the time-coefficient was a dispensable element in the Gospel. His message then readily reduces to a summons to existential decision in response to a challenging word of God spoken first by Jesus at a particular place and time

⁵⁹ R. Bultmann *History and Eschatology*, T. and T. Clark, 1957.

T. F. Glasson *The Second Advent*, 1945.

C. H. Dodd *The Apostolic Preaching and its Development*, 1936.

J. A. T. Robinson *In the End God . . .* Jas. Clarke, 1950.

Jesus and His Coming, S.C.M., 1957.

⁶⁰ W. G. Kümmel *Promise and Fulfilment*, (ET) S.C.M., 1957.

but since proclaimed by his followers without necessary reference to that time and place and without holding out hope of a future time of comparable crisis. But this way the word 'eschatology' is often transformed from meaning the study of the last things to concern about the contemporaneously important. Kümmel has shown⁶¹ to my satisfaction that the message of Jesus cannot refer exclusively and exhaustively either to future or present fulfilment, that he placed side by side the conceptions that the kingdom of God was expected soon, that its coming was expected within his generation, and that the expected kingdom of God was at the same time already present in his ministry. Jesus believed, taught and proclaimed that his present was a time of eschatological fulfilment of past promise but that an unfulfilled residuum remained for future realization, not disconnected with his present but closely entangled with it. Kümmel states the position correctly but wonders quite how Jesus resolved the tension. The bridge, he thinks, is simply that in the present Jesus demands a decision which will be the determining factor for the eschatological verdict of Jesus when he comes as Son of Man. There is more to it than that. Jesus did not have to think out this connection *de novo*. I believe those scholars are right who believe that Jesus inherited and took over a dogmatic, ready-made scheme of the Last Things from the Apocalyptic tradition of the inter-testamental period and that far from by-passing it and reverting to the non-apocalyptic eschatology of the canonical prophets he produced a synthesis of the two by casting himself in the lead-rôle in the cosmic drama. I shall not work out the details but content myself with saying that it follows that the self-understanding and message of Jesus, together with the Church kerygma which is not a distortion but a development of it, is saturated through and through with time-reference. For Jesus the past is not an aspect of the self which is crucified in decision, nor is the future a new aspect of the self which is created by decision but an area *ad extra* of the redemptive activity of God. There are acts of God yet to be that require time to fulfil.

⁶¹ W. G. Kümmel *Promise and Fulfilment*, (ET) S.C.M., 1957, p. 141.

X. Conclusion

To sum up: there is no peculiarly biblical concept of time distinguishable on the footing of lexical studies or any other kind of studies; harm may be done by uncritical surrender to philosophical ideas of time to which theologians have turned to make up this deficiency, though not necessarily for the theologian need not surrender but pick and choose as he likes; and in the end the apologetic situation always demands a statement of the relevance of time to the Gospel, which is not nearly so hard to find if you are naïve enough to let the Bible speak in its own unabashed way about the once-upon-a-time of God's salvation.

D. GARETH JONES, B.SC., PH.D.

The Phenomenon of Teilhard de Chardin*

'Teilhard de Chardin was a great evolutionary thinker, comparable with Marx and Darwin; he was at the same time a mystic with a vision as great as St. Augustine's'.¹

'The greater part of *The Phenomenon of Man* . . . is nonsense, tricked out by a variety of tedious metaphysical conceits, and its author can be excused of dishonesty only on the grounds that before deceiving others he has taken great pains to deceive himself'.²

The world of Teilhard de Chardin, like the world of his admirers and critics, is characterized by extremes. A priest of the Roman Catholic Church, but accepted far more warmly by evolutionary humanists, he has been variously described as a 'genius',³ an 'apostle of evolution',⁴ a 'mystic visionary'.⁵ The influence of his writings since his death in 1955 has been enormous, so much so that one writer was led to remark that in some quarters they were treated as though inspired writ.⁶

His critics with just as little restraint have described *The Phenomenon of Man* as anything from 'a hodgepodge of semi-materialistic, naturalistic speculations',⁷ to 'tipsy, euphoric prose-poetry'.⁸

*Abbreviations used in the references:

P *The Phenomenon of Man* by Teilhard de Chardin (Fontana Books, 1965).

L *Le Milieu Divin* by Teilhard de Chardin (Fontana Books, 1965).

C *Teilhard de Chardin* by C. Cuenot (Burns and Oates, 1965).

R *Teilhard de Chardin Scientist and Seer* by C. E. Raven (Collins, 1962).

¹ From a leaflet issued by 'The Pierre Teilhard de Chardin Association of Great Britain and Ireland'.

² P. B. Medawar, *Mind*, 1961, 70, p. 99.

³ *The Times Literary Supplement*, 25/5/1962, p. 366.

⁴ C., p. 383.

⁵ W. H. Thorpe, *Science, Man and Morals* (Methuen, 1965), p. 56.

⁶ *The Times Literary Supplement*, *op. cit.*, p. 365.

⁷ R. Hooykaas, *Free University Quarterly*, 1963, 9, p. 55.

⁸ Medawar, *op. cit.*, p. 99.

As for the man himself, he evoked universal warmth and affection, even in those who disagreed with his views. And so one critic has described him as 'a great soul, a kindly man and a subtle mystic'.⁹ To one admirer his personal quality was so precious that he could only describe it as 'a state of pre-beatitude'.¹⁰

Teilhard's self-description is revealing: 'I am a pilgrim of the future on the way back from a journey made entirely in the past'.¹¹ With his craving after the imperishable and with his desire to see all the elements of the world synthesized in Christ, his spiritual mission was to give back to Christians a true sense of the earth and so he devoted himself to 'manifest and exalt the divino-Christic power contained in the unitary development of the tangible world'.¹² In the light of this it does not surprise us to learn that he considered it the priest's duty to 'Christify' evolution.¹³

Life

Born in 1881 in Auvergne, he was the fourth of eleven children in a devout Roman Catholic family. At the age of 10 he went to a Jesuit college where he became very interested in geology and mineralogy. At 18 he entered the Society of Jesus. During the early part of his training with the Society, the community was expelled from France and went to Jersey. On completing this part of his studies in 1905, he was sent for three years to Cairo where he taught chemistry and physics, after which he came to England to complete his studies for the priesthood. It was during his stay in England that his view of the world began to expand.

During the First World War he served as a stretcher-bearer, distinguishing himself by his fortitude and courage. The importance of this period for his world-view lay in the development of a feeling of oneness with the whole of mankind, some-

⁹ G. G. Simpson, *Scientific American*, 1960, 202(4), p. 207.

¹⁰ C., p. 382.

¹¹ Quoted by N. Braybrooke (Ed.), *Teilhard de Chardin: Pilgrim of the Future* (A Libra Book, 1966), p. 7.

¹² Quoted by C., p. 395.

¹³ *Ibid.*, p. 368.

thing he had not previously experienced and which was to form an essential part of his evolutionary cosmology. It was also during this period that he experienced a vision of Christ, in which he saw the outlines of a painting of Christ merge into the rest of the world.¹⁴

In 1919 he returned to his scientific career and in 1920 became Professor of Geology at the Catholic Institute of Paris. 1923 saw him making his first visit to China, where he went on a palaeontological mission. Here in the vastness and isolation of Mongolia he saw that everything in the world could be described in terms of one single activity, and this gained expression in his *Mass on the World*, in which he, as God's priest, offered up to God 'on the altar of the entire earth, the travail and the suffering of the world'.¹⁵

On his return to France in 1924, he experienced his first clash with his superiors. He was forbidden to continue teaching because his ideas about original sin and its relation to evolution were considered unorthodox. After a period of unhappiness he returned to China in 1926, where he lived and worked for the best part of 20 years, with only occasional visits to Europe.

His next important work to be written was *Le Milieu Divin* in 1927. This he described as 'an essay on the interior life', and in it he attempted to 'recapitulate the eternal lesson of the Church in the words of a man who, because he believes himself to feel deeply in tune with his own times, has sought to teach how to see God everywhere, to see him in all that is most hidden, most solid, and most ultimate in the world'.¹⁶

In 1938 he was appointed Director of the Laboratory of Advanced Studies in Geology and Palaeontology in Paris, but his return to France was prevented by the outbreak of the Second World War. During the Japanese occupation of China his scientific work was considerably reduced, and it was at this period that his ideas reached their zenith. This was reflected in

¹⁴ *Christ in Matter*, in Braybrooke, *op. cit.*, pp. 18, 19. It is difficult to assess the importance of this incident in the development of his world-view. Although it emphasises the close relationship between Christ and matter, it does not feature as such in his thought.

¹⁵ Quoted by C., p. 50.

¹⁶ L., p. 46.

the production of *The Phenomenon of Man* in the late 1930's, with revisions of it during the first half of the 1940's.

Overall, however, his many years in China were very productive ones in the sphere of his palaeontology. His best known contribution was his association with the finding and description of *Sinanthropus* (Peking Man), which is an important example of one form of early man. In addition to this he completed several important monographs on the late Cenozoic mammals of China, and played an invaluable part in the organization of Chinese palaeontological and geological research.

The attitude of his superiors to his views had not changed by the time of his return to France in 1946, and not only was he forbidden to publish or teach on philosophical subjects but he also had to refuse a very important chair in the Collège de France.

In spite of these rebuffs he never once considered leaving the Society of Jesus, for the greater freedom he could have enjoyed as a secular priest. He was convinced that to do this would be synonymous with cutting himself off from the will of God. To him the Society was his 'divine milieu' and he accepted the restrictions imposed upon him with no outward sign of rebellion. However, he did ensure that the necessary arrangements had been made for the publication of his writings after his death.¹⁷

Before moving to New York in 1951 he travelled widely, making many contacts in the scientific world including the formation of a deep friendship with Sir Julian Huxley.

In New York, until his death four years later, he worked at the Wenner-Gren Foundation where he was instrumental in the formulation of anthropological policy. His position also gave him opportunity to elaborate and disseminate his views on the future rôle of man in the universe.

* At the time of his death, Teilhard's influence was limited to individuals, those who had been in his presence and who had been affected by his radiant personality, and by his stirring message to optimism and action.

It was with the publication, by an assorted group of sponsors, of *The Phenomenon of Man* (the French edition in 1955 and its

¹⁷ C., p. 307.

English counterpart in 1959) that Teilhard burst upon the intellectual scene; and Teilhardism was born.

In discussing Teilhard's thought I will have to recourse at various points to the interpretations and views of his followers. Without this I would have to omit much that is essential to an understanding of his position, for the simple reason that Teilhard presents his synthesis only as an introduction to,¹⁸ or as one aspect of, a complete explanation of the world.

Difficulties arise when we realize that from this *limited* starting-point he reaches *unlimited* conclusions. Whatever may have been his original intentions, he achieves the most all-embracing synthesis imaginable. Because of this we are forced to analyse all aspects of his message – as his synthesis is sometimes called – and not simply the aspects which he specifically mentions.

An added difficulty is due to the constant development of his thought, or perhaps more appropriately, to the continued enlargement of his vision. Consequently, it is hazardous to accept any one work as a definitive expression of his thought, although *The Phenomenon of Man* undoubtedly comes nearest to being this. In addition, we must also bear in mind, at the least, *Le Milieu Divin*, *The Future of Man*, *The Mass on the World* and his many letters.

Science

The principle which he stressed as being the foundation of *The Phenomenon of Man*, and which has been the centre of so much controversy, is *science*.

Although it has been suggested by one writer¹⁹ that *The Phenomenon of Man* was described as science, rather than theology, to give it a chance of being passed by his superiors, this seems hardly likely and not at all in character with the whole tenor of Teilhard's life. There is no doubt that he meant it as science, and not as metaphysics, theology or philosophy. His subject was man, man *solely* as a phenomenon, but the *whole* phenomenon.²⁰

¹⁸ P., p. 31.

¹⁹ F. H. Cleobury, *The Modern Churchman*, 1966, 10, p. 18.

²⁰ P., p. 31.

The question is, 'what did he mean by science?' Most of his critics have not paused to ask this question, but assuming his science to be the same as theirs have plunged headlong into their literary tirades. Hence the ruthless criticisms by such eminent scientists as Professor G. G. Simpson,²¹ Sir Peter Medawar²² and Sir Alistair Hardy,²³ and of the historian of science and evangelical, Professor R. Hooykaas.²⁴

Now it is clear from what we may term his orthodox geological and palaeontological articles²⁵ that in his scientific work he rigorously applied the principles of careful observation and experimentation to check foregoing hypotheses, and to suggest possible useful avenues for future work. He was a modern scientist of a very high calibre.

Science in this sense can be termed 'analytical'. It approaches problems by reducing them to their simplest known constituents, and with increasing knowledge gradually building up a more satisfactory picture of the system concerned. This is the approach of modern science.

For Teilhard, however, this was science at its *elementary* level, a level which had to be outgrown to enable it to pass on to its far more advanced task of 'synthesis'.²⁶ According to Teilhard science can, and science must, see things whole. If this is accepted, the most profitable way of seeing man, for instance, is not as a collection of cells – however much might be known about the cells themselves, nor as a system of interacting organs and tissues, nor as a social animal, nor as a mechanism capable of highly complex learning patterns, nor even as a combination of all four plus many other descriptions. Man must be seen in his relation to the whole of the universe, from the atoms at its beginning to its culmination when the synthesis and completion of all things in God-Omega will finalize evolution. Inevitably there is much in this which is not open to direct

²¹ G. G. Simpson, *Scientific American*, 1960, 202(4), p. 207.

²² P. B. Medawar, *Mind*, 1961, 70, p. 99.

²³ *The Living Stream* (Collins, 1965).

²⁴ R. Hooykas, *Free University Quarterly*, 1963, 9, p. 55.

²⁵ E.g., many of the articles reprinted in *The Appearance of Man* (Collins, 1965).

²⁶ P., p. 312.

observation and experiment. Teilhard surmounts these 'trans-experimental' obstacles by a mixture of analogy from the rest of science,²⁷ faith²⁸ and logic.²⁹

In such an approach he was not original. He was following in the steps of such people as Bergson, Lloyd Morgan and Smuts, who in their differing ways as emergent evolutionists strove to bring out the character, direction and significance of evolution.³⁰ Their religious and their evolutionary views were closely dependent upon each other.

The many apparent absurdities in Teilhard's works can now be seen in a new light. To say, for example, that inorganic matter has a 'within' and a form of consciousness, is something about which empirical science can say nothing. But to a vitalist, as Teilhard was, it does have meaning. In order to arrive at this conclusion, Teilhard argued that every mass is modified by its velocity; we do not see this change, that is, there is no absolute appearance of a new dimension; therefore, by analogy, consciousness recognized only in man is present in a veiled form throughout the cosmos.³¹

This example is typical of Teilhard's approach. Having started with *empirical* science he abandons it in favour of *synthetic* science when it can take him no further. When the senses can no longer help him, he resorts to logic and reason, *still in the name of science*. In his eyes this is science because it is still within the realm of material phenomena.

He is consistent then in claiming on the one hand that *The Phenomenon of Man* contains 'purely scientific reflections,'³² and on the other confessing that a conclusion he has come to is 'strictly undemonstrable to science.'³³ What is most unfortunate is that he uses (or is the translation in part to blame?) the same word to signify different things. This interpretation is, I think, supported by O'Connell when he claims that the word

²⁷ P., p. 61.

²⁸ *Ibid.*, p. 311.

²⁹ *Ibid.*, p. 68.

³⁰ R., p. 145.

³¹ P., pp. 59-61.

³² P., p. 31.

³³ P., p. 311.

'mémotre', translated 'treatise' in the preface to *The Phenomenon of Man*, carries the suggestion that the scientist, when he reflects on the meaning of his ordinary practice of science, becomes aware that his approach has been only a partial one.³⁴

The question which we should be asking ourselves is this: how useful is a vitalistic approach, such as the one Teilhard adopted, to the forwarding of empirical science?

Bernard Towers looked upon Teilhard as a scientific pioneer and generalizer, who propounded 'truly creative hypotheses'.³⁵ Now hypotheses are essential to scientific advance, but only those hypotheses which are open to rejection or verification. Although Towers stated that Teilhard's 'law of increasing complexity/consciousness' fell within this category, I am afraid I cannot follow him. To say as he does that this 'theory allows for the probability . . . of intelligent beings on other planets' and that 'it has relevance to proven phenomena in the field of extrasensory perception',³⁶ is an example of making statements which are so general as to have little, if any, value. I find it difficult to see how the majority of Teilhard's generalizations can, or ever will, be tested. If this is the case, are his hypotheses of any scientific usefulness? If they are not, is it science of any reputable kind? To this I think the answer must be 'no'.

To what then can we ascribe the attraction and power of his writings, when we bear in mind their influence on eminent scientists as well as on ordinary laymen?

The testimonies of the scientists concerned – including Sir Julian Huxley,³⁷ Dr. Joseph Needham³⁸ and Dr. W. H. Thorpe³⁹ – are revealing. Each of them holds an evolutionary world-view incorporating religious ideas – albeit in one case 'without revelation'. What distinguishes them from some of the scientists who oppose Teilhard's position, is that their religious or neo-religious views form an integral part of their evolution-

³⁴ *Journal of the American Scientific Affiliation*, 1966, 18(3), p. 80.

³⁵ *The Listener*, 15/4/1965, pp. 557, 558.

³⁶ *Idem*.

³⁷ Introduction to P.

³⁸ *New Statesman*, 7/11/1959, pp. 632, 633.

³⁹ W. H. Thorpe, *Science, Man and Morals* (Methuen, 1965), p. 56.

istic system, which in turn forms the basis of their detailed thinking about the future of man and his universe.

To such people Teilhard's immense evolutionary thinking, with its great originality of expression when describing his vision of the future, is bound to prove stimulating and exciting. To them the details of his vision are not important, nor whether it incorporates scientific precision. For instance, to Thorpe 'much of his greatness lies in his ability to demonstrate . . . the existence, in regard to the animal kingdom, of an overall tendency towards increasing complexity and the development of mind'.⁴⁰

To these men it is his vision which carries the day, and this is equally true in the case of the majority of his followers. He brought together science, philosophy and theology (as even Raven⁴¹ and Le Morvan,⁴² two ardent disciples, admit) in order to construct a vast picture of the world.

The essence of his vision is that the whole universe is of an evolutionary nature, and that it is absolutely necessary to adopt an evolutionary approach to nature. So convinced is he of this that he identifies a positive knowledge of things with the study of their development.⁴³ He is able to hold such a view because to him evolution is much more than a theory, 'it is a general condition to which all theories, all hypotheses, all systems must bow and which they must satisfy henceforward if they are to be thinkable and true'.⁴⁴ Is it any wonder then that, for Teilhard, 'evolution is a light illuminating all facts, a curve that all lines must follow'⁴⁵?

As if this were not sufficient, he proceeds to equate the recognition and spreading of evolutionary ideas with 'the most prodigious event, perhaps, ever recorded by history'.⁴⁶ As a rider to which I would ask: more important even than the incarnation of Christ?

⁴⁰ W. H. Thorpe, *Science, Man and Morals* (Methuen, 1965), p. 56.

⁴¹ *Op. cit.*, p. 206.

⁴² *Pierre Teilhard de Chardin* (Catholic Truth Society), p. 15.

⁴³ *P.*, p. 51.

⁴⁴ *Ibid.*, p. 241.

⁴⁵ *Idem.*

⁴⁶ *Idem.*

Here we have the problem posed by Teilhardism. A priest of the Roman Catholic Church presents us with a thorough-going, all-inclusive, evolutionistic philosophy; a man to whom evolutionism is the central pivot of the universe.

Theology

Of what nature was his theology to allow him to move so far in this direction?

There are, I think, three main strands of importance for an understanding of this problem.

The first concerns the overall approach to theological matters, basic to his position. For this I will have to follow Raven, one of whose chief characteristics appeared to be an intense dislike of all who are anything other than zealous liberals. Belief in the transcendence of God, in the Fall and in the Atonement, concentration upon sin and treating the Scriptures as God's chief means of revelation are all designated by him as the 'blight'.⁴⁷ This is due to the fact that such ideas are, to him, pessimistic, denying reality to the concept of progress and value to human reason and effort. They also tend to place little store by natural religion, anticipating the establishment of the Kingdom of God with the literal, physical return of Christ at the Second Coming.

Raven's liberalism appears somewhat outmoded today, with its intense optimism – which can see in Belsen and Auschwitz only the valour and endurance of the resistance movements,⁴⁸ with its anticipation of a better social order and with its resolute faith in the capacity of man.

And yet it is this type of theology which lies at the heart of Teilhardism, and without which Teilhardism could not have prospered in religious circles. In actual fact Teilhard's optimism far exceeds that of Raven's. We have only to look at his reaction to the first atomic bomb explosion to have this demonstrated. That event showed to him that 'the atomic age is not the age of destruction but of union in research'.⁴⁹ The

⁴⁷ R., pp. 26, 27.

⁴⁸ *Ibid.*, p. 25.

⁴⁹ *The Future of Man* (Collins, 1964), p. 147.

explosions themselves 'herald the birth into the world of a Mankind inwardly and outwardly pacified. They proclaim the coming of the Spirit of the Earth'.⁵⁰

There is, however, one way in which Teilhard is represented as being fully in line with at least some Scriptural teaching. This concerns the similarity of his thought to certain of the views of Paul, and to a lesser extent, of John. It is Raven again who reminds us that 'Teilhard in his whole Christian vision of the process of Cosmogogenesis and Christification is . . . restating for us the theology of St. Paul as this came to its fullest expression'.⁵¹

By this he means that Paul, in his three last epistles, Philipians, Colossians and Ephesians, presents a vision of Christ as the consummator of all things, in whom the whole universe finds its integration and fulfilment.

It is true that on a number of occasions throughout *Le Milieu Divin* Teilhard alludes to those words of Paul dealing with the extent and power of Christ's influence, and there is little doubt he was deeply moved by these ideas.

The most important one for Teilhard is that 'God shall be in all',⁵² which I imagine he takes from Colossians iii:11, where we are told that 'Christ is all and in all'. This he links with the anticipation of a unity of all things in an all-embracing personality, the Christ that is to be, based on Ephesians iv:13 which looks forward to our coming 'in the unity of the faith, and of the knowledge of the Son of God, unto a perfect man, unto the measure of the stature of the fulness of Christ'.

This sounds harmless enough, until we realize that it provides Teilhard with his vision of the cosmic Christ, the Christ who is the organic centre of the universe and the motive power of evolution. The statement, 'Christ is in all', signifies to Teilhard that the resurrected body of Christ is coextensive with the cosmos.⁵³ Further, as evolution progresses, mankind is moving towards a Christian community. In short, 'Christ is become

⁵⁰ *The Future of Man* (Collins, 1964), p. 147.

⁵¹ R., p. 159.

⁵² P., p. 322.

⁵³ C., p. 122.

cosmic, the cosmos is being Christified'.⁵⁴ This is the result of integrating the two visions of a mystic, universal Christ and a cosmic goal for evolution.

It is a pity that in order to obtain such an organismic synthesis, Teilhard has lost completely the spiritual Christ. Unfortunately he was concerned with only one aspect of Paul's thought, the one which appeared to coincide with ideas previously reached by rational means. His similarity to Paul is non-existent, even their universal Christs are totally dissimilar. For the one Christ delivers individuals from sin and its consequences uniting them one to another and to Christ as their Head, while for the other Christ's function is to advance the noospheric evolution of mankind.

This difference reflects the more fundamental difference in their starting-points. For Paul this was God and His revelation, for Teilhard it was man and his awareness of the rôle he has to play in advancing his self-evolution.⁵⁵

Thirdly, there is one feature of Teilhard's 'theology' which even many of his followers find inadequate. This is his view of evil.

In spite of Teilhard's very brief treatment of the subject, even in *Le Milieu Divin* where he might have been expected to give it detailed consideration, his remarks on it are unusually clear.

To him, evil is a by-product of evolution. This is because evolution advances by means of groping and chance, with the result that checks and mistakes are always possible. Furthermore, for every one success in evolution there are many failures.⁵⁶ Kopp has expressed his position admirably: '... if we see the universe as being in a state of becoming, imperfections must obviously be a part of the process, since anything arranging itself must necessarily include some disorder at every stage. Thus evil is structural stress of evolutionary creation. It counts for nothing in itself'.⁵⁷

In speaking of suffering, Teilhard remarked that 'sufferers... are merely those who pay the price of universal progress and

⁵⁴ R., p. 173.

⁵⁵ Cf., J. J. D. De Wit in *Creative Minds in Contemporary Theology*, P. E. Hughes (Ed.), (Eerdmans, 1966), pp. 407-450.

⁵⁶ P., pp. 339-341.

⁵⁷ *Teilhard de Chardin Explained* (The Mercier Press, 1964), p. 65.

triumph'.⁵⁸ This is inevitable, if evil is viewed as a by-product of a dynamic and progressive movement. So, too, is his view of death which is that it 'is the regular, indispensable condition of the replacement of one individual by another along a phyletic stem'.⁵⁹ Why? Because it is 'the essential lever in the mechanism and upsurge of life'.⁶⁰

The reason for Teilhard's sparse treatment of evil stems from his interest in the positive, rather than the negative, side of evolution.⁶¹ In part, this may be due to the way in which in his own life he seems to have been so taken up with the love of God that little place was left for considerations of sin. However, his references to sin as 'a weakening or deviation caused by our personal faults', or to bad actions as being 'positive gestures of disunion'⁶² are most disquieting. Even if it may be argued that in these quotes he was not speaking theologically, we are left wondering what can be the value of any system, whatever its nature, which regards sin within a purely human framework.

The logical outcome of making evil a part of the evolutionary process is that as scientific knowledge increases, evil decreases. The consequence of this is that when scientific knowledge will have reached its maximal point, evil will have been obliterated. And this is what Teilhard envisages when he describes the final convergence into Omega as taking place in peace.⁶³

His overall picture of sin and evil is devoid of any connection with God and His holiness, or with the way in which this is expressed in the laws and commands He has given to men. But this is not surprising when we recall that in Teilhard's eyes juridical symbols sufficed only for society prior to the dawn of the modern, scientific-industrial stage.⁶⁴

Having dealt with the primary scientific and theological considerations underlying the Teilhardian system, we are now able

⁵⁸ *The Meaning and Constructive Value of Suffering*, in Braybrooke, *op. cit.*, p. 25.

⁵⁹ P., p. 340.

⁶⁰ *Idem.*

⁶¹ *Ibid.*, p. 339.

⁶² L., p. 80.

⁶³ P., p. 316.

⁶⁴ Quoted by C., p. 194.

to give some thought to a few of the remaining concepts basic to his system.

The great conflict of Teilhard's inner life was to resolve the problem of how the man who believes in heaven and the cross can continue to believe seriously in the value of worldly occupations.⁶⁵ In other words he was faced with the classical dilemma of the radical dualism of matter and spirit, of body and soul. For Teilhard this was not simply an intellectual difficulty. For him it had profound personal implications, and the answer he arrived at met his deepest mystical aspirations as well as providing the background to his thinking.

His solution lay in seeing the universe, and everything in it, as comprising a single whole.⁶⁶ Hence he substituted a monistic approach to reality for a dualistic one. This allowed him to postulate on the one hand that Christ can and should transform matter, and on the other that we approach Christ through matter.

As a result he can say, in the first place, that the function of the Christian 'is to divinise the world in Jesus Christ',⁶⁷ and in the second, that the arms and the heart which God opens to him 'are nothing less than all the united powers of the world which, penetrated and permeated to their depths by your will . . . converge upon my being to . . . bear it along towards the centre of your fire'.⁶⁸ This centre where all the elements of the universe meet is for him the 'divine milieu'.⁶⁹ Consequently for Teilhard the world became the body of Christ,⁷⁰ this being just one aspect of the union which he saw between God, the transcendent personal, and the universe in evolution.⁷¹

There can be no doubt that this is the heart of Teilhard's mysticism, the origins of which are probably to be found in the sacramentalism of the Roman Catholic Church.

What Teilhard did was to increase yet further the physical

⁶⁵ L., p. 51.

⁶⁶ *Ibid.*, p. 61.

⁶⁷ *Ibid.*, p. 72.

⁶⁸ *Ibid.*, p. 126.

⁶⁹ *Ibid.*, p. 114.

⁷⁰ *Ibid.*, p. 155.

⁷¹ Quoted by C., p. 293.

aspect of dogma, incorporating this simultaneously into an evolutionary scheme.

Teilhard's mysticism it seems to me is of exceptional importance as it highlights fundamental aspects of his science. It explains why he was content to confine himself in his science to phenomena. As man's power to explain nature increases, so his knowledge of God increases. Furthermore, as man increases his control over nature, man himself becomes greater, creation as a whole becomes more beautiful, the more perfect is adoration and the more Christ finds a body worthy of resurrection.⁷² The evolution of the cosmos, that is cosmogenesis, is the Christification of all things as everything is moving towards the supreme personal centre, which is Omega or God.

Teilhard's mysticism ensures that science is essential for God to be disclosed.

To go a step further, in such a system there can be no place for, or need of, any specifically theological or philosophical concepts. This, of course, does not mean that such ideas are not present in his writings as undisclosed presuppositions. What it does mean is that he recognized no necessity to discuss such issues. A by-product of this procedure is that it enables one to adopt almost any theological interpretation to fit in with one of his phenomenal principles. For example, to account for the origin of man one can hold a 'special creation' or 'evolutionary' theological view and still adopt his 'infinite leap forward'.⁷³

The extent and some of the *implications of Teilhard's evolutionism* should have become clear by this stage, but we are still left with some further implications to discuss.

The first concerns Teilhard's view of God. As his evolutionism was all-embracing, his view of God is inevitably one tinged with evolutionism.

In Teilhard's language, after the earliest stages in evolution, the biosphere came into existence in the form of a living film over the surface of the earth. This in turn was followed by one of the greatest advances of all – the leap from instinct to reflection. With the development of this new layer, the 'thinking

⁷² Quoted by C., p. 123.

⁷³ P., pp. 187, 188.

layer', the noosphere made its appearance. This occurred with the rise of man, and it represented the beginning of a new age; the earth 'gets a new skin' to use Teilhard's poetic phrase.⁷⁴

Due to the earth being round, men with their thought and consciousness have been forced together and prevented from spreading apart in an unlimited fashion. As a result the evolution of man, which is the evolution of the noosphere, has been and will continue to be convergent. Further evolution will be in the direction of hyper-reflection and hyper-personalization, and due to its being convergent will eventually become involuted to a Universal and Personal point, termed Omega. Omega, in turn, is envisaged as 'a distinct Centre, radiating at the core of a system of centres; a grouping in which personalization of the All and personalization of the elements reach their maximum'.⁷⁵

Omega does, however, have two further characteristics, which in terms of the evolutionistic logic he has followed, are surprising. Firstly, although it is 'the last term of its series, it is also outside all series',⁷⁶ and secondly, while it emerges from the rise of consciousness, it has already emerged.⁷⁷ In other words, as he admits a little further on in his treatment of this subject, Omega is God.⁷⁸

These two surprises are most significant because they mean that Teilhard's God fits in with orthodox beliefs – in a general way at least, whereas his premises do not permit such a conclusion to be drawn. If he had remained faithful to his premises, he would have arrived at a natural god, complete only at the end of the universal process. At the present time such a god would be incomplete – a pre-god perhaps.⁷⁹ He rejects this conclusion, and has been forced to accept a dualistic solution to his problem, having previously rejected the premise of dualism.

His orthodox conclusion also means he escapes from the pantheist camp, as his God is more than the fusion of the centres

⁷⁴ P., p. 202.

⁷⁵ *Ibid.*, p. 288.

⁷⁶ *Ibid.*, p. 297.

⁷⁷ *Idem.*

⁷⁸ *Ibid.*, pp. 316, 322.

⁷⁹ J. Macquarrie, *The Expository Times*, 1961, 72, p. 337.

resulting from the ultimate convergence of the universe.⁸⁰ In addition, he took great care to make clear that together with the concentration of creatures within God-Omega, there was also a differentiation between them.⁸¹ From his conclusions, therefore, the charge of pantheism cannot be levelled against him.

Sir Julian Huxley found Teilhard's thought on point Omega not fully clear.⁸² This it appears to me is a gross understatement. The matter is a crucial one for Teilhard's whole phenomenal system. On his own criteria it stands or falls on its coherency.⁸³ We are faced with two alternatives. If we accept his system as a fully coherent one, it amounts to no more than evolutionary naturalism. If we allow his introduction of a transcendent God, his system as a system has little value. It is internally self-contradictory, and all that remains of it are a number of instances of evocative terminology.

The second implication of his evolutionism concerns the meaning it bestows upon salvation.

In his vision of the future he pictures only two alternatives – either absolute optimism or absolute pessimism. Between these two extremes there is no middle way 'because by its very nature progress is all or nothing'.⁸⁴ And so, either all men will finally converge into Omega, or none will. Hence he has dispensed with the necessity, or even relevance, of individual redemption. This is brought out in a different way in his discussion on 'hell' at the end of *Le Milieu Divin*, in which he attempts to reconcile his own belief in the virtual impossibility of any man ever having been damned, with the official Roman Catholic belief in the reality of hell.⁸⁵

This position has two consequences. In the first place the incarnation of Christ has only a universal evolutionary significance, with no meaning for individuals as individuals. In the second place salvation is dependent upon the efforts of mankind as a whole, efforts to complete the mystical body of Christ. This

⁸⁰ P., p. 338.

⁸¹ L., p. 116.

⁸² *Op. cit.*, p. 19.

⁸³ P., pp. 58, 268.

⁸⁴ *Ibid.*, p. 256.

⁸⁵ pp. 147-149.

explains the emphasis Teilhard laid upon the socialization of mankind, directed towards preventing the waste of human potential and with the object of speeding up the supreme development of mankind. This led him, and has since led his followers, into their dialogue with Marxists, whom they respect because of their concern for the social conditions of men and with whom they wish to find common ground. This is essential for Teilhardists as human socialization is man's hope of achieving the ultra-human condition necessary before Omega can be achieved.⁸⁶ We find we have travelled full circle and are back at Raven's theology.

Finally, the details of his evolutionary scheme must be compared with general evolutionary views today.

Characteristic of his evolutionism is its Lamarckism and orthogenesis, the scant attention paid to genetics, and the presence of critical points.

Lamarckism is generally understood as the doctrine of the heredity of acquired characters, although it also involves an orthogenetic development due to an upward urge within the organism concerned. Teilhard specifically repudiates a view of evolutionary change using natural selection as a mechanism, and replaces a Lamarckian explanation.⁸⁷ Whatever may be the status of natural selection as a mechanism, there is no convincing evidence in favour of, for example, a tiger 'handing on the soul of a carnivore',⁸⁸ as Teilhard would like us to believe.

Following on from this Teilhard sees orthogenesis as the only complete form of heredity.⁸⁹ Orthogenesis in the sense of evolution along a straight, and predetermined, line has definite metaphysical overtones, and understandably is in disfavour with biologists. Teilhard claims not to use the word in this sense, but for the manner in which terms succeed each other in 'a historical sequence towards 'increasing degrees of centro-complexity'.⁹⁰ If by this he means that everything has a direction of change, it explains nothing. If on the other hand he

⁸⁶ Cf., C., p. 235.

⁸⁷ P., p. 166.

⁸⁸ *Idem.*

⁸⁹ *Ibid.*, p. 120.

⁹⁰ *Idem.*

means that everything has a *specific* direction of change towards Omega, he is virtually using the term in its classical sense. In spite of his denial, his use of the term suggests he is endeavouring to signify a process directed from above, that is, from Omega – the motive power of cosmogenesis.

With respect to genetics, Teilhard thought this subject did not concern him directly, even in *The Phenomenon of Man*.⁹¹ This is disconcerting as it strongly suggests that when referring to the rates of evolutionary change he was influenced by factors more philosophical than scientific. His vagueness about these rates of change, for example, when he mentions the ‘almost explosive acceleration of noogenesis’ in one paragraph, and our ‘almost imperceptible advance’ in the next,⁹² confirms our fears.

His use of the concept of critical points is essential to his whole system. The two most important points are those responsible for the birth of life⁹³ and for the birth of reflection.⁹⁴ At the first, the cell was born and at the second, thought. It is the second which is the crucial one for Teilhard, as he must find a radical difference between man and the rest of the animal kingdom, a difference which does not involve any anatomical discontinuity. With genetics behind him, he imagined the birth of thought occurring at a single stroke, ‘a mutation from zero to everything’,⁹⁵ one particular being lacking the ability to think and the next possessing it.

The ease with which he could postulate this emanated from the emphasis he placed upon the ‘within’ as opposed to the ‘without’ of organisms. A critical point is a feature of the ‘within’, and may be accompanied by no discernible change in the ‘without’. The initiative lies with Teilhard’s followers to demonstrate the value of this hypothesis for evolutionary thinking, as it corresponds to no demonstrable evidence.

Without penetrating any further into all aspects of his evolutionary scheme, we can see that it is more in line with philosophical evolutionism than with any genetically-orientated,

⁹¹ pp. 152, 153.

⁹² *Ibid.*, p. 280.

⁹³ *Ibid.*, p. 112.

⁹⁴ *Ibid.*, p. 187.

⁹⁵ *Ibid.*, p. 190.

mechanistic approach to evolution. We might expect even vitalists to take seriously that part of their whole which is empirical science. But it seems that in Teilhard's case this was not so.

Conclusion

With the exception of his vision of the future, there is little that is completely original in Teilhard's work. Different aspects of his thought have affinities to such diverse people as Duns Scotus, the medieval scholastic, the philosophers Alexander and Whitehead, to Lloyd Morgan, an emergent evolutionist and to Huxley, an evolutionary humanist. What Teilhard did present to the world was two-fold – a synthesis of a form of evolutionism and a form of mystical Christianity, together with the personal testimony of a very remarkable and very devout man, a mystic and a scientist.

The mysticism he presented overrode both empirical science and Biblical Christianity. While giving the appearance of being a prophet for the mid-twentieth century, he rejected the science of today and the only faith relevant for today and clung instead to the science and philosophy of the Greek heritage.

The divine milieu. Such is the phenomenon of Teilhard de Chardin.

BOOK REVIEWS

Human Senses and Perception

BY G. W. WYBURN, R. W. PICKFORD and R. J. HIRST

Oliver and Boyd, 1964, 45s

Brain and Mind

ED. J. R. SMYTHIES

Routledge and Kegan Paul, 1965, 40s

Aristotle, having written his book on physics, followed it by a book on metaphysics. A century ago Clerk Maxwell insisted that Aristotle had his order right. First you must learn your facts – ‘physics’ for Aristotle included all scientific knowledge – after that you are free to philosophize on the basis of what you have learned. ‘As is a man’s physics, so is his metaphysics’ said Maxwell.

Philosophers for the most part have largely carried on in the old way, almost disdainful of the new knowledge that is daily being won from nature. A few years ago, however, the Professors of Anatomy, of Psychology and of Logic in the university of Glasgow combined to write a joint book following the Aristotelian order. The result is an interesting and authoritative work – the first of the books before us.

For a start Professor Wyburn, the Editor of the book, gives a lucid, well illustrated and up-to-date account of the physiology of the senses. Though we can trace back the sensations we derive from the physical world to the impact of physical events on bodily structures, the gulf between the physical and the mental remains unbridged.

Professor Pickford then takes up the psychological aspects of the subject. Here some of the experiments with the closest bearing on the inner citadel of the mind are probably those of Michotte. Hume held that physical causality cannot be directly perceived but that the notion of cause is an intellectual inference made as a result of experience. Michotte arranged for spots of light on a screen to move around, chase one another, collide, and so on. The spots are made to behave *as if* they are physical objects – say marbles on a billiard table. To those who witness the scene the impression is undoubtedly that causality (the movement of a spot is *caused by* an impact, etc) is perceived *directly*: it is *not* an inference. Though Hume might have explained these results on his view, they do seem to favour some kind of direct access of mind to the outer world, other than through the senses. The fact that in Michotte’s experiments the spots of light do not actually collide is irrelevant, for no one questions the fact that the mind may be misled by artificial situations, and in addition causality is certainly present behind the scenes in the mechanism used.

In the third section of the book philosophical problems are handled with a rare lucidity by Professor Hirst who devotes much space to the representa-

tion theory – the theory that causal pathways transmit information from the external world to the brain, and there present us with a model or representation of a reality outside ourselves. Some such theory as this is normally accepted by the scientist, as by the man in the street, but philosophers often reject it because it abounds with difficulties and pitfalls. These are here set forth with such clarity that no one who reads these chapters will be likely to slur over these difficulties again.

Suppose you are shown a map of the countryside. If you had lived in a windowless room all your life, and had only conversed with or read the writings of those who had likewise been imprisoned, the map would not be a map for *you*, nor could you recognize that it represented anything. If the representation theory is right we all live our lives glued to the tv screen of our minds: we have never seen the world, how then can we know that we have seen representations of the world?

Again, the physiologist speaks of physical events actuating sense organs, of messages passing along nerve fibres and of transmission in the brain. But all the items in the causal chain are known to us only by the final representation in the brain, for it is this which the mind perceives. We have no direct knowledge of any of them. So the theory cuts off the branch on which it sits. And the same applies to all our science – including measurement. For what do we measure? Only representations once again. These difficulties ‘are not fully appreciated by scientific expositors of the theory’. Attempts to answer them are outlined, but are not convincing.

After a brilliant summary, Professor Hirst concludes that the theory cannot be accepted in its traditional form. But can we do no better? Are we doomed to an idealist view, such as that of Berkeley, or to the scepticism of Hume?

Most certainly not. The evidence points overwhelmingly to the existence of *two* kinds of perceiving. We experience direct perception of external objects and this is mediated by the indirect perception which offers representations. An inexact analogy is afforded by tv: we contact a familiar public figure speaking to us, yet the experience is mediated by the electronic black box. This theory, Hirst calls the *Aspect* theory and so far as it goes it would appear to be the best that has been offered. It is a pleasure indeed to see a common-sense position – so obvious, yet hitherto unacceptable to the world of philosophy – argued with such acumen.

The second book, *Brain and Mind*, contains Essays on the nature of mind, written by ten authors; together with discussion. In the preface the Editor, J. R. Smythies, a well-known neurologist, draws attention to the fact that, not long ago, the question of dualism of mind and brain seemed to have been decided finally in the negative, but today, ‘The match is no longer a walk-over for the monistic side. The concept of the mind as an entity in its own right . . . is making a vigorous come-back’. Judging from these Essays, the contestant are about equally divided.

A high-light in the book is Professor H. H. Price’s ‘Survival and the Idea of “another world”’ – a charmingly written account of the kind of existence a dead man might experience, together with a devastating exposure of the

illogical thoughts commonly entertained on this topic. For Price, who is an expert on parapsychology, the evidence points to death as a form of sleep – ‘the next world, I think, might be conceived as a kind of dream world’, and Smythies, in the ensuing discussion, concludes, ‘This theory suggests that heaven, purgatory and hell may after all be very poignant realities’.

Another fascinating chapter is that by Smythies on *Perception* in which he reaches the same general conclusion as Hirst. The discussion is exceptionally fresh. For example (p. 249) in discussing the common sense argument for the existence of an external world, the author draws attention to the agonies of mind experienced by those, the mentally sick, who ‘are tortured by obsessional doubts as to whether the world really exists, or they may directly experience a shadowy and unreal, counterfeit world, as in the syndrome known as “derealisation” that follows some disorder probably of temporal lobe function’. Smythies imagines a world where half the population suffers in this way. A belief in an external world does not then disappear but people need constant reassurance, for ‘the anguish of the person with derealisation derives from the fact that he can remember the time when the world *was* real’.

This argument might profitably be developed along religious lines. It is easy for man to lose direct awareness of God owing to a widespread theological derealisation syndrome. Reason and argument, otherwise useless (you do not need a logician to prove your house is real – or to prove God’s existence if you are conscious of His presence) then become of great value for reassurance.

Other valuable chapters are by the late Lord Brain (see also, his *Science and Man*, Faber, 1966) who discusses what we mean by *mind*; John Beloff (an agnostic) who argues that ESP points strongly to the independence of mind, and Professor MacKay, well known to the Victoria Institute as a convinced Christian, who maintains the opposite – to Beloff’s evident surprise! The remaining chapters are by C. J. Ducasse (fascinating as usual) who writes on *Minds, Matter and Bodies*; Antony Flew on *A Rational Animal* (rather question-begging in the reviewer’s opinion), Professor Kuhlenbeck, who supports dualism and Antony Quinton.

Neither of these books is easy reading, but the reviewer at least has found them both most rewarding.

R. E. D. CLARK

The Living Stream; Evolution and Man

BY SIR ALISTER HARDY

Collins, 1965, 30s (Gifford Lectures)

This is a deeply interesting and extremely readable book by a well-known biologist, distinguished in particular for his work in oceanography.

Sir Alister Hardy, who claims to be a Darwinian evolutionist in the

modern sense, presents a clear non-technical account of the story of evolution and of modern evolutionary theory which makes for delightful reading. Indeed, his use of biological jargon is so sparing that reference to a dictionary is hardly ever necessary – quite a feat for a biologist!

By the turn of the century the Darwinians had succeeded in convincing the public, including many theologians, of the truth of their theory of natural selection as a creative force. But when attempts to test it were made they invariably failed. The engineer Fleeming Jenkin showed, what no biologist had noticed, that blended inheritance must invariably die away without producing improvements in the race. So Darwinism came under a cloud. 'Argument weak here: shout loudly' was the policy adopted.

The rediscovery of Mendel gave to Darwinism half of what was needed to make it work. Then came the discovery that natural selection must select from variations caused by genes – not from those caused by the environment. It was discovered too that genes could change. Even so the power of natural selection seemed very limited, but investigation of the effects of the size of a population, and the increased effectiveness of sexual as against non-sexual reproduction made evolutionary doctrine more plausible.

In pre-Darwinism days it seemed as if a great deal of circumstantial evidence favoured Lamarckianism (the doctrine of the inheritance of acquired characters) but later this hypothesis came to be deemed heretical. Indeed, Sir Alister complains that geneticists, such as Darlington, still crusade against it with almost religious fervour. Nevertheless, a good case is made out for a form of Lamarckianism. A bird finds a new way of scooping insects out of the bark of a tree, develops a liking for a smell, or learns how to open a milk bottle. These acquired habits, or likes or dislikes, soon spread and in effect the environment – the availability of food etc. is altered. In the next generation those best suited anatomically (e.g. with beaks suitably shaped for opening milk bottles!) to develop the habits will be favoured.

And so the story continues to the present day – with its increasing emphasis on molecular biology. In the fifth lecture Sir Alister discusses mimicry in some detail in illustration of the creative aspect of evolution. At this point the plausibility for the doctrine of creative evolution based on a materialistic natural selection hypothesis reaches its zenith. But afterwards the difficulties come thick and fast.

By 1940 it seemed to many that all the main problems had been solved. But today new and embarrassing questions are being asked. There is homology, for instance. In a man, a porpoise, a bird and a bat we find the same general arrangement of bones. In the vertebrates we find what seem to be basically the same organs adapted to perform different functions, a flipper for swimming, a wing for flying and so on. In the past it was taken for granted that the general organs had been handed down with occasional mutations from countless generations. But now it transpires that very frequently homologous organs are not even derived from the same genes. Genes in the fruit fly responsible for eyes may be lost, but soon other quite different genes recombine in such a way that they produce the missing eyes.

There are other difficulties, too. Homologous organs may not even arise from the same part of a structure (e.g. a backbone) and so on. There is no acceptable theory on materialistic lines, says Hardy, as to how such things might happen – and the case he makes is most convincing.

Again, there are elaborate behavioural patterns in certain cells within primitive organisms, even when the cells are not connected to a nervous system.

These and many other examples seem to suggest a power of some kind coming in from outside – often, perhaps, through some kind of universal telepathy.

Man, thinks Sir Alister, should be interpreted in a similar way. Up to the age of 18 months or so, a baby is not much superior to a chimp of the same age. Only when he speaks, does he leave the apes far behind. Even an adult man, without the use of words, may seem little superior to an animal. His notion of number is probably inferior to that of some birds; he can run a maze no better than a rat. What distinguishes man from animal? Sir Alister promises more on this subject in the volume to come, but he makes it clear that he accepts an outside influence.

Sir Alister believes that science will make a contribution to theology 'by showing the reality of part of the universe outside the world of the physical senses. It is in this *apparently* non-material part of the world that the power we call God must lie: some source of influence to which man can have access in an extra-sensory way'.

R. E. D. CLARK