Faith and Thought

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

Vol. 91 Number 1 Summer 1959

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Archaeology and Genesis i–xi

Introduction

A. The Plan

The first eleven chapters of Genesis form a section which is clearly distinct from what follows. In chapter xi, verse 26, Abram is introduced and here begins the story of the Patriarchs. Recent archaeological discovery at such sites as Mari, Nuzi, and Alalakh has served to show that the stories of the patriarchs fit well into the situation of the Middle Bronze Age in Western Asia, which followed on the opening of the second millennium B.C. It is now generally accepted therefore that the time of Abraham is to be placed in the first quarter of the second millennium, though opinions vary as to any more precise dating. From Genesis xi. 27 onwards therefore the general picture can be seen, and it is the filling in of details which claims attention.

For the first eleven chapters a different picture prevails. The people and events described seem more remote, and archaeology has yielded less which can have a definite bearing. Though it is extremely unlikely that any direct light on these early chapters is to be found, it may be that just as the general background of the Patriarchal Age is beginning to emerge without any direct reference to a Biblical character or event, there may be something in the general picture of the earlier period to be connected with these eleven chapters. It will be useful therefore to review the results of prehistoric and early historic research in the light of this question. This will not be prejudging the issue of the interpretation of these chapters, which will be discussed later, but is the necessary basic approach.

The method adopted will therefore be to survey the present view of early human history down to the first quarter of the second millennium B.C., or about the time of the patriarchs, then to examine the Bible record for any indications which may be relevant in this respect, and finally to draw any conclusions that there may be as to their relationship.

Before examining the archaeological results concerning these early periods, it will be a good thing to give a brief sketch of the history of the study of the subject, because some of the views held today can be better understood and assessed with a knowledge of their antecedents.

B. Historical Sketch

During the late eighteenth and the nineteenth centuries, the expansion of industrial civilisation, involving as it did much excavation for railways and the foundations of buildings, opened the way for the development of geology and its related studies. On the basis of the new materials thus revealed, James Hutton (1785), and following him William Smith (1816) and Lyell (1830-33) developed the principle of observing the conditions of geological action in their own time, and projecting them into the past, to provide a key for interpretation.

The budding science of prehistoric archaeology was developed in the main by the followers of this school, so that the great age of the earth and the principle of uniformitarianism were matters of common acceptance. From as early as the 1820s and 1830s, flint implements and apparently human skeletal remains had been found in geological deposits of great age, and sometimes in association with animals now extinct, but it was not until 1859 that the view was generally adopted that these implements were of human manufacture, and betrayed the presence of 'man' in early periods.

It was of course in this same year that *The Origin of Species* was published. Almost all the essential ingredients for the idea of evolution were present, as Professor Butterfield has pointed out,[1] by the end of the eighteenth century, and it only required the theory of natural selection, as propounded in 1858 (almost exactly a hundred years ago) by Darwin and Wallace, for it to receive wide acceptance. As a result the principle of evolution was freely applied outside the field of palaeontology, notably by Herbert Spencer to human social institutions, but also by Tylor, Marrett and others to religion, Haddon to art, Pitt-Rivers even to the service rifle, and Wellhausen in some degree to Old Testament history.

In line with this tendency, it was natural that the findings of prehistoric archaeology should be interpreted as demonstrating the evolution of culture. There were two possible approaches to this, one

[1] H. Butterfield, *The Origins of Modern Science, 1300-1800* (London, 2nd edn., 1957), pp. 201 ff.

through the study of the ancient remains of man, and the other through the study of surviving primitive peoples.

The first approach had its inception in Denmark, where in the first half of the nineteenth century C. J. Thomsen, the curator of the National Museum in Copenhagen, developed a system for the classification of the disordered archaeological material under his care. According to this, the objects were divided into three groups according as their material was stone, bronze, or iron, and these were claimed to represent three chronologically successive ages. This idea was adopted by Sven Nilsson, Professor of Zoology at Lund, and the three ages treated as stages in the evolution of culture. In England the scheme was adopted by John Lubbock, and in 1865 he invented the names Palaeolithic and Neolithic for the sub-periods of chipped and polished stone. This, with two additional periods, became the accepted general scheme for the evolution of human culture: Palaeolithic-Mesolithic-Neolithic-Chalcolithic-Bronze Age-and Iron Age, having universal validity.

One of the earliest formulators of the second approach was again Sven Nilsson. He classified the various primitive tribes surviving in the nineteenth century, and those known from classical authors, according to their means of subsistence, into savages, depending on hunting, fishing and collecting, herdsmen or nomads, and agriculturists, and assumed that human society must have developed through these stages in that order, ending up with civilisation. This scheme was modified by the American L. H. Morgan into three main stages, savagery, barbarism, and civilisation, which were adopted by Tylor and defined; barbarism by the arrival of agriculture; and civilisation by the introduction of writing. These three stages were therefore arrived at by projecting into the past the theoretical classification of modern primitive peoples according to their mode of subsistence.

These two approaches have been combined into a new scheme, chiefly by Professor Gordon Childe,[1] whereby a framework for prehistory has been provided by the postulating of what he calls economic revolutions, at which marked population increases became possible. According to this plan, the successive stages of human development were as follows: Food Gathering = Savagery = the Palaeolithic and Mesolithic Periods; terminated by the 'Neolithic Revolution' which

[1] First put forward in *The Most Ancient East* (1928), stated in more detail in 'Archaeological Ages as Technological Stages', *Journal Roy. Anth. Inst.*, **74**, (1944), 7-24, and popularised in *Man Makes Himself* (1936), and *What Happened in History* (1942).

introduced; Food Producing = Barbarism = the Neolithic Period, which led to the 'Urban Revolution' which introduced; Civilisation, characterised par excellence by writing and living in cities. This view, put forward between the wars, though not rigidly interpreted, has been widely accepted.[1]

Since the war, Professor R. J. Braidwood of Chicago has adopted the scheme, with modifications in terminology, and has devoted particular attention to the so-called 'Neolithic' or food-producing revolution, exploring in the area of Hither Asia with the avowed aim of discovering archaeological evidence of the transition from food-gathering to food-producing.[2]

There is no doubt that this hypothesis of the development of human culture from ancient times provides a framework into which the actual archaeological remains fit remarkably well, but this should not be allowed to obscure the fact that it is based on the speculations outlined above. There are many gaps still in the archaeological record, and in no one place is a continuous sequence of occupation known from the very earliest times. These gaps are obscured by the nature of the hypothesis which lends itself to deceptive generalisations where there is no material evidence to cite.

Archaeological Evidence

The archaeological evidence can best be surveyed under five headings.

First, Geology provides a general chronological frame for the Pleistocene Ice Age, in terms of (on present evidence) four main phases of glacial advance, when ice masses centring mainly on the Canadian Shield and the Scandinavian Mountains, and smaller ones on the Alps, Himalayas, and the Verkhoyansk-Kolyma range, advanced southward, and in the intervals retreated sometimes further north than at the present time. Zones of tundra, forest, and steppe moved in concert, varying the areas further south, with corresponding periods of greater rainfall, which so-called 'pluvial' periods are tentatively

[1] E.g. J. G. D. Clark, *From Savagery to Civilization* (1946); S. H. Hooke in H. W. Robinson ed., *Record and Revelation* (1938), pp. 350-352; E. C. Curwen, *Plough and Pasture* (1946), pp. 39-40; though Frankfort enters some reservations in *The Birth of Civilization in the Near East* (1951), pp. 38, n. 3, 57, n. 2.

[2] *The Near East and the Foundations for Civilization* (1952), and in more detail in *J. World History*, I (1953), 278-310, and in many other articles.

correlated with the northern glacials. In the periods of glacial maximum, sea level was low, but when the interglacial melting took place, the water level rose well above present sea level. For post-glacial times, varved sediments provide means for giving absolute dates, the beginning of the post-glacial being conventionally defined at about 8000 B.C., and related disciplines give the solar radiation and the radiocarbon methods of dating. The solar radiation results on the one hand differ largely from the radiocarbon and varve results on the other. As the present tendency is to favour the latter, and these only give satisfactory results for post-glacial times, dates in figures are best avoided for the Glacial Period proper.[1]

The second main source is Botany, which provides, through analysis of the succession of pollen and plant types in stratified peat deposits, a frame of post-glacial forest history for northern Europe. The post-glacial period is shown to have had a steady rise in temperature to a period of climatic optimum between about 5000 and 2500 B.C., after which it deteriorated.[2] In more direct connection with man, the study of the present distribution of the wild forms of wheat and barley, the cereal crops which formed the staples of the earliest 'Neolithic' farming communities, give a possible clue to the area of the first farmers. These grasses occur today in the upland zone stretching from Palestine and southern Anatolia to Iran.[3]

The third main body of evidence is provided by Palaeontology, in the form first of animal remains, and second those of man. Fossil animals give a clue, in the first place, to the climate of the area in which they lived, but also, when found in human contexts, such criteria as reduction in size of bone, tooth, and horn, and weaker ridges for muscle attachment, may indicate the presence of domesticated animals. Also in connection with the question of stock raising, it is worth noting

[1] The most recent compilation on the Pleistocene is J. K. Charlesworth, *The Quaternary Era; with special reference to its glaciation* (London, 1957), 2 vols.; see also F. E. Zeuner, *The Pleistocene Period* (2nd edn., London, 1959), and *Dating the Past: An Introduction to Geochronology* (3rd edn., London, 1952), Parts ii and iii; R. A. Daly, *The Changing World of the Ice Age* (New Haven, 1934); and H. Shapley, ed., *Climatic Change: Evidence, Causes and Effects* (Harvard U. P., Cambridge, 1953).

[2] See, e.g. H. Godwin, *The History of the British Flora* (Cambridge, 1956), pp. 1–63.

[3] See, e.g. F. E. Zeuner, 'Cultivation of Plants' in C. Singer *et al.* eds., *A History of Technology* (Oxford, 1954), vol. i, pp. 353–375; E. C. Curwen, *Plough and Pasture*, pp. 4–27, 38–48.

that the sheep and goat, the two earliest domesticated genera, are found in the wild state today, in much the same region as the wild cereals.[1]

The fossil remains of man are too numerous to be mentioned in any but the most cursory manner here, only the main groups being distinguished.[2] Owing to the fact that in the West it is not until the beginning of the fourth and last glaciation that any human remains are found in their original settlement deposits, materials before that time are often of doubtful date, or if found in a secure geological horizon, can only be assigned to the general period of the deposit. Hitherto the principal method of dealing with the supposed fossil remains of man has depended on noting their common morphological characters with modern man on the one hand, and the higher primates, Gorilla, Chimpanzee, Orang, and Gibbon on the other, and arranging them on this basis in a hierarchy between the two. Leaving aside evolutionary speculations, the Australopithecinae or South African 'man-apes' [3] may be disregarded as irrelevant from the present point of view. In general three major groups of fossil humans are usually distinguished. The Pithecanthropus group, consisting mainly of the Java and Pekin specimens, with which the Mauer jaw and now the mandibles from Ternifine, Algeria, are sometimes grouped, is characterised by remains with marked ape-like features from the early part of the Pleistocene. The second large and fairly homogeneous group is formed by the Neandertalers, whose remains, mainly in Europe, belong to the end of the third interglacial and the beginning of the last glaciation. It is now customary to designate as 'Neandertaloid' such specimens as the Steinheim, Ehringsdorf, Solo, Eyasi, and Rhodesian men, which though earlier than *Homo neanderthalensis* proper, as represented par

[1] See, e.g. Zeuner, 'Domestication of Animals' in Singer *et al.* eds., *A History of Technology*, vol. i, pp. 327–352; and forthcoming book on the same subject; Curwen, *Plough and Pasture*, pp. 27–38.

[2] The most convenient survey now in English is M. Boule and H. V. Vallois, *Fossil Men* (London, 1957).

[3] R. Broom and G. W. H. Schepers, *The South African fossil Ape-Men: The Australopithecinae* (Pretoria, 1946); Broom, *Finding the Missing Link* (London, 1950); and e.g. Sir Wilfred le Gros Clark, *History of the Primates* (6th edn., London, 1958), pp. 63–75. The recent discovery by Dr and Mrs L. S. B. Leakey of what they call *Zinjanthropus boisei* at Olduvai in Tanganyika (*Illustrated London News*, 235 (1959), No. 6268 (Sept. 19), pp. 288–289) will require study, but the remains are in Dr Leakey's opinion related in a general sense to the Australopithecinae.

excellence by the La Chapelle-aux-Saints skeleton, show the ape-like characters in smaller degree.[1] *Homo sapiens*, indistinguishable from modern man, appears in the record only during the last glaciation, arriving in Europe perhaps from the east, and replacing Neandertal man there.[2] A few specimens, too fragmentary for certainty, are sometimes held to show an earlier date for *Homo sapiens*. The most important of these are the Swanscombe and Fontechevade skull fragments of second and third interglacial date respectively. Professor Vallois has attached the name *praesapiens* to them, and Professor Le Gros Clark has expressed doubts as to whether they may be legitimately distinguished from *Homo sapiens*. The remains are too meagre for these conclusions to be more than tentative, but they at least demonstrate the presence well before the time of the Neandertalers, of types with a more human-like aspect.[3]

These fossil remains are both too few and too heterogeneous to suggest in isolation any view of evolution, but this hypothesis was already in mind in the period of their discovery, and was apparently supported by the fourth main source of evidence, the archaeological remains. These have been approached from two entirely different starting-points. The first, the continuation of the geological studies of Hutton and Lyell, began with Palaeolithic flints.[4] Before what will be called for convenience the 'Upper Palaeolithic', very few remains other than flint implements are known, and it is only toward the end of this earlier phase that stratified caves occur. Mainly, therefore, on the basis of the manufacturing techniques of these flint and stone implements, they are divided into two major provinces. In south east Asia, crude chopping tools of stone are found, and it is this type which is associated in China with the remains of Pekin man. In vast areas to the west on the other hand, stretching from Asiatic Russia to the Cape of Good

[1] E.g. Le Gros Clark, *History of the Primates* (6th edn.), pp. 99–109; Zeuner, *Dating the Past*, pp. 298–299. The word 'customary' is here used in its broadest sense, for variations in opinion abound.

[2] E.g. Le Gros Clark, *History of the Primates* (6th edn.), p. 110; see also C. S. Coon, *The Races of Europe* (New York, 1939), pp. 16–51; G. M. Morant, 'A Biometric Study of the Upper Palaeolithic Skulls of Europe, and their Relationships to Earlier and Later Types', *Annals of Eugenics*, 4 (1930), 109–214.

[3] H. V. Vallois, 'Neandertals and Praesapiens', *J. Roy. Anthro. Inst.* 84 (1954), 111–130; Le Gros Clark, *History of the Primates* (6th edn.), pp. 96–97.

[4] A convenient recent survey is H. L. Movius, Jr., 'Old World Prehistory: Palaeolithic', in A. L. Kroeber, ed., *Anthropology Today* (Chicago, 1952), pp. 163–192.

Hope, a combination of what are called core and flake tool traditions are found, associated with which were the Swanscombe and Fontechevade fossil remains. A late phase of this province, the Mousterian, seems to have been without exception the industry of Neandertal man, and it was with this phase that deliberate burial of the dead first appeared. A complete change took place with the arrival of the so-called 'Upper Palaeolithic' during the last glaciation, with which are associated the first undoubted fossil remains of *Homo sapiens*. This was the period of the famous cave paintings of southern France and Spain which artistic tendencies are also manifest on objects of bone and antler.[1] Recent excavations in the loess of Moravia and south Russia have revealed mammoth hunter settlements, with evidence of rudimentary huts, and an elaborate equipment, all from this period.[2] With the retreat of the last glaciers, all this comes to an end, and a series of fishing and fowling cultures known as Mesolithic have left scattered remains, the most characteristic of which are very small flint points. Though the evidence of the Palaeolithic has been most intensively studied in Europe, it is clear from recent exploration in the Middle East that these cultures flourished there too, and in Palestine a so-called Mesolithic culture, the Natufian, is found at several sites.[3]

The mention of the Middle East leads to the second main avenue to archaeological studies. This developed from the widespread interest in the Bible and the classical civilisations, and manifested itself in the last century in the recovery of the ancient civilisations of the Near East. These revelations naturally drew attention to the question of origins, and in the present century this has become a major field for research. On present evidence it is safe to say that there were five primary areas of early civilisation, to which all other areas were largely peripheral, namely Mesopotamia, Egypt, the Aegean, the Indus Valley, and the valley of the Yellow River in China.

Overlapping stratigraphical excavations in Mesopotamia have made it possible to trace settled civilisation back through a series of periods, Predynastic, Uruk, and Al 'Ubaid in the southern alluvial plain, and

[1] Summary in L. S. B. Leakey, 'Graphic and Plastic Arts', in Singer *et al.*, eds., *A History of Technology*, vol. i, 144–153.

[2] Childe, *Antiquity*, **24** (1950), 4–11; B. Klima, *Antiquity*, **28** (1954), 4–14; **30** (1956), 98–101; **32** (1958), 8–14.

[3] D. A. E. Garrod, 'The Natufian Culture; The Life and Economy of a Mesolithic People in the Near East', *Proc. British Academy*, **43** (1958), 211–227.

a further Halaf to Hassuna in the uplands of the north, Hassuna already representing a farming, or 'Neolithic', community, perhaps in the fifth millennium.[1] Recent study in the southern plain has made it likely that the rate of sedimentation at the edge of the Persian Gulf has been balanced throughout history by an isostatic subsidence of the alluvial plain,[2] so the possibility must now be entertained that important remains may lie below the present water table, the level hitherto assumed by excavators to represent the base of a mound.

In Egypt, a similar sequence of prehistoric cultures, running back through Gerzean, Amratian, and Badarian to Tasian, has been uncovered, the Tasian again representing a 'Neolithic' community of perhaps the fifth millennium. This sequence only holds for Upper Egypt, however, the important area of the Delta having lacked intensive excavation, and apparently suffering, like lower Mesopotamia, from a rising water table.[3]

Estimations based on later synchronisms lead to the conclusion that in the Indus valley, where the great Harappa civilisation flourished, the earliest stratified remains do not go much before 3000 B.C., so early traces of agriculture are not illuminated by the present evidence from there.[4]

Professor Braidwood's explorations on the hilly flanks of the 'Fertile Crescent' have not as yet produced remains which can be located in the sequence on other than typological grounds, or tentative radiocarbon dating. His farming settlement at Qal'at Jarmo in Kurdistan, while apparently early on the basis of its equipment, is only given a fifth millennium date by the radiocarbon method, or probably not much earlier than Hassuna. Miss Kenyon's recent excavations at Jericho, however, would appear to have penetrated further back towards the supposed beginnings of agriculture. Near the base of the Tell she found three phases of Neolithic, the first two without pottery, and the earliest representing a settlement covering half the area of the present

[1] A. Parrot, *Archéologie mesopotamienne* (Paris, 1953), vol. ii, pp. 107-331, whose terminology is here followed; A. L. Perkins, *The Comparative Archaeology of Early Mesopotamia* (Chicago, 1949).

[2] G. M. Lees and N. L. Falcon, *Geograph. J.*, **118** (1952), 24-39; cf. also **120** (1954), 394-397.

[3] E.g. J. Vandier, *Maniel d'archéologie égyptienne*, vol. i, part 1, *La Prehistoire* (Paris, 1952).

[4] S. Piggott, *Prehistoric India to 1000 B.C.* (Harmondsworth, 1950); R. E. M. Wheeler, *The Indus Civilization* (Cambridge, 1953).

mound and with a stone-built tower 25 feet high and 30 feet across, next to a rock-cut ditch 8 feet deep and 27 feet across. The radiocarbon date based on a charcoal sample from this period was in the neighbourhood of 6800 B.C. This remarkably early date, soon after the final retreat of the glaciers in the north, has been questioned by Professor Braidwood, mainly on the grounds that it is unique, but two estimates from samples taken in different years from different Neolithic levels support it, so it is reasonable to accept it provisionally. It must of course remain only provisional in view of the still tentative status of radiocarbon dating.[1]

In the Aegean area, where the Minoan civilisation flourished, it seems clear that the beginnings of higher culture, represented for instance by a series of Neolithic villages of the fourth millennium below the oldest Minoan levels at Knossos, were the work of immigrants from the east, so origins are not to be found there.[2]

The last great area of civilisation, China, is unfortunately not so well explored as the West, and the intervening area is practically a blank. Chinese civilisation, due to its long span into recent times, is commonly regarded as very ancient, but the first great flowering of the Shang Dynasty, whose remains have been uncovered at Anyang, was not until after 1500 B.C. Prior to that the situation is still uncertain, but the principal Neolithic cultures, the Yangshao and the Lungshan, are unlikely to belong before the third millennium, and a largely hypothetical Early Neolithic, not before the fifth millennium, but the evidence for this is meagre in the extreme. The Shang remains from Anyang show clear influences from the areas of civilisation in the west, and it is now becoming most likely that the Neolithic cultures were also influenced from the west.[3]

[1] K. M. Kenyon, *Palestine Exploration Quarterly* (1952), pp. 5-6, 72-73; (1953), pp. 83-88; (1954), pp. 47-55, 64-68; (1955), pp. 70-86, 109-114; (1956), pp. 69-77; (1957), pp. 101-107; *J. Roy. Anthro. Inst.*, **84** (1954), 103-110; *Antiquity*, **120** (1956), 184-195. In the final season of excavations at Jericho strata were traced back to early Natufian, thus providing an important link with the Mesolithic (*Antiquity*, **33** (1959), 5-9, esp. p. 8).

[2] Childe, *The Dawn of European Civilization* (5th edn., London, 1950), pp. 15 ff.; *Prehistoric Migrations in Europe* (Oslo, 1950), pp. 58 ff.

[3] See, e.g. Li Chi, *The Beginnings of Chinese Civilization* (Seattle, 1957), esp. pp. 26 ff. on western affiliations, on which also see L. Ward, in R. W. Ehrich, ed., *Relative Chronologies in Old World Archaeology* (Chicago, 1954), pp. 130 ff.; and now W. A. Fairservis, Jr., *The Origins of Oriental Civilisation* (New York, 1959), esp. pp. 102 ff.

The view which is now emerging, therefore, is that the Neolithic, farming-stockraising culture, began somewhere in the Near East, the so-called Bible lands, and spread out from there, westwards to the Mediterranean and Europe, and eastwards to the steppes of Central Asia and China.

The last category of evidence is formed by written records. Early writing existed in each of these five main areas, but in only two of them, Mesopotamia and Egypt, in any important degree in the period before the time of Abraham. Neither the Indus script nor the Minoan Hieroglyphics, which fall within this period, have been deciphered, and the earliest Chinese inscriptions, the oracle bones from Anyang, are not earlier than 1500 B.C.[1]

It is not possible here to detail the enormous mass of Mesopotamian and Egyptian written material from the period down to the first quarter of the second millennium. The earliest pictographic inscriptions in Mesopotamia, which on present evidence far outstrip any rivals in claim to antiquity, first appeared in the Uruk Period, well back in the fourth millennium, at least a thousand years before the time of Abraham.[2] Continuous texts in cuneiform, the developed form of this script, appeared around 3000 B.C., also about the time of the first hieroglyphic texts.[3] It will suffice here to mention that among the Sumerian texts of the end of the third millennium, there were Creation Stories, references to a Paradise (called Dilmun), a story of a dispute between a farmer and a herdsman which is somewhat reminiscent of the Story of Cain and Abel, a King List which mentions a Great Flood, and a separate Deluge Legend, all of these probably centuries before the time of Abraham.[4] The possibility of an earlier common factual

[1] On the Chinese writing see H. G. Creel, *The Birth of China* (London, 1936), pp. 158-173; Li Chi, *Beginnings of Chinese Civilization*, p. 17.

[2] The earliest at present known come from Level IV of the Eanna ziggurat sounding at Warka. Six hundred and twenty of these were published by A. Falkenstein, *Archaische Texte aus Uruk* (Berlin, 1936).

[3] That is the earliest at present known. See E. Edel, *Altägyptische Grammatik* (Analecta Orientalia, 34) (Rome, 1955), pp. 2 ff. for an inventory of the earliest inscriptions.

[4] Popular account of Sumerian literature in S. N. Kramer, *History Begins at Sumer* (London, 1958) (American edn., 1956); full discussion of the King List in T. Jacobsen, *The Sumerian King List* (Oriental Institute Assyriological Studies, ii) (Chicago, 1939); flood tablet, A. Poebel, *Historical Texts* (University of Pennsylvania: The University Museum: Publications of the Babylonian Section, vol. iv, No. 1) (Philadelphia, 1914), pp. 9-70; *Historical and Grammatical Texts* (P. B. S., vol. v) (1914), pl. I.

source for these and the Genesis narratives cannot therefore be ruled out.[1]

Biblical Evidence

It is necessary now to turn to the other main body of evidence, that derivable from the Biblical text. There is not space here to mention every significant point in these chapters, so only the most outstanding can be dealt with.

The part of Genesis under study is provided with a number of natural divisions, marked by the recurring formula 'these are the generations of . . .', but for the present purpose it will be convenient to override these divisions and instead consider, as units, the groups of narrative which are separated by the two formal genealogies of chapters v and xi. Thus, passing over the first twenty-five verses of chapter i, which belong properly to the province of astronomy and geology, rather than archaeology, the first division comprises the account of Adam and his descendants. Chapter v provides the genealogy from Adam to Noah, and the dividing line to the second main division, chapters vi to xi, which gives the accounts of Noah, the Flood, and the Tower of Babel. The Table of the Nations in chapter x differs from the rest of these chapters, in that such names as have been identified with references in extra-Biblical sources suggest that it is a separate document compiled in the latter part of the second millennium B.C.,[2] and as this lies outside the defined period of this study, it will be ignored. This second main group of narratives is then followed by the second genealogy, that from Shem to Abraham, which brings the account down to the historical period in the early second millennium.

The first division, chapters i-iv, deals with Adam and his descendants. For Him 'God planted a garden eastward in Eden', the most likely sense being that God planted a garden or 'enclosure' in the eastern part of a place called Eden. It is very likely that the name Eden is to be connected with Sumerian *edin* (e.din.(na).), meaning 'plain' or 'steppe', in which case the garden would perhaps be an arboretum or

[1] Clearly no one person can know at first hand all the material outlined above. It is necessary, however, in my opinion, to take it all into account in any realistic consideration of Genesis, so I have risked the manifold pitfalls. I have tried to give sufficient bibliography to make it possible to check the statements made.

[2] E.g. D. J. Wiseman, 'Genesis 10: Some Archaeological Considerations', *Trans. Vict. Inst.*, **87** (1955), 14-24, 113-118.

even an oasis in an area of open terrain. A river went out from Eden, or the plain, and watered the garden. The statement in ii. 6 that 'there went up a mist from the earth, and watered the whole face of the ground' may be relevant here, for it has long been suggested that the word *ʾēd*, usually translated 'mist', may correspond to Sumerian *id*, 'river', with the sense that the river rose to water the garden, in the manner of the annual inundation of the Nile, for instance, thus providing automatic irrigation.[1] The river divided into four heads, *râšîm* presumably referring to the points where each became a separate river. Of these, the Hiddekel and the Perath are safely identified with the Tigris and Euphrates, the Akkadian *Idiqlat* and *Purattu*, and the Sumerian *Idigna* and *Buranum*. The Tigris is further defined as flowing past Aššur, presumably referring to the city, represented today by the mound Qal'at Sharqat on the west bank of the river. The Pishon and Gihon have not been satisfactorily identified, such conjectures as the Indus and Nile being unsubstantiated, but tentative connections with rivers in Armenia and the Caucasus seem as likely as any.

A few indications of the minerals of the area are given in the description of the land of Havilah, round which the Pishon flowed, which is said to be a source of gold, and the *šōham* stone. Though from the word *ʾeben*, it seems probable that a gem stone of some kind is meant, the precise meaning of *šōham* is not known, so speculation is idle. These two minerals are in any case not described as coming from the garden itself.

The garden was well clothed with vegetation, starting with trees of every kind which could be desired for food (ii. 9), probably indicating fruit trees. Also very probably referring to some kind of tree is the *bᵉdōlaḥ* which is mentioned in connection with Havilah. In the book of Numbers, the manna is likened to *bᵉdōlaḥ*, and the general description of its appearance supports the view that it may be the *bdellion* or bdellium of the classical writers, a transparent resinous gum of pleasant odour, found, according to Pliny, in such places as India, Babylonia, and Arabia.[2] One other tree, the *tᵉʾēnâ*, most probably the fig, is of course mentioned in the account of the fall. The most common species, *Ficus carica*, is today indigenous to Syria and Asia Minor, and was evidently so in the time of Sargon of Akkad, as it is mentioned in the account of his campaign to that area. It may be that the statement in

[1] E. A. Speiser, *Bull. Amer. Schools Oriental Res.*, **140** (1955), 9–11.
[2] *Naturalis Historia*, xii. 9.

ii. 5 that 'no *śîaḥ*' and 'no *ʿēśeḇ* of the field' were yet in existence before the planting of the garden, is intended to imply that these did form part of the vegetation of the garden when it was ready. The word 'field', *śāḏeh*, which is frequently used elsewhere to refer to arable land, occurs here for the first time, and may indicate that the *śîaḥ* and *ʿēśeḇ* were particular types of plant suitable for human use. The general usage 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.

As to animals, even if *bᵉhēmâ* in ii. 20 does not necessarily mean domesticated animals, it seems best to take 'every living thing of the field', *kōl ḥayyaṯ haśśāḏeh*, in that sense.

Thus the picture the text gives may perhaps be interpreted as indicating an enclosure in a plain somewhere in Hither Asia, with fruit-bearing trees and bushes, and wild cereals, irrigated by periodical inundations from the river flowing through it, and tame animals to maintain the natural balance of nature. Adam was placed in this enclosure, and given the task of dressing and keeping it, the verb *ʿāḇaḏ* suggesting sufficiently active labour to keep him in good health, and *šāmar*, the general watching over and caretaking of it. The episode in which the animals are brought to Adam to be named suggests that this overseeing included intelligent organisation of the contents.

All this was changed with the expulsion from the garden, Adam was still to eat the *ʿēśeḇ* of the field, but there would be no more automatic irrigation, and God was going so to curse the ground that thorns and thistles would choke the food crops, and Adam would have continuous toil and sweat to gain his food (not necessarily 'bread' (*leḥem*)) from the ground.

All this seems to suggest an agricultural economy, a view supported by the statement that Cain was a tiller of the soil and Abel a keeper of sheep. The mention of Adam and Eve sewing (*tāpar*) leaves together suggests needles, and God teaching them to make *koṯnôṯ ʿôr*, tunics of skins, indicates leather-working tools. Further to this, the possibility of religious installations is suggested by the offerings, *minḥâ*, brought to God by Cain and Abel (iv. 3, 4).

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', *ʿîr*, 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 appear to bear this out. Jabal is described as the 'father' or 'originator' of those who dwell in tents and have cattle, but *miqneh* need not mean more than 'possessions', or even possibly, if the Massoretic vocalisation is ignored, it might be a form of *qāneh*, 'read', 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. The same could be said for the other four elements. *Kinnôr*, could mean basically, 'a stringed instrument', and the presence, now generally accepted of the archer's bow in the Upper Palaeolithic [1] 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 *ʾûgāb*, are known from the same period.[2] 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.

Summarising the indications from this section dealing with Adam and his immediate descendants, while most of the features might belong to any period from the Upper Palaeolithic to the Iron Age, two features, agriculture and animal husbandry, would seem to point to a period following the 'Neolithic Revolution' in Western Asia.

At the other end of the genealogy of chapter five, the brief statement in connection with the birth of Noah, which associates 'toil' (*ʿiṣṣabôn*), with the word *ʾᵃdāmâ*, seems to suggest that agriculture in some form was still practised in the period just before the Flood.

The account of the building of the ark is instructive. The word *tēbâ*, ark, is generally thought to derive from an Egyptian word meaning 'chest' or 'box' (*dbꜣt*), and is only used once elsewhere in the Old

[1] J. G. D. Clark, *Prehistoric Europe* (London, 1952), pp. 30–33.

[2] O. Seewald, *Beiträge zur Kenntnis der steinzeitlichen Musikinstrumente Europas* (Vienna, 1934), pp. 22–42.

Testament, to describe the ark of bulrushes in which Moses was set.[1] This implies that it need not be a plank-built craft. The identity of gopher wood is uncertain, the most common suggestion being cypress, or something of the sort, but the use of the word *ʿēṣ* with it suggests that it was a tree, and not merely a bush.

It seems reasonable to adopt Dr Ullendorff's suggestion that the pointing of *qinnîm* (vi. 14), usually taken as the unique plural of *qēn*, 'nest', and translated 'rooms', be altered to *qānîm*, the plural of *qāneh*, 'reed', and render the phrase ,'of reeds', rather than 'with rooms thou shalt make the ark'.[2]

The word *kōper* only occurs in this one place in the Bible, and is usually translated 'pitch', a product in antiquity of the distillation of wood tar, but the Akkadian cognate *kupru* was sometimes used of bitumen, a natural derivative of crude petroleum, so it seems that 'bitumen' would be a better rendering here.[3] Bitumen of course occurs naturally in Mesopotamia, and also, it is perhaps worth noting, north of the Caucasus in the Aralo-Caspian basin.

The phrase 'with lower, second, and third stories shalt thou make it', if taken literally means 'thou shalt make it lower second and third' (*taḥtiyyim šᵉniyyim ûšᵉlišîm taʿᵃśehā*, vi. 16), the noun 'stories' being supplied in most translations. While this is a possible interpretation, it may be suggested that the phrase 'lower, second and third' could be taken as referring to three thicknesses in the construction of the sides. *Peṯaḥ*, usually translated 'door', need not mean more than 'opening'. The meaning of *ṣōhar* is uncertain, some taking it as 'roof', but the most common conjecture sees it as an opening for light running right round the vessel just below the roof. This is however a guess at best.

Taking now these indications together, it might be possible to see the building of the ark on something of the following lines. A number of logs, or even tree trunks (*ʿᵃṣê-gōper*), might have been bound together, in three layers (v. 16) and caulked with 'reeds' (*qānîm*), and the whole waterproofed and finished off with bitumen (*kōper*). If the cubit is taken in its usual sense of the length of the forearm, the dimensions of the craft would have been approximately 450 × 75 × 45 feet, that is long and narrow, and though such a construction would involve a

[1] E.g. Koehler-Baumgartner, *Lexicon in Veteris Testamenti Libros*, p. 117; and Supplement, p. 192.

[2] *Vetus Testamentum* 4 (1954), 95–96.

[3] E. R. J. Forbes, *Bitumen and Petroleum in Antiquity* (Leiden, 1936), p. 70.

lot of labour, it seems well within the bounds of possibility. Given an area with the right raw materials, it would not require a very elaborate kit of tools, and might even have been possible with an Upper Palaeolithic equipment.

It is not possible here to enter on the question of the extent of the Flood, beyond mentioning the possibility of reading *ʾereṣ* with a more restricted meaning than 'earth', and accommodating other statements to this meaning, so that all that would be necessary for the interests of the passage would be that mankind should be destroyed according to his distribution at the time. This is only a possibility, and does not rule out the other possible interpretation, that the Flood covered the whole earth.

On the other side of the Flood, there are a number of points to note. First of all the ark landed on one of the mountains of, or perhaps better, in the hill-country of Ararat, or Urarṭu, a kingdom of late second, and early first millennium date, centering on the neighbourhood of Lake Van in Armenia. On present evidence therefore this seems to point to a landing place somewhere in the hills of Kurdistan.

The other points must be passed over more rapidly. The mention of a 'place of sacrifice', *mizbēᵃḥ*, and burnt offerings (*ʿōlōt*) (viii. 20) requires no comment. The pre-Flood indications that Noah was an agriculturalist are borne out by the reference to seedtime and harvest in viii. 22, and the still clearer references to him as a husbandman *ʾîš hā ᵃdāmâ*, and the planter of a vineyard in chapter ix. The fact that grapes have in themselves all the necessary ingredients for fermentation shows that no elaborate equipment is implied. The mention of a garment or mantle, *śimlâ*, may suggest the presence of weaving, which together with the other elements points to settled agriculture. So *ʾōhel* may have more the sense of 'dwelling' than 'tent', though probably in the early stages of agriculture periodical moves were necessary as the neighbouring arable land became exhausted.

Thus the general outline of material culture of the time of Noah as derived from these references would seem to suggest a period following the Neolithic Revolution, and it is interesting to note that the most likely area is somewhere in the uplands of Western Asia.

Passing over the Table of the Nations, the Tower of Babel episode, which evidently relates to a time after some unspecified interval had elapsed, must be dealt with very briefly. It is of course possible to take the word *ʾereṣ* again in a limited sense, and render verse one, 'the whole land was one lip and one word', and even if this is not the sense, the

third plural 'they' in verse two need only refer to a section of the inhabitants of the earth. The presence of an *ʿayin* in the name Shinar seems to preclude a direct equation with Šumer, the southern part of Babylonia, and in view of the information in chapter x, the name seems to refer to the whole of the Babylonian plain, including both ancient Sumer and Akkad. The location in this area is supported by the reference to burnt brick and *ḥēmār*, which is probably the native Hebrew word for the foreign *kōper*, 'bitumen'. It is tempting to connect the city and the Tower with the common Mesopotamian arrangement of a city with its ziqqurat, but the word *ʿîr* gives no information as to its size, and the word *migdāl* has more the sense of 'watchtower', than of anything so specifically religious as ziqqurat (the phrase 'its top in the heavens' not necessarily having any religious significance). These terms, and the absence of any reference to writing, show the possibility of an extremely early date.

Conclusions

What conclusions may now be drawn from these two ranges of evidence?

Genesis seems to indicate that Adam, the first man, was a farmer, and the present state of archaeology seems to point to an origin of agriculture in the Near East, some time after the close of the Pleistocene Ice Age. Should Adam then be placed on what Braidwood calls the 'hilly flanks of the fertile crescent', his descendants dividing, the agriculturalists to move down eventually into the Mesopotamian plain, and the nomads mainly to the north, to the steppes of Asia? There would be ample time to allow for the rest of the events described in the early chapters of Genesis, and the view of Green and Warfield that the genealogies could cover any length of time, being non-consecutive, could be adopted.[1] The Flood would be a bad river inundation in the alluvial plain, such as that discovered by Woolley at Ur, and the Tower of Babel story would fit in shortly before the appearance of writing, the principals in that episode perhaps being the Sumerians.

There are, however, certain rather serious objections to such a view. In the first place, the remains of the Palaeolithic, including the fossil remains of men of modern type, and the remarkable cultural remains,

[1] *Bibliotheca Sacra* (1890), pp. 285–303; *Princeton Theological Review*, **9** (1911), 1–17.

not only in the painted caves of Europe, but also the quite elaborate equipment as revealed for instance in the mammoth hunter camps of Moravia, would be left completely out of account. On present evidence, the dating of these remains is sufficiently sure to rule out the possibility that they were later than the Near Eastern farming remains. Another difficulty with this view, though not perhaps so great, is the fact that a flood coming so relatively late in the prehistoric period would not have destroyed all men on the earth, let alone have risen sufficiently high to leave an ark on the Kurdish hills.

The main difficulty of this view, that of ignoring the Palaeolithic remains would be met by saying that Adam must have appeared at the beginning of the Palaeolithic, possibly being in existence at the close of the Pliocene, and that all the remains from the Palaeolithic are to be attributed to Biblical 'man'. The fossil remains of types different from modern *Homo sapiens* could all be 'men' in this sense, for on the basis of bone morphology alone it is not possible to decide what constitutes 'man' and what does not. The Neandertalers could be equated with the Nephilim, and the Flood could be connected with one of the great changes of sea level during, or at the end of, the Pleistocene. Noah and his descendants would then be the Neolithic farmers of Hither Asia, spreading out from the area where the ark landed in the uplands of the fertile crescent. The Tower of Babel story would be early, and might represent the first descent from the uplands into the alluvial plain, the event taking place possibly, but not necessarily, at the original site of later Babylon, whose earliest levels may lie, according to the theory of Lees and Falcon, well below the present water table.

The objections to this view are also considerable. It would be a tremendous stretch, even following the non-consecutive interpretation of the genealogies, to let the one in chapter v go right back to the beginning of the Pleistocene, a time which on a conservative estimate may have been hundreds of thousands, and according to the solar radiation theory, some 600,000 years ago. Further, though there is evidence of great changes in sea level during the Pleistocene, the distribution of Palaeolithic implements is so vast, covering, as far as present evidence seems to go, the whole unglaciated part of the Eur-Afrasian land mass, that a flood would have to be assumed far beyond any evidence that exists, even to destroy mankind.

A final difficulty from the Biblical evidence comes in the statement that Adam and his descendants were farmers, which would require, on

this scheme, the presence of agriculture at the beginning of the Palaeolithic, a thing for which there is no evidence.

Some of the difficulties of this second view might be met if it were assumed that only the fossil remains which have been unequivocally described as *Homo sapiens* (namely the men of the Upper Palaeolithic) were to be called 'man' in the Biblical sense. This has certain points to commend it, in that it appears that these men arrived in Europe from the east,[1] and while there is no agreement as to their precise area of origin, it would not seem to be so far from the possible area of Eden. Also in this period, the remains such as the cave paintings suggest a standard of mind on a different level altogether from the earlier periods. While the genealogies would still be considered as non-consecutive, they would not have to span such an unconscionably long period. It would be necessary to connect the Flood and subsequent episodes with the same events as on the previous view, but with only Upper Palaeolithic man to be disposed of, if this view of the Flood is taken, it would not need to be of such wide extent.

There are still, of course, difficulties with this view, not least of which is the lack of specific evidence for a Flood of anything like the size it would require. The question of Adam being a farmer would still interfere, as there is no evidence for agriculture in the Upper Palaeolithic. The question also arises as to how the tool-making creatures of the periods before the Upper Palaeolithic should be regarded. The current anthropological view is that man is a tool-making animal, and that therefore where fossil forms are discovered in association with implements they are to be regarded by definition as true 'men'. It does not seem necessary on the Biblical evidence to follow this view, however, since there the difference between man and the animals is placed on a far less tangible level, and the studies of Yerkes and Kohler show that chimpanzees, for instance, exhibit what are evidently rudimentary tool-making propensities.[2] It is possible, therefore, though this is of course speculation, that the fossil forms of non-sapiens type represent extinct groups of ape-like primates, which made use, to a greater extent than the surviving great apes, of quite efficient implements. These would not be pre-Adamite men, for they would not be men.

[1] This is, of course, no more than a vague hypothesis, see D. A. E. Garrod, *J. World History*, 1 (1953), 13-38, where this view is not supported.

[2] *Antiquity*, 22 (1948), 210-211.

A fourth view, and one which is perhaps the most widely held today, is that these early chapters are not intended to narrate historical events at all, but are what might be called 'poetic media for the conveyance of divine truth'. In Paul's important statement about the Scriptures in his Second Epistle to Timothy, he does not claim that they are profitable for historical research, and this view would hold that these chapters convey truth about God in the form of picture language. If this view is adopted, all the difficulties discussed above are resolved, and in fact it becomes possible to regard the whole enquiry, indulged in up to now, as futile and misconceived.

This view, however, is not without its difficulties. In the first place, apart perhaps from chapter i, there is no clear indication that these chapters are couched in other than plain narrative prose, and apart from the serpent, there is nothing in them which is intrinsically fabulous. If they are then called 'prose poetry', they can only be so named on grounds which lie outside any objective criteria in the text. But perhaps the most serious difficulty is to be found in the attitude of the New Testament. An examination of the references to the stories in these first eleven chapters, by such writers as Paul,[1] Peter, and John certainly leaves the impression that to them they were historical narratives. But the most important statements must always be those of our Lord. To mention only the most outstanding: in Matthew xxiii He speaks of Abel in the same category as Zacharias, a historical character spoken of in Chronicles; and in Luke xvii He speaks of Noah and the Flood as in the same sphere of reality as the second coming. It seems likely that if He spoke in such terms of these isolated individuals and incidents, His remarks would refer also to the wider context, and in fact to the whole of these early narratives. It is therefore difficult to escape the conclusion that to our Lord these early narratives described actual events.

It may be, of course, that it is merely a peculiarity of the modern Western outlook to see only two categories, that of literal history, and that of poetic prose, and on this account it should not be dogmatically asserted that these chapters must be one or the other, but this view again would exclude the possibility of any but a subjective decision in the present situation.

Thus it appears that in the present state of knowledge, firm conclusions on the questions raised above are not possible. But while

[1] See, e.g. the argument in Romans v and I Corinthians xv.

there are no striking harmonisations between the two bodies of evidence, the very fact that it was feasible just now to consider certain possible general correlations seems significant. So while it cannot be maintained that the early chapters of Genesis definitely relate historical events, it equally cannot be asserted either that they could not, or do not.

These seem to me to be some of the problems to be faced in the study of this subject. Though, as has been pointed out, there can be no solution at present, it may be helpful for me to put forward my own tentative *opinion* on these matters, which could act as a theory to be examined and criticised.

The teaching of Genesis i-xi on any interpretation is of declension from an original state of communion with God, and all the accompaniments of that, so it seems false always to view the archaeological remains in the light of an evolutionary hypothesis. It might be therefore that technically advanced cultures, including such things as agriculture, were in existence at times much earlier than we have supposed.

To me, more difficulties arise from a view which would deny a historical status to these narratives, than advantages gained. The view, therefore, of connecting Adam with Upper Palaeolithic man is the one which I would tentatively adopt, and support with the consideration that the evidence is still too meagre to make the absence of traces of agriculture at that time, and of a great Flood towards the end of the Pleistocene, conclusive against it.

Finally, to touch briefly on the question of transmission, not hitherto mentioned, the scope of Sumerian literature at the beginning of the second millennium shows the possibility, to put it no higher, that the main contents of those chapters of Genesis which relate to the pre-Patriarchal period could have been known to Abraham before he accompanied his father Terah on his journey out of Mesopotamia.