## FOSSIL MAN IN THE LIGHT OF THE RECORD IN GENESIS

ARTHUR C. CUSTANCE\*

The evidence indicates that Homo erectus (essentially man as we now know him), Homo habilis and Zinjanthropus were broadly contemporary. Hence any attempt to derive H. erectus from either of the other forms runs contrary to the paleontological record.

Aside from the interesting Olduvai fossils in Africa, the geographical distribution of fossil human remains indicates they are marginal representations of a widespread dispersion of people from a single multiplying population in the Middle East. All were of one basic stock—the Hamitic family of Genesis 10.

The most degraded specimens are from the least hospitable areas where they suffered physical degeneration as a consequence of the circumstances in which they were forced to live.

The extraordinary physical variability of fossil men results from the fact that they were members of small, isolated inbred populations.

Later the Indo-Europeans (Japhethites) displaced or overwhelmed the original Hamitic pioneer stock. All trace back to the three sons of Noah.

#### 1. The Evolutionary Faith

Man is a primate and within the order of Primates is most closely related to the living African anthropoid apes.

So wrote F. Clark Howell'recently, thus providing us with a good example of the kind of confident announcement with which evolutionary literature abounds. As it stands, it is purely presumptive. Just because members of a family are apt to look alike, it is not at all safe to assume that all "look-alikes" are related.

Howell's first statement, "Man is a primate," is true enough; but his second statement, which is presented as though it were equally factual, is simply supposition without any positive proof whatever. Within the order Primates man may most closely resemble the living African anthropoid apes from an anatomical point of view, but it is quite another thing to state categorically that he is most closely related to them.

Resemblance and relationship are by no means the same thing. Howell does admit in the next sentence that he is not sure how far removed the relationship is, but the basic assumption still remains that the blood relationship exists. Very few readers except those expert in the subject would discern the presumption in Howell's statement. All that the facts indicate is similarity.

Relationship is totally unprovable by an appeal to morphology. If Howell had said, "Man is anatomically most like the African anthropoid apes," his statement would have been quite correct. As it stands, his statement is completely hypothetical. He is confusing hypothesis with fact.

The extent to which anthropologists today exercise faith, holding to be true and firmly established what in fact is only hopefully believed, is borne out by several of the following quotations, all of which are from top flight experts in the field. Raymond Pearl, for instance, presents a beautiful example of hopeful possibilities stated as high probabilities by circumlocution when he said:

While everyone agrees that man's closest living relatives are to be found in the four manlike apes, gorilla, chimpanzee, orang-utan, and gibbon, there is no such agreement about the precise structure of his ancestral pedigree. The evidence that he had a perfectly natural and normal one . . . is overwhelming in magnitude and cogency. But exactly what the individual steps were, or how they came about, is still to be learned. There are nearly as many theories on the point as there are serious students of the problem. All of them at present, however, lack that kind of clear and simple proof which brings the sort of universal acceptance that is accorded to the law of gravitation, for example.

Only on one point, and that one a little vague, can there be said to be general agreement. It is that, on the weight of evidence, it is probable that at some remote period in the past for which no clear paleontological record has yet been uncovered, man and the other primates branched off from what had theretofore been a common ancestral stem.<sup>2</sup>

In this quotation the phrase "a perfectly natural and normal pedigree" means, of course, an evolutionary one. Pearl assures us that the evidence for this is overwhelming in magnitude and cogency, but in the next breath he speaks only of possibilities and adds that even for these there is no clear paleontological evidence. Many anthropologists today, twenty years after the above was written, would argue that the paleon-

<sup>\*</sup>Arthur C. Custance is a Research Scientist and Group Head of the Human Engineering Laboratory, Defence Research Board, Shirley Bay Site, near Ottawa, Ontario, Canada. He completed his education in England in private and public schools and holds a Master of Arts as an Orientals Scholar and a Doctor of Philosophy degree. Dr. Custance publishes the Doorway Papers, Box 1283, Station B, Ottawa, Canada.

tological evidence is now at hand in the form of a wide range of cattarrhine anthropoidea loosely cataloged together as *pithecines*. These creatures include such types as *Dyopithecus*, *Ramapithecus*, *Kenyapithecus*, and of course the more popularly known *Australopithecines*.

## Disagreements on Relationships

But a study of the literature in which these fossils are examined indicates first of all that there is considerable disagreement as to their precise status and relationship with one another, and secondly, that there is considerable debate whether they really stand in the line leading to *Homo sapiens*, though hopefully people like Robinson try to slide them across in the family tree so that they at least fall under the heading of hominoidea, whence man is supposed to have evolved. At the present moment it appears to me that there has not been enough time yet to achieve a clear picture, and even granting that evolution were true it still seems unlikely that *Homo sapiens* arrived via a *pithecine* route.

The trouble is that the *Australopithecines* had very small brains indeed, a mean cranial capacity of 575 cc. compared with the normal for modern man of 1450 cc. and yet appear to have been tool users. Since by definition man is a cultured animal and tools are an essential part of his cultural activity, some investigators have credited these primitive apes with culture, and for this reason elevated them to man-hood, though at a very low level of course. But there are many who hold that a creature cannot be said to be a "cultured animal merely because it *uses* tools. Birds use tools, for example, but this could hardly be considered as cultural activity.

I do not know of any unequivocal evidence that the *Australopithecines* deliberately manufactured tools, which is a very different thing. There *is evidence* of what look like manufactured tools, but it is highly debatable whether they were actually the work of the *Australopithecines* themselves. It has been argued that *Australopithecines* were hunted by early man and that these tools were left by the hunters.

In the second place, it used to be held that cranial capacity and intelligence were closely related. This is seriously questioned today although there is general agreement that a human being cannot be normal with a cranial capacity below about 800 cc., the so-called "cerebral Rubicon." If there is no real relationship between these two indices, then the very small *Australopithecine* brain might still qualify as 'human." But there is certainly no general agreement on the matter. In any case, modern man with his far larger brain is represented by fossils which

were contemporary with the latest in the *Australopithecine* line, so it still seems unlikely that *Homo sapiens* arrived via this route.

Leakey, writing in 1966 with reference to *Homo habilis*, a supposed *maker* of tools, for a number of reasons rejects any such linear series as *Australopithecus africanus-Homo habilis-Homo erectus* (the latter being essentially man as we now know him). "It seems to me," he says, "more likely that *Homo habilis* and *Homo erectus* as well as some of the *australopithecines*, were all evolving along their own distinct lines by Lower Pleistocene times." And again, "I submit that morphologically it is almost impossible to regard *H. habilis* as representing a stage between *Australopithecus africanus* and *Homo erectus*." Leakey adds,

I have never been able to accept the view that *Australopithecus* represented a direct ancestral stage leading to *H. erectus*, and I disagree even more strongly with the present suggestion of placing *H. habilis* between them. . . . It is possible that *H. habilis* may prove to be the direct ancestor of *H. sapiens* but this can be no more than a theory at present. . . .

All that can be said at present is that there was a time at Olduvai when *H. habilis*, Australopithecus (Zinjanthropus) boisei and what seems to be a primitive ancestor of *H. erectus* were broadly contemporary and developing along distinct and separate lines (Emphasis added).<sup>6</sup>

The debate continues, and though specialists do not question man's evolutionary origin, the conclusive links are still missing.

The problem is that although there are a substantial number of fossil candidates which can be manipulated into the proper kind of sequence, the chain seems to lead rather to modern apes—or to extinction-than to man. For certain periods of geological history there are promising successions of fossil forms which look as though they ought to lead to man, but they do not. Very recently, Elwyn L. Simons observed:

Within the past fifteen years a number of significant new finds have been made. . . . The early primates are now represented by many complete or nearly complete skulls, some nearly complete skeletons, a number of limb bones, and even the bones of hands and feet. In age these specimens extend across almost the entire Cenozoic era, from its beginning in Paleocene epoch some sixty-three million years ago up to the Pliocene which ended roughly two million years ago. . . . But they do not lie in the exact line of man's ancestry.



Zinjanthropus, drawn for the Sunday Times of April 5, 1964



Zinjanthropus, drawn by Neave Parker for Dr. L. S. B. Leakey, and published by the Illustrated London News and Sketch, Jan. 1, 1960



Zinjanthropus, drawn by Maurice Wilson for Dr. Kenneth P. Oakley.

Figure 1. Three different reconstructions of the same fossil Zinjanthropus into "flesh and blood" head and face.

## Imaginative Thinking All-Important

When the significance of the data is a subject of so much debate, it is clear that a great deal depends upon imaginative thinking, each authority being persuaded that he is merely reading the evidence, but the disagreement which exists between authorities demonstrates clearly that the evidence can be "merely read in several different ways. For this reason, Melville Herskovits observed that "no branch of Anthropology requires more of inference for the weighing of imponderable, in short, of the exercise of scientific imagination, than pre-history."

Many years ago, Professor Wilson D. Wallis' pointed out that there is a kind of law in the matter of anthropological thinking about fossil remains which goes something like this: the less information we have by reason of the scarcity and antiquity of the remains, the more sweeping can our generalizations be about them. If you find the bones of a man who has died recently, you have to be rather careful what you say about him because somebody might be able to check up on your conclusions. The further back you go, the more confidently you can discuss such reconstructions because there is less

possibility of anyone being able to challenge you. Consequently, when only a few fossil remains of early man were known, very broad generalizations could be made about them and all kinds of genealogical trees were drafted with aplomb.

A few wiser anthropologists today decry the temptation to draft genealogical trees which, as I. Manton<sup>10</sup> said, are more like "bundles of twigs" rather than trees in any case. And when it comes to the reconstruction of a fossil find into a "flesh-and-blood head and face, the degree of divergence can be even more extraordinary as is shown, for example, in those concocted to represent *Zinjanthropus* for the *Sunday Times* (*London*), the *Illustrated London News*, and for Dr. Kenneth Oakley by Maurice Wilson, respectively. (Figure 1) The reconstruction of man's evolutionary history is still much more of an Art than a Science. The original fossil skull is shown in Figure 2.

Moreover, as has been recognized for many years and emphasized very recently by J. T. Robinson, 12 habits of life, climate, and diet can tremendously influence the anatomical features of the skull, indeed to such an extent that two series of fossil forms which may very well be in fact a single species are by some authorities put into different genera. I have in mind the Australopithecines and Paranthropus. How can one take seriously family trees in which the lines of connection are drawn solely on the basis of similarity or dis-similarity in appearance when these similarities or dis-similarities could be nothing more than evidence of a difference in diet? Such cultural or environmental factors cannot only cause two members of a single species to diverge sufficiently to be put into two different genera, but two different genera can for the same reason *converge* until they have the appearance of belonging to the same species. There are some extraordinary examples of convergence.15

# Morphology No Guide to Relationships

It is evident, therefore, that morphology in itself is not really any kind of guide at all to lineal relationships. Indeed, even the finding of the skeletons of a mother and a child buried together, although it might be presumptive evidence of a mother-child relationship, could never be taken as absolute *proof.* Almost all fossil remains are "proved to be related in this way or that, only in the sense that if you agree to the theory of evolution to start with, the relationship might be reasonably assumed. But in itself similarity of form does not prove relationship.

Those who see in their own finds, or who wish to see in them, more of man than the ape tend to classify them by tacking the suffix -anthropus

on to their name. Those who are reemphasizing rather the *antiquity* of their finds may tend to classify them as —*pithecus*. Thus one has two alternative temptations, one being to stress *antiquity* of man's supposed ancestors, and the other the *humanness* of them.

One other factor clearly enters into these naming games and that is the prestige of having made a find which initiates a new genus or subfamily or category of some kind. Thus von Koenigswald calls his Javanese find *Meganthropus*, whereas others see it as merely representative of one branch of the *Australopithecines*. Similarly, Leakey labels his Olduvai finds as *Zinjanthropus*, whereas others would rob his specimens of their unique status by reducing them also to a mere *Australopithecine*. "

The unfortunate thing is that the very naming of these finds can give to them a weight of importance which can be quite unjustified. The name creates the significance, not the find itself. One thing is certain: not one of these specialists is ever *tempted* to make any pronouncement regarding their particular finds which puts the slightest question mark against their evolutionary origin. Evolution is unchallengeable!

LeGros Clark has pointed out that "practically none of the genera and species of fossil hominoids (and this includes all the *Australopithe-cines* according to Robinson-added by A.C.C.) which have from time to time been created have any validity at all in zoological nomenclature." And again,

Probably the one single factor which above all others has unduly, and quite unnecessarily, complicated the whole picture of human phylogeny is the tendency for the taxonomic individualization of each fossil skull or fragment of a skull by assuming it to be a new type which is specifically, or even generically, distinct from all others.<sup>16</sup>

In the popular mind, the Australopithecines are constantly being presented as though they were little by little filling the gap between man and his animal ancestors, and the temptation has been for "fossil-finders" to contribute to this confusion by attaching names to their finds which are intended to reinforce this impression." In point of fact, not only are these names unjustified in many cases but the line itself now appears to have continued its imagined evolutionary development right up into Pleistocene times when modern man was already in existence. This has the unfortunate consequence of making man as old as his supposed ancestors, which seems nonsense to me, but in the evolutionist's Credo, this is his faith, -"the substance of things hoped for, the evidence of things not seen. . . . "



Figure 2. Original fossil skull of Zinjanthropus upon which reconstructions shown in Figure 1 were based.

## **Faith Without Sufficient Reason**

There is no question that the theory of evolution is useful as a teaching aid to assist in the orderly arrangement of the data that is available. And there is no doubt also that when the theory is presented for popular consumption, ie., omitting any mention of problems which yet remain to be solved before it can unequivocally be considered factually established, it has a certain compulsiveness about it, for it appears to explain everything.

This, as a matter of fact, is one reason why there are a few authorities of stature within the camp who nevertheless feel somewhat uneasy about it all in its current theoretical formulation. For a theory which can be made to explain everything by manipulating the threads of the argument to suit the occasion is really unsound for the basic reason that it could never be disproved. As Medawar<sup>18</sup> observes, if a theory is so flexible that the same explanation can be used to account for two entirely contrary tendencies, then the theory is meaningless.

Once it was held that man's enlarging brain caused his emergence as *Homo sapiens*, the great tool-users, so that smaller brained creatures were lower in the scale. Now that the small-brained creatures have turned up as tool-users, it is being argued that the very use of tools is what enlarged the brain to man size! Evolutionary theory is highly "adjustable". Medawar

says, "When we speak as Spencer was the first to do, of the survival of the fittest, we are being wise after the event: what is fit or not fit is so described on the basis of a retrospective judgement. It is silly to profess to be thunderstruck by the evolution of organism A if we should have been just as thunderstruck by a turn of events which would have led to the evolution of B or C instead."

A few year's ago, Professor T. H. Leith<sup>19</sup> underscored the fact, which I believe is of fundamental importance, that in order to be useful a theory must be so structured that some critical experiment is conceivable which if it is actually false could prove it to be so. As Medawar<sup>30</sup> has pointed out, since absolute proof is beyond our power (for there may always turn up one more piece of evidence which is irreconcilable), the best we can do in any area of research is to constantly seek for error in the hypothesis.

The result of each experiment which does not demonstrate a flaw serves either to confirm the present hypothesis or to purify it by forcing its modification. But the theory of evolution is so flexible that it is simply not possible to conceive of a critical experiment which *could* disprove it. All research seems to be ultimately devoted to proving the theory, not to challenging it. How could one challenge it?

In the meantime, it may be useful enough, heuristically, or even as a philosophy which ministers to our materialism, but it is nevertheless held as an act of faith-indeed Huxley would define it as a kind of Religion. As such, there is a large element of emotion involved in its defence. In a recent book, *This View of Life*, Simpson reveals this quite remarkably. There are some sections in which he reiterates *ad nauseam* the basic tenet of his faith: "Evolution is a fact."

## **Circular Reasoning Very Common**

Circular reasoning plays a large part in current evolutionary anthropology, perhaps as large a part as it does in modern geology, although it is not as readily admitted. The circularity of the reasoning goes something like this: we know that human evolution is true and therefore there must be a succession of forms from some proto-human being up to man spread over the appropriate time scale of millions of years.

Since one can, by disregarding geographical location and taking some liberties with an expansive time scale, line up a set of candidates in fossil form which make what is euphemously termed a "nice sequence," this proves that human evolution is a fact. The possibility that there might be any other explanation for similarity of form is not even considered.

The point is that the mere arbitrary lining up of man-like fossils, even when the temporal ordering is correct, does not prove descent. The assumption is made that descent is the explanation and the line-up is then used to prove the assumption. <sup>23</sup> This is as characteristically circular as much geological reasoning is.

This kind of evolutionary sequence was once very popular in *cultural* anthropology: artifacts developed progressively from simple to complex by known stages; religion evolved continuously from animism to monotheism; art passed from a very low stage of crude representation to its modern sophisticated (?) level of abstraction; in short, everything evolved. Little by little most of these classically familiar evolutionary schemes have been discarded as being either purely arbitrary mental creations or positively contrary to fact. Christian readers sometimes see references to the abandonment of these cultural evolutionary constructs and unfortunately gather the impression that all evolutionary ideas are being abandoned-which is not so at all.

#### **Doubts Africa as Cradle of Man**

Unfailingly, human and pre-human fossil remains are still being set forth in such a way as to create the impression that linear relationships actually have been demonstrated between them. As Howell put it, "Man . . . IS most closely related to the living African anthropoid apes", and that's a fact!

It is too soon for us to be able to see the true significance of the many new fossils from Africa and elsewhere, each of which tends, by its discoverer, to be hailed as *the* missing link, until it is challenged as to its significance by the man who is lucky enough to find an even more primitive (or human-like!) fossil. Because most of these fossils have been turning up in Africa, at the present time it is popular to hail Africa rather than the Middle East as the true home of man in spite of the fact that the *Australopithe-cine line* leads to modern apes and not to man at all, according to many experts.

But there are ways in which the Middle East can still be shown to be the most reasonable cradle of man and that group of fossils widely scattered over the world (in Asia, Africa, and Europe) which by general consensus of opinion DO represent early man, such as the Homo erectus series, can be accounted for without making them man's ancestors. After all, there is no need to assume automatically that everything that looks like an ancestor is an ancestor . . . it could be a descendant. If one believes in evolution, the former is a reasonable enough assumption on account of the fact that these fossil skulls are so very primitive in appearance.

If one believes that man was created, the logic of the argument is not nearly so compelling— for degeneration is as likely as improvement.

On the other hand, provided that one can, for the sake of gaining a new perspective, ignore for the present the time element involved (and there are many uncertainties here), there is a way in which all those fossil remains which are generally agreed to belong within the family of man, *Homo sapiens*, can be accounted for without appealing to evolutionary processes of any kind. And this way is not only reasonable in itself, but has substantial support from what we know of man's early history on the basis of archaeology, the records of antiquity, and modern research into the effects of food, climate, and habit of life on human physique.

## 2. An Alternative Faith

Whether we believe that the Flood in Noah's day was geographically local or universal, most of those who read this Annual will certainly agree that from the point of view of the world's human population the Flood was an overwhelming catastrophe which left this earth with eight sole human survivors. The same basic agreement would, I believe, be found with respect to the period of time which has elapsed since these eight souls began to re-people the world, a period which cannot be much more than four or five thousand years at the most.

It seems unlikely, even making all conceivable allowances for gaps in genealogies which some are persuaded must exist, that one could push back the date of the Flood beyond a few thousand years B.C. In this case, we are forced to conclude that, except for those who lived between Adam and Noah and were overwhelmed by the Flood and whose remains I believe are not very likely to be found, all fossil men, all pre-historic cultures, all primitive communities of the past or the present, and all civilizations since, must be encompassed within this span of a few thousand years. On the face of it the proposal seems utterly absurd.

However, I think there are lines of evidence of considerable substance in support of it. In setting this forth all kinds of "buts" will arise in the reader's mind if he has any broad knowledge of current physical anthropology. An attempt is made to deal specifically with a number of these "buts" in other papers by the author<sup>25</sup>, yet some problems remain unsolved, particularly the question of the time element. However, one does not have to solve every problem before presenting a hypothetical reconstruction. After all, the orthodox view is shot full of them, and yet it is still held to be a respectable one!

#### **Main Contention Presented**

It is our contention that Noah and his family were real people, sole survivors of a major catastrophe, the chief effect of which was to obliterate the previous civilization which had developed from Adam to that time. When the Ark grounded, there were eight people alive in the world . . . and no more.

Landing somewhere in the highlands north of Mesopotamia, they began to spread as they multiplied, though retaining for some time a homogeneous cultural tradition. The initial family pattern, set by the existence in the party of three sons and their wives, gave rise in the course of time to three distinct families of man. According to their patriarchal lineage, these families have been termed appropriately – Japhethites, Hamites, and Shemites, but in modern terminology would be represented by the Indo-Europeans (Caucasoids), the Mongoloid and Negroid peoples, and the Semites (Hebrews, Arabs, and some more ancient branches of the family such as the Assyrians, etc.), respectively.

At first they kept together, but within a century or so they began to break up and subsequently some of the family of Shem, some of the family of Ham, and perhaps a few of the family of Japheth arrived from the East in the southern section of the Mesopotamian Plain.<sup>26</sup> Here it would appear from the evidence discussed elsewhere by the author<sup>27</sup> the family of Ham became politically dominant, initiated a movement to prevent any further dispersal by the erection of a monument high enough to be a visible rallying point on the flat plain, and brought upon themselves a judgment which led to their being forcibly and rapidly scattered to the four comers of the earth. Part of this we know only from the Bible; but part of it we know also from archaeological evidence.

The fact is that in every area of the world where Japhethites have subsequently settled, they have always been preceded by Hamites. This pattern applies in every continent. In prehistoric times the circumstance seems always to be true, the earliest fossil remains of man being Mongoloid or Negroid in character and in head shape, while those that came last belonging to the family of Japheth, ie., Caucasoid. Indeed, in pre- and early historic times, the pattern of events is repeated again and again, whatever cultural advances the pioneering Hamites had achieved tended to be swallowed up by the succeeding Japhethites.

The record of Japheth's more leisurely spread (ie., "enlargement": Gen. 9:27) over the earth has been marred consistently by his destruction of the cultures which were already in existence wherever he arrived in sufficient force to achieve

dominion. It happened in the Indus Valley, it happened in Central America, it happened to the Indian tribes of North America, it happened in Australia, and only numerical superiority of the native population has hitherto preserved parts of Africa from the same fate.

Now in spite of the claims made for the implications based upon the South African discoveries of recent years, it still remains true that whether we are speaking of fossil *Man*, ancient civilizations, contemporary or extinct native peoples, or the present nations of the world, all lines of migration which are in any way traceable or deducible seem to radiate from the Middle East like the spokes of a wheel.

#### Nature of Evidence to Be Presented

Before presenting some of the evidence, it will be well to summarize briefly the nature of the evidence. Along any migratory route there will be settlements each of which differs slightly from the one which preceded it and the one which stems from it. As a general rule, the direction of movement tends to be reflected in the gradual loss of cultural artifacts which continue in use back along the line, but either disappear entirely forwards along the line or are less effectively copied or merely represented in pictures or in folklore.

When several lines radiate from a single centre, the picture presented is more or less a series of ever increasing circles of settlements, each sharing fewer and fewer of the original cultural artifacts which continue at the centre, while each witnesses the appearance of completely new items developed to satisfy new needs which were not found at the centre. The further from the centre one moves along any such routes of migration the more new and uniquely specific items one is likely to find which are not shared by the other lines, while there will yet be preserved a few particularly useful or important links with the original home base. Entering such a settlement without previous knowledge of the direction from which the settlers came, one cannot be certain which way relationships are to be traced without some knowledge of the culture content of settlements up and down the line in each direction.

There is usually, however, some quite specific type of evidence which allows one to separate the artifacts which have been brought *with* the newcomers from those which have been developed on the site. This is particularly the case whenever complex items turn up, the materials for the making of which would not be available locally. Sometimes the evidence is, as it were, secondhand, existing in the form of an article

which is clearly a copy and has that about its construction which proves it to be so.

For example, certain Minoan pottery vessels are clearly copies of metal prototypes, both in the shape they take and in their ornamentation. Where the pottery handles of these vessels join the vessel itself, little knobs of clay are indicated which serve no functional purpose, but which are clearly an attempt to copy the rivets which once secured the metal handle to the metal bodies of the prototype. These prototypes are found in Asia Minor and it is therefore clear which way the line of migration is to be traced, for it is inconceivable that the pottery vessels with its little knobs of clay provided the metalworker with the clues as to where he should place the rivets.

## **Tendency for Loss of Culture**

In the earliest migrations which, if we are guided by the chronology of Scripture, must have been quite rapid, it was inevitable that the tendency would be markedly towards a loss of cultural items common to the centre as one moves out, rather than a gain of new items.25 Thus the general level of culture would decline at first in certain respects, although oral traditions and things like rituals and religious beliefs tend to be surrendered or changed much more slowly. In due time, when a large enough body of people survived in any one place which was hospitable enough to favour permanent settlement, a new culture centre would arise with many of the old traditions preserved, but some new ones established of sufficient importance that waves of influence would move out both forwards and backwards along the lines whence the settlers had come.

Accompanying such cultural losses in the initial spread of the Hamitic peoples would often be a certain coarsening of physique. Not only would people tend to be in many cases unsuited for the rigours of such a pioneering life and be culturally degraded as a consequence, but food itself would often prove grossly insufficient or unsuitable to their unaccustomed tastes. Not infrequently the food would at first be inadequate for the maintenance of full bodily vigour and the development of entirely normal growth of the young, for dietary disturbances have their effects upon growth patterns.

Indeed, as Dawson<sup>30</sup> long ago observed, the more highly cultured an immigrant is when he arrives at a frontier, the more severely is he handicapped and likely to suffer when robbed of the familiar accoutrements of his previous life. This has been noted by those who have studied the effects of food deficiencies upon the form of the human skull for example, a subject

dealt with in some detail by the author elsewhere.<sup>25</sup>

The effect upon the technological achievement of the newcomers is obvious enough, for a highly educated lady who had never made bread, or mended her own clothes, or cultivated a garden would be far worse off on the frontier when she first arrived than would a London charwoman. Thus the most likely cause of a particularly degraded society at the beginning would not be a *low* cultural background but a high one! And this is certainly the situation that Genesis presents us with immediately after the Flood.

## Cradle of Mankind in Middle East

Meanwhile, the occasional establishment, along the various routes of migration, of what might be called "provincial" cultural centres whose influences spread in all directions would greatly complicate the patterns of cultural relationship in the earliest times. By and large, the evidence which does exist strongly supports a Cradle of Mankind in the Middle East, from which there went out just such successive waves of pioneers who were almost certainly not Indo-Europeans (ie., Japhethites).

These pioneers were Hamitic, either Mongoloid or Negroid in type for the most part but with some admixture; and they blazed trails and opened up territories in every habitable part of the earth. They did so, often, at great cost to their own cultural heritage, and to the detriment of the refined physique still to be found in their relatives who continued to reside at their point of origin. In each locality they ultimately either established a way of life which made maximum use of the resources available . . ., or circumstances overwhelmed them and they died out leaving a few scattered remnants behind whose lot must have been appallingly difficult in their isolation and whose physical remains bear witness to the effect.

The Japhethites followed them in due course, often taking advantage of the established technology as the Puritans were to do in North America thousands of years later, sometimes displacing them entirely, sometimes absorbing them so that the two stocks were fused into one, and sometimes educating them in new ways and then retiring. India has seen all three patterns. The Indus Valley people were overwhelmed and entirely displaced or absorbed, and this admixture thousands of years later was once more educated in new ways by a further influx of Japhetic settlers who have since surrendered their dominant status.

One further factor bears upon the degenerative form which so many of the earliest fossils of man seem to show. Although the life span of man declined quite rapidly after the Flood, for several hundred years many people survived to what would today be considered an incredible old age. If we add to the isolation and deprivation of some of these more scattered early pioneers the possibility of their living well past the century mark or perhaps even much longer, the ultimate effect upon their physique would be tremendously accentuated. It has been noted, in fact, that the skull sutures are almost obliterated in some specimens, a circumstance which might reasonably be interpreted as evidence of very extreme old age. Extreme old age would often tend to modify the skull towards the conventional man-ape form.

## More Detailed Examination of Evidence

So much, then, for the broad picture. We shall now turn to a more detailed examination of the evidence: (1) that the dispersal of man took place from a centre somewhere in the middle East and that this dispersal accounts for fossil man, and (2) that those who formed the vanguard were of Hamitic stock, using the term "Hamitic" to mean all the descendants of Noah who were not in the line of Japheth or Shem.

Before man's evolutionary origin was proposed, it was generally agreed that the Cradle of Mankind was in Asia Minor or at least in the Middle East area. Any evidence of primitive types elsewhere in the world, whether living or fossil, were considered proof that man had degenerated as he departed from the site of Paradise. When evolution captured the imagination of anthropologists, then primitive fossil remains were at once hailed as proof that the first men were constitutionally not much removed from apes.

One problem presented itself, however, almost from the beginning, and this was that these supposed ancestors of modern man always seemed to turn up in the wrong places! The basic assumption was still being made that the Middle East was the Home of Man and therefore these primitive fossil types, which were turning up anywhere but in this area, seemed entirely misplaced. Osborn, in his Men of the Old Stone Age, accounted for this anomaly by arguing that they were migrants. He asserted his conviction that both the human and animal inhabitants of Europe, for example, had migrated there in great waves from Asia and from Africa. In the latter case, he wrote that it was probable that the source of the migratory waves was also Asia, north Africa being merely the route of passage.

This was his position in 1915, and when a third edition of his famous book appeared in 1936, he had modified his original views only slightly. Thus Osborn has a map of the Old World with this subscription, "Throughout this long epoch Western Europe is to be viewed as a peninsula, surrounded on all sides by the sea and stretching westwards from the great land mass of eastern Europe and Asia–which was the chief theatre of evolution, both of animal and human life". "2007."

However, in 1930, and contrary to expectations, Professor H. J. Fleure<sup>33</sup> had to admit: "No clear traces of the men and cultures of the later part of the Old Stone Age (known in Europe as the Aurignacian, Solutrean, and Magdalenian phases) have been discovered in the central highland of Asia."

The situation remained essentially the same when, twenty years later, Wilhelm Koppers observed:

It is a remarkable fact that so far all the fossil men have been found in Europe, the Far East, and Africa that is, in the marginal regions of Asia that are most unlikely to have formed the cradle of the human race. No remains are known to us from central Asia where most scholars who have occupied themselves with the origin of men would place the earliest races.<sup>34</sup>

It is true that some fossil men have now been found in the Middle East, but far from speaking against this area as being central to subsequent migration, they seem to me to speak indirectly—and therefore with more force—in favour of it. We shall return to this subsequently.

## **Migratory Movements Considered**

Professor Griffith Taylor of the University of Toronto, in speaking of migratory movements in general whether in pre-historic or historic times, wrote:

A series of zones is shown to exist in the East Indies and in Australasia which is so arranged that the most primitive are found farthest from Asia, and the most advanced nearest to Asia. This distribution about Asia is shown to be true in other 'peninsulas' (ie., Africa and Europe-added by A.C.C.), and is of fundamental importance in discussing the evolution and ethnological status of the peoples concerned . . .

Which ever region we consider, Africa, Europe, Australia, or America, we find that the major migrations have always been from Asia. 35

After dealing with some of the indices which Taylor employs for establishing possible relationships between groups in different geographical areas, he remarks: "How can one explain the close resemblance between such far-distant types as are here set forth? Only the spreading of racial zones from a *common* cradleland can possibly explain these biological affinities." (Emphasis in original)

Then, subsequently, in dealing with African ethnology, he observes,

The first point of interest in studying the distribution of the African peoples is that the same rule holds good which we have observed in the Australasian peoples. The most primitive groups are found in the regions most distant from Asia, or what comes to the same thing,-in the most inaccessible regions. . Given these conditions it seems logical to assume that the racial zones can only have resulted from similar peoples spreading out like waves from a common origin. This cradleland should be approximately between the two 'peninsulas', and all indications (including the racial distribution of India) point to a region of maximum evolution not far from Turkestan. It is not unlikely that the time factor was similar in the spread of all these peoples.<sup>3</sup>

In a similar vein, Dorothy Garrod wrote:

It is becoming more and more clear that it is not in Europe that we must seek the origins of the various Paleolithic peoples who successfully overran the west. . . . The classification of de Mortillet therefore only records the *order of arrival* in the West of a series of cultures, each of which has originated and probably passed through the greater part of its existence elsewhere. <sup>38</sup> (Emphasis added)

So also wrote V. G. Childe:

Our knowledge of the Archaeology of Europe and of the Ancient East has enormously strengthened the Orientalist's position. Indeed we can now survey continuously interconnected provinces throughout which cultures are seen to be zoned in regularly descending grades round the centres of urban civilization in the Ancient East. Such zoning is the best possible proof of the Orientalist's postulate of diffusion.<sup>39</sup>

Henry Field, in writing about the possible cradle of *Homo sapiens*, gives a very cursory review of the chief finds of fossil man (to that date, 1932), including finds from Java, Kenya, Rhodesia, and Heidelberg, and then gives a map locating them; and he remarks:

It does not seen probable to me that any of these localities could have been the original point from which the earliest men migrated. The distances, combined with many geographical barriers, would tend to make a theory of this nature untenable. I suggest that an area more or less equidistant from the outer edges of Europe, Asia, and Africa, may indeed be the centre in which development took place.<sup>40</sup>

It is true that these statements were written before the recent discoveries in South Africa, or in the Far East at Choukoutien, or in the New World. Of the South African finds we have already spoken—and they do not concern us here since there is no general agreement that they are truly fossils of *Man* or even, in the opinions of some, ancestral to him. The finds at Choukoutien, as we shall attempt to show, support the present thesis in an interesting way. As for the New World, nobody has ever yet proposed that it was the Cradle of Mankind in any case, nor do they antedate the supposedly earliest fossil men in the Old World.

Thus the Middle East could still retain priority as the Home of Man, although in the matter of dating it must be admitted that no authority with a reputation for orthodoxy at stake would ever propose it was a homeland *so recently*– by our reckoning only 4500 to 5000 years ago. The problem of time remains with us and at the moment we have no answer to it, but we can continue to explore further lines of evidence which in most other respects assuredly do support the thesis set forth in this paper.

# Physical Types and Culture

Part of this evidence, curiously enough, is the fact of diversity of physical type found within what appear to have been single families (since the fossils are found all together and seem to be contemporary), which has been a source of some surprise though readily enough accounted for on the basis of central dispersion. Some years ago, W. D. Matthew made the following observation: "Whatever agencies may be assigned as the cause of evolution in a race, it should be at first most progressive at its point of original dispersal. . . . "

Some comment is in order on this observation because there are important implications in it. Lebzelter pointed out that where man lives in large conglomerations, physical form tends to be stable while culture becomes specialized: where he lives in small isolated groups, culture is stable but specialized races evolve. According to Lebzelter, this is why racial differentiation was more marked in the earlier stages of man's history. The explanation of this fact is clear enough.

In a very small, closely inbreeding population, genes for odd characters have a much better chance of being homozygously expressed so that such characters appear in the population with greater frequency, and tend to be perpetuated.

On the other hand, such a small population may have so precarious an existence that the margin of survival is too narrow to encourage or permit cultural diversities to find expression. Thus physical type is variant, but is accompanied by cultural conformity. Whereas in a large and well established community, a physical norm begins to appear as characteristic of that population, while the security resulting from numbers allows for a greater range of cultural divergence.

At the very beginning, we might therefore expect to find in the central area a measure of physical diversity and cultural uniformity: and at each secondary or provincial centre in its initial stages, the same situation would reappear. The physical diversity to be expected on the foregoing grounds would, it is now known, be exaggerated even further by the fact (only comparatively recently recognized) that when any established species enters a new environment it at once gives expression to a new and greater power of diversification in physical form. As Le Gros Clark put it, "High variability (in type) may be correlated with the fact that (at that time) the rate of hominid evolution was proceeding rather rapidly with the development of relatively small and often contiguous populations into widely dispersed areas with contrasting and changing environments.'

Many years ago, Sir William Dawson remarked upon this in both plant and animal biology. From a study of post-Pliocene molluscs and other fossils, he concluded that "new species tend rapidly to vary to the utmost extent of their possible limits and then to remain stationary for an indefinite time". The circumstance has been remarked upon in connection with insect populations by Charles Brues who adds that "the variability of forms is slight once the population is large, but at first is rapid and extensive in the case of many insects for which we have the requisite data". Adolph Schultz has confirmed this generalization for primate populations, and Ralph Linton remarks upon it in connection with man.

Thus we have in reality three factors, all of which are found to be still in operation in living populations, which must have contributed to the marked variability of early fossil human remains, particularly where several specimens are found in a single site as at Choukoutien, for example, or at Obercassel, or Mount Carmel.

## Three Factors of Variability

These factors may be summarized, then, as follows: (a) a new species is more variable when it first appears; (b) a small population is more variable than a large one; (c) when a species shifts (or a few members of it) into a

new environment, wide varieties again appear which only become stable with time. To these should be added a fourth, namely, (d) that small populations are likely to be highly conservative in their culture, thus maintaining many links with the parent body though widely extended geographically.

Fossil remains constantly bear witness to the reality of these factors, but the witness has meaning only, and the facts are best accounted for only, if we assume that a small population began at the centre and, as it became firmly established there, sent out successive waves of migrants usually numbering very few persons in any one group, who thereafter established a further succession of centres—the process being repeated again and again until early man had spread into every habitable part of the world. Each new centre at the first showed great diversity of physical type, but as the population multiplied locally a greater physical uniformity was achieved in the course of time.

Where such a subsidiary centre was wiped out before this uniformity had been achieved and where chance preserved their remains, the diversity was, as it were, captured and frozen for our examination. At the same time in marginal areas where individuals or families were pushed out even further by those who followed them, circumstances often combined to degrade them so grossly that fossil man naturally tends towards a bestial form-but for quite secondary reasons.

That the idea is not altogether unreasonable is borne out by the fact that Le Gros Clark, for example, in discussing Heidelberg Man, asks whether he represents a separate species of man or may not be "merely a deviant peripheral isolate". 48 Clark virtually admits the same possibility for Neanderthal Man. For after referring to him as "an aberrant side line . . . a sort of evolutionary retrogression", he goes on to say, "If the remains of Neanderthal Man are placed in their chronological sequence, it appears that some of the earlier fossils, dating from the earlier part of the Mousterian period are less 'Neanderthaloid' in their skeletal characters (and thus approach more closely to Homo sapiens) than the extreme Neanderthal type of later date (Emphasis added) ".4"

On the other hand, in the earliest stages of these migrations cultural uniformity would not only be the rule in each group, but necessarily also between the groups themselves. And this, too, has been found to be so to a quite extraordinary degree. Indeed, following the rule enunciated above, the most primitive fragments which had been pushed furthest to the rim might logically be expected to have the greatest proportion of shared culture elements, so that

links would not be surprising if found between such peripheral areas as the New World, Europe, Australia, South Africa, and so forth-which is exactly what has been observed.

Such lines of evidence force upon us the conclusion that we should not look to these marginal areas for a picture of the initial stages of man's cultural development nor for a picture of his original appearance. It is exactly in these marginal areas that we shall *NOT* find these things. The logic of this was both evident to and flatly rejected by E. A. Hooten who remarked:

The adoption of such a principle would necessitate the conclusion that the places where one finds existing primitive forms of any order of animal are exactly the places where these animals could not have originated. . . . But this is the principle of 'lucus a non lucendo', ie., finding light just where one ought not to do so, which pushed to its logical extreme would lead us to seek for the birthplace of man in that area where there are no traces of ancient man and *none of any* of *his primate precursors* (Emphasis added).<sup>50</sup>

Nevertheless, the principle may be true-even if it does contradict evolutionary reconstructions.

William Howells has written<sup>51</sup> at some length on the fact that, as he puts it, "all the visible footsteps lead away from Asia". He then examines the picture with respect to the lines of migration taken by the "Whites" (Caucasoids) and considers that at the beginning they were entrenched in southwest Asia "apparently with the Neanderthals to the north and west of them". He then proposes that while most of them made their way into both Europe and North Africa, some of them may very well have travelled east through central Asia into China, which would explain, possibly, the Ainus and the Polynesians.

He thinks that the situation with respect to the Mongoloids is pretty straightforward, their origin having been somewhere in the same area as the Whites, whence they peopled the East. The dark skinned peoples are, as he put it, "a far more formidable puzzle." He considers that the Australian aborigines can be traced back as far as India with some evidence of them perhaps in southern Arabia. Presumably, the African Negroes are to be also from the Middle East, possibly reaching Africa by the Horn and therefore also via Arabia.

However, there are a number of black skinned peoples who seem scattered here and there in a way which he terms "the crowning enigma"-a major feature of which is the peculiar relationship between the Negroes and the Negritos. Of these latter, he has this to say:

They are spotted among the Negroes in the

Congo Forest, and they turn up on the eastern fringe of Asia (the Andaman Islands, the Malay Peninsula, probably India, and possibly formerly in southern China), in the Philippines, and in New Guinea, and perhaps Australia, with probable traces in Borneo, Celebes, and various Melanesian Islands.

All of these are 'refuge' areas, the undesirable backwoods which the Pygmies have obviously occupied as later more powerful people ar-

rived in the same regions. . . .

Several things stand out from these facts. The Negritos must have had a migration from a common point. . . . And it is hopeless to assume that their point of origin was at either end of their range. . . . It is much more likely that they came from some point midway which is Asia.<sup>52</sup>

## **Agreement on Lines of Migration**

There is, then, a very wide measure of agreement that the lines of migration radiate not from a point somewhere in Africa, or Europe, or the Far East, but from a geographical area which is to be closely associated with that part of the world in which Scripture seems to say that man not only began physically the peopling of the world after the Flood, but also where man began culturally. Looking at the spread of civilization as we have looked at the spread of people, it is clear that the lines follow the same course.

The essential difference, if we are taking note of current chronological sequences, is that whereas the spread of people is held to have occurred hundreds of thousands of years ago, the spread of civilization is an event which has taken place very recently. I think that man was making his long trek to the uttermost corners of the world while at the very same time civilization was blossoming at the centre. I think they were contemporary events: human evolutionists do not.

# Interpretations of Fossil Data

It used to be argued that although civilized man is a single species, the far flung fossil remains of man formed separate species in their own right and were therefore not related to modern man in any simple way. Some authorities have proposed, tentatively, for example, a concept such as this by looking upon Neanderthal Man as an earlier species or sub-species who was eliminated with the appearance of socalled "modern man".53 The association of Neanderthals with moderns in the Mount Carmel finds seems to stand against this conception.50 And indeed, there is a very widespread agreement today that, with the exception, of course, of the most recent South African finds, all men fossil, pre-historic, historic, and modern-are one species, Homo sapiens.55

Ralph Linton viewed the varieties of men revealed by fossil finds as being due to factors which we have already outlined. As he put it:

If we are correct in our belief that all existing men belong to a single species, early man must have been a generalized form with potentialities for evolving into all the varieties which we know at present. It further seems probable that this generalized form spread widely and rapidly and that within a few thousand years of its appearance small bands of individuals were scattered over most of the Old World.

These bands would find themselves in many different environments, and the physical peculiarities which were advantageous in one of these might be of no importance or actually deleterious in another. Moreover, due to the relative isolation of these bands and their habit of inbreeding, any mutation which was favorable or at least not injurious under the particular circumstances would have the best possible chance of spreading to all members of the group.

It seems quite possible to account for all the known variations in our species on this basis, without invoking the theory of a small number of distinct varieties.<sup>56</sup>

Viewed in this light, degraded fossil specimens found in marginal regions should neither be treated as "unsuccessful" evolutionary experiments towards the making of true *Homo sapiens* types, nor as "successful but only partially complete" phases or links between apes and men. Indeed, as Griffith Taylor was willing to admit, "the location of such 'missing' links as *Pithecanthropus* in Java, etc., seems to have little bearing on the question of the human cradleland." And he might in fact also have said, "on the question of human origins". As he concludes, "They are almost certainly examples of a . . . type which has been pushed out to the margins".

Thus the way in which one studies or views these fossil remains is very largely coloured by whether one's thinking is in terms of biological or historical processes. Professor A. Portmann of Vienna remarks:

One and the same piece of evidence will assume totally different aspects according to the angle-palaeontological or historical-from which we look at it. We shall see it either as a link in one of the many evolutionary series that the paleontologist seeks to establish, or as something connected with remote historical actions and developments that we can hardly hope to reconstruct. Let me state clearly that for my part I have not the slightest doubt that the remains of early man known to us should all be judged historically.<sup>58</sup>

Figure 3. The fossil Neanderthal skull and reconstructions showing how "modern" in many respects Neanderthal Man might have looked.

## Fossil Man and Modern Man

been in appearance!

This general approach towards the interpretation of the meaning of fossil man has been explored in some detail by Wilhelm Koppers who considers that "primitiveness in the sense of man being closer to the beast" can upon occasion be the "result of a secondary development". He believes that it would be far more logical to "evolve" Neanderthal Man out of Modern Man than Modem Man out of Neanderthal Man, (Figure 3) He holds, in fact, that they were a specialized and more primitive type-but *later* than modern man, at least in so far as they occur in Europe.

Surprisingly enough, such a great authority as Franz Weidenreich was prepared to admit unequivocally, "no fossil type of man has been discovered so far whose characteristic features may not easily be traced *back* to modern man''<sup>60</sup> (Emphasis added)! Agreement with this opinion by Griffith Taylor is born out when he observed, "evidence is indeed accumulating that the Paleolithic folk of Europe were much more closely akin to races now living on the periphery of the Euro-African regions than was formerly

admitted. <sup>61</sup> Many years ago, in fact, Sir William Dawson pursued this theme and explored it at some length in his beautifully written but almost completely ignored work entitled, *Fossil Men and Their Modern Representatives*. <sup>62</sup>

At the Cold Springs Harbour Symposium on "Quantitative Biology" held in 1950, T. D. Stewart in a paper entitled, "Earliest Representative of *Homo Sapiens*," stated his conclusions in the following words, "Like Dobzhansky, therefore, I can see no reason at present to suppose that more than a single hominid species has existed on any time level in the Pleistocene". 63

The most primitive types being at the margins and only essentially modern types so far found where civilization had its source, it is to be expected that combinations and intermediate forms would be found in the geographic areas in between. As Alfred Romer observed in commenting on the collection of fossil finds from Palestine (Mugharet-et-Tabun, and Mugharetes-Skuhl), "while certain of the skulls are clearly Neanderthal, others show to a variable degree numerous neanthropic (ie., 'modern man') features", while subsequently he identifies such neanthropic skulls as being of the general Cromagnon type in Europe—a type of man who appears to have been a magnificent physical specimen. He proposes later that the Mount Carmel people "may be considered as due to interbreeding of the dominant race (Cromagnon Man) with its lowly predecessors (Neanderthal Man)".

The assumption is still being made that the lower Neanderthal form *preceded* the higher Cromagnon Man. William Howells says of the Skuhl fossil group, "It is an extraordinary variation. There seems to have been a single tribe ranging in type from almost *Neanderthal* to almost *sapiens*". 55 Le Gros Clark is even prepared to omit the "almost". 56

## **Example of Variability**

As an extraordinary example of the tremendous variability which an early small isolated population at the periphery can show, one cannot do better than refer to the finds at Choukoutien in China from the same locality in which the famous Pekin Man was found. These fossil remains came from what is known as the Upper Cave, and consist of a group of seven people who appear to be members of one family: an old man judged to be over 60, a younger man, two relatively young women, an adolescent, a child of five, and a new-born baby. With them were found implements, ornaments, and thousands of fragments of animals.

A study of these remains has produced some remarkably interesting facts, the most impor-

tant of which in the present context is that, judged by cranial form, we have in this one family a representative Neanderthal Man, a "Melanesian" woman who reminds us of the Ainu, a Mongolian type, and another who is rather similar to the modern Eskimo woman. In commenting on these finds, Weidenreich expressed his amazement at the range of variation. Thus he wrote:

The surprising fact is not the occurrence of Paleolithic types of modern man which resemble racial types of today, but their assemblage in one place and even in a single family considering that these types are found today settled in far remote regions.

Forms similar to that of the 'Old Man', as he has been named, have been found in Upper Paleolithic, western Europe and northern Africa: those closely resembling the Melanesian type, in the neolithic of Indo-China, among the ancient skulls from the Cave of Lagoa Santa in Brazil, and in the Melanesian populations of today; those closely resembling the Eskimo type occur among the pre-Columbian Amerindians of Mexico and other places in North America and among the Eskimos of western Greenland of today.

He then proceeds to point out the upper Paleolithic melting-pot of Choukoutien "does not stand alone". \*\*In Obercassel in the Rhine Valley two skeletons, an old male and a younger female, were found in a tomb of about the same period as the burial in Choukoutien. Weidenreich says, "The skulls are so different in appearance that one would not hesitate to assign them to two races if they came from separate localities". So confused is the picture now presented that he observes:

Physical anthropologists have gotten into a blind alley so far as the definition and the range of individual human races and their history is concerned. . . .

But one cannot push aside a whole problem because the methods applied and accepted as historically sacred have gone awry.<sup>89</sup>

This extraordinary variability nevertheless still permits establishment of lines of relationship which appear to crisscross in every direction as a dense network of evidence that these fossil remains for the most part belong to a single family, the descendants of Ham.

Griffith Taylor links together Melanesians, Negroes, and American Indians. The same authority proposes a relationship between Java Man and Rhodesian Man. He relates certain tribes which seem to be a pocket of an older racial stock with the people of northern China, the Sudanese, the Bushmen of South Africa, and the Aeta of the Philippines. He would also link

the Predmost Skull to Aurignacian folk and to the Australoids. $^{73}$ 

Macgowan<sup>74</sup> and Montagu<sup>75</sup> are convinced that the aboriginal populations of central and southern America contain an element of Negroid as well as Australoid people. Grimaldi Man is almost universally admitted to have been Negroid even though his remains lie in Europe<sup>76</sup>, and indeed so widespread is the Negroid type that even *Pithecanthropus erectus* was identified as Negroid by Buyssens.<sup>77</sup>

T. H. Huxley maintained that the Neanderthal race must be closely linked with the Australian aborigines particularly from the Province of Victoria<sup>78</sup>; and other authorities hold that the same Australian people are to be related to the famous Canstadt Race.<sup>79</sup> Alfred Romer relates Solo Man from Java with Rhodesian Man from Africa.<sup>80</sup> Hrdlicka likewise relates the Oldoway Skull with LaQuina Woman; Lachapelle and others to the basic African stock<sup>81</sup>; and holds that they must be related also to Indian, Eskimo, and Australian races. Even the Mauer Jaw is held to be Eskimo in type.<sup>82</sup>

We cannot do better than sum up this general picture in the words of Sir William Dawson who, far in advance of his time, wrote of fossil man in Europe, in 1874:

What precise relationship do these primitive Europeans bear to one another? We can only say that all seem to indicate one basic stock, and this is allied to the Hamitic stock of northern Asia which has its outlying branches to this day both in America and in Europe.<sup>83</sup>

While it is perfectly true that the thesis we are presenting has against it in the matter of chronology the whole weight of scientific opinion, it is nevertheless equally true that the interpretation of the data in this fashion makes wonderful sense out of the present evidence and, indeed, would have allowed one to predict both the existence of widespread physical relationships as well as an exceptional variableness within the members of any one family. In addition to these anatomical "linkages" there are, of course, a very great many cultural linkages.

One such linkage, as a single example of what I mean, is the painting of the bones of the deceased with red ochre—a custom which not so very long ago was still being practiced by the American Indians and which has been observed in pre-historic burials in almost every part of the world<sup>84</sup> Surely such a custom could hardly arise everywhere indigenously on some such supposition as that "men's minds work everywhere pretty much in the same way. . . ." It seems much more reasonable to assume it was spread by people who carried it with them as they radiated from some central cradle.

## Cradle of Man Reconsidered

And this brings us once more to the question of the geographical position of this cradle. Evidence accumulates daily that, culturally speaking, the place of man's origin was somewhere in the Middle East. No other region in the world is as likely to have been the Home of Man if by Man we mean something more than merely an intelligent ape. Vavilov and others have repeatedly pointed out that the great majority of the cultivated plants of the world, especially the cereals, have been traced there as to their origin. Henry Field remarks:

Iran may prove to have been one of the nurseries of *Homo sapiens*. During the middle or upper Paleolithic periods the climate, flora, and fauna of the Iranian Plateau provided an environment suitable for human occupation. Indeed, Ellsworth Huntington has postulated that during late Pleistocene times southern Iran was the *only* (his emphasis) region in which temperature and humidity were ideal, not only for human conception and fertility but also for chances of survival.<sup>87</sup>

Many speculations exist as to the routes taken by Causcasoids, Negroids, and Mongoloids, as the world was peopled by the successive ebb and flow of migrations, and while not one of these speculations really establishes with certainty *how* man originated as *man*, almost all of them make the basic assumption that western Asia is his home as a creature of culture.

From this centre one can trace the movements of an early migration of Negroid people followed by Caucasoid people in Europe. From this same area undoubtedly there passed out into the East and the New World successive waves of Mongoloid people, and the time taken need not have been so great. Kenneth Macgowan<sup>ss</sup> says it has been estimated that men might have covered the 4000 miles from Harbin, Manchuria, to Vancouver Island in as little as twenty years, while Alfred Kidder<sup>ss</sup> says,

A hunting pattern based primarily on big game could have carried man to southern South America without the necessity at that time of great localized adaptation. It could have been effected with relative rapidity, so long as camel, horse, sloth, and elephant were available. All the indications point to the fact that they were.<sup>89</sup>

According to de Quatrefages<sup>81</sup>, 600,000 people made a trip from a point in Mongolia to China during winter and under constant attack in just five months, covering a distance of 700 leagues or 2100 miles, and though this seems to be a staggering trip in so short a time, it actually works out to an average of 14 miles per day.

In Africa, Wendell Phillips<sup>91</sup>, after studying the relationships of various African tribes, concluded that evidence already existing makes it possible to derive many of the tribes from a single racial stock (particularly the Pygmies of the Ituri Forest and the Bushmen of the Kalahari Desert), which at a certain time must have populated a larger part of the African continent only to retreat to less hospitable regions as later Negroid tribes arrived in the country.

Professor H. J. Fleure<sup>32</sup> held that evidence of similar nature towards the north and northeast of Asia and on into the New World was to be discerned by a study in the change of head forms in fossil remains, and it has even been suggested that the finds at Choukoutien mean we have encountered some of these first pioneers on their way to the Americas! Moreover, wherever tradition sheds light on the subject, it invariably points in the same direction and tells the same story, many primitive people having recollections of a former higher cultural standing, a circumstance explored elsewhere by the writer at considerable length.

## Conclusion

And thus we conclude that from the family of Noah have sprung all the peoples of the world, -pre-historic and historic. The events described in connection with Genesis 6 to 10 and particularly the prophetic statements of Noah himself in Gen. 9:25-28 with respect to the future of his three sons, Shem, Ham, and Japheth, together combine to provide us with the most reasonable and best possible account of the early history of mankind. This is a history which, rightly understood, does not at all require us to believe that modern man began with the stature of an ape and only reached a civilized state after a long, long evolutionary history. Rather, we may believe that modern man made a fresh start as a single family who carried with them into an un-peopled earth the accumulated heritage of the pre-Flood world.

#### **Summary**

In summary, then, what we have endeavored to show in this paper may be set forth briefly as follows:

- a) that the geographical distribution of human fossil remains is such that they are most logically explained by treating them as marginal representatives of a widespread and, in part, forced dispersion of people from a single multiplying population established at a point more or less central to them all, which sent forth successive waves of migrants, each wave driving the previous one further towards the periphery;
- b) that the most degraded specimens are representatives of this general movement who were

driven into the least hospitable areas where they suffered physical degeneration as a consequence of the circumstances in which they were forced to live:

- c) that the extraordinary physical variability of their remains stems from the fact that they were members of small, isolated, strongly inbred bands; whereas the cultural similarities which link together even the most widely dispersed of them indicate a common origin for them all;
- d) that what is true of fossil man is equally true of vanished and of living primitive societies;
- e) that all these initially dispersed populations are of one basic stock-the Hamitic family of Genesis 10;
- f) that they were subsequently displaced or overwhelmed by the Indo-Europeans (ie., Japhethites) who nevertheless inherited, or adopted and extensively built upon, Hamitic technology and so gained the upper hand in each geographical area where they spread; g) that throughout this movement, both in

pre-historic and historic times there were never any human beings who did not belong within the family of Noah and his descendants;

h) and finally, that this thesis is strengthened by the evidence of history which shows that migration has always tended to follow this pattern, has frequently been accompanied by instances of degeneration both of individuals or whole tribes, and usually results in the establishment of a general pattern of cultural relationships which are parallel to those that archaeology has since revealed from antiquity.

## References

<sup>1</sup>Howell, F. Clark. 1967. The hominization process (in) Human evolution: readings in physical anthropology. Edited by Noel Korn. Holt, Rinehart and Winston, N. Y., p. 85.

<sup>2</sup>Pearl, Raymond. 1946. Man the animal. Principia Press, Bloomington, Indiana, p. 3.

3Clark, Wilfred Le Gros. 1958. Bones of contention (Huxley Memorial Lecture), Journal of the Royal Anthropological Institute, 88 (2), p. 136-138.

<sup>4</sup>Tool Using: see Kenneth P. Oakley. 1954. Skill as a human possession (in) A history of technology, Edited by Charles Singer et al., Oxford, Vol. 1, p. 1-37 for a discussion of animal tool-users. Also Mickey Chiang. 1967. Use of tools by wild macaque monkeys in Singapore, Nature, 214; p. 12.58-9. Also K. R. L. Hall. Toolusing performances as indicators of behavioral adaptability (in) Human evolution (ref. #1), p. 173-210; especially p. 195 for a remark by R. Cihak: "The author states that not tool- using but tool- making signalizes the critical stage in the transition from ape to human; but it ought to be pointed out that tool-making, as 'shaping an object for an imaginary future eventuality', is the real boundary between ape and man".

Weidenreich, Franz. 1948. The human brain in the light of its phylogenetic development, Scientific Monthly, 67, p. 103-109.

<sup>6</sup>Leakey, L. S. B. 1966. Homo habilis, Homo erectus, and the AUSTRALOPITHECINES. Nature, 209, p. 1280,1281.

Simons, Elwyn L. 1964. The early relatives of man, Scientific American, July, p. 50. Simons' recent discovery in the Fayum of Aegyptopithecus reported in his article, The earliest apes, Scientific American, Dec., 1967, p. 28-35, and which he describes as "the skull of a monkey equipped with the teeth of an ape", does not shed light on the nature of the missing link between ape and man,-only between monkey and ape.

Herskovits, Melville. 1950. Man and his works. Knopf,

N. Y., p. 97. Wallis, Wilson D. 1948. Pre-suppositions in anthropological interpretations, American Anthropologist,

July-Sept., 50, p. 560.
"Manton, I. 1950. Problems of cytology and evolution in the pteridophyta, Cambridge, quoted by Irving W. Knobloch, 1953. Journal of American Scientific Affiliation, 5(3), Sept. p. 14.

"Sunday Times, April 5, 1964; and Illustrated London News and Sketch, Jan. 1, 1960; see also: The fallacy of anthropological reconstructions by the author, Door-

way Paper No. 33, Ottawa, 1966.

Robinson, J. T. The origins and adaptive radiation of the australopithecines (in) Human evolution (ref. #1),

pp. 227, 279, and 294.

<sup>13</sup>Convergence: Leo S. Berg. 1926. Nomogenesis: or evolution determined by law, (English trans.), Constable, Edinburgh; David Lack. 1967. Evolutionary theory and christian belief. Methuen, London, p. 65; Evan Shute. 1961. Flaws in the theory of evolution. Temside Press, London (Can.), p. 138 ff.

"Koenisgwald, G. H. R. von, re. Meganthropus: see Human evolution, p. 280 ( ref. #1); and re. Zinjanthropus, see 'The Fossil Skull from Olduvai", editorial comment (in) British Medical Journal, Sept. 19, 1959,

p. 487. <sup>15</sup>Clark, Le Gros, Bones of contention (in) Human evolution (ref. #1), p. 302.

<sup>16</sup>Clark, Le Gros, *Îbid.*, p. 299.

<sup>17</sup>Thus Sir Solly Zuckerrnan. 1954. Correlation of change in the evolution of higher primates (in) Evolution as a process. Edited by J. Huxley et al. Allen and Unwin, London, p. 301. "The fundamental difficulty has been that in the great majority of cases the descriptions of the specimens that have been provided by the discoverers have been so turned as to indicate that the fossils in question have some special place or significance in the line of direct human ascent as opposed to that of the family of apes'

Medawar, Sir Peter B. 1965. The art of the soluble.

Methuen, London, p. 55.

<sup>19</sup>Leith, T. H. 1965. Some logical problems with the thesis of apparent age, Journal of American Scientific Affiliation, 17, p. 119.

<sup>20</sup>Medawar, Sir P. B. 1957. The uniqueness of the individual. Basic Books, N.Y., p. 76. Similarly, Rudolf Flesch remarked, "The most important thing about Science is this: that it isn't a search for truth but a search for error. . . " (The art of clear thinking, Scientific Monthly, 74: 1952, p. 240. See also editorial comment under "The Discipline of the Scientific Method" in Nature, Aug. 1, 1959, p. 295: "Since, according to the code of science, no positive assertions are final and all propositions approximations, and indeed provisional, science is seen to advance more by denying what is wrong than by asserting what is right -by reducing, and eventually eradicating, errors rather than by heading straight toward some preconceived final truth".

<sup>21</sup>Huxley, Julian. 1950. New bottles for new wine: ideology and scientific knowledge, Journal of the Royal Anthropological Institute, 80, p. 7-23, especially p. 15b; and his introduction to Teillard de Chardin. 1959. The phenomenon of man, Collins, London, where he hails him as the new prophet of the new faith!

<sup>22</sup>Simpson, Gaylord G. 1964. This view of life. Harcourt, Brace and World, N. Y.,

p. vii one of the basic facts. . . .

p. 10 Fact-not theory. . . .

p. 12 no one doubts. .

p. 40 all the facts support it. . .

p. 51 only dishonest biologists disagree. . .

p. 62 unassailable now. .

p. 63 all problems being solved "triumphantly". . . . p. 151 Evolution a fact. . . . creation a dogma. . . .

p. 193 Evolution a fact. . the truth of evolution proofs. . . . all agree. . . . proofs of evolution. . . ad nauseam!

In his article, The biological nature of man, *Science*, 152: 1966, p. 475, he wrote, "We are no longer concerned with whether man evolved, because we know that he did! (Emphasis in original)

<sup>23</sup>R. H. Rastall of Cambridge wrote, "It cannot be denied that from a strictly philosophical standpoint geologists are here arguing in a circle. The succession or organisms has been determined by a study of their remains buried in the rocks, and the relative ages of the rocks are determined by the remains of organisms that they contain". (Encyclopedia Britannica, 1956, Article on Geology, Vol. 10, p. 168). W. R. Thompson says of Simpson, "Simpson states that homology is determined by ancestry and concludes that homology is evidence of ancestry"! (Evolution and taxonomy, Studia Entomological, 5: 1962, p. 567.)

<sup>24</sup>On the question of gaps in the biblical genealogies see: The genealogies of the bible, Doorway Paper No. 24, by the author, 1967.

<sup>25</sup>Custance, A. C. 1957. The supposed evolution of the human skull, Doorway Paper No. 9; 1960. Primitive cultures: a second look at the problem of their historical origins, Doorway Paper No. 32; 1966. The fallacy of anthropological reconstructions, Doorway Paper No. 33.

<sup>26</sup>The existence of the three "families" at this time is noted twice by Vere G. Childe. 1935. New light on the most ancient east. Kegan Paul, London, p. 18; 1946. What happened in history. Penguin Books, Baltimore, Md., p. 81.

<sup>27</sup>Custance, A. C. 1958. The part played by Shem, Ham and Japheth in subsequent world history, Doorway Paper No. 28; 1960. The technology of Hamitic people, Doorway Paper No. 43; 1961. The confusion of tongues, Doorway Paper, No. 8.

<sup>28</sup>On this, see J. D. S. Pendlebury. 1939. The archaeology of Crete. Methuen, London, p. 68; and V. G. Childe. 1950. The dawn of european civilization. Kegan Paul, London, 5th edition, p. 19.

<sup>29</sup>Perry, W. J. 1937. The growth of civilization. Penguin Books, Baltimore, Md., p. 123.

<sup>30</sup>Dawson, Sir Wm. 1903. The story of the earth and man. Hodder and Stoughton, London, p. 390.

31Obliteration of skull sutures were noted by Sir Wm. Dawson. 1904. Meeting place of geology and history. Revell, N. Y., p. 63.

"Osborn, H. F. 1936. Men of the old stone age. N.Y.,

p. 19.ff

33Fleure, H. J. 1930. The races of mankind. Benn, London, p. 45.

<sup>34</sup>Koppers, W. 1952. Primitive man and his world picture. Sheed and Ward, N.Y., p. 239.

35Taylor, Griffith. 1945. Environment, race and migration. U. of Toronto, Canada, p. 9.

<sup>36</sup>Taylor, G., Op. cit., p. 67.

<sup>37</sup>Taylor, G., *Op. cit.*, p. 120, 121.

<sup>38</sup>Garrod, Dorothy. Nova et vetera: a plea for a new method in Paleolithic archaeology, Proceedings of the Prehistoric Society of East Anglia, Vol. 5, p. 261.

<sup>39</sup>Childe V. G, 1939. Dawn of european civilization. Kegan Paul, London, 3rd. edition. In the 1957 edition, Childe in his introduction invites his readers to observe that he has modified his "dogmatic" orientation a little, but he still concludes at the end of the volume: "the primacy of the Orient remains unchallenged, p. 342.

<sup>40</sup>Field, Henry. 1932. The cradle of *Homo sapiens*, American Journal of Archaeology, Oct.-Dec., p. 427. Matthew, W. D. 1914. Climate and evolution, Annals

of the New York Academy of Science, Vol 24, p. 180. <sup>42</sup>Lebzelter, quoted by W. Koppers. 1952. primitive man, etc. (ref. #34), p. 220. His view was sustained by Le Gros Clark. 1958, Journal of the Royal An-

thropological Institute, 88 (2), p. 133. "Clark, Sir W. Le Gros. 1967. Bones of contention (see ref. #l), p. 301.

"Dawson, Sir William. 1930. The story of the earth and man. Hodder and Stoughton, London, p. 360.

<sup>45</sup>Brues, Charles. 1947. Contribution of entomology to theoretical biology, Scientific Monthly, Feb., p. 123ff., quote at p. 130.

<sup>46</sup>Schultz, Adolph. 1950. The origin and evolution of man, Cold Springs Harbour Symposium on Quantative Biology, 15; p. 50.

<sup>47</sup>Linton, Ralph. 1936. The study of man. Appleton Century, N. Y., p. 26f.

48Clark, Le Gros. 1967. Bones of contention (in) Human evolution (ref. #1), p. 239.

<sup>49</sup>Clark, W. Le Gros. 1957. History of the Primates. Phoenix Books, University of Chicago, p. 163, 164.

<sup>50</sup>Hooten, A. E. 1927. Where did man originate?, Antiquity, June, p. 149.

<sup>51</sup>Howells, William. 1945. Mankind so far. Doubleday Doran, New York, p. 295ff.

52 Howells, William, *Ibid*, p. 298, 299.

<sup>53</sup>Weidenreich, Franz. 1943. Palaeontologia Sinica, Whole Series No. 127, p. 276.

54Romer Alfred. 1948. Man and the vertebrates. University of Chicago Press, Chicago, p. 219. 221.

55Fossils of men as a whole: see F. Gaynor Evans in a note. 1945. The names of fossil men, Science 101, p. 16, 17.

56Linton, Ralph. 1936. The study of man (ref. #47), p. 26. Taylor, Griffith, *Op. cit.,* p. 282.

58Portmann, A. 1947. Das Ursprungsproblem, Eranos-Yahrbuck, p. 11.

<sup>59</sup>Koppers, Wilhelm, Op. cit., p. 220 and 224.

60Weidenreich, Franz. 1948. Apes, giants and man. Chicago University Press, Chicago, p. 2.

<sup>61</sup>Taylor, Griffith, Op. cit., p. 46, 47.

<sup>62</sup>Dawson, Sir William. 1883. Fossil men and their modern representatives. Hodder and Stoughton, London, viii and 354 pp.

<sup>63</sup>Stewart, T. D. 1950. Origin and evolution of man, Cold Springs Harbour Symposium on Quantative Biology, Vol. 15, p. 105.

64Romer, Alfred, Op. cit. (ref. #54), p. 219, 221.

65 Howells, William, Op. cit., (ref. #51), p. 202.

<sup>66</sup>Clark, Sir W. Le Gros, (in) Human evolution (ref. #1), p. 302.

<sup>67</sup>Weidenrich, Franz. 1939. *Homo sapiens* at Choukoutien, News and Notes, *Antiquity*, June, p. 87.

68Weidemeich, Franz, Ibid, p. 88.

<sup>69</sup>Weidenreich, Franz, *Ibid.,* p. 88. <sup>70</sup>Taylor, Griffith, *Op. cit.,* p. 11.

<sup>71</sup>Taylor, Griffith, *Op. cit.*, p. 60. His argument here is based on head form, which he considers conclusive.

<sup>72</sup>Taylor, Griffith, *Op. cit.*, p. 67. He feels only a "common cradleland" can possibly explain the situation.

<sup>73</sup>Taylor, Griffith, *Op. cît.*, p. 134.

Macgowan, Kenneth. 1950. Early man in the new world. MacMillan, N.Y., p. 26.

Montagu, Ashley. 1947. Introduction to physical anthropology. Thomas, Springfield, Ill., p. 113.

<sup>76</sup>Weidenreich, Franz, Op. cit. (ref. #67), p. 88.

 Buyssens, Paul, 1936. Les trois races de l'Europe et du Monde. Brussels. See G. Grant MacCurdy. 1937. American Journal of Archaeology, Jan.-Mar., p. 154.
 Huxley, Thomas, quoted by D. Garth Whitney. 1908.

<sup>78</sup>Huxley, Thomas, quoted by D. Garth Whitney. 1908. Primeval man in Belgium, *Transactions of Victoria Institute* (London) Vol. 40, p. 38.

stitute (London) Vol. 40, p. 38.

<sup>79</sup>According to D. Garth Whitney, *Ibid*.

<sup>80</sup>Romer, Alfred, Op. cit., p. 223.

\*\*Hrdlicka, Ales. 1930. Skeletal remains of early man, Smithsonian Institute, Miscellaneous Collections, Vol. 83, p. 342ff. \*\*Hrdlicka, Ales, *Ibid.*, p. 98. And see William S. Laughlin. 1963. Eskimos and aleuts: their origins and evolution, Science, 142, p. 639 and 642.

ssDawson, Sir William. 1874. Primitive man, Transactions of Victoria Institute, (London) Vol. 8, p. 60 and

61.

\*\*Red Ochre: The custom is common to burials in Paleolithic Europe (Vere G. Childe. 1957. Dawn of european civilization. Routledge and Kegon Paul, London, pp. 6, 168, 209, 254, and 259) and in North America (Wm. Dawson. 1883. Fossil men and their modern representatives. Hodder and Stoughton, London, p. 19, 143, etc.) and in Australia (C. S. Coon. 1948. A reader in general anthropology. Holt, N.Y., p. 226), sometimes being applied to the body of the dead, sometimes to infants, and sometimes warriors.

85 Vavilov, N. I. 1937. Asia, the source of species, Asia,

Feb., p. 113.

\*\*Harlan, J. R. 1951. New world crop plants in Asia Minor, Scientific Monthly, Feb., p. 87.

\*Field, Henry. 1940. The Iranian plateau race, Asia, Apr., p. 217.

ssMacgowan, K., *Op. cit.* (ref. #74), p. 3 and map on p. 4.

\*\*Kidder, Alfred. 1953. Problems of the historical approach: results (in) Appraisal of anthropology today. Edited by Sol, Tax et al., p. 46.

<sup>90</sup>de Quatrefages, A. 1905. Lespece humaine. Balliere et Cie., Paris, 14th edition, p. 135, 136.

<sup>91</sup>Phillips, Wendell. 1950. Further african studies, Scientific Monthly, Mar., p. 175.

<sup>92</sup>Fleure, H. J., *Op. cit.*, p. 43 and 44.

## **NEW PUBLICATION**

Evolution and the Reformation of Biology by E. L. Hebden Taylor. The Craig Press, Nutley, New Jersey. (Paperback, \$1.50), 1967.

This is a monograph in which the author presents a Reformed scientific approach to modern biology. It is sub-titled, "A Study of the Biological Thought of Herman Dooyeweerd of the Free University of Amsterdam and J. J. Duyvene de Wit, late Professor of Zoology at the University of Bloemfontein, South Africa." Herman Dooyeweerd suggested a truly scripturally directed approach to biology and physics in his monumental *New Critique of Theoretical Thought*.

In the opinion of the author, only a Reformed scientific approach to modern biology can effectively answer modern apostate mega-evolutionism, since it refuses to compromise in any way the scriptural conception of man and the cosmos with the apostate humanist view of reality. The reader will discover that this Reformed scientific approach requires nothing less than a complete reformation in contemporary man's view of time, of substance, as well as of the various structures of the creation, including the structure of the living cell.

After a chapter on the General and Special Theory of Evolution along the lines presented by G. A. Kerkut in his book, *Implications of Evolution* (Pergamon Press, 1960), the author presents specific evidences from paleontology, genetics, and embryology which do NOT support the General Theory of Evolution. Worthy of particular note is mention of the work of C. P. Raven, who has shown experimentally that the basic characters of living organisms, as well as their basic form structures, are determined not so much by their genes as by the so-called egg-cortex or cytoplasm which surrounds every cell nucleus. Apparently nuclear genes begin to unfold their activity only after the body plan has been laid out in broad outline.

The Reverend E. L. Hebden Taylor was born of medical missionary parents in the province of Katanga, Congo, Africa, in 1925. Educated in English schools, he graduated from Trinity Hall, Cambridge University with honors in 1949, and in 1952 received his Licentiate in Theology from the Anglican Theological College of British Columbia at Vancouver, Canada.