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# Faith and Thought

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

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## EDITORIAL

We now complete the first volume of *Faith and Thought* in its new format. It is hoped that the *Journal* will increase both in favour with the members of the Victoria Institute and in its general circulation. Several encouraging remarks have been made in various quarters, and we are glad to note that numerous applications for membership have been received.

In this number we announce the Schofield Prize for 1959. The award, which is to the value of £40, will be made by the Council to the competitor who, in the opinion of the adjudicators, best presents the subject chosen for an essay. The title chosen is 'Faith's Debt to Scepticism'. Entries should not be more than 7,000 words in length, and should be preceded by a synopsis of not more than 250 words. Competitors should write under a nom de plume. Their entries should arrive at the Society's Office not later than 31 December 1959. Fuller details appear overleaf.

As far as we are aware, Dr Saggs is a newcomer to the *Journal* of the Victoria Institute, and we welcome his most valuable contribution. On 13 March 1959 Mr Gordon Barnes read a paper at a meeting held at the University of Birmingham jointly arranged by the Research Scientists Christian Fellowship and this Society. The Chairman on this occasion was Professor Otto Lowenstein, D.Sc., F.R.S. who helpfully provoked some interesting discussion of the subject of the address.

Dr Ernest White, a devoted member of the Victoria Institute, and one who has faithfully served on the Council for a number of years, has favoured us with a critique of Ernest Jones's *Sigmund Freud; Life and Work*.

Our Secretary informs us that members of the Victoria Institute may now claim relief in respect of their subscriptions to Her Majesty's Inspector of Taxes. This is the happy result of an appeal which was forwarded on behalf of the Institute by Mr F. F. Stunt, our Honorary Treasurer, and Mr Metcalfe Collier, our Auditor.

# The Schofield Prize Essay

## FAITH'S DEBT TO SCEPTICISM

This title, chosen for the next Schofield Prize Essay, may at first sight seem a strange one for the Victoria Institute, which has for its purpose the investigation of all fields of knowledge from the position of an avowed Christian faith. Yet it is believed that competitors will find in it a challenge to examine anew the basic relationship of faith and thought.

It has a good theological basis. It is not inconsistent with a belief in revelation to perceive that as each vision of God has broken upon the human spirit, the way has had to be prepared by a growing sense of the inadequacy of that which was waxing old and ready to pass away. In the age old drama of the book of Job, there is preserved the agony of the human revolt against a concept of God which no longer satisfied the sense of need in crisis. This sense of inadequacy, this revolt, is felt as scepticism, as a dark night of doubt and despair.

That which has been true of the race has been true of the individual. The experiences of saints and mystics, of prophets and of warriors for God have shown how often there is a dark night of the soul, of fear and uncertainty through which they must pass.

And as with religion, where the deepest insights of the human spirit await the answering light of God's own presence, so with that adventure of the intellect which we know as scientific discovery. In the perspective of history it is easy to see how the work of such men as Copernicus and Galileo was done because they were dissatisfied with explanations that had become inadequate, and sceptical of theories which the majority thought it impiety to challenge. It is not so easy to read the signs of one's own times, but it is still true that the faith of science, whose cardinal tenet is that our universe is one of order, advances by the work of those who are not content to accept without question, and who know that their own approximations to truth will, by a future generation, be rejected as being nothing better than approximations.

So, too, in creative art. Every epoch finds its own characteristic forms, and if it is to live, art must continuously find new modes of

expression lest it become mere plagiarism and vulgar copying. There is no standing still; the principle runs throughout life, into its every field.

‘Darest thou now O soul,  
Walk out with me toward the unknown region?’

Except there be those who have courage to doubt, faith itself must die. This is why the subject ‘Faith’s Debt to Scepticism’ is placed before our competitors as a challenge to think and to share their thought with us.

H. W. F. SAGGS, B.D., M.TH., M.A., PH.D.

## Some Ancient Semitic Conceptions of the Afterlife

### *Introduction: Some Fluidity in Christian Beliefs*

Contemporary Christian belief, as represented by certain of its documents no less than by popular practices, contains a large number of diverse conceptions of the Afterlife, some of them incompatible or mutually exclusive. This diversity is at a minimum in doctrinal works, where theologians have deliberately combated heresies or reconciled differences of belief, but remains present not only, as some would say, in the biblical sources of our faith, but also in popular devotion, expressed on the one hand in funeral and memorial customs and on the other in modern hymnody. To quote only one instance from the last-mentioned source, the conception of the point at which the Afterlife begins ranges from that of Mrs Alexander's gloomy dirge<sup>1</sup> which, speaking of the departed in the churchyard, says:

They do not hear when the great bell  
Is ringing overhead;  
They cannot rise and come to Church  
With us, for they are dead.  
But we believe a day shall come  
When all the dead will rise,  
When they who sleep down in the grave  
Will ope again their eyes.

to the fine hymn of F. W. Faber<sup>2</sup> which clearly implies that it is not in an eschatological future but immediately at the end of its earthly travail that the Christian soul goes to its rest and joy with the Shepherd in Heaven:

Rest comes at length; though life be long and dreary,  
The day must dawn, and darksome night be past;  
Faith's journey ends in welcome to the weary,  
And Heav'n, the heart's true home, will come at last.

Other examples of similar contradictions could be given. The fact that one belief is officially the true Catholic doctrine<sup>3</sup> to the exclusion of the other does not affect the fact that in popular devotion the two beliefs exist side by side.

When such diversity of popular belief still exists within our own faith despite the fact that for over a millennium the finest intellects of the western world employed themselves in erecting one unified logical and systematic theology of the Christian faith, it is against all probability that it should be possible, without violence to the facts, to abstract from the archaeological and written sources concerning ancient Semitic conceptions of the Afterlife a single unified set of ideas.<sup>4</sup> No such attempt is made in the present essay, which endeavours to describe the more prominent conceptions found and to relate them, where possible, to particular periods, *milieux* and external influences.

### *Sources*

An initial difficulty in discussing any aspect of Semitic religion is to decide what is admissible as source material. The term 'Semitic' itself need not trouble us here: though perhaps not justifiable as applied to anything other than languages, and difficult of precise definition, it is in this connection convenient and generally understood. Quantitatively, the largest mass of documentary material for ancient Semitic civilisation consists of the texts from Babylonia and Assyria, but so great was the influence of the Sumerian sub-stratum on the civilisation of Babylonia and Assyria that there have been authorities who would deny that the religion of these peoples may properly be considered as Semitic at all.<sup>5</sup> This view seems to go too far, particularly in view of some very marked differences (for example, the relative prominence of goddesses) between the purely Sumerian religion of the third millennium B.C. and later Assyro-Babylonian religion; nonetheless it is essential to bear in mind the possibility of Sumerian influence when considering any evidence from the Assyro-Babylonian field for which no parallel can be adduced from Semitic influences uninfluenced by Sumer.

The most generally known evidence on this subject is that of the Old Testament: this has been so frequently recapitulated and so extensively discussed that the treatment of the material in this essay is largely confined to summarising the main opinions, and differences of opinion, maintained by scholars on this subject.

A third source of ancient documentary material, which has become available in the last thirty years, consists of the Ras Shamra (Ugaritic) tablets,<sup>6</sup> of which the evidence for the present investigation is important though not extensive. Interpretation of some of the passages crucial for this subject is still in dispute amongst authorities.

Some scraps of evidence relating to the northern Semites are to be found in a few Phoenician and Aramaic memorial inscriptions, whilst some hints concerning the beliefs of Arabs before Islam may be gleaned from South Arabian inscriptions, burial practices as established by excavation, and traditions in Arabic literature.

### *Stages in General Conception of the Afterlife*

F. Cumont, in his *Afterlife in Roman Paganism* (1922), brilliantly demonstrated that in Roman religion at least three strata of belief were to be recognised concerning the Afterlife. Originally the soul of the dead man was felt to continue some kind of existence within the tomb itself; then the tomb was regarded as being the entrance to the great gloomy subterranean chamber in which all the dead shared a shadowy existence; finally the conception was reached of a celestial heaven, at least for certain of the deceased, who attained this privilege either through personal merit or by salvation through the Mysteries. It is not difficult to illustrate the existence of the two earlier stages of belief amongst the Semites: that they had, prior to and independent of the period of Iranian influence, any conception of a celestial heaven, in the sense of a home of the blessed departed, is less easily established.

### *Palaeolithic and Neolithic Burial Practices*

The archaeological evidence (in the narrow sense) is concerned primarily with burial practices. Here it is difficult to make significant distinctions between the practices of the Semites and those of many non-Semitic peoples, largely because the practices themselves go back to an enormous antiquity, long before a distinct Semitic culture group arose. Indeed, the evidence available suggests that the concern of Man with the mystery of death and therefore with ritual disposal of the body was earlier than *Homo Sapiens*, going back half a million years to *Homo Sinanthropus*.<sup>7</sup> In the Middle Palaeolithic period Man (perhaps because of an increased vividness of his dreams related to the mental development associated with his increasing mastery of tool techniques, though this 'dreams' theory has been criticised<sup>8</sup>) began to pay great and increasing attention to funeral rites and the cult of the dead,<sup>9</sup> and from this time onwards 'ceremonial interment was practised continuously'.<sup>10</sup> Cave-burials of the Middle Palaeolithic period have been found in which the body has been carefully disposed, in some cases with a

specific orientation, and accompanied by tools; this suggests some form of belief in survival in and possibly beyond the grave.<sup>11</sup> In the Upper Palaeolithic period there was further development in the cult of the dead, notably the staining of skeletons with red ochre, doubtless as 'an attempt to make the deceased live again in his revived body'.<sup>12</sup> In this period also is found the beginning of the practice of flexing the dead body: this has generally been taken as symbolising the foetal position and thus as relating to an idea of re-birth beyond the grave: James suggests<sup>13</sup> more plausibly that the object was to prevent the dead from walking to the discomfiture of living men.

At the neolithic revolution there emerged a myth and ritual in response to the new factors in human economy and society, but behind this there lay the palaeolithic cults concerned with the dead. The new conceptions involved appropriate modifications in the ancient practices, such as the introduction of figurines of the mother-goddess, the source of life of neolithic religion, into the funerary equipment, but the ancient practices themselves continued. There is therefore no necessity to suppose that all aspects of burial practices in the neolithic or proto-historic periods necessarily reflected current conceptions.

#### *Burial amongst the Semites*

All the branches of the Semites shared in the ancient idea that there was some kind of continued existence after death: the conception of annihilation at death only began to be considered by them at a very late period and under Greek influence.<sup>14</sup> 'Life' was thought of as something tangible and indestructible, either as associated with the blood<sup>15</sup> or as a kind of vapour which at death passed out through the nose:<sup>16</sup> amongst the pre-Islamic Arabs the soul (*hāma*) was represented in poetry 'as a kind of bird, resembling an owl . . . , which flies out of the head of the dead man and hovers about near the grave'.<sup>17</sup> Death was referred to, in the Old Testament and elsewhere, as 'sleep'.<sup>18</sup>

Amongst the Semites the mode of disposal of the body was almost invariably burial. Only rarely and in exceptional circumstances did cremation take place. Consignment of the body to the river, which is attested as a means of disposal of the corpse in early Sumerian times,<sup>19</sup> does not appear to have been established by any textual evidence as a practice of the Semitic inhabitants of Babylonia: archaeological evidence is not likely to become available either to prove or to disprove the existence of such a practice.

Whilst burial was the almost invariable means of disposal of the body amongst the Semites, the place and details of burial might vary widely. The corpse might be buried under the floor of a house or palace, in a cave or rock-tomb, or in a special graveyard. There is no evidence from Babylonian or Assyrian graves for any particular orientation of the corpse, which might be flexed, unflexed, or pushed into the shape most suitable for disposal in a large pot or other container.<sup>20</sup> At Ugarit burial in a vault, probably wrapped in a shroud,<sup>21</sup> was the normal way of disposal of the body:<sup>22</sup> according to the evidence of an Egyptian source, the story of Sinuhe, the inhabitants of Syria five hundred years earlier buried the body in a sheepskin.<sup>23</sup> At Ugarit as elsewhere women served as professional mourners, pouring ashes on their heads, tearing their clothes, lacerating their bodies, and making lamentation.<sup>24</sup> Mourning practices of this kind, long known from the Old Testament, have recently been found referred to in a Babylonian inscription of the sixth century B.C.<sup>25</sup>

### *Grave Offerings*

There is widespread evidence, not confined to the Semites, for the practice of placing vessels containing food and drink, and various other objects, in or near the tomb.<sup>26</sup> As archaeological evidence for the practice in the Babylonian *milieu* may be quoted the many graves excavated at Assur, which contained a great variety of ornaments, weapons, household equipment, and vessels for food and drink.<sup>27</sup> Since the shades of the dead required sustenance, the unburied, or those lacking the usual grave-offerings, were in an unhappy plight: the *etimmu* (ghost) without a grave is mentioned alongside a number of other beings, including 'the *etimmu* who has no-one to tend him, the *etimmu* who has no provision of food-offerings, the *etimmu* who has no libations of water',<sup>28</sup> as likely to be possessing a sick man, and the exorcist warns all such spirits: 'Until you depart from the body of the [sick] man, you shall not drink water. . . . Neither sea water, sweet water, bad water, Tigris water, Euphrates water, well water nor any river water will they pour out for you.'<sup>29</sup> It is interesting also that in pre-Islamic Arabic poetry almost the only feeling ascribed to the departed soul (*hāma*) is that of thirst,<sup>30</sup> and in poems composed on the death of a relation one finds such phrases as 'May he be refreshed with drink'.<sup>31</sup> G. Ryckmans suggests<sup>32</sup> that names given to South Arabian tombs, such as *khṛf*, 'Autumn Rain', and *mrw*, 'Stream', may be related

to the idea that abundant rain or libations were beneficial to the departed.

A text from Ugarit<sup>33</sup> makes it explicit that after a man's death his future well-being depended upon offerings made by his son, who also had the pious duty of erecting in the sancturay a stele bearing the name and lineage of the deceased. The presence of pottery in some cave-tombs confirms the statements of the texts that at Ugarit the dead were provided with food and drink. Archaeological evidence also establishes that food and drink offerings were given to the dead amongst the Canaanites in Palestine, whilst tubes leading into Canaanite graves were almost certainly intended to convey drink thither.<sup>34</sup>

The position with regard to funerary offerings amongst the Israelites in Palestine seems to be open to some doubt. Certainly vessels were placed in the graves, but it has been asserted that no 'single clear remnant of food or drink has been discovered in any of the dishes, jugs, and jars placed in the tombs which have so far been excavated in ancient Israelite Palestine'.<sup>35</sup> What if we accept this claim, are we to make of the presence of such vessels in the grave? G. E. Wright, adducing Jeremiah xvi. 7 and Hosea ix. 4 as evidence for the holding of a funeral feast for family and friends, suggests that the vessels were those of the mourners, placed in the tomb for sentimental reasons, as a 'symbolic and/or traditional survival of the primitive custom'<sup>36</sup> of prehistoric times. There are objections to this view. In a tomb of the monarchy period at Tell en-Nasbeh (a site a few miles north of Jerusalem and possibly the remains of Mizpah of 1 Samuel vii. 5, etc.) a jar did contain some substance which, though it was never properly analysed, was probably the remains of a honeycomb.<sup>37</sup> As to the suggestion regarding the origin of the vessels in the tomb, it is notable that of three classes of juglet found at Tell en-Nasbeh, two classes 'were largely reserved for funeral offerings',<sup>38</sup> that is, they were not vessels of everyday use such as Wright's theory requires, but special vessels for the tomb.

As to the biblical evidence, it seems possible to take the passages adduced by G. E. Wright in a rather different sense from that normally given them. In Hosea ix. 4 there is no justification beyond the Septuagint translation for the specific rendering 'bread of mourners' rather than 'bread of sorrow', and if the Septuagint translation (*πένθους*, gen. sing.) is to be taken as the basis for the translation, this passage could in fact be interpreted as referring to grave offerings, since *πένθος* is elsewhere in the Old Testament the usual rendering of Hebrews. *ēbēl*,

which appears to mean in a number of occurrences not simply 'mourning' but 'funerary rites'.

The verse Jeremiah xvi. 7, though in its present form it certainly contains phrases which suggest that the eating and drinking is done by the survivors, may perhaps show traces of an original idea of sharing food and drink with the dead. Jeremiah xvi. 3 ff. refers to certain additional horrors to be added to the common fate of death. The horrors beyond death are: omission of burial (verses 4, 6), lamentation (verses 4, 5, 6), ritual laceration (verse 6) and ritual cutting of the hair (verse 6). These are penalties inflicted not upon the survivors but upon the dead. It seems not unreasonable to take verse 7 as continuing the thought. The first words should in that case be translated not 'they shall not break<sup>39</sup> [bread] for them in mourning', but 'they shall not distribute [bread] to them in mourning rites' (taking *paras 1<sup>e</sup>* as in Isaiah lviii. 7, and the third person plural indirect object as referring to the dead, as in all translations). In the phrase 'they shall not cause them to drink the cup of consolation', there seems to be no reason to assume that the third person plural direct object here differs in its reference from the three preceding indirect objects in third person plural, which all undoubtedly refer to the dead and not to the survivors. The remaining words—'to comfort them for the dead' and 'for their father or for their mother'—are against the proposed interpretation of the verse; they may either be taken as conclusive evidence that the verse, despite the points mentioned, never bore any allusion to offerings to the dead, or else treated as containing an editorial attempt to modify a text which was found offensive in that it seemed to condone the practice of making offerings to the dead. Heidel, accepting the usual interpretation of Jeremiah xvi. 7 and Hosea ix. 4, asserts that 'while among the Babylonians and Assyrians it was the duty of the surviving relatives to supply the departed with food and drink . . ., we have no Old Testament evidence that this practice was in vogue also among the Hebrews'<sup>40</sup> and claims that the only passage adduced in support of such a view worthy of consideration is Deuteronomy xxvi. 14, which he prefers to interpret as alluding to gifts of food to mourners. The detailed criticism of Heidel's arguments must be relegated to the footnotes,<sup>41</sup> but the evidence of the Old Testament, though not conclusive for either interpretation, does seem to point to the fact that the provision of food and drink offerings to the dead, like many other pagan cults, was practised amongst the Israelites, and that the practice had not been wholly stamped out, despite the unquestioned

opposition of the prophets, by the Exile or perhaps even by the time of Ecclesiasticus.

### *Necessity of Proper Burial*

Whatever the specific beliefs concerning the destiny of the soul after death, burial according to the prescribed rites was thought to be essential to enable the soul to pass from the vicinity of the corpse to whatever awaited it.<sup>42</sup> In Babylonian religion, without proper burial of the corpse the shade could not find rest in the Underworld and was doomed to wander ceaselessly upon the earth. Amongst the ghosts which might haunt a sick man and require to be exorcised was 'one that lies dead in the desert, uncovered with earth'<sup>43</sup> and 'a ghost without a grave'.<sup>44</sup> Assurbanipal, in exposing the bones of Elamite kings, says 'I brought restlessness upon their ghosts and cut them off from food-offerings and libations'.<sup>45</sup> The idea that denial of proper burial would affect the person concerned after death seems also to have been accepted by the prophets, to judge by Amos ii. 1, where Moab is denounced for burning the bones of the kings of Edom. A similar idea may be recognised in 2 Kings xxiii. 16-18, where it is recorded that the good King Josiah had the bones of idolaters burned but decreed that the bones of a Yahwist prophet should not be disturbed. Burial without adequate rites was a heavy penalty (Jer. xxii. 19, xxvi. 23) and a horror which exceeded death itself (Jer. xvi. 4, 6). Mutilation after death (2 Sam. iv. 12) or cremation (Josh. vii. 25) might be resorted to in the case of a criminal.

The idea that the repose of the soul depended upon the body remaining buried in the proper manner underlies the imprecations inscribed on tombs in other parts of the ancient Semitic world. Thus a funerary inscription of a king of Sidon (c. 300 B.C.) reads: 'Do not open me nor disquiet me, for this thing is an abomination to 'Ashtart. And if you do . . . [so] . . . , may you have no seed among the living under the sun nor resting place among the shades (*rp'm*).'<sup>46</sup> Funerary steles in pre-Islamic South Arabia also bear curses intended to fall upon anyone who violates the tomb.<sup>47</sup>

The recognised importance at Ugarit of the proper burial rites has already been referred to.

Whilst in Babylonian belief the ghost of one who had not received proper burial was regarded as malevolent and dangerous to living man, there is only slight evidence in the Old Testament of belief that such

a spirit could harm. Deuteronomy xxi. 22, 23 (cf. Josh. viii. 29, x. 26, 27) which prescribes that an executed criminal shall be buried on the same day, may be related to this conception. Lilith, the female demon (in popular but false etymology 'night-demon') of Isaiah xxxiv. 14 and later Jewish tradition, represents a different conception, that of a primeval spirit which had never been embodied: this is quite clear from the Babylonian evidence where the *lilitu*, the counterpart and original of Lilith, represents a demon or class of demon quite distinct from the *etimmu* or ghost.

### *Passage of Ghosts to the Underworld*

If the corpse had been buried according to the due rites, the ghost was able to pass into the Underworld. On its journey thither, in the Babylonian conception, the ghost had to pass over a river, according to the statement of the Babylonian Theodicy: '(Men must) go the way of death; "You shall cross the river *Huḅur*", they are ordered from eternity.'<sup>48</sup> The idea was elaborated by the provision of a ferryman, *Huḃuṣ-tabal*<sup>49</sup> (Bear swiftly!), to take the soul across to the city of the dead. In the religion of Ugarit the idea of a River of the Underworld seems also to have been held, in view of the occurrence of the term *ṭpt nhr*<sup>50</sup>—'Judge River'—in connection with the Underworld: the phrase suggests that the soul not only crossed but was judged at the River. That the Babylonians may also have admitted the idea of some kind of judgment taking place at the River of the Underworld is indicated by a text in which occurs the passage: 'At the side of the Holy River—the place of judgement of the people who cross. The side of the river—the Ordeal.'<sup>51</sup> However, whilst there is certainly mention elsewhere of judges in the Underworld, the idea of a judgment of souls remained inchoate in Babylonian religion; it is, indeed, just possible that the text translated may have referred to the Ordeal of the terrestrial legal system, in which it was the River-God who in the last resort decided a case.

There seems to be no evidence in the Old Testament for the idea of a river of judgment in the Underworld.

It may be mentioned at this point that it has been denied that there was at Ugarit any idea of the dead passing beyond the tomb: according to one authority, A. van Selms, 'Once buried the dead were supposed to remain in their graves. There they "slept", though they were able to partake of food, especially that in liquid form, which their relatives

bestowed on them.'<sup>52</sup> There is a passage in the Ugaritic texts which, speaking of a man who has been killed, may be translated, 'his soul (*npš*) shall go forth like wind, his ghost like a puff';<sup>53</sup> but this provides, according to van Selms, no reason to suppose that 'a *npš*, after leaving the nostrils, is a sentient being'.<sup>54</sup> The use of the term 'the cave of the gods of the earth' for 'grave' van Selms explains<sup>52</sup> as related simply to the fact that the grave, as a hole in the ground, is part of the domain of the chthonic deities, whilst according to him the statement that the dead 'go down into the earth' merely expresses a literal truth concerning the place of burial.<sup>55</sup> He further claims that 'nowhere is there mention of any act of the dead': this view is not, however, universally accepted and its validity depends upon the meaning of the Ugaritic word *rpum*, which is discussed below.

Whatever doubts may exist as to the doctrine of the soul passing to the Underworld at Ugarit, there can be none concerning its prevalence in the Old Testament. Here the principal word for 'Underworld' is Sheol (<sup>s</sup>ē<sup>l</sup>), but in addition a number of synonyms or presumed synonyms occur, such as Destruction (<sup>a</sup>*baddôn*), Pit (*bôr*, *šahat*), or Death (*māwet*). The term Sheol itself in some passages<sup>56</sup> seems to have been synonymous with 'grave',<sup>57</sup> but it is difficult to accept a view put forward by Heidel that in a number of cases<sup>58</sup> the word meant simply 'death': in one of the examples, Psalm xxx. 4 (R.V. 3), the parallelism shows that Heidel's interpretation is incorrect; in another, Psalm lxxxvi. 13, the qualification 'lowest' for 'hell' seems to be meaningless if 'hell' here means simply 'death', but very much to the point if there was the conception of a hierarchy in the Underworld; whilst in Jonah ii. 3 (R.V. 2) 'from the belly of Sheol', parallel to 'in the heart of the seas' (certainly literal) in the following verse, seems undoubtedly to have a concrete meaning.

A number of authorities, in writing of Old Testament conceptions of the Underworld, have laid emphasis upon the idea of waters of the Underworld. Thus A. R. Johnson writes: 'In many cases the most striking aspect of the psalm is the expression which it gives to the worshipper's fear of death and his vivid sense of already being engulfed by the waters of the Underworld as he descends captive to the realm of the Dead.'<sup>59</sup> Job xxvi. 5 also shows that the dwellers of Sheol were beneath waters. The geographical relationship of such waters to Sheol itself is not made clear, but there is nothing to suggest that they correspond at all closely to the cosmic river of the Babylonian and probably the Ugaritic conception. Heidel explains the situation

by the assumption that 'the Old Testament localises the realm of the dead, or, rather, the realm of certain disembodied human spirits, within the innermost parts of the earth, below the sea',<sup>60</sup> but that the real visible sea comes into the matter is not proved by the passages quoted.

### *Nature and Inhabitants of the Underworld*

In the Babylonian conception the Underworld was 'the Land of No Return', 'the house in which he who enters is deprived of light; where dust is their food and clay their sustenance; where they see no light and dwell in darkness; where they are clad with garments of wings like birds; where dust has spread over door and bolt'.<sup>61</sup> In the Hebrew conception likewise, the Underworld was a place of darkness.<sup>62</sup>

The inhabitants of the Babylonian Underworld included others than the shades of the human dead. The realm was ruled over by a goddess, Ereškigal, with the god Nergal as consort. At an earlier stage of thought, however, Ereškigal must have ruled over the Underworld alone, for an Akkadian myth<sup>63</sup> explains how she came to take Nergal as her spouse. Whilst Nergal was certainly of Sumerian origin, he seems to have become of particular importance after the Amorites came into Babylonia at the end of the third millennium. Nergal, as the killing sun of the Babylonian summer, was regarded as a hypostasis of the Semitic sun-god (as a text expressly states),<sup>64</sup> and it is not impossible that Ereškigal's taking of Nergal as consort may to some extent reflect the patriarchal basis of Semitic society.

There was another group of divine beings, probably belonging to a set of ideas of Sumerian origin, known as the Anunnaki, who dwelt in a separate building called the Egalgina: they served (though this may be a Sumerian conception) as judges, sitting outside their palace on golden thrones.<sup>65</sup> Gilgamesh, a partly divine Sumerian king of Erech of the first quarter of the third millennium, is also met with as a god<sup>66</sup> and judge<sup>67</sup> of the Underworld, but here also the conception is probably Sumerian rather than Semitic. Other divine figures of the Underworld are described in an interesting but unfortunately much damaged Assyrian text<sup>68</sup> which gives an account of the descent thither, apparently in a dream, of an Assyrian Crown Prince, probably a son of Esarhaddon though not necessarily Assurbanipal. Most of the first half of the text is fragmentary, so that the circumstances of the descent are far from clear, but at the point at which the text becomes readily intelligible Ereškigal has appeared to the prince and granted him his

desire: subsequently he sees the Underworld. Fifteen divine creatures are described, including Namtar (otherwise known as a plague-demon), vizier of the Underworld, and a number of composite human-animal creatures: one of these was a black man with a face like the divine Zu-bird, garbed in red and bearing a bow in his right hand and a sword in his left. Nergal himself, crowned, sat on his throne with the Anunnaki to left and right. Nergal, on seeing the prince, stretched out to him his divine sceptre, full of *puluhtu* (*mana*) to kill him with its touch, but was stayed in his purpose by his counsellor the god Išum. The prince, after reproof for his presumption in approaching Ereskigal, was handed over to the doorkeeper Lugalsula to return to the upper world by the gate of Ištar and Ea.

It is thus clear that there was a developed hierarchical pantheon in the Babylonian Underworld, though there is no evidence that this is to be treated as a distinctly Semitic rather than a Sumerian conception. In addition to the divine beings already mentioned were hordes of lesser anonymous non-human spirits, such as the evil *gallē* (ghouls?), evil gods, and evil winds:<sup>69</sup> 'evil' in such contexts relates not to any moral standard but to the malevolence to living men of such beings when they escaped from the Underworld.

#### *Condition and Activities of the Dead in the Underworld*

Despite the mention in Babylonian literature of judges of the Underworld, and some allusions, in both Sumerian and Akkadian texts, to judgment after death,<sup>70</sup> there is very little if any suggestion that a moral verdict was at any point passed on a man's course of life: references to 'good' and 'evil' in connection with judgment seem to relate to observances of ritual rather than moral requirements. The fate of the dead seems to have depended only upon their status in life, their manner of death, and the correctness or otherwise with which the heirs carried out the funeral ritual.<sup>71</sup> In the Epic of Gilgamesh, Enkidu, when allowed to return from the Underworld to inform his friend of conditions there, gives some details of the scale of merit.<sup>72</sup> A man's advantages increased with the number of his sons, the man with one son weeping at the foot of the wall and the father of five sons being honourably admitted into the palace as a scribe. The warrior slain in battle was provided for, though normally the man without an heir had to feed on scraps and garbage. At Ugarit the principle, if not the details, was similar, since the lot of the departed after death

depended upon the action of the heir, and the worst fate that could befall a man was to die without a son.<sup>73</sup> The same attitude was displayed amongst the Israelites, where the institution of levirate marriage gave the deceased a chance of acquiring a son posthumously.<sup>74</sup>

In the Old Testament sphere, despite the clear statement that 'all go to one place',<sup>75</sup> it has been denied that the souls of pious persons, like those of the unrighteous, were believed to descend to Sheol. Heidel, who takes this view, bases it upon Psalms lxxiii and xlix.<sup>76</sup> These passages need not, however, be taken in a sense which supports Heidel's contention. In Psalm lxxiii the crucial verse is 24, translated in R.V. 'Thou shalt guide me with thy counsel, And afterward receive me to glory'. Heidel annotates the second half of the verse 'Or: "Thou wilt receive me with honor." The ultimate sense is the same.'<sup>77</sup> The ultimate sense is in fact very different. 'Glory' in English has undergone a semantic development which enables it to be employed in some contexts in the sense of 'the splendour and bliss of heaven':<sup>78</sup> no evidence has yet been adduced that the Hebrew original underwent such a development, and in the absence of such evidence the term must be taken in the sense 'honour' or 'renown'; 'glory' is a legitimate translation in English only if it is understood in its more primitive meaning.<sup>79</sup> Heidel's other passage of supposed positive evidence, Psalm xlix, has been very differently interpreted by other scholars.

In the cases in which 'Sheol' indisputably occurs of the place to which a righteous man goes, the term is interpreted by Heidel as meaning merely 'death' or at the most 'Afterworld',<sup>80</sup> whilst of the common expression 'to be gathered to one's fathers' Heidel says that it 'cannot mean anything else than that the soul or spirit of a certain person leaves this world at death and enters the afterworld, in which his fathers or certain of his kindred already find themselves'.<sup>81</sup> Since, however, the very evil Manasseh at death 'slept with his fathers',<sup>82</sup> who included his own pious father Hezekiah, and was afterwards joined by his pious grandson Josiah,<sup>83</sup> this expression does not allow one to differentiate between the Afterworld of the bad and the Afterworld of the good: 'all go to one place.'

The indisputable piece of evidence on this subject, the coming up of the ghost of Samuel when conjured by the witch of En-dor,<sup>84</sup> does not appear to be fairly faced by Heidel. Heidel speaks of 'the much-debated question whether the apparition described . . . was the real Samuel or whether it was an evil spirit who had assumed the outward appearance of Samuel'.<sup>85</sup> This question, highly important if one

is attempting to discover the facts of the incident with a view to testing the validity of Spiritualism, is completely irrelevant when we are considering not the facts of the incident but the beliefs (which may have been in conflict with the facts) of the ancient Hebrews: whether the witch was an impostor or not, quite clearly Saul, himself an erst-while prophet, in asking the witch to 'bring up Samuel', expected Samuel to come *up* from below. It may have been the fact that Saul was, as Heidel puts it, 'distracted, Godforsaken, and desperate'<sup>86</sup> that led him to take part in a practice on which official religion frowned; but whilst his spiritual state undoubtedly distorted his view of the *rightness* of necromancy, there is no evidence whatever to suggest either that it affected his view of the *possibility* of necromancy or that it clouded his memory of such a purely technical point as the direction from which a ghost would be expected to come. Far from Saul's nocturnal *séance* being an isolated aberration, it is clear that it was part of an evil cult of necromancy sufficiently widespread to necessitate legislation against it in Deuteronomy and Leviticus and condemnation by Isaiah.<sup>87</sup>

On the basis of the above considerations it is therefore concluded that the original and prevalent conception in the Old Testament was that all the dead, pious and impious alike, went to Sheol, the Underworld. There are, however, indications that within the Underworld there was, as in Babylonian religion, the possibility of some differentiation between the lots of different men. Sheol itself seems to have been divided into more or less remote parts, as is indicated by the occurrence of such terms as 'the depths of Sheol', 'loins (furthest parts) of the pit', 'the pit of the *taḥtiyyoṯ* (lowest parts)' ('*taḥtiyyoṯ* of the earth' being a phrase for 'Underworld'), and 'lowest Sheol'.<sup>88</sup> Ezekiel xxxii. 21-32 seems to imply that the warriors of Meshech and Tubal (i.e. Mušku and Tabalu of Assyrian sources) would be separated from the rest of the uncircumcised in the Underworld. Within Sheol the departed retained at least part of the characteristic distinctions of their earthly life, for Samuel still wore his mantle,<sup>89</sup> and kings still sat upon thrones.<sup>90</sup> The only passages which speak of everlasting punishment for the wicked, Isaiah lxvi. 24 and Daniel xii. 2-3, are recognised by almost all authorities as coming from a period when the Jews were or had been strongly exposed to the influence of Iranian thought.

A term to be considered in connection with the Hebrew conception of the Underworld is *rephaim* (properly *r<sup>o</sup>pā'im*), which eight<sup>91</sup> times occurs in the Old Testament as a designation of the dwellers of the Underworld. In view of Proverbs xxi. 16 and the parallelism with the

word for 'dead men' in some other cases, it can hardly be proposed that the term refers to some species of chthonic beings other than human souls. The matter is complicated by the application of the term *rephaim* in other cases to pre-Israelite giants. The two usages have been explained on the theory that originally the term 'referred to the giants . . . who were destroyed by God from the earth and cast down into the Underworld' and eventually 'came to be used as a general designation of all those in the Underworld'<sup>92</sup> including the departed from this world; but unless it is assumed that the belief in the Underworld found no part in Hebrew religion before the entry into Canaan, there seems no reason why the inhabitants of Sheol should have been particularly associated with the pre-Israelite dead rather than with Israel's own ancestors. The term *rephaim* also occurs in some Phoenician tomb inscriptions. In these a curse is called down upon anyone who disturbs the tomb, and the sanctions include a clause that such a person shall have no resting-place with the *rp'm*. Since the potential violator is specified in one case as 'any prince or any man',<sup>93</sup> it cannot be argued that the *rephaim* here represent a class of divinity which a king alone, by virtue of his divine kingship, might join.

An Ugaritic term, *rpum*, also comes into consideration here; some have sought to connect it<sup>94</sup> or even identify it with Hebrew *rephaim*. However, whilst all authorities accept that the two terms come ultimately from the same root, it cannot be proved that *rpum* and *repa'im* have undergone corresponding semantic developments, and it has been denied that there is any significant relationship between the two terms. Van Selms gives the opinion that in Ugaritic religion 'there is no real argument for assuming that human beings became *rpum* after death. These beings, whose name recalls the Old Testament *rephaim* of whom we know even less, were certainly deities; that cannot be said of the *rephaim*. . . . All this points more to [*rpum* being] a certain class of minor gods than . . . the ghosts of the dead.'<sup>95</sup> J. Gray, in regarding the *rpum* as 'a sacred guild closely associated with the king in his office as dispenser of fertility',<sup>96</sup> takes a view acceptance of which removes the term from consideration as evidence on the subject of the Afterlife. However, could it be proved that *rpum* was equivalent to *rephaim*, the passages concerned would show that in Ugarit the lot of the shades was distinctly brighter than in the Hebrew conception, since they could hold a feast, make a sacrifice, or be invited by the supreme god to his palace.<sup>97</sup> This happy lot was certainly possible for the departed soul, at least of the king, in the north Syrian state of Ya'di (of

which the capital is represented by modern Zinjirli), since in an Aramaic inscription of the eighth century B.C. a dead king, Panammu, instructs his sons to sacrifice to the god Hadad saying: 'May the soul (*nps*) of Panammu eat with Thee, and may the soul of Panammu drink with Thee. . . .'<sup>98</sup>

Whether the *rephaim* of the Old Testament had any relationship with God, or with the world of the living, seems open to doubt.<sup>99</sup> A lack of relationship with God is supposed for the dead in the Underworld in certain passages in the Psalms and in Isaiah xxxviii. 18, whilst a contrary belief is expressed in Psalm cxxxix. 7-12. As to knowledge of events on earth, R. Pettazzoni, as a general conclusion from the comparative study of religions, says: 'The dead . . . know everything. . . . In [the case of the knowledge of animals, birds and serpents] we have to do with a magical or oracular wisdom. . . . The spirits of the dead also possess knowledge of this sort.'<sup>100</sup> Despite this general principle, in Psalm lxxxviii. 13 (R.V. 12) Sheol is called 'the land of forgetfulness', and a similar idea underlies Psalm cxlvi. 4: 'His breath goeth forth, he returneth to his earth; In that very day his thoughts perish.' Yet Samuel was believed to recognise Saul on returning to the earth, and to be acquainted with current human affairs, whilst Ezekiel xxxii. 21 expects gentile warriors who are already dead to recognise the Egyptians when they come down to join them. Likewise in Isaiah xiv. 9-10 the dead are expected to know and even mock at the king of Babylon coming to share their shadowy lot. Jeremiah xxxi. 15 speaks of the long-departed Rachel weeping at the adversities which had befallen her children.

In Babylonia doubt as to the continuing relationship of the dead with their kin on earth and even with the gods did not arise. In the Babylonian Underworld prayer could be made to the gods: the spirits of the dead could receive the prayers of their descendants and families and intercede with Shamash and Gilgamesh for them.<sup>101</sup> This was perhaps made possible by the fact that Nergal, the god of the Underworld, was an hypostasis of the sungod Shamash, the god of Justice. The pantheon of the Underworld was, it may be noted, ultimately under the authority of the supreme god Anu, to whom the individual gods of the Underworld were subordinate.

#### *Escape of the Dead from the Underworld*

In what circumstances could the shades of the dead escape from the Underworld? That they were thought to be able to do so, at least

temporarily, is borne out by specific instances from Babylonia and Israel, as well as by the widespread belief in ghosts in other parts of the Semitic world. The theoretical possibility is made clear in the Babylonian version of the myth of the descent of the goddess Istar to the Underworld, in which Istar at one point threatened to break down the bolted doors of the Underworld, whereupon the dead would rise *en masse*.<sup>102</sup> How far this is a Semitic fancy, as distinct from one taken over from the Sumerians, is uncertain, though it may be noted that in the Sumerian *Descent of Inanna* upon which the Semitic *Descent of Istar* is based, at Inanna's return to the upper world she was accompanied by swarms of beings—not necessarily human souls—from the Underworld.<sup>103</sup> Though certain classes of spirits might come forth from the grave to consume mortuary offerings,<sup>104</sup> there seems to be no evidence that the shades of dead humans normally did so: the manner in which these shades received the offerings and libations made for them is not clear, though it is probably connected with the fact that, in addition to the one principal entrance to the Underworld,<sup>105</sup> each grave was also an entrance, and in some parts of the Semitic world there were arrangements whereby offerings could be introduced into the tomb.<sup>106</sup> By special command of a god, a shade might be permitted to leave the Underworld for a short period: such was the case with Enkidu, whose spirit, at the application of Ea, was permitted by Nergal to appear to Gilgamesh. Nergal opened a hole in the Underworld, so that the spirit (*utukku*) of Enkidu came forth like a *zaqiqu*.<sup>107</sup> *zaqiqu*, often translated with the sense of 'wind', is known elsewhere as a type of being which comes forth from the Underworld in quest of mortuary offerings.<sup>108</sup> A more substantial resurrection was possible in the case of certain dying gods or those primeval beings imprisoned in the Underworld,<sup>109</sup> but this does not relate directly to the Afterlife of humans.

In the Ugaritic religious literature—of which probably no more than a small fraction has been recovered—there has so far been found no conception of human resurrection, either in finite time or eschatologically.

In pre-Islamic South Arabia, certain titles of rulers found in the inscriptions have very dubiously been related to the conception of the possibility of apotheosis of kings after death:<sup>110</sup> this, if a valid conclusion, would indicate that kings at least might escape the common lot.

The clearest evidence in the Old Testament for the possibility of the

temporary release of a human shade from the Underworld is the story of the bringing up of Samuel by the witch of En-dor. This incident, however, is clearly parallel to the appearance to Gilgamesh of the shade of Enkidu, and the account is no evidence for a Hebrew belief in an eschatological resurrection. The view, which has often been advanced, and is still maintained by some, that belief in an ultimate resurrection was a part of Old Testament theology, rests largely on the supposed evidence of Job xix. 25-27 and some passages in Daniel. The interpretation of Job xix. 25-27 remains controversial, and on this matter a quotation of one of the most recent and moderate statements of the facts must suffice. W. Baumgartner, speaking of '[Job] xix. 25-27, once the *locus classicus* for the resurrection', says 'Opinions still differ as to whether Job is to "see God" in this or a future life. [Many noted scholars] support the first view. Those who support the *post mortem* interpretation, however, are not showing a mere return to tradition as may be seen by the varying ways in which it is treated by [them]. These general points seem to me to be clear: (i) The rendering of *gô'âlî* by "my Redeemer", which goes back to Jerome and Luther, does not rightly express his legal function; (2) "Vindication, not the vindicator is the essential requirement of the situation" (Stevenson); since the person is not defined, must it inevitably be God? (3) The setting of these verses in a connection where this confidence bears no fruit tells against according to the verses a central significance in the old sense. In the same way the parallel with the cultic cry of the Ugaritic myth: "I know that Aliyn Baal is alive" is purely fortuitous, since both times it occurs in entirely different situations.'<sup>111</sup>

Job xiv. 7-14, with the crucial verse 12—'so man lieth down, and riseth not: till the heavens be no more, they shall not awake, nor be roused out of their sleep'—is most naturally interpreted as a denial of the doctrine of resurrection,<sup>112</sup> though Heidel argues otherwise. He takes the view that 'till the heavens be no more' implies that the death of a man is only temporary, on the ground that Psalm cii. 26-28 and Isaiah xxxiv. 4 and li. 6 show that the heavens *will* pass away: all texts which, on the contrary, say that heaven and earth are eternal are dismissed without adequate consideration.<sup>113</sup> The statement of E. C. S. Gibson seems still to be applicable to this passage: 'It would be entirely out of place to read into this verse the thought of the extinction of the heavens spoken of in Isaiah li. 6, and to imagine that Job was teaching that man actually would rise again, but not till this took place. This has indeed been the view of many commentators since the days of Gregory

the Great. But nothing could be clearer than the fact that Job here definitely denies any resurrection.' <sup>114</sup>

Isaiah xxvi. 19 has also been adduced as evidence for an ancient Hebrew belief in the mass resurrection of the righteous,<sup>115</sup> but verses 15 and 20 strongly suggest that the passage is to be applied not to individuals but to the nation. The Targum explains 'dead men' of verse 19 as 'the bones of their dead bodies',<sup>116</sup> but even if the Targumic interpretation is taken as meaning a physical resurrection in the Christian sense (and it could with equal validity be explained as meaning mere magical revivification of skeletons, the interpretation being influenced by Ezekiel xxxvii. 1-14), this was merely the interpretation current at the time of writing of the Targum and not necessarily the original Hebrew conception.

An Old Testament passage which has been taken as referring to the resurrection and as containing the doctrine of the Afterlife in a very developed form is Isaiah liii. 8-12, one of the so-called 'Servant Songs' of Deutero-Isaiah. Old Testament scholars are, however, far from unanimous in accepting this interpretation, and one of them in a recent work explains the meaning of the passage Isaiah lii. 13 to liii. 12 as being that 'suffering and privation, contempt and an ignominious death are to be taken, despite all natural human inclination, not as proof of dereliction and guilt, but as vicarious self-sacrifice, voluntarily undertaken for others; further, that this has made available a hitherto unheard of depth in the conception of life and the universe . . .'.<sup>117</sup>

Daniel xii. 1-3 undoubtedly refers to a general resurrection of both good and evil, with a distinction between the final fates of the righteous and the unrighteous. This passage, however, though highly relevant in a discussion of the Christian doctrine of Judgment and Immortality, is generally accepted as coming from about the middle of the second century B.C., and it is questionable whether it is to be taken as a development which arose in purely Semitic thought or as one which took place under external influence.

### *Heaven*

Related to this *Daniel* passage is the problem of the belief in Heaven, the abode of the blessed, distinct from the Underworld. As has been shown, the idea was widely diffused throughout Semitic thought of some kind of judgment after death and a distinction (not necessarily based on moral considerations) between the lots in the Underworld of

different men. There is also, as pointed out above, some indication from Hebrew terminology that the Underworld itself was divided into more or less remote parts. Daniel xii. 1-3, where the idea of the Judgment and Separation is beyond doubt, compares the wise and righteous, after judgment, with the firmament and the stars, thus suggesting (though not proving) that the realm of the blessed was thought to be astral or celestial and distinct from the Underworld. Psalm lxxiii. 23-25 has often been adduced as further evidence of the same belief, but the objection to interpreting this passage as a reference to life after death has been mentioned above: moreover, even were it conceded that the passage could and should be interpreted on those lines, the parallelism of verse 25, where 'heaven' balances 'earth', would make it inadmissible to interpret 'heaven' as intended to designate the place to which God will take the Psalmist 'to glory'.

An instance, and that a relatively early one, in which there can be no doubt that the place of the blessed was thought to be in the celestial sphere and not in the Underworld is the assumption of Elijah, who was taken up to Heaven in a whirlwind.<sup>118</sup> The only possible parallel to this in the Old Testament is the fate of Enoch, who 'walked with God: and . . . was not; for God took him'.<sup>119</sup> However, despite the traditional interpretation that Enoch escaped death, the meaning of the passage is by no means assured; and even if the two cases are accepted as parallel, they only establish that the taking of humans into Heaven was a most rare privilege which could only be accomplished by exempting the favoured man from the normal process of physical death. The difficulty of reaching Heaven, the abode of God, is clearly shown in the dream of Jacob, in which the angels of God required a ladder to pass between earth and heaven.<sup>120</sup>

In the Babylonian literature also are found references to the possibility of eternal life in a realm of the blessed distinct from the Underworld. Adapa, summoned before the great gods to answer for his impiety in breaking the wings of the south wind, as a result of the counsel of his protector, the god Ea, behaved in so conciliatory a manner that he was in fact offered the bread of life and water of life. These, believing them to be bread and water of death, he refused, and thereby failed to acquire immortality.<sup>121</sup> A motif found on many cylinder-seals has been interpreted as 'an enthroned god bestowing on his worshipper a vase with the water of life and bread of life'<sup>122</sup> and related to the belief in the possibility of attaining immortality, but such an interpretation is highly speculative.

The problem of the possibility of attaining immortality is also dealt with in Babylonian literature in the Epic of Gilgamesh. Gilgamesh, terrified at the thought of death, undertook a long and difficult journey to his ancestor Uta-napištim, and Uta-napištim, in answer to his enquiries, related how he himself had attained immortality. Long ago, the god Enlil had sought to destroy mankind by a great flood. Forewarned by the god Ea, Uta-napištim had built a ship, by means of which he and his wife, together with their family, had been able to escape drowning. When the flood subsided Enlil was at first full of wrath that his plan had been thwarted, but, when his anger had been appeased, he apotheosised Uta-napištim and his wife, and proclaimed that they should live 'afar off, at the mouth of the rivers'.<sup>123</sup> Here, for ever, lived Uta-napištim and his wife, but there is no suggestion that their place of abode was with the sky-gods, and the idea approximates more nearly, in terms of Christian thought, to the Garden of Eden than to Heaven.

It was proved to Gilgamesh himself that he could not bear immortality, but as a consolation he was given the secret of a magic plant, not of eternal life but of escape from old age. This he found, but during his return home it was stolen by a snake. Gilgamesh, in great distress but at last convinced of his fate, sat down and lamented that he had, for all his toil, acquired nothing for himself.<sup>124</sup> This negative result of his quest reflected the Babylonian belief that before the destiny established for him by the gods man was helpless; there was nothing man could do to escape from the common lot of old age and death.

#### FOOTNOTES AND REFERENCES

1. *Hymns Ancient and Modern*, 575.
2. *Hymns Ancient and Modern*, 223.
3. E. L. Mascall, *Christ, the Christian and the Church*, p. 146.
4. A. Heidel, *The Gilgamesh Epic and Old Testament Parallels*, p. 222, at the end of his valuable essay on *Death and the Afterlife* (which has been extensively used in the present article) states as a supposed conclusion from his examination of the Old Testament material that 'whilst there is progress in the unfolding of the Hebrew eschatological beliefs, there is no conflict between the earlier and the later writings of the Old Testament, correctly interpreted, in the matter of death and the afterlife'. It is, however, clear from Heidel's treatment of the Old Testament material that this is not an independent conclusion but an initial theological premise. That Sellin takes the same viewpoint (Heidel, *op. cit.* p. 222, n. 255) merely emphasises this fact, since for Sellin 'Old Testament theology is only interested in the line which was fulfilled in the Gospel . . . [and]

. . . should leave on one side not merely the Canaanite influence but also the whole national-cultic side of Israel's religion'. (N. W. Porteous, *Old Testament Theology*, p. 328, in H. H. Rowley (ed.), *The Old Testament and Modern Study*.)

5. So É. Dhorme, *Les religions de Babylonie et d'Assyrie*, p. 4. For the contrary view, very moderately stated, see J. Bottéro, *La religion babylonienne*, p. 5.

6. Datable to c. 1400 B.C. For the most convenient recent edition see G. R. Driver, *Canaanite Myths and Legends* (1956).

7. E. O. James, *Myth and Ritual in the Ancient Near East*, pp. 31 f.

8. W. F. Otto, *Die Manen oder von den Urformen des Totenglaubens* (1923).

9. Sir R. Paget, *Cahier d'histoire mondiale*, vol. i, p. 410.

10. E. O. James, op. cit. p. 32.

11. E. O. James, op. cit. p. 33.

12. E. O. James, op. cit. p. 34.

13. E. O. James, op. cit. p. 35.

14. This idea of annihilation, illustrated in the Old Testament in *Eccles.*, also had currency in pre-Islamic Arabia; see A. A. Bevan, *Journal of Theological Studies*, 6 (1904), 20, and Nabih Amin Faris, *The Antiquities of South Arabia*, p. 104, alleged inscription of dhu-Shallam.

15. Deut. xii. 23.

16. G. R. Driver, op. cit. pp. 56, 58, *Aqhat*, III. i. 25, 36.

17. A. A. Bevan, *ibid.* p. 21.

18. Ps. xiii. 4, Job xiv. 12; G. R. Driver, op. cit. p. 62, *Aqhat*, I. iii. 45.

19. F. Thureau-Dangin, *Die sumerischen und akkadischen Königsinschriften*, p. 49, col. 6, line 15; S. N. Kramer, *Gilgamesh and the Land of the Living*, line 26, in J. B. Pritchard (ed.), *Ancient Near Eastern Texts*, p. 48.

20. A. Haller, *Die Gräber und Gräfte von Assur* (1954), pp. 38-45.

21. So G. R. Driver, op. cit. p. 62, *Aqhat*, I. iii. 41, and J. Gray, *The Legacy of Canaan* (1957), p. 86. The interpretation is not beyond question, and A. van Selms, *Marriage and Family Life in Ugaritic Literature* (1954), p. 135, denies any mention of shrouds.

22. For textual evidence see G. R. Driver, op. cit. p. 62, *Aqhat*, I. iii. 6, 20-21, 34-35, 40-41, and for archaeological evidence *Ugaritica*, I (1939), figs. 60, 61, 69, 70, 75, and plates XV-XVII. A passage from one of the Ugaritic texts (G. R. Driver, op. cit. p. 54, *Aqhat*, II. vi. 35-37)—'What does a man get as the final lot? Glaze will be poured on (my) head and quicklime upon my pate; and I shall die the death of all (men) and myself indeed shall die'—has generally been taken as referring to acceptance of old age and death as the lot of all men. However, if it be accepted that the two halves of the second sentence could be taken as expressing a parallelism rather than a consecution of events, it is just possible that the references to 'glaze' and 'quicklime' may have originally been literal, referring to an ancient burial custom, so far known only from Jericho (c. 5000 B.C.), of coating the skull, from above the eye-sockets downwards, with plaster; see *Illustrated London News*, 18 April, 1953, p. 627 and 17 October, 1953, supplement, plate IV. The great time lapse and the complete lack of archaeological evidence for such a practice at Ugarit in the 2nd millennium B.C. are against this interpretation.

23. J. B. Pritchard (ed.), *Ancient Near Eastern Texts*, p. 21, lines 195-199.

24. A. van Selms, op. cit. p. 134.

25. C. J. Gadd, *Anatolian Studies*, 8 (1958), 55-57, 91.

26. F. Cumont, *Afterlife in Roman Paganism*, 50, 200 *et passim*.

27. A. Haller, op. cit., *passim*.
28. R. C. Thompson, *The Devils and Evil Spirits of Babylonia*, I, 40. The list includes spirits other than ghosts of humans.
29. R. C. Thompson, op. cit. I, 44.
30. The idea is not wholly extinct. A grave stands alone in the churchyard of Henham (Essex) at the spot upon which the gutter spout on the tower discharges rain water. Living witnesses recall that the grave was so sited at the request of a blacksmith who died at the end of the nineteenth century, having composed an epitaph revealing his motive. The epitaph, of which the incumbent forbade the erection, identified the deceased as 'old Johnny Hayden come for a drink'.
31. A. A. Bevan, *ibid.* p. 21.
32. *Les religions arabes préislamiques* (1951), p. 36.
33. G. R. Driver, op. cit. p. 48, *Aqhat*, II. i. 21-29.
34. A. Lods, *Israel from its Beginnings to the Middle of the Eighth Century*, p. 115.
35. Heidel, op. cit. p. 168, leaning on G. E. Wright, *Biblical Archaeologist*, 8 (1945), 17.
36. G. E. Wright, *ibid.*
37. W. F. Badè, *Excavations at Tell en-Nasbeh 1926 and 1927; a Preliminary Report* (1928), p. 27; C. C. McCown, *Tell en-Nasbeh, I, Archaeological and Historical Results* (1947), p. 83.
38. McCown, op. cit. p. 89.
39. The phrase 'to break bread' means (Murray, *A New English Dictionary*, sub *bread* 2c) (a) 'to break it for one's own mouthfuls; hence to eat or partake of bread or food; (b) (from N.T.) to break it for distribution to others, to dispense bread . . .'. 'Break [bread]' is a legitimate translation for Heb. *pāras* only in sense (b), since the basic sense of the verb seems to be that of 'dividing' and not simply 'breaking'. In Mic. iii. 3 the context suggests that this verb does not mean 'break [bones]' but 'divide [bones]', i.e. 'separate [the carcase] into [joints]' after skinning and before cutting up for the pot.
40. Heidel, op. cit. p. 204.
41. Heidel interprets Deut. xxvi. 14 in the sense he gives it 'in the absence of literary or archaeological proof that the ancient Hebrews provided a dead person with food, and in view of the custom prevailing among them of sending food to the mourners for their refreshment' (op. cit. p. 205); but some of the passages adduced in support of this either can or must be interpreted otherwise than Heidel interprets them. The matter of the supposed lack of archaeological evidence has been discussed above (p. 162). The evidence adduced by Heidel for the custom of sending food to mourners consists of 2 Sam. iii. 35, Jer. xvi. 7, Ezek. xxiv. 17. The Jer. and Ezek. passages and the first clause of Deut. xxvi. 14 prove that eating a funeral meal was established as a custom a little before the Exile, but tell nothing of the origin of the custom. 2 Sam. iii. 35, in which David refused to eat on hearing of Abner's death, shows not that a mourner normally ate at that period but that he fasted, since David was giving the greatest publicity to the fact that he was a mourner for Abner and not a party to his death: the favourable impression made upon public opinion by David's conduct (verse 36) would be inexplicable if by fasting David had been

flouting a custom of partaking of food at a funeral. The conclusion drawn is that at c. 1000 B.C. a mourner fasted, whereas by c. 600 B.C. he took part in a funeral meal. The innovation of eating at a funeral requires explanation; a possible explanation is that the pagan practice of making food-offerings to the dead (still observed in the time of David and Tell en-Nasbeh tomb 5), had been proscribed by official religion (hence Deut. xxvi. 14) and with difficulty deliberately replaced by a simple memorial feast. Num. xix. 14 ff., another text adduced by Heidel in support of his interpretation of Deut. xxvi. 14, relates only to uncleanness from a dead body spreading by contagion (cf. Hag. ii. 13), and provides no evidence that the use of a part of a crop at a simple memorial feast would render the rest (if not in physical contact with the dead body) unclean; indeed, verse 16 indicates that even a vessel actually in the tent with the corpse, provided it was sealed, was not unclean. Heidel is prepared to accept (n. 213) that Ps. cvi. 28 may refer to the eating of offerings actually made to the dead, and so appears to concede the occurrence of the practice otherwise denied. His insistence that 'we are dealing with a pagan rite which the psalmist condemns' seems beside the point, since all scholars who see evidence in the Old Testament of offerings to the dead accept that it was a feature of popular practice proscribed by official Yahwism. Heidel also appears to accept the occurrence of food-offerings to the dead amongst the Jews of the intertestamental period (Tob. iv. 17, Ecclus. xxx. 18; add Bar. vi. 27), but seeks to attribute this to Greek influence.

42. A. Lods, *op. cit.* pp. 116, 222, speaks of a suggestion that in some circumstances the Semites may have believed in reincarnation. The present writer sees no trace of evidence for this.

43. R. C. Thompson, *op. cit.* I, 38, line 48.

44. R. C. Thompson, *op. cit.* I, 40, line 6.

45. H. C. Rawlinson, *Cuneiform Inscriptions of Western Asia*, V, plate 6, lines 75-76.

46. G. A. Cooke, *A Text-book of North Semitic Inscriptions*, p. 26, Tabnith, line 8. Cf. *ibid.* p. 30, Eshmun-azar, line 8.

47. G. Ryckmans, *Les religions arabes préislamiques* (1951), p. 35.

48. *Zeitschrift für Assyriologie*, neue Folge, 9, p. 47.

49. *Zeitschrift für Assyriologie*, neue Folge, 9, p. 16, Rückseite 45.

50. G. R. Driver, *op. cit.* p. 76, Baal III\* C 7, p. 78, Baal III\* C 21.

51. H. C. Rawlinson, *op. cit.* 5, plate 47, lines 30-31.

52. A. van Selms, *Marriage and Family Life in Ugaritic Literature*, p. 131.

53. G. R. Driver, *op. cit.* p. 56, *Aqhat*, III, O. i. 24-25. For a general definition of the Semitic *nepesh* as 'l'âme végétative de l'individu qu'on est obligé de nourrir' and which 'reste attachée à la tombe', see R. Dussaud, *La pénétration des Arabes en Syrie avant l'Islam* (1955), p. 33.

54. A. van Selms, *op. cit.* p. 130.

55. A. van Selms, *op. cit.* p. 132.

56. Isa. xiv. 11, Ezek. xxxii. 26-27, Job xxiv. 19-20, listed and discussed in Heidel, *op. cit.* pp. 174-5. In Ps. cxli. 7, also adduced as evidence by Heidel, it is not the term 'Sheol' but the expression 'the mouth of Sheol' which means 'grave', and it does so because 'Sheol' by itself here means 'Underworld', to which the grave was an entrance.

57. Possibly this was the original meaning of the term, for which no satisfactory etymology has been offered; the development of meaning to 'Underworld' would have occurred in association with the development of the conception that the dead passed from the grave to a vast subterranean chamber.

58. Heidel, op. cit. p. 176.

59. A. R. Johnson, *The Psalms*, p. 171, in H. H. Rowley (ed.), *The Old Testament and Modern Study*, pp. 162-207; see also p. 174.

60. Heidel, op. cit. p. 178.

61. P. Jensen, *Assyrisch-babylonische Mythen und Epen* (1900), p. 80, lines 1, 7-11.

62. Job xxxviii. 17, x. 21-22. The former passage is accepted by Heidel (op. cit. pp. 180-1) as establishing this. The latter passage Heidel takes as referring to the grave, but it is difficult to see how the final words—'when it shines, it is like darkness'—are to be fitted into such an explanation.

63. P. Jensen, op. cit. p. 78, Stück II, lines 11-21.

64. *Zeitschrift für Assyriologie*, alte Folge, 6, 241, lines 52 ff.

65. P. Jensen, op. cit. p. 88, lines 31-33.

66. *Zeitschrift für Assyriologie*, neue Folge, 18, 18, obv. 3, line 11.

67. P. Jensen, op. cit. p. 266, lines 1-4.

68. See W. von Soden, *Die Unterweltsvision eines assyrischen Kronprinzen*, in *Zeitschrift für Assyriologie*, neue Folge, 9, 1-31.

69. See R. C. Thompson, op. cit., *passim*.

70. Two interesting texts (one in Sumerian and the other from Elam) referring to judgment after death are edited in E. Ebeling, *Tod und Leben nach den Vorstellungen der Babylonier* (1931), pp. 20-23. A difficult passage from the end of Tablet X of the Gilgamesh Epic, adduced by B. Meissner, *Babylonien und Assyrien*, 2, 146, as evidence of judgment after death, is probably to be restored and translated in a different sense: see Heidel, op. cit. p. 79.

71. The text *V.A.S.*, I, 54, quoted in Heidel, op. cit. p. 154, might be interpreted as implying the idea of moral retribution, but it is more probable that the clear water in the Underworld was the direct magical result of the blessing which would follow the pious deed, just as a curse might pursue the violator of a tomb.

72. Heidel, op. cit. p. 100, line 99 to p. 101, line 153.

73. G. R. Driver, op. cit. p. 50, *Aqhat*, II. ii. 15-17.

74. Deut. xxv. 5, 6.

75. Eccles. vi. 6, iii. 20.

76. Heidel, op. cit. pp. 183-6.

77. Heidel, op. cit. p. 184, n. 159.

78. See Murray, *A New English Dictionary*, sub *glory*: the earliest occurrence of the word 'glory' in precisely that sense which Heidel's interpretation requires is dated 1648.

79. According to H. Gunkel, *Die Psalmen* (1926), p. 210, the crucial verse 16 'has nothing to do with assumption into heaven without death occurring, nor with the eternal life of the community, but refers to protection against the threat of death in the hour of danger'.

80. Heidel, op. cit. pp. 186-7.

81. Heidel, op. cit. p. 188.

82. 2 Kings xxi. 18.

83. 2 Kings xxii. 20.

84. 1 Sam. xxviii. 7-20.

85. Heidel, op. cit. p. 189.

86. Heidel, op. cit. p. 190.

87. Deut. xviii. 11, Lev. xix. 31, Isa. viii. 19.
88. For these phrases see Prov. ix. 18, Isa. xiv. 15, Ps. lxxxviii. 7 (R.V. 6), Ps. lxiii. 10 (R.V. 9).
89. 1 Sam. xxviii. 14.
90. Isa. xiv. 9.
91. Isa. xiv. 9, xxvi. 14, 19; Ps. lxxxviii. 11 (R.V. 10); Prov. ii. 18, ix. 18, xxi. 16; Job xxvi. 5.
92. W. O. E. Oesterley and T. H. Robinson, *Hebrew Religion*, p. 251.
93. G. A. Cooke, op. cit. p. 30, Eshmun-lazar, lines 6-7.
94. G. R. Driver, op. cit. p. 10.
95. A. van Selms, op. cit. p. 130.
96. J. Gray, *The Legacy of Canaan* (1957), p. 92.
97. A. van Selms, op. cit. p. 130.
98. G. A. Cooke, op. cit. p. 160, lines 15-17, 21-22.
99. Ps. vi. 6 (R.V. 5), xxviii. 1, xxx. 10 (R.V. 9), lxxxviii 5-6 (R.V. 4-5), 11-13 (R.V. 10-12).
100. R. Pettazzoni, *The All-Knowing God* (1956), pp. 3-4.
101. E. Ebeling, *Tod und Leben nach den Vorstellungen der Babylonier*, p. 131, lines 34-41.
102. P. Jensen, op. cit. p. 80, lines 16-20.
103. J. B. Pritchard (ed.), op. cit. p. 56.
104. R. C. Thompson, op. cit. 2, 130, lines 1-10.
105. This was at the place where the sun set; see E. Ebeling, op. cit. p. 141. lines 14 ff.
106. A. Lods, op. cit. p. 115.
107. P. Jensen, op. cit. p. 262, lines 21-24.
108. R. C. Thompson, op. cit. 2, 130, line 6.
109. For a criticism of the view that the Babylonians believed in the death and resurrection of Marduk see W. von Soden, *Gibt es ein Zeugnis dafür, dass die Babylonier an die Wiederaufstehung Marduks geglaubt haben?* in *Zeitschrift für Assyriologie*, neue Folge, 17, 130-166.
110. G. Ryckmans, op. cit. pp. 36-37.
111. W. Baumgartner, *The Wisdom Literature*, p. 221, in H. H. Rowley (ed.), *The Old Testament and Modern Study*, pp. 210-235.
112. That the doctrine could be specifically denied shows that the writer knew of some contemporaries who held the belief.
113. See Heidel, op. cit. p. 217, n. 246.
114. E. C. S. Gibson, *The Book of Job* (1899), p. 71.
115. Heidel, op. cit. pp. 218-220.
116. J. F. Stenning, *The Targum of Isaiah*, p. 82.
117. O. Eissfeldt, *The Prophetic Literature*, p. 149, in H. H. Rowley (ed.) *The Old Testament and Modern Study*, pp. 115-160.
118. 2 Kings ii. 1, 11. 119. Gen. v. 24.
120. Gen. xxviii. 12.
121. P. Jensen, op. cit. p. 98, lines 24-33.
122. B. Meissner, op. cit. 2, 140.
123. P. Jensen, op. cit. p. 244, lines 204 f.
124. P. Jensen, op. cit. p. 252, lines 307-313.

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## The Concepts of Randomness and Progress in Evolution

A survey of the history of biological thought reveals that certain philosophical ideas, found in current literature on evolution, have been derived from classical Greek philosophy rather than biological theory. These ideas are (1) the metaphysical notion that the randomness of evolution is incompatible with a creatorial plan or purpose, and (2) the ethical notion that evolution manifests some sort of progress.

These two ideas are discussed in relation to pre-human evolution, and it is argued that the first results from a failure to differentiate between two distinct concepts of randomness, physical and metaphysical; while the second results from the unwarranted imputation of values to objective biological features.

Human social history is then discussed; and it is concluded that no grounds exist, in the facts of evolution, either for predicting future progress, or for determining ethical principles to ensure it.

Thus evolution is considered to be metaphysically and ethically neutral.

### *Introduction*

The theory of evolution is a typical scientific theory, in that its postulates are, in principle, open to test by empirical methods. But it has gained a number of accretions which cannot be tested empirically, and which must, therefore, be regarded as philosophical rather than scientific.

These philosophical concepts and theories are very frequently incorporated into the scientific writings (both technical and popular) of some who are undoubted authorities on the scientific theories of organic and psycho-social evolution. This may be both valuable and dangerous: valuable, because it serves to stimulate thought and discussion amongst professional scientists and philosophers; dangerous, because it misleads students and laymen into believing that the particular philosophical view of the writer is logically implied by the scientific evidence. The danger could, of course, be very largely avoided if the writer were to make it clear when he is stepping across the boundary between scientific and philosophical territory. Unfortunately the boundary is seldom indicated.

The importance of making this distinction between science and philosophy has been stressed in two papers previously delivered to the

Victoria Institute. In one, Barclay<sup>1</sup> discussed the many meanings of the word 'Evolution', and made the plea that the word should, in the interests of clear thinking, be limited to a scientific connotation, and divorced from its philosophical overtones. In the other, I<sup>2</sup> surveyed the logical apparatus that characterised the scientific method, and distinguished it from philosophy; and urged the importance of differentiating between scientific and philosophical concepts in the communication of scientific knowledge.

This paper may be regarded as a sequel to those two papers. Its object is not to discuss the truth of scientific theories of biological evolution (as generally accepted by the majority of biologists), but to demonstrate that, given their truth, certain arguments commonly found in current scientific literature do not follow. The arguments fail because they require various philosophical assumptions, which are usually not explicitly stated. The theories to which the arguments lead are, then, themselves philosophical: they cannot be verified by the scientific method, but must be tested against the philosophical and theological criteria of truth, viz., logical self-consistency, and consistency with revelation, respectively.

### *The History of the Concepts of Randomness and Progress in Evolution*

In order to trace the origins of the concepts of randomness and progress in the history of life, one needs to go back as far as the ancient Greek philosophers.

One of the earliest, the Ionian philosopher, Anaximander (sixth century B.C.), pictured the universe as originating in a chaotic fusion of hot, cold, wet, and dry (the *apeiron*), which gradually resolved itself into an orderly arrangement of its separate elements, as seen in the *cosmos*.<sup>3</sup> He not only propounded a progressive cosmogony, but also postulated that life arose in warm mud in the sea, and later gave rise to terrestrial organisms, including man.<sup>4</sup>

The pluralist philosopher, Empedocles (fifth century B.C.), taught that the earliest organisms were formed by the random association of

<sup>1</sup> O. R. Barclay, 'The meanings of the word Evolution in biology and their bearing on the Christian faith', *J. Trans. Vict. Inst.*, 78 (1946), 91-101.

<sup>2</sup> G. E. Barnes, 'Philosophical principles in the teaching of science and religion', *J. Trans. Vict. Inst.*, 88 (1956), 79-98.

<sup>3</sup> W. K. C. Guthrie, *The Greek Philosophers* (Methuen, 1950).

<sup>4</sup> G. Sarton, *History of Science* (O.U.P., 1953).

organs, of both plants and animals, but only those adapted to their environment, and therefore able to survive and reproduce, had persisted. Thus there had been a progressive replacement of imperfect forms by perfect forms as a result of the selection of suitable random combinations.<sup>1</sup>

A younger contemporary of Empedocles was Democritus (fifth and fourth centuries B.C.), a materialist, and father of the atomic theory. To him, gross structure and change were merely the manifestations of the combination and movements of atoms, of infinite number and variety of shape. All things, including life and mind, were properties of particular changing configurations of atoms, and were therefore the effects of materialistic causes. If purpose, plan, or will existed, they were effects and not causes of matter. There was thus no mind at work in the universe, and natural events could be regarded, therefore, as neither intentional nor accidental, but just necessary.<sup>2</sup>

Although Aristotle (third century B.C.) held Democritus in very high esteem, his own teleological views, derived from Plato, prevented him from accepting the materialistic metaphysics of Democritus. Whereas the 'material cause' of Democritus was the adequate and only cause, Aristotle's 'material cause' represented merely a potentiality which could be actualised only by the operation of three other causes, the formal, the efficient, and the final causes. Thus Aristotle rejected the concept of purely materialistic causation.

Aristotle's doctrine of the four causes logically required a divine plan to which the whole universe conformed. He therefore rejected the concept of randomness, held by Empedocles. Furthermore, as the 'forms' of organisms were eternally constant, there could be no transition from one to another. So he also rejected the evolutionary ideas of his predecessors.<sup>3</sup> Nevertheless, he constructed a scale of life, along which he arranged natural 'forms' from the least to the most perfect. It included, in order, inanimate objects, plants, sponges, sea anemones, bloodless animals (i.e. invertebrates), fishes, birds, oviparous quadrupeds (i.e. reptiles), viviparous quadrupeds (i.e. mammals), monkeys, and men.<sup>4</sup>

<sup>1</sup> H. S. Williams, *A History of Science*, vol. I (Harper, 1904).

<sup>2</sup> W. T. Sedgwick and H. W. Tyler, *A Short History of Science* (Macmillan, 1919).

<sup>3</sup> M. Clagett, *Greek Science in Antiquity* (Abelard-Schuman, 1957).

<sup>4</sup> Aristotle, *De Partibus Animalium*, English translation by W. Ogle (O.U.P., 1912).

Aristotle's philosophy of nature proved not only popular in his own times, but also very congenial to later Christian thought, and it eventually became incorporated, with modifications, into the official Thomist philosophy of the Roman Catholic church. Thus it retained its position of influence for two thousand years.

In particular, Aristotle bequeathed to western culture (a) an antipathy to purely materialistic causation, (b) the idea that randomness is incompatible with a divine plan, (c) an opposition to evolutionary theories, and (d) the concept of a scale of values in organisms, the *scala naturae*.<sup>1</sup>

Of these four attitudes, the first succumbed to the Renaissance, with its overthrow of authority, and development of the experimental approach. The success of Galileo in astronomy, Harvey,<sup>2</sup> Borelli,<sup>3</sup> and Perrault<sup>4</sup> in biology, and Newton in physics, finally established the value of the mechanistic attitude to causation, while the philosophical writings of Leibniz<sup>5</sup> demonstrated the compatibility of this attitude with the theism of Christianity.

The third of the above attitudes, opposition to evolutionary theories, began to wane a century ago, after the publication in 1859 of Darwin's book, *The Origin of Species*. Ideas of organic evolution had, of course, been in the air for a century before this, but most scientists, as well as philosophers and theologians, had not accepted them. Darwin, however, presented, not only a vast array of evidence for the fact of evolution, but also a satisfactory mechanistic hypothesis for its cause; and most scientists were within a few years won over to the support of his theory. Today, evolutionary theories have little opposition.

The other two attitudes derived from Aristotle have persisted until the present day. The antithesis of randomness and plan, or purpose, has been repeatedly invoked by both sides in the evolution controversy. At first, it was the theologians and metaphysicians who used it to whip the scientists; now, more often, it is the scientists who use it against Christian theology. Carter<sup>6</sup> quotes Annan as saying: "The real signifi-

<sup>1</sup> A. Rey, *L'Apogée de la Science Technique Grecque*, livre iv (Michel, 1946).

<sup>2</sup> W. Harvey, *De Motu Cordis et Sanguinis*, 1628, English translation by R. Willis (Dent, 1923).

<sup>3</sup> G. A. Borelli, *De Motu Animalium*, 1679.

<sup>4</sup> C. Perrault, *Essais de la Physique*, 1680.

<sup>5</sup> G. W. Leibniz, *Philosophical Writings of Leibniz*, English translation by M. Morris (Dent, 1934).

<sup>6</sup> G. S. Carter, *A Hundred Years of Evolution* (Sidgwick and Jackson, 1958), pp. 65-66.

cance of *The Origin of Species* lay in its apparent contradiction of orthodox metaphysics. Darwin introduced the idea that *chance* begets order. Fortuitous events, not planned or rational but fortuitous, result in a physical law; the process of natural selection achieved by minute accidental variations in the species, breaks the principle of internal determinism. . . . *The Origin of Species* made the world seem less, not more, rational, and the universe a creation of blind chance, not a "block-world" (in William James's phrase) created by an other-worldly Master Mind.<sup>1</sup> Simpson provides a modern example of this antithesis, when he writes: 'Man is the result of a purposeless and materialistic process that did not have him in mind. He was not planned.'<sup>2</sup>

The fourth of the above Aristotelian ideas, that of a scale of values, when combined with transmutationist<sup>3</sup> theories, gave rise to the concept of progress. There was no scientific evidence for believing that the evolutionary changes postulated were always from 'lower' to 'higher' forms, but what science could not supply speculative theology did. Bonnet (1720-93) was probably the earliest writer to make much of the idea of biological progress; and of him Nordenskiöld writes: 'One idea that occupies his mind . . . is the thought of the progressive development going on in nature. His firm conviction as to the wisdom of the Creator has made of him an incorrigible optimist; he is absolutely convinced that nature is advancing towards a high goal.'<sup>4</sup> Thus the *scala naturae* of Aristotle, a series of static forms, developed into Bonnet's *échelle des êtres naturels*, a dynamic series progressive with time.

Bonnet, of course, had no idea of a continuous evolutionary development—he was a catastrophist—and it was left to Lamarck (1744-1829), who quoted Bonnet,<sup>5</sup> to wed the concept of the *échelle des êtres* to that of a continuous and gradual evolution of organisms. The latter still conceived of evolution as following a single line (represented by the *échelle*), and it has been said that 'this unfortunate mistake was largely responsible for the rejection of Lamarck's whole theory'<sup>6</sup> of evolution.

<sup>1</sup> N. G. Annan, *Leslie Stephen* (1951).

<sup>2</sup> G. G. Simpson, *The Meaning of Evolution* (O.U.P., 1950), p. 334.

<sup>3</sup> Transmutationist, as defined by R. Hooykaas, 'The principle of uniformity in geology, biology, and theology', *J. Trans. Vict. Inst.*, 88 (1956), 105.

<sup>4</sup> E. Nordenskiöld, *The History of Biology* (Tudor Publishing Co., 1927).

<sup>5</sup> J. B. P. A. de M. de Lamarck, *Recherches sur l'Organisation des Corps Vivants*, 1802.

<sup>6</sup> T. Dobzhansky, *Evolution, Genetics, and Man* (Wiley, 1955).

At the end of Lamarck's life, Comte (1798-1857) was beginning to make known his *philosophie positive*<sup>1</sup> in which he developed the idea of 'social dynamics', a progressive evolution of human social systems. Comte's sociology laid the foundation of nineteenth-century liberalism, associated particularly with the names of Bentham, Buckle, J. S. Mill, and Spencer, all practical social reformers, so that the idea of progress ceased to be just an interesting speculation of the philosophers, and became a live and influential ideology amongst educated people. So the idea of progress was very much in the wind when Darwin's *Origin of Species* was published.

Darwin's work not only made the theory of evolution scientifically tenable, but it also provided the contemporary philosophy of progress with an apparent basis in scientific fact. In the theory of organic evolution, starting with the 'lowest' forms and leading to man, Herbert Spencer (1820-1903) saw a historical process which, by extrapolation, promised continuous human progress in the future. In Darwin's theory of natural selection he found, furthermore, a mechanistic explanation of biological progress. As a result of the 'survival of the fittest' (Spencer's own phrase), progress was not only possible but also inevitable. 'Progress', he declared, 'is not an accident, but a necessity'.<sup>2</sup> It was also universal, operating throughout the cosmic, organic, and social spheres. 'The law of organic progress', he wrote, 'is the law of all progress. Whether it be in the development of the Earth, in the development of Life upon its surface, in the development of Society, of Government, of Manufacture, of Commerce, of Language, Literature, Science, Art, this same evolution of the simple into the complex through successive differentiations holds throughout. From the earliest traceable cosmical changes down to the latest results of civilization, we shall find that the transformation of the homogeneous into the heterogeneous is that in which progress essentially consists.'<sup>3</sup> Thus, with Spencer, the idea of progress reached its zenith.

Since his time, the concept has been repeatedly attacked by both philosophers and scientists, and no biologist today could hold the naïve view that Spencer held of the inevitability and universality of progress. Nevertheless, the concept still persists, in various forms, in the works of contemporary biologists. Sometimes it is presented

<sup>1</sup> I. A. M. F. X. Comte, *Cours de Philosophie Positive* (Paris, 1830-42).

<sup>2</sup> H. Spencer, *Social Statics*, revised edn. 1892, p. 30.

<sup>3</sup> H. Spencer, *Progress, Its Law and Cause*, Essays, vol. 1, p. 10.

rather cautiously as a tentative interpretation of evolutionary history:<sup>1</sup> at other times it is stated as an objective fact, with ethical implications.<sup>2</sup> Sir Julian Huxley would even have us make it the basis of a new religion, Evolutionary Humanism.<sup>3</sup>

This has been a very rapid survey of two and a half millennia of biological thought; but I think sufficient has been said to show that two ideas, current in modern biological literature, (a) that the random features of evolution are incompatible with plan or purpose, and (b) that, despite this, organic evolution exhibits progress, have been derived historically, not from science, but from philosophical speculation. This, of course, does not necessarily invalidate them—other philosophical theories (e.g. the atomic theory) have later become incorporated as scientific truth—but it should cause us to enquire whether they are valid inductions from objective facts, and therefore justifiably included in scientific theory, or merely philosophical interpretations in terms of inadequate thought-forms of the past. It is to this enquiry that I now turn.

#### *Randomness in Evolution*

The word 'randomness' has two distinct connotations, a popular one and a technical scientific one. The former denies the *existence* of a plan; the latter denies the *appearance* of a plan: and it is important to differentiate between the two. They are logically independent.

Certain events may occur with such regularity that they look as if they are planned, and yet the circumstances may be such as to reveal to a knowledgeable observer that they are, in fact, unplanned. For example, a leaky joint in a piece of machinery may yield drips of oil just as regularly as the pistons of the machine turn a wheel. Yet the rotation of the wheel is planned, but the dripping of the oil obviously is not. On the other hand, things which appear to be unplanned may sometimes be discovered to be the result of design. There is, in fact, such a thing as planned randomness. A good example is afforded by some of Professor Graham Cannon's anatomical drawings. If one were to examine them with a hand lens, one would discover in certain areas a random distribution of ink dots. Yet Professor Cannon

<sup>1</sup> E.g. J. Z. Young, *The Life of Vertebrates* (O.U.P., 1950).

<sup>2</sup> E.g. J. S. Huxley, *Evolution, the Modern Synthesis* (Allen and Unwin, 1942); G. G. Simpson, *The Meaning of Evolution* (O.U.P., 1950).

<sup>3</sup> J. S. Huxley, *Evolution in Action* (Chatto and Windus, 1953), pp. 149-150.

has revealed<sup>1</sup> that he carefully places each dot in position so as to avoid all regularities, such as straight lines, that would break up the continuity of the area. So, whether events appear to be planned or unplanned is not, in itself, evidence for or against an actual plan.

Thus there are two types of randomness, for which two different types of evidence must be adduced. The popular concept can be arrived at only by some sort of metaphysical insight. Either one must know, from the circumstances, that there is no mind which could possibly plan or control, or else one must know that a potential controlling mind did not, in fact, do so. The latter knowledge could be gained in two ways: that mind could reveal that it played no part in the planning, or else one could discover that the objects or events under consideration did not conform with a plan which that mind has revealed as its own. But in either case there must be a self-revelation. So, before one can assert that certain events are random (in the popular sense), one must either be in a position to deny the existence of a planning mind or else have received a self-revelation of that mind. In both cases, the assertion will be a metaphysical one.

In contrast to this, the technical concept is based purely upon objective features. Thus, a series of events would be regarded as random if the study of a large number of them did not enable an observer to predict the characteristics of the next one.<sup>2</sup> Tossing a penny, for example, a thousand times would not enable an experimenter to predict which way the 1001st toss will fall—unless, of course, it happened to be a double-headed penny, which would remove the element of randomness entirely. The technical criterion of randomness is then a physical (i.e. objective) one, and it is without metaphysical implications. In fact, it would be very easy for a statistician to write down on paper a series of 'heads' and 'tails' in such an order that another statistician could not tell whether the series had been planned,

<sup>1</sup> H. G. Cannon, *A Method of Illustration for Zoological Papers* (Association of British Zoologists, 1936), pp. 14-16.

<sup>2</sup> D. Lack (*Evolutionary Theory and Christian Belief*, (Methuen, 1957) appears to use the word 'random' in contradistinction to either 'rigidly determined' (p. 67) or 'the result of natural laws' (p. 71). This seems to me a false antithesis. The series of letters, *odwtwvnpnaddf*, is an objectively random series, yet it is rigidly determined by taking the first letters of successive paragraphs in a recent *Reader's Digest* article. Similarly, the successive flights of a repeatedly tossed coin produce random 'heads' and 'tails', yet they are the result of natural laws. Science assumes as a prerequisite working hypothesis that all observable phenomena are the results of natural laws; yet it still recognises randomness.

or was a record of a series of tosses. To distinguish, therefore, between the two types of randomness I shall subsequently refer to them as 'metaphysical' and 'physical' randomness, respectively.

A study of evolution reveals several physically random features, among both the causes and the course of descent with modification. Hurst has summarised the random factors in the mechanism of evolution, as follows: 'the course of creative evolution in living nature has been shaped and guided in the higher organisms by at least four different vital processes, all of which in their action are random variables, namely, Mutation, Transmutation, Sex, and Natural Selection. The random mutations of genes and the chance transmutations of chromosomes appear, on experimental evidence, to be caused by atomic or other disturbances due to short wave radiations and other causes, producing at random every possible kind of hereditary variation. The function of sex, in the higher organisms, serves to combine and recombine at random and to fix these mutations and transmutations in different individual organisms, while the constant action of natural selection determines their survival and consequently the progressive adaptation of the mutants and transmutants to the changing conditions of life. Natural selection, being contingent, is locally random in its action according to the particular conditions of environment which happen to be present during the fertile life of the surviving organism, whether it be a gene, a protist, a plant, or an animal. Of the four prime factors concerned with the processes of creative evolution, natural selection has been the final arbiter, and though locally random and contingent in its action it has inevitably made for general progress in creative evolution.'<sup>1</sup>

These physically random factors in the mechanism of evolution lead to physically random features in the course of evolution.<sup>2</sup> Natural selection by continually changing environments leads to many random lines of adaptive radiation. Of these, only very few persist so as to take part in a trend towards a new phylogenetic group. Similarly, trends are themselves physically random in that a knowledge of the trends of several related groups does not enable one to predict the trend of yet another related group: neither does a knowledge of the trend of one group over a certain period of time enable one to predict the trend of the same group during a subsequent period of time.

<sup>1</sup> C. C. Hurst, *The Mechanism of Creative Evolution*, 2nd edn. (C.U.P., 1933), pp. 328-329.

<sup>2</sup> G. G. Simpson, *The Meaning of Evolution* (O.U.P., 1950), chap. xi.

These are all examples of physical randomness, but are they in any way evidence of metaphysical randomness? The atheist, the pantheist, or the deist could regard them as such, but then metaphysical randomness is already implied anyway by his own metaphysical presuppositions; and the facts of the history of life are irrelevant. The theist could, too, if he had any grounds for believing that the facts of evolution are incompatible with the character and will of God. This has, in fact, often been the basis of argument of many who have denied that evolution could be the result of the activity of the God of the Bible. Several incompatibilities have been alleged, but they fall into two categories, very clearly indicated by J. B. S. Haldane. He writes: 'There are two objections to this hypothesis' (that evolution has been guided by divine power). 'Most lines of descent end in extinction, and commonly the end is reached by a number of different lines evolving in parallel. This does not suggest the work of an intelligent designer, still less of an almighty one. But the moral objection is perhaps more serious. A very large number of originally free-living crustacea, worms, and so on, have evolved into parasites. In so doing they have lost, to a greater or less extent, their legs, eyes, and brains, and have become in many cases the source of considerable and prolonged pain to other animals and to man. If we are going to take an ethical point of view at all (and we must do so when discussing theological questions), we are, I think, bound to place the loss of faculties coupled with increased affliction of suffering in the same class as moral breakdown in a human being, which can often be traced to genetical causes. To put the matter in a more concrete way, Blake expressed some doubt whether God had made the tiger. But the tiger is in many ways an admirable animal. We have to ask whether God made the tapeworm. And it is questionable whether an affirmative answer fits in either with what we know about the process of evolution or what many of us believe about the moral perfection of God.'<sup>1</sup>

Now it may well be that the extinction of most evolutionary lines, or the evolution of the tapeworm, does not fit in with what many of us believe about God. But then it is so easy for 'man to create God in his own image', to use Voltaire's expression. To the Christian theist, however, the test is not 'what many of us believe', but what God has revealed in the Bible; and before physical randomness in evolution can be used as evidence of metaphysical randomness it must be shown

<sup>1</sup> J. B. S. Haldane, *The Causes of Evolution* (Longmans, Green and Co., 1932), p. 159.

that the facts of evolutionary history are incompatible with the intelligence and moral perfection of the omnipotent God of that Book.

To discuss this adequately would require two further papers, one on the Biblical teaching of God's immanence in His creation, and the other on the two distinct problems of pain and moral evil. But a few brief points may be made here. Firstly, the God of the Bible is Master of physical randomness. 'The lot is cast into the lap; but the whole disposing thereof is of the Lord.'<sup>1</sup> The apostles 'prayed, and said, Thou, Lord, which knowest the hearts of all men, show whether of these two Thou hast chosen. . . . And they gave forth their lots; and the lot fell upon Matthias.'<sup>2</sup> Many random events recorded in Holy Writ are regarded as miracles only because they occurred at highly significant moments when they obviously subserved the Divine will. Secondly, God's wisdom is such that His plans and purposes are normally incomprehensible to man, so that if the facts of evolutionary history do 'not suggest the work of an intelligent designer, still less of an almighty one', the lack is on man's side and not God's. 'For my thoughts are not your thoughts, neither are your ways my ways, saith the Lord. For as the heavens are higher than the earth, so are my ways higher than your ways, and my thoughts than your thoughts.'<sup>3</sup> And the believer who has learned to appreciate God's plan, albeit in a very limited measure, can only exclaim 'O the depth of the riches both of the wisdom and knowledge of God! How unsearchable are His judgments, and His ways past finding out!'<sup>4</sup> Thirdly, it may well be true, as Haldane suggests, that the consequences of parasitic infection fall into the same class as the consequences of human moral breakdown, but it is also true that the God of the Bible accepts responsibility Himself for just those same consequences;<sup>5</sup> and if He is responsible for human moral failure, I see no reason why He should not be responsible for the tapeworm's amoral activities. In fact, 'the noisome beast' and 'the pestilence' are two of God's 'four sore judgments' which he sends upon mankind.<sup>6</sup>

In conclusion, I would summarise this section, then, by saying that, although physical randomness is a very conspicuous feature of evolutionary history, this in itself is evidence neither for nor against a

<sup>1</sup> Proverbs xvi. 33.

<sup>2</sup> Acts i. 24-26.

<sup>3</sup> Isaiah lv. 8-9.

<sup>4</sup> Romans xi. 33.

<sup>5</sup> See, e.g. Exodus vii. 3, Judges ix. 23, 2 Samuel xxiv. 1 (cf. verse 10), Isaiah xlv. 7, and my comment, *J. Trans. Vict. Inst.*, 88 (1956), p. 183.

<sup>6</sup> Ezekiel xix. 21.

creatorial plan. Furthermore, although some random features in evolution are incompatible with some popular conceptions of divine activity, there appears to be no incompatibility between them and the activity of the God revealed in Scripture.

### *Progress in Evolution*

The word 'progress' is commonly used in two different senses in the literature on evolution, sometimes, one suspects, without the writer's awareness of the difference. The word often means 'progression', or 'movement', or 'extent of change' (just as one might speak of the 'progress' of a chemical reaction), but to use it in this sense is merely to single out for description one aspect which is necessarily implied in the biological concept of evolution, viz. that it is a process in time. The word, on the other hand, may be used of a movement of a particular type; a change from a worse to a better condition, a progression from a lower to a higher form; in other words, some sort of improvement. This is a feature which is not necessarily implied in the biological concept of descent with modification, nor obvious in the history of the course of evolution; and we must enquire what justification there is for arguing from 'progression' to 'progress' (in this latter sense). A number of different answers have been given.

Herbert Spencer argued that, as natural selection ensured the survival of the fittest, the only trend that organic and social evolution could exhibit is one of gradual progress towards perfection.<sup>1</sup> He regarded human social progress as the extension of the Lamarckian *échelle des êtres*, so the total process acquired an ethical significance. In fact, he regarded evolution as synonymous with progress.

This view could result only from faulty logic and inadequate knowledge of biological facts. Firstly, his logic failed him in his deduction from the 'survival of the fittest'. If we ask, in this context, 'what are the fittest?', the only answer that can be given is 'those that survive'. So his phrase 'survival of the fittest' becomes a tautology, 'survival of the survivors', and tells us nothing about the nature of those survivors. Secondly, he had no appreciation of the many types of evolutionary change that had occurred, and he thought that increasing complexity (i.e. increasing heterogeneity and increasing coherence) and increasing adaptation to environment comprised them

<sup>1</sup> H. Spencer, *Autobiography*, vol. 2 (1904), summarises the argument.

all. But, as T. H. Huxley<sup>1</sup> pointed out, the multiformity of evolutionary change is such that it would be impossible to find any one feature that was common to all evolutionary lines, and which could be regarded as the criterion of progress. If there has been increasing complexity in some groups, there has also been simplification in others; if there has been adaptive change, there has also been age-long stability; indeed almost every conceivable type of change has taken place, and no one today could identify evolution with progress, as did Spencer.

But, if evolution is not inevitably and universally progressive, are there any general trends, or even intra-phyletic trends manifest here and there, which may be regarded as progressive? Simpson<sup>2</sup> has surveyed the various affirmative answers that have been given to this question, and upon his survey I base the succeeding discussion.

There appears to be only one general trend that could be regarded as progressive. That is, to quote Simpson, 'a tendency for life to expand, to fill in all the available spaces in the livable environments, including those created by the process of that expansion itself. This is one possible sort of progress. Accepting it as such, it is the only one that the evidence warrants considering general in the course of evolution. It has been seen that even this, although general, is not invariable. The expansion of life has not been constant and there have been points where it has lost ground temporarily, at least. The general expansion may be considered in terms of the number of individual organisms, of the total bulk of living tissue, or of the gross turnover, metabolism, of substance and energy. It involves all three, and increase in any one is an aspect of progress in this broadest sense.'<sup>3</sup>

Although this statement begs two very interesting questions,<sup>4</sup> firstly as to what is a 'livable environment', and secondly as to what it means to 'fill' the available spaces in that environment, it is nevertheless a fair statement of this general trend in evolution. If, however, one applies this criterion of expansion to individual phyletic groups (as distinct from life as a whole), one finds that progress has been very variable in the past, although man at the present time is a very progressive animal. But is expansion a valid criterion of progress? Is it

<sup>1</sup> T. H. Huxley, *Evolution and Ethics*, Romanes Lecture, 1893. *Essays*, vol. ix: *Criticisms on the Origin of Species*, 1864; *Essays*, vol. ii: Macmillan.

<sup>2</sup> G. G. Simpson, *The Meaning of Evolution* chap. 15.

<sup>3</sup> G. G. Simpson, *The Meaning of Evolution*, pp. 243-244.

<sup>4</sup> One cannot say whether an environment is inhabitable until something inhabits it. Similarly, one cannot say whether an environment is fully occupied until it gains more occupants.

better to belong to a species or group which is numerous, or has a high rate of metabolism, than to one which is rare or metabolises slowly? If it is, then a few species of soil bacteria must be, by far, the best organisms in existence, for they are exceedingly numerous and are responsible for as much metabolic turnover as all the rest of the animals and plants put together. They thus satisfy two of Simpson's three criteria of expansion, and therefore ought to be highly progressive organisms. But I think a few moments' reflection will reveal that there is no scientific reason for regarding expansion as a good thing—it is ethically neutral.

Sir Julian Huxley has made much of the sequence of dominant groups as a means of establishing the concept of biological progress. His arguments have been presented in a large number of books, essays, and articles, both scientific and popular, over a period of many years.<sup>1</sup> He points out that the palaeontological record shows that there has been a succession of groups which biologists would agree were dominant. It is not easy to define 'dominant groups', but Simpson says that they are 'much more varied and abundant than others' at the time, while Huxley adds that they are characterised 'by a high degree of complexity for the epoch in which they lived'. Now if we compare dominant with non-dominant groups, or later dominant groups with earlier ones, we should find in both cases, Huxley argues, that the former show improvements over the latter, and these could be taken as criteria of progress. He says, 'the distinguishing characteristics of dominant groups all fall into one or other of two types—those making for greater control over the environment and those making for greater independence of changes in the environment. Thus advance in these respects may provisionally be taken as the criterion of biological progress.'<sup>2</sup>

In illustration of his argument, Huxley quotes the dominance sequence: trilobites, eurypterids, ostracoderms, placoderms, fishes, amphibians, reptiles, and, simultaneously, birds and mammals. In so doing, he is being highly selective, and, as Simpson points out, is bringing in other criteria, which are not wholly objective, in addition to that of dominance. To be completely objective one would have to include protozoa, molluscs, insects and teleost fishes, as well as birds and mammals, in the category of present-day dominant groups.

<sup>1</sup> E.g. J. S. Huxley, *Progress, Biological and Other*, in *Essays of a Biologist* (1923); *Evolution, the Modern Synthesis*, chap. 10.

<sup>2</sup> J. S. Huxley, *Evolution, the Modern Synthesis*, p. 562.

But even if one agrees to the use of selection (upon valid principles, of course), so as to produce a convincing dominance sequence, one must still raise a much more fundamental problem, and that is the validity of using dominance as a criterion of progress. To put the problem in the form of a question, why is it better to belong to a dominant group rather than to a non-dominant one, or to a later dominant group than an earlier one? I suggest that science provides no answer.

Several other criteria of progress have been postulated from time to time, and to deal with them all would extend this paper beyond reasonable limits, but I will briefly mention those which Simpson regards as having some validity and usefulness. They are (*a*) the successive development of new modes of life, (*b*) successive replacement of types within a given ecological niche, (*c*) improvement in adaptation, or increasing biological efficiency, in a given environment, (*d*) increasing adaptability, and (*e*) increasing control over the environment. These all require for their validation some sort of value judgment, for which there is no scientific justification. Criterion (*a*) assumes that it is better to follow a newer mode of life than an older one, (*b*) assumes that it is better to be a later occupant of an ecological niche than an earlier one. It is often argued that replacement of one type by another is evidence of the greater efficiency of the newcomer. This is not necessarily true, but if it were the case, it would lead to criterion (*c*). This raises the difficult problem of the assessment of biological efficiency, which presumably would have to be based upon such data as numbers, length of life, or metabolic rate, of individual organisms; and these, in turn, suggest further value judgments, e.g. that it is better for an organism to be one of many rather than one of a few, or that it is better to live for a longer than for a shorter while. Adaptability, involved in criterion (*d*), is of no value to an organism in a constant environment, but, should the environment change, it may permit survival which would otherwise be impossible. So criterion (*d*) assumes that survival of a group or individual is better than extinction. Lastly, criterion (*e*) is quite obviously ethically neutral. Control over the environment is of ethical significance only in relation to the use to which it is put. So unless one is prepared to see moral significance in animal behaviour, this also fails as a criterion of progress. Now we may feel very much in sympathy with some of the above value judgments, particularly when they are applied to human life, but that does not alter the fact that they are not scientifically determined.

I therefore conclude that the concept of progress is not a valid scientific induction from the facts of evolutionary history.

Huxley writes, 'It is, curiously enough, among the professional biologists that objectors to the notion of biological progress and to its corollary, the distinction of higher and lower forms of life, have chiefly been found. I say curiously enough, and yet to a dispassionate observer it is perhaps not so curious, but only one further instance of that common human failing, the inability to see woods because of the trees that compose them.'<sup>1</sup> There is another explanation, I suggest. May it not be that the professional biologist is more aware than the layman of the limitations of his own science?

Philosophers, of course, are agreed, and have repeatedly asserted, that ethical values cannot logically be derived from the objective data, or inductive inferences, of science; and, if they are right, the concept of biological progress is non-scientific. The foregoing arguments, then, merely exemplify this philosophical principle, but I think they still need stating in detail, when eminent biologists teach, as scientific facts, concepts which have no more scientific justification than had the older *scala naturae*, from which, historically, they have been derived.

### *Randomness and Progress in Human Evolution*

By extrapolation from the past into the future, attempts have been made, either to predict progress in the human race, or to lay down principles of conduct for ensuring it. The former is now a matter of past history; the latter a current intellectual exercise.

Spencer was, as has been mentioned, the major prophet of the inevitability of progress. In his view, man, as a species, would always continue to rise, despite anything that individual men or societies might do. Progress, he wrote, 'is not a thing within human control, but a beneficent necessity'.<sup>2</sup> Although he held this view before the publication of Darwin's *Origin of Species*—so it was not a deduction from the theory of natural selection—he nevertheless regarded that theory as affording valuable biological support for his view. Human social evolution was merely the extension of animal evolution.

<sup>1</sup> J. S. Huxley, *Progress, Biological and Other*, in *Essays of a Biologist* (Pelican Books), p. 22.

<sup>2</sup> H. Spencer, *Progress, Its Law and Cause*, Essays, vol. I.

His prediction of human progress, however, falls down for two reasons: firstly, because trends in animal evolution have been random, so that it is impossible to predict the future of any given group; and, secondly, because, even if progress had been a universal feature in the past, the mechanisms now operating most effectively in human social change are completely new ones, which, because of their speed, relegate the older factors to relative insignificance. T. H. Huxley realised this, when he said the oft-quoted words, 'ethical progress of society depends not on imitating the cosmic process, still less in running away from it, but in combating it'.<sup>1</sup> He probably over-stated his case in uttering these words (inasmuch as it may be argued that human ethics are themselves a late product of evolution), but I think none today would deny that those characters which ensured the survival of animals in the past are very different from those which are influencing human societies today. It is therefore impossible to predict human progress by extrapolation from the facts of animal evolution.

With the advent of man, a new type of evolution has commenced. This psycho-social evolution, to use Huxley's phrase,<sup>2</sup> depends upon the acquisition and communication of knowledge and skills, and it is so rapid a process that it has virtually superseded organic evolution in human history. So it could be that the new mechanism of change did, in fact, produce only one sort of trend, or alternatively one major trend; and if this had been maintained for sufficiently long, there would have been grounds for predicting the human future. I have, however, now moved into the province of the anthropologist, the archaeologist, and the historian, and here I am not qualified to judge; but I hazard the guess, from what little I know of the way in which civilisations have arisen and declined at different times and in different ethnic groups, that randomness is just as marked a feature in human history as it is in biological history.

This is not to deny the obvious fact that there has been a great increase in knowledge and its application (technology), particularly in the last three or four centuries, when it has become a major trend. Although this could be described as 'technological progress', it is progress only in the non-ethical sense of increase or development. In itself it is of no ethical value; only the purpose to which it is put

<sup>1</sup> T. H. Huxley, *Evolution and Ethics*, Romanes Lecture, 1893.

<sup>2</sup> J. S. Huxley, *The Emergence of Darwinism*, Darwin-Wallace Commemoration Lecture, 1958 (J. Linn. Soc., 1958, 1).

determines whether it is progress; and human purposes appear to be as random as human history.

Now if technological progress is to be transmuted into ethical progress, it is necessary that human purposes should cease to be random, and should be directed into good channels. The determination of these good channels has traditionally been a task of religion and philosophy; but some present-day biologists of repute, notably Huxley, Simpson, and Waddington, apparently discontented with what they call 'intuitive ethics', have attempted to establish ethical principles upon a scientific foundation. Waddington, for example, argues that 'ethical judgments are statements of the same kind—having, as the logicians would say, the same grammatical structure—as scientific statements'.<sup>1</sup> All three writers regard evolution as providing the necessary factual basis.

The various systems of 'evolutionary ethics' have been criticised by Lack,<sup>2</sup> and other criticisms of Waddington's arguments are to be found in the discussion in his own book.<sup>3</sup> Simpson,<sup>4</sup> too, criticises the systems of evolutionary ethics other than his own. So a few brief comments only must suffice here, in order to complete this survey of the concept of progress.

Huxley's ethics are well summarised in the following passage: 'When we look at evolution as a whole, we find, among the many directions which it has taken, one which is characterised by introducing the evolving world-stuff to progressively higher levels of organization and so to new possibilities of being, action, and experience. This direction has culminated in the attainment of a state where the world-stuff (now moulded into human shape) finds that it experiences some of the new possibilities as having value in and for themselves; and further that among these it assigns higher and lower degrees of value, the higher values being those which are more intrinsically or more permanently satisfying, or involve a greater degree of perfection. . . . We can say that this is the *most desirable* direction of evolution, and accordingly that our ethical standards must fit into its dynamic framework. In other words, it is ethically right to aim at whatever will promote the increasingly full realization of increasingly higher values.'<sup>5</sup>

<sup>1</sup> C. H. Waddington, *Science and Ethics* (Allen and Unwin, 1942), p. 10.

<sup>2</sup> D. Lack, *Evolutionary Theory and Christian Belief* (Methuen, 1957), chap. 9.

<sup>3</sup> Particularly relevant here is H. Dingle's contribution to the debate in *Science and Ethics*.

<sup>4</sup> G. G. Simpson, *The Meaning of Evolution*, chap. 18.

<sup>5</sup> J. S. Huxley, *Evolutionary Ethics*, Romanes Lecture, 1943, in T. H. and J. S. Huxley, *Evolution and Ethics*, 1893-1943 (Pilot Press Ltd., 1947).

This means, in simple language, that man must decide what possibilities of life are more perfect (thus begging one ethical question), or more satisfying (an emotional criterion); and then decide which of many evolutionary trends lead to these possibilities; and then, finding these trends most desirable (on what grounds? emotional?), decide to behave in a manner conducive to these trends. Surely it is not necessary at all to bring evolution into this ethic: the whole argument is a circuitous way of saying that man must decide what he likes, and act accordingly. Quite evidently, this is not a scientific argument.

Simpson, unlike Huxley, sees, not similarity, but contrast between pre-human and human evolution, with reference to ethical values. 'The old evolution', he writes, 'was and is essentially amoral.<sup>1</sup> The new evolution involves knowledge, including the knowledge of good and evil.'<sup>2</sup> So pre-human evolution is irrelevant to human ethics, which must therefore be based upon human evolution. Apart from this, his argument is similar in form to Huxley's. 'Man has risen', he says, 'not fallen. He can choose to develop his capacities as the highest animal and try to rise still farther, or he can choose otherwise. The choice is his responsibility, and his alone.'<sup>3</sup> This argument prompts a number of questions. Firstly, in what sense is man the highest animal? If he really means 'the highest animal', he is considering man in relation to pre-human evolution,<sup>4</sup> which he tells us in the same paragraph is amoral. But perhaps he means 'higher than the animals', because man alone knows good and evil; in which case he is making the *a priori* value judgment that it is better to know good and evil than to be amoral. Secondly, what does it mean for man to 'rise still farther'? How does he determine which direction of evolution is correctly described as 'rising', without making another *a priori* value judgment? Thirdly, what does it mean to speak of human 'responsibility', a word which he frequently uses without defining? 'Responsibility' surely implies an allegiance to some superordinate mind, code, or purpose; and yet in the same paragraph Simpson writes, 'Evolution

<sup>1</sup> It is difficult to reconcile this statement with his insistence on progress in animal evolution. He defines 'progress' as 'movement in a direction from (in some sense) worse to better, lower to higher, or imperfect to more nearly perfect' (op. cit. p. 241). To speak of worse and better implies a good, an ethical value.

<sup>2</sup> G. G. Simpson, *The Meaning of Evolution*, p. 311.

<sup>3</sup> G. G. Simpson, *The Meaning of Evolution*, p. 310.

<sup>4</sup> His argument earlier in his book (chap. 15) for regarding man as the highest animal is certainly based upon pre-human evolution.

has no purpose; man must supply this for himself'. So the essence of his argument is that man must decide in which direction he desires to develop, and then choose his behaviour accordingly. This is no more scientific, or based upon evolutionary fact, than Huxley's argument.

Lastly, Waddington repudiates any criteria external to the process of evolution, and maintains that that process itself affords the only possible ethic. He writes, 'we must accept the direction of evolution as good simply because it is good according to any realist definition of that concept. We defined ethical principles as actual psychological compulsions derived from the experience of the nature of society; we stated that the nature of society is such that, in general, it develops in a certain direction; then the ethical principles which mediate the motion in that direction are in fact those adopted by that society. Of course, the good is, as the anthropologists pointed out, different in different societies, and particular cultures which regress may be actuated by principles at variance with the cosmic process. But in the world as a whole, the real good cannot be other than that which has been effective, namely that which is exemplified in the course of evolution.'<sup>1</sup> So the function of science then, he argues, is 'the revelation of the nature, the character, and direction of the evolutionary process in the world as a whole, and the elucidation of the consequences, in relation to that direction, of various courses of human action'.<sup>2</sup>

One difficulty with Waddington's ethical principle is the problem of deciding just what is the 'direction of the evolutionary process in the world as a whole'. A further difficulty would be to demonstrate that the development of the Waddington type of ethics is a feature of that direction (it might well be a local and temporary aberration, like the regressive cultures that he mentions); and, until this is demonstrated, Waddington's system is logically self-destructive.

The various systems of evolutionary ethics are all concerned with *knowing* the good: there yet remains the problem of *choosing to do* the good. Until this problem is solved in the life of both individuals and society, I suggest that randomness of purpose will continue to be a very evident feature of human social development.

I conclude, therefore, that the theories of biological and psychosocial evolution offer no satisfactory grounds, either for the prediction of, or for the prescription for, human progress.

<sup>1</sup> C. H. Waddington, *Science and Ethics*, p. 18.

<sup>2</sup> C. H. Waddington, *Science and Ethics*, p. 19.

### Conclusions

We have seen that physical randomness is a prominent feature of both the mechanism and direction of evolution, but also that this physical randomness is not, as some would argue, evidence of meta-physical randomness. It is possible to believe (on non-scientific grounds, of course) that evolution is the outworking of purpose.

Owing to natural selection, those random mutations which are of adaptive significance accumulate to produce adaptive trends. These trends cannot, on scientific grounds alone, be regarded as progressive. Nevertheless, Huxley and Simpson have given an ethical value to such objective features as increasing complexity, increasing independence of changing environments, etc., with the result that they see evolution as, in parts, a progressive process.

It is difficult to know how Huxley and Simpson derive their values. They could be reading into the evolutionary record their own human values, as J. B. S. Haldane asserts. 'We must remember', he says, 'that when we speak of progress in Evolution we are already leaving the relatively firm ground of scientific objectivity for the shifting morass of human values'.<sup>1</sup> But both Huxley<sup>2</sup> and Simpson<sup>3</sup> deny this.

Huxley, furthermore, writes: 'there was progress before man ever appeared on the earth, and its reality would have been in no way impaired even if he had never come into being.'<sup>4</sup> Now progress involves a value judgment, as both Huxley and Simpson admit. But values (other than the ultimate abstractions: goodness, truth, and beauty, of certain ethical systems; or the will of God, of various religions) cannot exist apart from purpose: a thing is good only if it subserves the purpose for which it is intended.<sup>5</sup> So the concept of progress logically leads to the concept of purpose in evolution. Yet

<sup>1</sup> J. B. S. Haldane, *The Causes of Evolution*, p. 154.

<sup>2</sup> J. S. Huxley, *Evolution, the Modern Synthesis*, pp. 565-566.

<sup>3</sup> G. G. Simpson, *The Meaning of Evolution*, p. 242.

<sup>4</sup> J. S. Huxley, *Progress, Biological and Other*, in *Essays of a Biologist* (Pelican Books), p. 43.

<sup>5</sup> I find it difficult to understand what Huxley means when he speaks of 'possibilities as having value in and for themselves' in the passage quoted earlier in this paper. But I notice that he relates this to the human stage of evolution in contrast to the earlier stages. Nevertheless, I still wonder how man recognises possibilities as having value, apart from purpose.

the concept of purpose, apart from human purposes, both of these biologists repudiate.<sup>1</sup>

Thus, one can only conclude that these writers have constructed on the basis of the theory of evolution two philosophical theories which are mutually exclusive. The ethical theory of biological progress logically refutes the metaphysical theory of the absence of mind or purpose.

Waddington's ethics, if tenable, would avoid this difficulty. He argues that evolution is good, not because it conforms to external ethical standards, but because evolution itself has produced, by the interaction of society and the individual's Super-ego, the concept of the good. Without evolution of this sort, presumably there would be no 'good'.<sup>2</sup> Therefore evolution is good, although it has no purpose. But it could be equally well argued that evolution is bad or amoral, because, through the same interaction, it has also produced the concepts of the bad and the amoral, with no logical means of distinguishing between the categories so designated.

The thesis of this paper, however, is that, in reality, evolution, as studied by the method of empirical science, neither implies nor denies the existence of a controlling mind, and that in itself it is neither good nor bad, but amoral. In short, evolution is both metaphysically and ethically neutral.<sup>3</sup>

<sup>1</sup> J. S. Huxley, *Evolution, the Modern Synthesis*, pp. 576-577. G. G. Simpson, *The Meaning of Evolution*, pp. 344-345.

<sup>2</sup> This assumption appears to be implicit in Waddington's argument, but it cannot be substantiated. Quite obviously, it is impossible to perform a control experiment to test it. The Christian could argue that man's knowledge of the good is independent of the mechanism of his origin, but dependent upon his *spiritual* relation to his Creator.

<sup>3</sup> If this thesis can be maintained, it would be a good thing if biologists were to reconsider their use of such ethically-overtone words as 'higher', 'lower', 'advanced', and 'degenerate', which appear to be a cover for much vague thinking. I suspect that these words mean different things to different people, and different things in relation to different phyla: and they could well be replaced by words which relate to purely objective characters.

ERNEST WHITE, M.B., B.S.

## Sigmund Freud. Life and Work\*

It was Thomas Carlyle who said: 'Let men beware when God lets loose a great thinker in the world.' Great and original thinkers are rare, and generations may pass away without one appearing. The nineteenth century was unusually rich in the outstanding genius it produced in the realm of literature, and science, and medicine. One can choose, almost at random, a list of great men whose work still influences thought, and will continue to do so for a long while to come. Darwin, Huxley, Spencer, Wallace, in biology; Pasteur, Koch, and Lister in medicine; William James in psychology; Dickens, Thackeray, Robert Browning, Emerson, Tennyson, Carlyle, Ruskin in the realm of literature and poetry, are a few of the stars which illuminated the nineteenth-century firmament. Last, but by no means least, of these great names, comes that of Sigmund Freud, who did much of his great work in the last decade of the last century, and continued it well into this. It may be said without exaggeration that he revolutionised psychology. Many of the technical words he used have become part and parcel of our common language; complex, repression, sublimation, the Oedipus complex, narcissism, inhibition, rationalisation are a few of the words which have entered into the language of the ordinary man. Furthermore, however much later schools of psychology and psychiatry may have diverged from Freud's original teaching, it is difficult to find any modern textbook on these subjects which does not make use of some of his ideas, often without acknowledging, and perhaps without realising, the source from which they sprang. When Ernest Jones set out to write an account of the life and work of Freud, he was confronted with an immense and difficult task. It may be said of Freud, what is equally true of some other great men, that his work was so tremendous in its scope and in the genius that it displayed, that the man himself, the events of his career, the details of his life, fall into comparative insignificance beside the richness, originality and variety of his thought.

It was a task of great difficulty to interweave an account of the outer life of the man with the vast scope of his teaching, so that the result should be both an exposition of psycho-analytical doctrine and a story

\* *Sigmund Freud: Life and Work*. By ERNEST JONES (3 Vols), Hogarth Press.

of the life of a man who founded it. This intertwining of themes has been accomplished with great skill by the author, but with all his skill he found himself still obliged to defer some of Freud's teaching to the last part of the third volume, when, having completed the story of Freud's life, he writes several further chapters expounding his views on several subjects allied to his main discoveries in the realm of the mind. There are chapters on Metapsychology, lay Analysis, Biology, Anthropology, Sociology, Religion, Art, and Literature, on each of which subjects Freud had exercised his wonderfully versatile mind.

Ernest Jones has accomplished his formidable task with great skill and insight. He writes in good plain English, and sustains the interest of the reader from start to finish. He was well equipped for his task by a personal friendship with Freud of many years' duration. He was amongst the first of the small group of disciples who gathered round Freud in Vienna, and absorbed his doctrines. He was a member of the Psycho-analytical Society which met at regular intervals in Vienna, and he was the first British doctor to practise psycho-analysis in England. He kept in touch with Freud by correspondence and by visits, right up to the time of Freud's death. When Freud's earlier followers, Adler, Jung, and Stekel, broke away from Freud and finally separated from him, Jones remained faithful to the end.

Freud was born of Jewish parents at Freiberg in Moravia in 1856. When he was four years old the family moved to Vienna, where Freud lived and practised until his old age. Under the threat of the Nazi regime, he came over to England before the Second World War, and died in London in 1939.

After a brilliant career at school in Vienna, where he excelled in languages, he entered the University of Vienna at the age of seventeen as a medical student. His student days were longer than the average. He studied for eight years before qualifying, not from any lack of ability or hard work, but because he spent his extra time in the Physiological Department studying the minute anatomy of the nervous system. After qualifying he held various minor hospital posts, and continued his researches, and finally started private practice as a neurologist. It was in this speciality that he first made his name by the publication of several papers on the structure of the brain and spinal cord, and on paralysis in children.

Many of the patients who came to Freud for treatment were not suffering from any organic disease of the nervous system, but were ill from emotional and mental causes, psycho-neuroses, as we now

label them. Freud soon realised that little was known about the causes and treatment of these disorders, and he determined to make further investigations. He went to Paris where a famous psychiatrist, Charcot, gave lectures and demonstrations in mental and nervous diseases. Charcot practised hypnotism, and for a long period Freud used this method with his own patients. For various reasons, he abandoned this method, and gradually discovered an entirely new technique for dealing with neurosis, which he called psycho-analysis. With great courage and perseverance he set out to analyse his own mind—perhaps the first human being ever to do this in the same way. It was a painful, long and difficult process, but he emerged from it a changed man.

Thereafter he pursued his researches into the structure and functions of the mind, and for the rest of his life gave his whole energies to this field of research.

At the height of his career he showed an exceptional capacity for work. At one period he rose at seven o'clock, had sessions from eight until one, then lunch and a walk. He started work again at three, and was in continuous session with patients until nine in the evening. Each patient was interviewed for fifty-five minutes, with a five-minute interval between each. After supper he started work again, going over his day's work and writing essays and books, and finally retired to bed at one in the morning, or after.

He wrote a large number of books and essays, in addition to his clinical work. He gave lectures, and attended meetings of the psycho-analytical society in Vienna.

During the last sixteen years of his life he experienced a great deal of suffering. Cancer affected first his palate, then his upper jaw. He underwent a severe operation for removal of his upper jaw, and thereafter had to wear an artificial palate which caused him a great deal of trouble. He was obliged to undergo a long series of operations for the rest of his life, for repeated recurrences of the growth; but in spite of all this he continued working until within six months of his death. He died at eighty-three, an exile in England.

He married and had six children, and he was a good father and husband. He once said he did not know why he was so moral in his life, but he never wanted to be otherwise.

It is not possible in a short review to attempt even a summary of the extensive outcome of his fertile genius. He revolutionised psychological theory. Up to his time psychology had advanced along two main lines. First of all the Associationist school, of which the last, and perhaps the

greatest exponent, was William James, the American psychologist. The other line of development was along experimental channels, and was more physiological than psychological. Both schools of research contributed a great deal of knowledge to the understanding of the mind, and experimental psychology still occupies a large place in the field of research.

Broadly speaking, the value of Freud's contribution lay in the vitalising of psychology. The older school of association of ideas revealed a great deal about the structure of the mind, but could give no explanation of the forces and motives which lay behind mental processes. To adopt a simile from the petrol engine, one might liken the older psychology to a description of the various parts of an engine after it had been taken to pieces, but no one knew how it worked because the electric spark and the explosions of petrol gas in the cylinders were not known. The old psychology was static. The new psychology of Freud was dynamic. He discovered the secret of the spark and the explosive gases. In the light of Freud's discoveries, the mind became alive.

Unfortunately the word Psycho-analysis has an ambiguous meaning. In its primary meaning, it denoted a method of exploring the mind, but when Freud and his followers built up a system of theory founded upon their discoveries, a body of doctrine accumulated, and this also was called Psycho-analysis. Any psychiatrist may employ the method of analysis described by Freud, without necessarily subscribing to all his doctrines. How far his doctrines will bear the test of time and further research, the passing of the years will show. A great amount of research continues, and Freud himself never considered or claimed that his findings were final. He took a very humble attitude toward his own theories and said that he was but showing others the way to proceed.

In his later years Freud turned his thoughts to religion. In a series of essays and books, amongst which were *Totem and Taboo*, *The Future of an Illusion*, *Civilisation and its Discontents* and his last major work, *Moses and Monotheism*, he attempts to interpret religion in the light of psycho-analysis. In his earlier years he had read the Old Testament, but he did not believe in the reality of God, and questioned the historicity of the Gospels and of Jesus.

Whilst admitting that religion had played an important part in the development of civilisation, and in the lives of individuals, he maintained that the idea of God was an illusion founded on childish wishes.

He expressed the belief that with the advance of scientific knowledge, religious beliefs would be discarded because they would be no longer necessary. They had helped man in his onward march, but would ultimately be cast aside as worn out garments which had served their purpose.

In reading his ideas about religion, one is tempted to conclude that, with all his learning and sincerity, he had never seriously studied, and still less understood, the Christian faith. The religion he writes about is not the religion of a mature and well-taught Christian. It more resembles a bogey which he set up in his own imagination, only to shy things at it and knock it down. In *Totem and Taboo*, and in *Moses and Monotheism*, much of what he writes is the product of his own fantasy, and has no basis in fact or in history.

One is surprised to discover in a man of undoubtedly supreme genius such a distorted view of the Christian doctrine. It brings to mind the words of St Paul, 'But, and if our Gospel is veiled, it is veiled in them that are perishing; in whom the god of this world hath blinded the minds of the unbelieving'.

Unfortunately, because of his great genius and his world-wide fame, his views about religion would influence a far wider circle than that of his immediate followers. It should be remembered that specialised knowledge in one direction does not necessarily qualify a man to speak with authority on subjects outside his own sphere of investigation. Freud's views on religion are not any more authoritative than those of any other intelligent person, and certainly of less weight than the views of those who devote their lives to the study of the Bible and the Christian religion.

In conclusion, it should be said that Ernest Jones, by his comprehensive and well-documented life of Freud, and by the lucid account of Freud's teaching, has rendered a great service to all who are interested in psychology, whether they be psychiatrists, psychologists, or intelligent people in any walk of life who are interested in the manifestation of genius. This book will no doubt become a classic in the history and literature of modern psychology.

## REVIEWS

*More Light on the Dead Sea Scrolls.* By MILLAR BURROWS. Secker & Warburg. 35s.

*Aspects of the Dead Sea Scrolls.* Edited by C. RABIN and Y. YADIN. Magnes Press, Jerusalem, Israel. 40s.

*The Historical Background of the Dead Sea Scrolls.* By C. ROTH. Blackwell, Oxford. 10s. 6d.

Amid the flood of books on the Scrolls, which shows no sign of abating, these three are worthy of special attention.

An earlier book by Professor Burrows, *The Dead Sea Scrolls* (1955), was widely acclaimed as the most comprehensive, readable and trustworthy introduction to the subject for the non-specialist. In the judgment of most of its reviewers it had only one defect: it lacked an index. The author defended himself in advance against this criticism by saying that an index would have increased the scale of the book unduly; but we are glad that he has had second thoughts on the matter, for the present book, which is a worthy sequel to the earlier one, has an index which serves for its predecessor as well as for itself.

The story of the discoveries is brought up to date in this new volume. The earlier volume contained translations of the most significant texts which had appeared to date; further translations are provided in this volume, including translations of the parts so far published of the *Genesis Apocryphon*, of the *Rule of the Congregation*, of the 'testimony' document from Cave 4, and several fragmentary commentaries. There are twelve pages of bibliography, supplementing the bibliography given in the earlier volume.

Professor Burrows reviews the most significant recent lines of interpretation of the Qumran material, and deals in detail with some of the issues which have been brought most before the public eye since the Scrolls became front-page news. The reader who is biblically literate (even if he makes no claim to be a specialist) may feel some impatience at the amount of space devoted to the demolition of certain theories whose flimsiness he regards as self-evident; but Professor Burrows is not writing only for him but for other interested readers who have been bombarded with contradictory accounts of the Scrolls and their meaning and do not know what to believe. For them he expounds the subject patiently and objectively, considering the light which the Scrolls shed on Christian beginnings and biblical studies, and describing the history, beliefs and organisation of the Qumran sect. He is not dogmatic in a field where dogma is out of place, and has given us a book which, like its predecessor, can be recommended to everyone without reserve.

*Aspects of the Dead Sea Scrolls* is Volume IV of the series *Scripta Hierosolymitana*, and is dedicated to the memory of the late E. L. Sukenik. In it ten Israeli scholars deal (in English) with various branches of the study of the Qumran texts. One of the contributions, Dr Yigael Yadin's study of 'The Dead Sea Scrolls and the Epistle to the Hebrews', was noted briefly in our presidential address for 1958 (see FAITH AND THOUGHT, 90 (1958), 99 f.). A

number of the articles deal with linguistic and palaeographical aspects of the Scrolls. M. H. Segal discusses the date of the War Scroll, which he places in the reign of John Hyrcanus (nearly a century earlier than Yadin's dating of it). S. Talmon has a highly important paper on the Qumran calendar, a subject on which he has already made himself an expert. Jacob Licht analyses the doctrine of the two spirits in the Manual of Discipline, and finds an exposition of dualistic principles within a predestinarian framework. But of all the articles none is (in this reviewer's opinion) so important as David Flusser's. He examines the relation between the Qumran sect and pre-Pauline Christianity, and discovers points of contact too numerous and too significant to be set down to mere coincidence. He does, however, take adequate note of the divergences: 'the theological structure of the Sect was taken apart and the stones re-used by early Christian thinkers to build a new and different house. Much other material also went into the construction of this new and larger edifice: both stones taken from other ancient houses (Greek and Jewish) and stones hewn out of truly original unprecedented Christian religious experience. The material was not only collected, but fused, refashioned and enriched by the impact of the personality and teaching of Jesus and the tremendous creative forces unleashed by the new faith. The one important instance is the Christology of the new religion, which has no true parallel. Therefore, research on the Dead Sea Scrolls will never replace the study of Christian origins, but it will help us to understand some important aspects of early Christianity.' When the essential *novum* in Christianity is so fully recognised, research into the relationship between the Qumran sect and Christian beginnings promises to be excitingly fruitful.

Dr Cecil Roth has publicised his interpretation of the Scrolls in a number of quarters before producing his book on their historical background. Briefly, he identifies the Qumran sect with the party of the Zealots, and the Teacher of Righteousness either with their leader Menahem, son of Judas of Galilee, or with his kinsman and successor as party-leader, Eleazar son of Jair. Josephus (*War*, ii. 433 ff.) tells us how Menahem's attempt to seize power in Jerusalem in the autumn of A.D. 66, soon after the outbreak of the revolt against Rome, was frustrated by the captain of the temple, Eleazar, by whom he was captured and put to death. Dr Roth finds a reference to this occasion in the Habakkuk commentary from Qumran Cave 1, where the Wicked Priest is said to have burst in upon the Teacher of Righteousness and his followers while they were celebrating the day of atonement (evidently according to a different calendar from that observed by the Wicked Priest).

Attractive as this interpretation is, it is beset with serious difficulties, chief of which is the palaeographical evidence. If the palaeographical evidence shows that the manuscripts relating to the Teacher of Righteousness and the Wicked Priest are several decades earlier than A.D. 66, the implications for Dr Roth's view are evident. Besides, Dr Roth will have to pay more attention to the Zadokite work. He takes the Damascus exile, mentioned in that work, quite literally, and suggests tentatively that it may be dated between 4 B.C. and A.D. 6, between the first and second rising led by Menahem's father Judas. But, according to the Zadokite work, the Teacher of Righteousness was to all intents and purposes the founder of the sect, and he was no longer alive when

that work was composed. Menahem was certainly not the founder of the Zealot party, and if the Zadokite exile to Damascus took place between 4 B.C. and A.D. 6, the Zadokite work must have antedated Menahem's death by many years. Perhaps Dr Roth distinguishes the Teacher of Righteousness in the Zadokite work from the Teacher of Righteousness in the Qumran commentaries; in that case, one wonders if he would identify the Teacher in the Zadokite work with Judas, or even with Judas's father Hezekiah, executed by Herod in 46 B.C. But again the palaeographical difficulty crops up: we are now told that fragments of the Zadokite work found at Qumran go back to the second quarter of the first century B.C.

Dr Roth plainly has not ceased to think actively about the problems raised by his interpretation of the Scrolls and their background, and he will no doubt have more of interest to say on the subject. He has certainly given pause to some who have been too prone to repeat the statements of others, without inquiring closely enough into the basis for these statements.

F. F. BRUCE

*Illustrations from Biblical Archaeology.* By DONALD J. WISEMAN. Tyndale Press. 12s. 6d.

Mr Wiseman, a member of our Council, needs no introduction to the Victoria Institute. From his headquarters in the Department of Western Asiatic Antiquities in the British Museum he has issued volume after volume of studies in cuneiform literature which have placed the world of Near Eastern learning heavily in his debt. By the present volume he has greatly extended the range of his debtors, for this is a work in which the fruits of his expert labours are made available to Bible students in general.

*Illustrations from Biblical Archaeology* is a volume of unusual format: the pages are 6 inches high by 9 inches wide. But this format is particularly suitable for such a work. There are 117 plates illustrating biblical archaeology from antediluvian days to Roman imperial times. Accompanying these there is a continuous account of the archaeological record, divided into seven chapters: (1) The Dawn of Civilization; (2) The Patriarchal Age; (3) Egypt and the Exodus; (4) In the Days of the Kings; (5) The Exile and After; (6) In New Testament Times; (7) Methods and Results.

Mr Wiseman writes here for the student and teacher of biblical history, literature and theology, not for the specialist in Near Eastern languages and literatures. But he writes with all the authority of one who is himself a specialist; his contributions to Assyriology in particular have established for him a world-wide reputation which is as high as it is well-deserved. The reader of this work may therefore have every confidence in the trustworthiness of the material which is presented to him here—and that, unfortunately, cannot always be said about popular books on biblical archaeology. And not only is the material trustworthy; it is right up to date. Mr Wiseman's own studies and his contacts

with colleagues in other Near Eastern fields give him access to the latest news before it becomes general property.

All sorts of interesting information may be found as the pages are turned over. Here is a reference to a Sumerian text describing the special creation of woman under the name *Nin. ti*, 'a Sumerian expression which can be equally translated "the lady of the rib" and "the lady who makes live" which recalls Eve, "the mother of all living", fashioned from Adam's rib' (p. 9). Jericho's 'fallen walls, once thought by Garstang to represent the destruction of the city by Joshua in 1407 B.C., are now known to have been part of the fortification of the city three hundred years earlier' (p. 46). The fall of Joshua's Jericho is probably to be dated at the time when so many other Canaanite cities show signs of sudden destruction at the end of the Bronze Age. 'At Lachish (Tell ed-Duweir) the widespread destruction of the period is further marked by an inscribed sherd dated in the early reign of Merneptah' (p. 46). The Exodus is dated under Rameses II (1301-1234 B.C.), the greatest king of Dynasty XIX, builder of Pithom and Ra'amses. 'No object of the preceding Dynasty XVIII has been found at either site during a series of excavations and this corroborates the dating of Exodus i. 11 in the reign of Rameses II' (p. 43). On the area and population of Nineveh, according to Jonah iii. 3; iv. 11, we are told that an 'inscription from Nimrud, twenty-two miles to the south, shows that about 60,000 people were housed within its walls, measuring four and a quarter miles in circuit'; it appears, then, that 'Jonah's claim is not so anomalous as has been supposed' (pp. 52 f.).

There are some wise words in the last chapter on the proper use to be made of archaeology in Bible study. 'Scientific archaeological research in Bible lands is a comparatively recent development. Many promising sites are still unsearched and much remains to be studied and published. If progress is to be maintained in biblical archaeology as a scientific study great care is needed, both in the selection of facts from archaeology as a whole, and in the integration of the evidence with the proved results of Old Testament scholarship. For lack of this, much well-intentioned effort to "prove the truth of the Bible" is rightly criticised' (p. 102).

There is a valuable bibliography and a general index.

For the following list of errata we are indebted to the author: p. 14, fig. 11, read 'later (upper) levels'; p. 17, l. 1, read 'half a millennium or more' for 'half a century or more'; p. 45, read 'Geb' for 'Seb'; p. 55, fig. 49, read 'XXIIInd Dynasty' for 'XIIth Dynasty'; p. 56, l. 3, read '2,000 chariots' for '200 chariots'; p. 59, l. 3, read 'Pekah was replaced by Hoshea'; p. 64, fig. 58, read 'Kawa' for 'Karnak'; p. 81, fig. 78, read 'home town' for 'birthplace'; p. 83, fig. 80, read 'Nero (A.D. 54-68)'.

F. F. BRUCE

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