

DARWIN AND GENESIS¹

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OPSOMMING

In hierdie artikel word 'n poging aangewend om die konflik tussen Darwin se teorie van evolusie en die Christelike leerstelling van 'n Goddelike skepping uit die weg te ruim. Om die konflik goed te verstaan, word 'n kort uiteensetting gegee van die wyse waarop Christene die implikasies van die teorie van evolusie vir hul leerstelling van 'n Goddelike skepping ingesien het. Die diverse reaksies van teoloë hierop sal kortliks geskets word, waarna 'n analise van die redes vir hierdie konflik verskaf sal word, gebaseer op 'n leidraad van Hans Küng, 'n Duitse teoloog. Die standpunt sal beredeneer word dat dit 'n spesifieke interpretasie van die Christendom was, gerugsteun deur 'n filosofies-biologiese teorie, wat verdedig is en nie die sentrale aspekte van die Christendom self nie. Laastens sal gevra word of die konflik uit die weg geruim kan word en die positiewe antwoord wat hierop gegee word, stel dat 'n korrekte interpretasie van die Bybelse skeppingsleer 'n teorie van evolusie kan akkommodeer wat geregverdigde aansprake op wetenskaplike geldigheid maak.

Darwin's theory of evolution had far-reaching implications for the views on creation that the Christians of the 19th century believed in. Ever since the publication of his book *On the Origin of Species by means of Natural Selection*, Darwin's views on the origin of life on earth were seen as controversial and they generated intense

¹ This article originally formed part of my unpublished M.A. dissertation with the title *Van teologiese oorheersing tot wetenskaplike outonomie - 'n filosofiese ontleding van die historiese verloop van die debat tussen Christelike geloof en wetenskap*. Stellenbosch, 1984.

and emotional discussions and debates (Bernal, 1969:556). The reason for this was the sensitive nature of the issues he touched on - issues such as God's involvement with nature, the nature of man and his relation to the animal kingdom and the factual truth of certain Biblical passages formed important aspects of Christian doctrine that Darwin's theory of evolution now questioned. In order to provide insight into the conflict between Darwin's theory of evolution and the Christian doctrine of creation (and other related matters) a short exposition will be given of the way in which the implications of the theory of evolution for the Christian doctrine of creation were understood. The diverse reactions of Christian theologians will be briefly outlined and then an analysis of the reasons for the conflict will be given. Finally the question whether this conflict can be resolved will be posed and responded to.

Darwin's theory versus the Christian view

The Christians of the 19th century quickly realised the implications that Darwin's theory of evolution had for their traditional doctrine of divine creation. The most important of these implications was the fact that the Biblical account of creation was contradicted by the seemingly scientifically proven theory of evolution. There were several other important implications besides this one. Instead of the generally accepted Aristotelian-Christian view that God had created all species distinct from each other in His original deed of creation and that He gave man a special position in creation because He created man in His own likeness, there now was a theory that explained the origin of all species, including man, without any reference to God - but with full reference to natural forces that could form new forms of life in the course of long processes of development. Instead of the idea that the adaptation of plants and animals was due to God's brilliant design, it was now asserted that this adaptation could best be explained by means of the process of natural selection wherein no preconceived design, plan or end played any role - it is rather by chance that things develop. Instead of man's uniqueness in creation because of his origin as a creature according to God's image, there was now an emphasis on man's humble origin as a member of the animal kingdom and on the similarities and continuity between man and the other animals. Instead of the emphasis on man's special abilities created by God - such as intelligence and a sense of morality - that place

man in a special relationship to God and that separate man qualitatively from the animal kingdom, there was now an explanation of these abilities as instruments that had developed through the process of evolution as a means to assist man in his adaptation to his environment. Instead of the authority of biblical passages there was now an emphasis on the forceful reasoning that can be done on the grounds of empirical evidence in support of scientific theories.

Reactions

If the implications of the theory of evolution are understood as described above, it is understandable why there have been such diverse reactions to it. Durant (1985:18) calls these reactions "extremely mixed". The Christian theologians had to try to find a way of living with a theory that seemingly endangered the central doctrines of their faith.

Broadly speaking three reactions can be distinguished.

- The first was the reaction of conservative theologians that defended the traditional biblical beliefs passionately (Küng, 1978:379) and mostly "rejected Darwin's arguments outright" (Durant, 1985:18). This defence of the truth of the biblical account of creation either altered the theory of evolution in several ways to make it fit into the biblical account of creation or suggested new ways of interpreting the Bible that would make some room for the new scientific theory, e.g. the word 'day' in Genesis 1 might be interpreted as designation a longer period of time. In general the conservative theologians refused to accept evolution, because they did not like the atheistic implications they detected in this new theory (Dillenberger, 1960:241-244). They thus rejected the theory of evolution because it endangered traditional Christian views on God's role in creation, the uniqueness of man and the truth of the biblical account of creation.
- The second reaction to the theory of evolution was that of the modernistic theologians. While they enthusiastically embraced the theory of evolution, they also deviated substantially from the tradi-

tional interpretation of key elements of Christian doctrine (Küng, 1978:379 and Barbour, 1966:101). In their attempt to accommodate the theory of evolution they were in danger of abandoning very important aspects of Christian doctrine. This is illustrated in the way they viewed the Bible not as God's revelation to man, but as a result of the writers' search for God. In the light of this they saw the Biblical passages concerning creation as "a poetic expression of religious convictions concerning man's dependence on God and the orderliness and the goodness of the world" (Barbour, 1966:102). Their attempt to interpret and accommodate Christian doctrines within the boundaries of what they regarded as the infallible truth of the theory of evolution led to views on God and man in which characteristic Christian elements were absent. The principal attribute of God, for example, was seen as "immanence in nature, rather than transcendence" (Barbour, 1966: 102) and salvation was attained not by supernatural aid or "any basic orientation of the self" (Barbour, 1966:103) but through "increased knowledge and noble goals" (Barbour, 1966:102). In this case the theory of evolution functioned as a criterion to determine which aspects of traditional Christian doctrine were still relevant for their time.

- The third reaction was an attempt by so-called liberal theologians to take a more moderate stance between the viewpoints of conservative and modernistic theologians (Dillenberger, 1960:252 and Barbour, 1966:104). Like the modernistic theologians they welcomed new scientific knowledge, but they reacted against the way in which modernistic theologians abandoned certain aspects of Christian doctrine. In this regard the liberal theologians were closer to the conservative theologians who tried to secure the traditional interpretation of Christian doctrine. Liberal theology originated largely from a new study of the Bible where the focus was especially on the contribution of the writers in the coming into being of the Bible (Heron, 1980:51-59). A new view of the Bible emerged in which the historical context of the various authors of the Bible was emphasized and these writers themselves were seen "as very human figures who shared the assumptions of their day and incorporated considerable legendary material in their writings" (Barbour, 1966:105). With this view of the Bible they were able to reduce the tension between the

theory of evolution and the Biblical account of creation. No longer did they give a literal interpretation of the Biblical account of creation and they accepted a large part of the theory of evolution. A further relevant aspect of liberal theology is the foundation of Christianity in man's religious experience (Heron, 1980:23) and not in God's revelation or natural theology. This new foundation, taken together with the high priority accorded to the ethical element in man (Heron, 1980:32 and Barbour, 1966:107), enabled the liberal theologians to emphasize "man's spiritual supremacy over nature" (Dillenberger, 1960:252). Thus, while they accepted a major part of the evolutionary view of man they succeeded in enriching it to the extent that they could defend man's religious nature and his special status amongst living beings. By means of this new anthropology they hoped to safeguard the fundamental truths of Christianity.

A new perspective

It is questionable whether the theological reactions, as briefly outlined above, succeeded in solving the conflict between the Christian doctrine of creation and the theory of evolution satisfactorily. Is it really necessary that the views of a major scientist like Darwin, who brought about a revolution in biology so that he could justifiably be called a second Copernicus, should once again generate controversy to such an extent with regard to religion that he should be condemned like a second Galileo (Küng, 1978:377)? And does it really count as the best solution to try to harmonize the Christian doctrine of creation with the theory of evolution by adapting them to each other? Is it not possible that with the aid of hindsight we could look afresh at this conflict today, with a new perspective?

Hand Küng provides a clue that could lead to such a new perspective (Küng, 1978:378). He points out that the debate between the Christian doctrine of creation and the theory of evolution was mostly conducted in a way in which the biblical account of creation was identified with a particular scientific theory. This scientific theory was Aristotle's view of nature as it had been adapted especially by Thomas Aquinas to fit in with Christian doctrines. This clue that Küng provides thus leads one to ask whether the conservative theologians defended the biblical doctrine

of creation or whether they defended a certain interpretation thereof based on Aristotelian scientific and philosophical assumptions. Or, one may ask, was the battle against one specific scientific theory fought with the assistance of another scientific theory that fitted better into a literal interpretation of certain Biblical passages? Could one thus say that the conflict was "tegen het verderfelijke 'evolutionisme', voor een met bijbel en traditie overeenstemmend 'fixisme'" (Küng, 1978:377)? Küng gives a valuable insight into one of the factors that endangered the relation between Christianity and science in this specific case, viz. the inability to disentangle and clearly distinguish the various issues involved in this conflict. Therefore it now becomes essential to ask (i) what the original intention of the biblical account of creation was and how it must be interpreted today; (ii) what Darwin's theory of evolution intended to say and what its supporting empirical evidence permits it to say; (iii) whether all the conclusions drawn from Darwin's theory and the extrapolations made thereof were scientifically sound and (iv) whether the biblical account of creation should be identified with a certain philosophical system or a scientific theory. Answers to these questions could do much to clarify the relation between Darwin's theory of evolution and the biblical accounts of creation.

Today it is generally accepted that the theory of evolution challenged the truth of the literal interpretation of the biblical account of creation (Barbour, 1966:96-98 and Gilkey, 1968:167). According to Barbour (1966:97) there "could be no compromise with evolution" for those who preferred a literal interpretation of the biblical account of creation. This kind of interpretation, that implies that the biblical account of creation provides facts relevant for science concerning the origin of life on earth, will obviously be in conflict with a sophisticated scientific theory such as Darwin's. It is questionable whether this interpretation does justice to the original intention of the biblical passages under consideration. Today this literal interpretation is mostly rejected and it is accepted that the biblical account of creation had no intention of providing scientific facts - it rather fulfilled a religious function in the ancient Hebrew community (Deist, 1982:11-23). Deist indicated that Genesis 1 originated during the Babylonian exile (1982:11) and it had to portray "die grootsheid van God aan die moedelse ballinge in Babilonië" and had to

compare God with the idols "wat lyk asof hulle sterker is as Israel se God" (1982:19).

The conflict between the biblical account of creation and the theory of evolution seems even less serious if the limitations of scientific theories are taken into account. It seems that Darwin's theory was widely accepted in the 19th century as if it provided the final and authoritative truth concerning the origin, nature, end and function of all living beings. According to Jim Moore in Durant (1985:76) evolution "was the popular doctrine to reckon with in natural history, social theory and theology". It is questionable whether Darwin himself intended his theory to be used for such far-reaching inferences to be drawn from it and whether the available supporting evidence of his theory would in any case have allowed anyone to make valid statements concerning such a wide range of topics. Furthermore it seems as if not all of Darwin's own conclusions could be supported by empirical evidence. This especially concerns the way in which Darwin drew inferences from explanations of known phenomena that he extrapolated to unknown phenomena. Here one can refer to his explanation of his collection of empirical evidence concerning variations that he observed in animals that he extrapolated to the developmental history of the animal kingdom. These extrapolations that led him to postulate four or five original forms of life from which all other forms of life evolved (Darwin, 1859:241, 243) seemed plausible, but their validity was not easily proved by means of experimental testing or sufficient supporting empirical evidence. This is reflected in Darwin's remark that "though we find in our geological formations many links between the species which now exist and which formerly existed, we do not find infinitely numerous fine transitional forms closely joining them all together" (Darwin, 1859:165). He sees the geological record of the world as "a history of the world imperfectly kept, and written in a changing dialect; of this history we possess the last volume alone, relating only to two or three countries. Of this volume, only here and there a short chapter has been preserved; and of each page, only here and there a few lines" (Darwin, 1859:166). The inferences drawn from Darwin's theory and utilized for the making of new world views were also not always scientifically valid. Spencer's views on evolutionary progress, for example, were based "on the idea that the entire universe - nature, human nature and society - was ascending towards ultimate perfection

through the operation of inexorable natural laws" (Durant, 1985:21). According to Durant, Darwin offered a theory of organic change, whereas Spencer "offered a metaphysic based on change" (Durant, 1985:21). Gilkey sees the naturalistic world view as "an extension of scientific understanding beyond the range of science. It is an extension into metaphysics, into a general description of the ultimate nature of the universe" (Gilkey, 1965:168).

It is important to ask to what extent Christianity must align itself with or be interpreted by means of a philosophical system or a scientific theory. Thus it must be asked whether the synthesis of the Christian doctrine of creation and Aristotelian biology is preferable to a synthesis with evolutionary biology. Or should this kind of synthesis rather be avoided? These questions were also relevant in the debate on the incompatibility between the geocentric and heliocentric world views. It also constituted one of the main problems that concerned medieval thinkers, viz. the exact relationship between Christian doctrines and the Greek philosophical systems. That scientific theories and philosophical systems can become part and parcel of a specific interpretation and formulation of Christian doctrine was evidenced in the conflict between Galileo and the Roman Catholic Church. The view that the Church defended as Biblical comprised Aristotelian, Ptolemaic and Thomistic elements. That this kind of synthesis gives serious problems happens mostly because a specific theory or system is replaced by another. When this happens the truth of Christian doctrine is often questioned because of the close association of doctrine and theory or system. The debate between Galileo, with his defence of Copernican astronomy, and the Roman Catholic Church, with its defence of Aristotelian-Ptolemaic-Thomistic cosmology, provides a fine example of the problems that arise when an attempt is made to design a synthesis. One could thus conclude that the conflict between the Christian doctrine of creation and Darwin's theory of evolution could partly have been avoided if Aristotelian biology, the ancient world view of the biblical writers and the true intention of the biblical account of creation were separated. It would also have been helpful if the need for harmonizing all aspects of the contents of the Bible with all aspects of the theory of evolution was dropped.

One might go one step further in an attempt to resolve the conflict between Darwin and Genesis by asking whether the making and creating of theories such as Darwin's theory of evolution should not be expected if one correctly understands the Christian doctrine of creation. But how can it be that a theory that gives a naturalistic explanation of the origin of all species and never refers to God could be in line with the idea that God created everything *ex nihilo*? This can be explained along the following lines. When Christians reject Darwin's theory of evolution they do it either because it contradicts the biblical account of creation or because his theory denies God any role in the coming into being of life on earth. Now it seems as if this rejection is based upon the assumption that aspects of God's relationship to creation, either His *creatio ex nihilo* or His continued involvement with it, can be discovered by means of scientific investigation. To accept this assumption would be to agree with Thomas Aquinas that the fact of a divine creation is not only a matter of faith, but can also be discovered by reason (Durand, 1982:20). To reject this assumption would be in agreement with Luther and Calvin who said that creation as a deed of God is a matter of faith and the doctrine of creation is not a matter of man's natural insight (Durand, 1982:23). Thus if one opts for the views of the Reformers that the fact of a divine creation can not be discovered by man's natural insight - as it is supremely exemplified in scientific activities - then Darwin acted correctly not to attempt to find any scientific proof of God's creative deeds. To have done that would actually have been a new form of natural theology. Thus one can say that a scientist cannot effectively judge with his scientific means whether God created all living beings or not. Kolakowski (1982:77) makes a similar point when he says that "God is helpless to produce any empirical evidence for His existence which would seem irrefutable, or even highly plausible, in scientific terms". This would imply that God also cannot provide empirical evidence of the fact that He created all things. The most that can be stated by Christians against Darwin is that he did not believe in God as Creator as the Bible proclaims God to be. If Darwin had been a Christian he probably would have come up with the same theory - if his scientific integrity were of the same high standard as that of the Darwin we know.

The argument set out above can further be supported by means of John H. Hick's view that God placed man in an autonomous universe (Hick,

1966:318-319). According to Hick this means that God created the universe and man's natural environment to be autonomous because it has to function "as a neutral sphere in which we are endowed with a sufficient degree of autonomy to be able to enter into a freely accepted relationship with our Maker" (Hick, 1983:38). This implies that man can investigate his environment without being compelled to postulate God as a prerequisite for the origin or functioning thereof. At the most the created universe portrays an ambiguity - one can advance reasons both for and against God's existence and none of them can ever conclusively settle the matter. According to Kolakowski, whoever believes in God's presence in the world "has to admit that empirically His presence is ambiguous. Clearly, there would be no need of faith if the course of world affairs followed directly and unmistakably the norms of justice" (Kolakowski, 1982:49). It seems as if Darwin lost his faith in the Christian God partly because of his study of the autonomous universe where he could find no rationally convincing trace of God's creative activities - should it indeed be the case then it implies that Darwin accepted the assumption mentioned earlier of Thomas Aquinas, and abandoned Christianity because he could find no traces of divine creative activity through his scientific investigation.

Conclusion

In the light of the foregoing discussion one might venture the following conclusion, viz. that scientific activity must be seen as "incurably un-theological" (Gilkey, 1965:167) on the one hand and on the other hand it can also not be "antitheological" (Gilkey, 1965:167). With this conclusion and the discussion above in mind it ought to be clear why Darwin's theory of evolution could devastate the natural theology of Paley and others that was popular in the early part of the 19th century despite Hume's shattering criticism expressed against this kind of arguments. The attempt of natural theology to show that this world was designed by God by referring to certain empirical evidence, is also unacceptable if judged in terms of the Christian doctrine of creation, because it contains the assumption that God's creative deeds can be discovered by means of man's reason. The fact that God created the universe and all living beings can only be confessed as a truth of faith that has to be believed and cannot be proved in any way by human reason. How God

was involved in the process of creation cannot be known and therefore scientists cannot be instructed on the grounds of biblical evidence as to the conclusions that they ought to reach or not ought to reach. At the same time it must be said that God's non-existence or absence can, in principle, not be proved by science (Gilkey, 1965:167) and therefore scientists must be wary or attempting to make statements based on science concerning God's existence.

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