Reviews

FROM ARISTOTLE TO DARWIN AND BACK AGAIN. Etienne Gilson. Translated by John Lyon. *Sheed and Ward.* London 1984. Pp xx + 209. £15.00

The theme of this study, which first appeared in French in 1971, is the perennial role of teleology in the philosophy of nature. The exposition is largely historical. Starting with a brief summary of Aristotle's doctrine of final causality in the context of his general theory of causal explanation, Gilson first sketches the history, as exemplified in the systems of Descartes and Bacon, of attempts to eliminate teleology altogether from scientific explanation and then describes how, in opposition to such purely mechanistic theories, the pioneers of evolutionary theory, Lamarck, Spencer and Darwin, revived and developed teleology in a new scientific context, a tradition whose continuity is traced in the evolutionary metaphysics of Bergson. The final two chapters bring the story up to date. Gilson argues that contemporary attempts to get rid of teleological explanation are no more successful than their 17th century predecessors; such schemes of explanation can at best describe how systems work, but the systems themselves have to be seen as teleological systems, i.e. as systems organised in such a way as to achieve such and such a goal (p. 125). There is, however, some obscurity as to what his final account of teleology is. On page 124 he asserts that "... science has no need for final causes, but it is no less true that what we call final causality exists in reality". The thought is perhaps that the function of science is restricted to explaining in mechanistic terms how systems work; but *that* any such system exists is a fact which (a) must be explained by reference to goals, purposes etc. and therefore (b) cannot be explained by science. If that is Gilson's thought, it immediately raises the question why (b) might be thought to follow from (a). If what we call final causality exists in reality, then some things really happen because their happening fulfills some function or promotes some goal. But in that case why does it not belong to some science or sciences to provide that kind of explanation? Surely Gilson cannot wish to argue that the only kind of explanation which science can provide is mechanistic explanation, since the bulk of the book has purported to show that such a restricted conception of scientific method is inadequate to account for evolutionary biology.

This obscurity as to the central thesis is not, unfortunately, an isolated instance, but rather exemplifies a pervasive failure to engage with the many difficult and important questions which cluster round the concept of teleology. For instance, granted that we find it useful and indeed necessary to describe and explain the nature and behaviour of systems of many different kinds, from the organisation of organic substances to the flight of target-seeking missiles, in teleological terms, are such explanations merely useful concessions to human limitations, in particular to limitations on the availability of information? Or, as suggested by Dennett, does recourse to such explanations reflect the adoption of a particular standpoint toward what is to be explained, a natural and heuristically fruitful standpoint indeed, but nonetheless a standpoint which can in principle be modified or abandoned in the light of circumstances? Or rather, do we have to give such explanations, not because of our limited information or because we adopt a particular stance towards the world, but because the world is intrinsically teleological? If the latter, is the world not merely intrinsically but also ultimately teleological? I.e. are the teleological explanations themselves ultimate, or are they grounded in some yet more yet more ultimate explanations? And if they are so grounded, must those ultimate explanations be in terms of conscious purposes? These and related questions receive no organised discussion; rather,

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if treated at all, they are the subjects of unsystematic pronouncements, more or less dogmatic in character. Thus Gilson maintains (pp 112ff.) that there can be no "mechanical" explanation of the formation of cells from their constituent molecules, apparently on the ground that such explanations would postulate random collections of molecules, while the "chances of seeing a single living cell come into being from the possible mechanical combinations of its elements are infinitesimal" (p. 114). But a theory such as that of DNA explains the formations of cells *given* collocations of molecules; the statistical probability of the ocurrence of a particular instance of a particular collocation is irrelevant to the theory. Moreover, natural selection will explain why collocations of molecules giving rise to cellular structures will tend to become more frequent, since only such structures will be capable of reproducing themselves regularly. (Gilson mentions DNA theory, as expounded by Jacques Monod, sporadically in footnotes only; there is no treatment of it in the main text).

Philosophically, then, there is little of substance in the book. Nor is the historical content of much greater interest, being written at the level of intelligent encyclopaedia articles. One of Gilson's principle interests is to demonstrate that Darwin did not call his theory of the transformation of species by natural selection by the name "evolution"; the term, given a technical sense by Spencer as the name of his own, distinct, theory, was popularly applied to Darwin's theory within a few years of the publication of *The Origin of Species,* somewhat to Spencer's chagrin, as Gilson points out (p. 69). But despite the latter's disclaimer (pp 71–2) he does not suceed in showing that the question is other than verbal, and that the now virtually universal application of the term "evolution" to Darwin's theory involves any substantive misunderstanding. Concentration on such trivia, together with frequent slips in citation and quotation (detailed by the translator in the notes), suggests a certain failure of powers on the part of an author who, major historian of philosophy though he undoubtedly was, was in his 87th year when the book first appeared.

It is, therefore, doubtful whether it was worth translating this work after an interval of thirteen years. But if the job was to be done at all it should have been done properly; unfortunately this is not the case. Frequently the translator produces sentences which are unidiomatic to the point of unintelligibility. Sometimes this can be attributed to lack of stylistic sense, issuing in such barbarisms as "doubtlessly" (p. 100) and "philosophical technics" (p. 103, for "la technique philosophique" i.e. "philosophical technicality"), archaisms such as "implicates" for "implies" (p. 105) and sentences such as "It at least deserves no more to be entitled e-volution" (p. 87) and " ... this time it is my turn to feel not concerned" (p. 108). But all too often comparison with the original reveals the explanation to be an inadequate grasp of fairly elementary points of French grammar or idiom. Citation must be selective. Gilson writes of Darwin (p. 124 of the 1971 edition):

> Sa propre découverte de 1844 n'était pour lui celle de la variabliité des espèces que parce qu'elle lui découvrait en même temps la cause de leurs variations.

i.e.

> His own discovery in 1844 was in his eyes the discovery of the variability of species only because it simultaneously revealed to him the cause of their variations.

Apparently failing to grasp the *ne ... que* construction, the translator renders this as

> His own discovery of 1844 was not in his eyes that of the variability of species, for that uncovered to him simultaneously the cause of their variations.

He is apparently unaware that *se tromper* means "make a mistake"; hence he writes that human craftsmanship is characterised by "the capability of being deceived" (p. 96), instead of "the capacity to make mistakes" and renders

> On se trompait du tout au tout quand on reprochait à Darwin d'imaginer la

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Sélection Naturelle comme un choix effectué par la Nature (p. 138, 1971 ed.)

as

> One deceives oneself completely when one reproaches Darwin with imagining natural selection as a choice brought about by nature (p. 83)

instead of

> It was a complete mistake to reproach Darwin with conceiving of natural selection as a choice made by nature.

(Here the error is compounded by the failure to recognise the imperfect tense of the verbs.) When Gilson describes Darwin (p. 139, 1971 ed.) as pleased by an article because it was "élogieux" (laudatory), the translator renders this (p. 84) by the nonsensical "elegiac". Sometimes he reaches the level of the schoolboy howler: when Gilson writes (page 156, 1971 ed.) "(D)ans l'ennuie le patient dit: le temps me dure" (i.e. "in boredom the sufferer says "time drags"") Lyons renders (p. 95) "in boredom the condemned man says: "time is hard on me"", apparently supposing that the verb *durer* is mysteriously formed from the adjective *dur*. I have not attempted a comprehensive comparison of the translation with the original, which should surely have been the task of a linguistically competent publisher's reader. The errors cited, themselves merely a sample of a substantial number revealed by a fairly cursory inspection, are however sufficient to show that the translator was not up to the job.

At £15.00 this return trip is not worth the price of the ticket, even with a more reliable guide than the translator has proved to be.

C.C.W. TAYLOR

THE LANGUAGE AND LOGIC OF THE BIBLE. THE EARLIER MIDDLE AGES, by G.R. Evans. *Cambridge University Press,* **Cambridge, 1984. Pp. XIX + 199. £18.50.**

Thanks chiefly to the pioneering work of the late Beryl Smalley, the medieval Bible is more and more studied, and these last years have seen a crop of interesting and valuable contributions. Among them is Dr Evans new book. Its special value comes principally from the unusual starting point of her research. The greatest part of the studies on exegesis of the Middle Ages focuses either on a given commentary or on the treatment of some difficult scriptural pericope, or on some of the theological problems treated by monastic or university masters.

Dr Evans has chosen to study the interaction between Biblical exegesis and the arts of the *triuium*. So her book is a kind of development of some chapters of her former *Old Arts and New Theology* (Oxford, 1980), but viewed from a different standpoint. The difficulty of the task lay in the need to be familiar with the works of medieval theologians and exegetes on the one hand and, on the other, with the grammarians and logicians. The author has not only a very wide knowledge of printed sources and studies but has also consulted some important works still available only in MSS, such as Peter the Chanter's *De Tropis Loquendi* and Thomas of Chobham's *Ars Praedicandi* (the critical edition of which is presently being prepared at Geneva by F. Morenzoni). This broad knowledge of the matter allows Dr Evans to pass from one side (Bible, theology) to the other (grammar and dialectic) with great ease and to show how each of the disciplines helped for the progress of the others. If grammar and logic allowed theologians to explain more accurately passages where there was some apparent contradiction, exegesis afforded to the *triuium* a lot of fresh questions to try to solve. Until now the interdisciplinary relations were chiefly thought of and studied only as successive fecundations of theology by Greek, Jewish and Arabic philosophies. There is no question of denying this aspect, but there was also a not unimportant correlative influence of theology on philosophy; and it is one of the attainments of this book to have illustrated some cases of this influence of exegesis on grammar and logic; very typical is the paralleism from Peter the Chanter's *De Tropis*

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