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REVIEW

Introduction to Medieval Logic. By ALEXANDER BROADIE. New York, N. Y., The Clarendon Press of Oxford University Press, 1987. Pp. vi, 150.

Broadie's *Introduction to Medieval Logic* is informed, intelligent, and clearly written. There is nothing new here for those who have been doing research in mediæval logic, but Broadie's intended audience seems to be philosophers and logicians previously unfamiliar with mediæval logic, whether acquainted with mediæval philosophy or not. This audience will find Broadie's volume to be well worth reading. It is an excellent introduction and, in the longer run, it may help to polish up the tarnished image mediæval logic has undeservedly received. Broadie discusses logical form, truth-conditions for atomic ("categorical") and molecular propositions, tensed and modal propositions, inferential validity (including the syllogism), and closes with a discussion of syllogistic tense-logic.

Three qualifications, however, should be noted at the outset. First, Broadie has written an account of mediæval logic on our terms, not as mediæval logicians themselves would have understood their subject. Second, Broadie takes his material almost exclusively from a small number of fourteenth-century thinkers—William of Ockham, Jean Buridan, Walter Burley, Albert of Saxony, Paul of Venice—largely ignoring other sources. Third, as the title indicates, Broadie is writing on an introductory level. Altogether, a more accurate title for the book would be *Introduction to Some Fourteenth-Century Treatments of Modern Logical Concerns*.

These qualifications are not minor. The first has the consequence that large areas of concern to the mediæval logician are not treated at all: topics, fallacies, *obligationes*, sophismata, and the like. Now Broadie might point out that he is concerned with formal logic, and these areas depend on non-formal elements for their analysis. Yet this is precisely to import a distinction which is modern rather than mediæval. To be sure, most mediæval logicians allow the distinction of formal and non-formal elements within a proposition. But this is by no means equivalent to the general thesis that logical properties such as truth and validity are solely a function of the formal elements of a proposition. The neat modern divisions of syntax and semantics, object-language and metalanguage, and even soundness

and validity, do not easily carry over to mediæval logic. Furthermore, the conception of logic as a study of "formal" properties of systems is itself modern—by definition it would exclude fallacies, and hence could not be the mediæval conception of the nature of logic. The mediæval logician would have a very different view of his enterprise than the view Broadie employs.

The second qualification has the consequence that Broadie presents a limited view of what "mediæval" logic is. Peter of Spain is mentioned several times, but not Lambert of Auxerre, to say nothing of Peter Abelard or the twelfth-century writings which make up the *logica modernorum*. In his Introduction, Broadie says that "the high point of logic in the Middle Ages was the fourteenth century" (a controversial claim), but there is no discussion of such fourteenth-century logicians as Marsilius of Inghen, Ralph Strode, Pierre d'Ailly, William Heytesbury, and Vincent Ferrer. No reason is given for these omissions. As for later works, the early sixteenth-century Scottish logicians George Lockert and William Manderston are mentioned, but not traditional sources such as John of St. Thomas, much less Johannes Venator or Paul or Pergula. Of course, Broadie does not claim to be comprehensive, but some acknowledgement of the diversity of mediæval logic (and mediæval logicians) would be appropriate, especially for the reader unfamiliar with the field.

The third qualification has the consequence that issues in philosophical logic are shunted aside, and some of the knottier problems of pure logic are bypassed. For example, the extremely clear discussion of the theory of supposition makes no mention of the difficulties mediæval logicians encountered in determining the supposition of the terms of an O-form sentence. Equally, Broadie only gestures at the complex rules concerning precedence and order in determining the supposition of a term (where such rules are the mediæval attempt to define a theory of the scope of terms and operators). While this is perfectly reasonable for an introduction, it limits the usefulness of the work for those engaged in research on mediæval logic. However, there is no better introduction to mediæval logic available to those who are not active researchers in the field, whether previously acquainted with mediæval philosophy or not.

Once the nature and scope of Broadie's enterprise are clearly understood, his discussion is quite sensible. However, the qualifications noted above have to be borne in mind. For example, Broadie notes, correctly,

that mediæval logicians typically classified under the single heading *consequentiae* what modern logicians would distinguish into conditional sentences and arguments. After listing four differences between kinds of consequentiae recognized by mediæval logicians, Broadie then concentrates on *consequentiae* which correspond most closely to what modern logicians would call arguments—hence his translation of '*consequentia*' as 'inference.' Equally, Broadie renders the adjective '*bona*' in *bona consequentia* as 'valid,' despite its application to other kinds of *consequentiae*. Such translations might be thought misleading if the qualifications noted above are not kept in mind: while the philosophically interesting project raised by this discussion is whether mediæval logicians might have been on to something in classifying what we now take as disparate logical phenomena under the same heading, such a project would be out of place in an introductory work focussed primarily on the formal aspects of mediæval logic. Indeed, rather than pursue this project, Broadie turns to a delightfully clear and concise description of mediæval theories of "valid inference." His discussion of this topic will serve as an example, giving the flavor of the book.

Broadie begins by stating that he will follow the mediæval view which takes an inference to consist in "a set (perhaps one-membered) of propositions, followed by 'therefore' or one of its synonyms, followed by another proposition," allowing both valid and invalid inferences to count as inferences, rather than the view (put forward by Jean Buridan among others) that an inference must be valid to count as an inference. The former view can be roughly characterized as syntactic, the latter as semantic. Now once the syntactic view is adopted, an obvious problem arises: How can valid inferences be distinguished from invalid inferences? Broadie reviews three mediæval accounts. The first proposes that an inference is valid when the antecedent cannot be true unless the consequent is also true. The difficulty here is that mediæval logicians took propositions to be actual time-dependent entities, and hence that the antecedent and the consequent might not exist at the same time. The second account meets this difficulty by restricting the first account of validity to those cases in which the antecedent and consequent exist together (or "are both formulated," in mediæval terminology). However, another problem then arises: what of an inference such as "No proposition is negative; therefore, no donkey runs"? Since the antecedent is self-falsifying, the inference as a whole is valid by the second account—but it is clearly invalid, as there might well

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be a possible world (as we should say) in which only affirmative propositions are put forth, containing a running donkey. Therefore, a third account was put forward, one which did not explicitly use the notions of truth and falsity, but rather 'signification' (*very* roughly, 'meaning'). According to this third account, an inference is valid if it is impossible for things to be as signified by the antecedent but not be as signified by the consequent. Technically, this is not an account but a schema; it should be adjusted to take the appropriate tenses of the antecedent and consequent into account. The obvious advantages of this third account were such that a consensus gradually developed that it was the proper way to approach the question of valid inference.

Broadie's discussion of inferential validity is crisp and clear, accurately representing the problems mediæval logicians faced and treating them with respect and intelligence. The development of these three accounts was not as historically neat as Broadie suggests, but such scholarly details would most certainly be out of place. This style and approach characterizes Broadie's volume well—sensitivity to logical nuance, awareness of modern issues, and clarity of exposition. The selection of topics is judicious, and the presentation well-organized.

In short, if you have been wondering what mediæval logic is all about, this is an excellent book to begin with. Given Broadie's self-imposed limitations, there is little to quarrel with. It is perhaps the best short introduction to a very active field of research, offering a clear (although simplified) vision of many centuries of logical activity. There is as yet a gap between specialized scholarly research in mediæval logic and introductions such as Broadie's, but perhaps that will be addressed by the profession. Even then, this book will be a useful introduction.

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