

✎ Modern Logic ω

George Bentham, *Outline of a New System of Logic*, Bristol: Thoemmes Antiquarian Books, Ltd., 1990. x + 287 pp. np.

Reviewed by

James W. VAN EVRA

Department of Philosophy, University of Waterloo
Waterloo, Ontario N2L 3G1, Canada

This facsimile reprint of the [1827] edition of Bentham's *Outline* is a welcome addition to the small but growing fund of early nineteenth century works currently in print.

George Bentham (1800-1884; a nephew of Jeremy) was one of a group of logicians whose work appeared between the seventeenth century tradition of British text-writers (Robert Sanderson, John Wallis, Henry Aldrich and others), and the algebraic logicians of the later nineteenth century. The earlier group had succeeded in producing stable, widely accepted, but uninspired renderings of traditional syllogistic doctrine, while the latter moved in distinctly new directions. Bentham, Richard Whately, Sir William Hamilton and a few others constituted an interim group whose works contained little formal novelty, but nonetheless rekindled interest in logic by presenting fresh accounts of the theoretical basis of the subject.

The primary work in this period was Richard Whately's *Elements of Logic* [1826], a particularly influential work which remained in nearly continuous publication from its first appearance in 1823 until the first decade of the twentieth century. In summary, Whately conceived of logic as an abstract science in which the syllogism, for instance, was no longer considered to be a species of argument but was instead regarded as a pure form which could be used to test the validity of any (actual) argument. In addition, Whately sharply circumscribed the domain of logic by paring away many of the extraneous topics (e.g. method, induction, psychology,

etc.) with which logic had become associated, especially during the two previous centuries.

Bentham's *Outline* is a running commentary, nearly point-for-point and section-for-section, on Whately's *Elements*. As he explains in the introduction, he had been preparing logic manuscripts written by his uncle Jeremy during the period 1795-1811 for publication and had been working on a logic manuscript of his own. But before he could finish either, the *Elements* appeared. Rather than proceeding further on his own projects, Bentham decided to write a commentary on the already popular work, and to include within it his own views, and those of his uncle, where they differed from those of Whately.

Again in brief, what results is a harkening back to the style of the earlier texts, and in particular (as Bentham admits) to Robert Sanderson's early seventeenth century work, *Artis Logicae Compendium* [1615]. Where Whately drew modern limits around the legitimate domain of logic, Bentham, while agreeing with Whately's basic ideas, sought to temper them in the direction of earlier, broader, more inclusive conceptions of logic.

While details of the often subtle shifts involved in these works can safely be left for the specialist, there is one feature of Bentham's work which is of somewhat larger historical interest. Adopting a rigidly extensionalist interpretation of syllogistic terms, Bentham permits quantification of both terms in a syllogistic proposition, and he interprets the copula as identity between them, so conceived. Thus 'all X is Y,' understood as 'All X is Y, and other things may be Y as well,' is symbolized as $tX = pY$, where t stands for 'in toto,' and p for 'ex parte.' Given this interpretation, the later debate between Augustus De Morgan and Sir Willam Hamilton over who was the first to quantify predicates, seems clearly to have been based on a false assumption.

While Bentham's *Outline* enjoyed significantly less popularity than did Whately's *Elements*, it did have an impact on subsequent developments in the subject. It is, for instance, mentioned in Hamilton's [1833] survey of English logic, in Robert Blakey's *Historical Sketch of Logic* [1851], and the subject of a debate in the *Athenaeum* in 1850 and 1851.* Ironically, in his

*See especially *The Athenaeum*, No. 1208, p. 1351, which appeared as the December issue in 1850. The debate occurs in the "Miscellanea" section of

[1918] *Survey of Symbolic Logic*, C.I Lewis discusses Bentham but makes no mention of Whately.

While the quality of reproduction in the present volume is excellent, it contains nothing more than the original text. Some additional commentary would have been useful. That is, however, a minor matter. The volume as it stands will make an important addition to collections of nineteenth century works.

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the *Athaenum*, and is not otherwise noted in the index. It begins with a Mr. Warlow noting that Baynes's recently published *New Analytic of Logical Forms* [1850] gives credit to Sir William Hamilton for the invention of the quantification of the predicate. Mr. Warlow suggests that readers should look at Bentham's book, for his version of the quantification of the predicate clearly predates Hamilton's. The debate is mentioned by De Morgan [1966, 140, footnote] without bibliographic details.

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