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George Boole: His Life and Work (Book Review)

Abstract

Reviewed Title: *George Boole: His Life and Work* by Desmond MacHale. (Profiles of Genius Series, 2.) xiii + 304 pp., illus., bibls., index. Dublin: Boole Press, 1985.

Keywords

book review, George Boole, life, work, Desmond MacHale

Disciplines

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the first and second editions as of 1982. This tabulation was based on my census but includes a few copies, conspicuous by the absence of my initials, that I consider to be ghosts. In the past several years I have located about a dozen more copies of each edition, but this list is still a pretty comprehensive guide.

OWEN GINGERICH

■ Seventeenth Century

Jerry Weinberger. *Science, Faith, and Politics: Francis Bacon and the Utopian Roots of the Modern Age—A Commentary on Bacon's Advancement of Learning.* 342 pp., index. Ithaca, N.Y./London: Cornell University Press, 1985. \$32.50.

In this difficult commentary on *The Advancement of Learning*, Jerry Weinberger argues that Francis Bacon's real but hidden agenda was to put forward a secret political doctrine. Weinberger places Bacon in the context of the "moderns," thinkers from Machiavelli to Hobbes who "recommended turning the human intellect from the contemplation of God's nature to the scientific project for mastering nature and fortune" (p. 9). He argues that Bacon was not only one of the founders of the "modern project," but also that he understood its limits: "While recommending the mastery of nature, he doubts whether the artful conquest of nature can accomplish its true goal, which is to overcome mankind's obstreperous political nature" (p. 35). Bacon's analysis of the limits and problems of the modern project, according to Weinberger, rests on his understanding of ancient utopian thought that enigmatically established the incompatibility of the mastery of nature with human ends and perfect political freedom.

Because Bacon adopted the "enigmatical method," Weinberger considers his task to be to "pierce the veil" and to establish the real hidden meaning of Bacon's text. He approaches this task by considering the text, with its numerous classical and Biblical allusions and its patent contradictions. By unveiling Bacon's true meaning, Weinberger hopes to establish that Bacon's views "illuminate the most pressing problem of the modern age: what may loosely be called 'the problem of technology'" (p. 17).

Weinberger explicitly eschews a historical approach to Bacon's text. He thinks it is not necessary to understand Bacon in his historical context because "for Bacon, mankind can have a history, but mankind's natural possibilities determine the course of that history, not vice versa" (p. 19). This neglect of historical understanding underlies many of the problems in this book and renders it of little interest to readers of *Isis*.

Weinberger's commentary explicates *The Advancement of Learning* by finding associations between Bacon's text and the work of various ancient writers. With the exception of Machiavelli, Weinberger ignores the existence of any intellectual history between late antiquity and Bacon's time. There is no reference to the Scientific Revolution, which is surely central to Bacon's thought, or to possible links between Bacon and the Hermetic writers. At many places Weinberger's discussion neglects to consider the historical context of Bacon's ideas. For example, in connection with an extended discussion of the relationship between divine will and divine wisdom, Weinberger fails to note the important discussions about voluntarism that Francis Oakley and others have demonstrated to be so important in the development of both the philosophy of science and the political philosophy of Bacon's era.

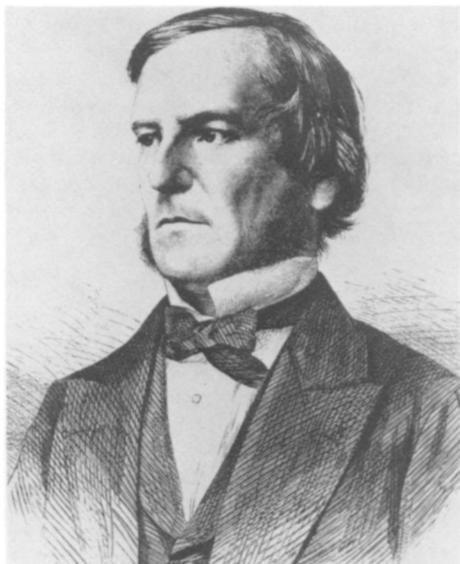
Weinberger ignores not only Bacon's historical context but also a wealth of modern scholarship that might well illuminate Bacon's text. Virtually the only secondary sources cited in his footnotes are works by Leo Strauss. Bacon is thus interpreted not only as a political philosopher, but as one adhering to a peculiarly contemporary position.

MARGARET J. OSLER

■ Nineteenth Century

Desmond MacHale. *George Boole: His Life and Work.* (Profiles of Genius Series, 2.) xiii + 304 pp., illus., bibls., index. Dublin: Boole Press, 1985. \$24.95.

This is the first book-length biography of George Boole, the well-known nineteenth-century British mathematical logician. Drawing upon a wealth of material, much of it previously unknown or untapped, Desmond MacHale presents an engaging and original portrait of Boole the man. The



George Boole

book is directed at “the general reader” and is written in a style suitable for such an audience. It therefore does not provide detailed documentation for its claims or for the numerous quotations taken from primary sources, and it also steers clear of any analysis of Boole’s works in mathematics or logic that would require knowledge of these fields or of the specific period. However, anyone who is familiar with Boole’s life cannot fail to be impressed by the thorough research that went into this book. Time and again I found myself slipping out of the role of omniscient reviewer and critic to become simply a fascinated reader. Earlier accounts of Boole’s life, such as the colorful version spun by E. T. Bell in his popular *Men of Mathematics*, come nowhere near this work in scholarly accuracy or breadth.

MacHale organizes his material topically within an overall chronological framework. Boole’s program of self-education and his early employment as a school-teacher, his development into an independent research mathematician and logician, and his sometimes-turbulent career as a conscientious and well-respected professor of mathematics at Queen’s College in Cork, Ireland (now University College, where MacHale teaches mathematics) are all fleshed out in detail unavailable anywhere else. Boole emerges from MacHale’s narrative as a reserved and somber but warm

human being with a staunch, highly developed sense of purpose and duty on both institutional and civic levels, a person who privately held strong religious opinions that combined elements of Unitarianism and Judaism and tended, at times, toward agnosticism.

As a general biography this book succeeds quite well. One must occasionally smile at MacHale’s decision to infuse the work with additional Irish content (a biographical vignette of Robert Murphy, a little-known, short-lived Irish mathematician; and a complete reproduction of Boole’s account of John Walsh, an eccentric from Cork whose self-appointed task in life was expelling calculus from science and combating Newton’s law of gravity), but one can easily treat these passages as brief and interesting diversions that provide local color.

There are spots, however, where the biography is weakened by not delving further into Boole’s work in mathematics and logic and by not setting the stage more elaborately in history of mathematics and history of logic. These omissions occur by design, of course, but since the “general reader” interested in Boole will probably know something about mathematics and logic or be willing to learn, I think MacHale could have raised the level of discussion on these matters rather substantially.

Notwithstanding this objection, I heartily recommend the work to anyone, novice or scholar, who wants to learn about Boole’s life. MacHale has given us a labor of love, the result of a decade of research and writing, which at the price offered is a bargain seldom found these days. Since we had to wait for over a century for this first biography of Boole, how nice it is to have one that is popular and scholarly at the same time.

CALVIN JONGSMA

Harry W. Paul. *From Knowledge to Power: The Rise of the Science Empire in France, 1860–1939.* ix + 415 pp., bibl., index. Cambridge/London/New York: Cambridge University Press, 1985. \$49.50.

The title of this book suggests a study of the relationship between the acquisition of scientific knowledge and the exercise of political or social power in modern France. However, Harry W. Paul’s account of French scientists makes them appear