makers such as Fraunhofer, Amici, Selligue and Chevalier? Also, the figures of the plate from the 1787 *Essays on the microscope* were not drawn thanks to an Adams microscope, but are copies, probably made by a camera obscura, of original figures taken from the works of Trembley (1744, 1747), Baker (1753), Rösel von Rosenhof (1755), and others.

This certainly does not affect the high quality of the book. Indeed, the impact of Millburn's work on historiography could go far beyond that of a well contextualized biography. More than his previous studies, this book marks a turning point in the standards necessary to produce a serious historical work on instrument makers. To counterbalance classical works on the technical and historical aspects of instruments, a larger scheme was needed capable of integrating historical research on political, civilian and professional connections implemented by instrument makers, along with their various strategies regarding advertising, corporations, management, trade, prestige, etc. The inclusion and integration of all these items and more within his pleasant narrative, and the use of rich and good iconographical resources, make Millburn's book a model for the genre.

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Michael Hunter, Robert Boyle

(1627–1691): scrupulosity and science, Woodbridge, Boydell Press, 2000, pp. ix, 293, £50.00, US\$90.00 (hardback 1-085115-798-X).

This book presents three new essays together with eight previously published articles on Robert Boyle by one of the editors of the new complete edition of Boyle's Works (edited with Edward B Davis, 14 vols, London, 1999-2000), and of the Correspondence of Robert Boyle (edited with Antonio Clericuzio and Lawrence Principe, 6 vols, London, 2001). At one point in this collection the judgement of James Boswell is quoted: "They only who live with a man can write his life with any genuine exactness and discrimination" (p. 259). In view of his editorial labours over recent years, it seems fair to say that Professor Hunter has indeed lived with Boyle, and this remarkable collection immediately impresses the reader with precisely the genuine exactness and discrimination that Dr Johnson's biographer had in mind. Surveying other literature on Boyle, Hunter suggests that Lawrence Principe's study of Boyle's alchemy, The aspiring adept: Robert Boyle and his alchemical quest (Princeton, 1998), is "arguably the most important book on Boyle yet published" (p. 5). Excellent as Principe's book is, its focus is highly specific, and Hunter's more wide-ranging survey of Boyle's life and work must surely be seen, henceforth, as the starting point for any proper understanding of Boyle.

The standard of the papers is uniformly high. Readers of this journal might be expected to be most interested in the two pieces which detail Boyle's work in, and attitude towards, medicine: 'Boyle versus the Galenists' (1997), a study of Boyle's suppressed critique of contemporary orthodoxy in medicine, and 'The reluctant philanthropist' (1996), a study of the difficulties, both personal to Boyle and more generally in Restoration England, inherent in the "free communication" of medical "secrets and receipts". But the collection also includes some fundamentally important pieces; most notably, 'How Boyle became a scientist' (1995), 'Casuistry in action' (1993), and 'Alchemy, magic and moralism' (1990). Each of these is crammed with insights about Boyle and the historical context from which he emerged, but taken

together, the whole of this book is much greater than the sum of the eleven articles.

This is not just because Hunter has slightly amended the original papers to add cross-references to the others, although this is undoubtedly useful, and off-sets the inevitable repetition resulting from their original composition as separate pieces. The book is greater than the sum of its parts because Hunter sees it as a model for something much more ambitious than a study of one "great man" in the history of science. Hunter sees it as a model of how intellectual history should be written (p. 14). What this amounts to, and the origins of this idea can be traced back far earlier in Hunter's work, is a belief in the value of collective biographies, but now conceived on a grand scale. The approach Hunter has in mind is a long way from the collective biography of the fellows he saw himself as presenting in his early study of the Royal Society (The Royal Society and its fellows, 1660-1700, 1982, and 1994). Hunter is now calling for a collection made up of Boswellian biographies. "Primarily," he writes, "I see intellectual history as comprising the study of individual reactions to common problems: hence the best route to a proper understanding of intellectual change in any period seems to me to be an intensive scrutiny of the intellectual personality of each thinker, drawing on all available sources in an essentially biographical manner" (pp. 223-4). There is something essentially Baconian in Hunter's vision of intellectual history; perhaps the result of working so long on the supreme Baconian philosopher. "We cannot afford to pick and choose the aspects we study of a figure like Boyle", Hunter writes, "only by tracking him as a whole will we understand him" (p. 153). Reading this collection it is easy to be carried along by the author's mastery of his subject, in which different facets of Boyle are revealed in successive papers and continually reflect upon other facets revealed in other papers. The result is undoubtedly a brilliant and fascinating gem, but it is hard to believe that all other historical figures are susceptible to the same treatment, or that all intellectual historians are capable of pursuing it.

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Brian Dolan (ed.), Malthus, medicine, and morality: 'Malthusianism' after 1798, Clio Medica 59, Wellcome Institute Series in the History of Medicine, Amsterdam and Atlanta, Rodopi, 2000, pp. v, 232, Hfl. 125.00, £37.50, US\$53.00 (hardback 90-420-0851-2), Hfl. 40.00, £12.00, US\$17.00 (paperback 90-420-0841-5).

In 1998 the Wellcome Institute for the History of Medicine hosted a one-day symposium on Thomas Robert Malthus, author of the (in)famous (depending upon your point of view) Essay on the principle of population (1798). The focus of the symposium was certainly well chosen as there is much to learn about the impact on medicine of Malthus's theory that unchecked population growth will inevitably outstrip nature's capacity to provide for us. The Wellcome Institute wisely observed the Essay's 200th birthday by bringing together scholars to shed new light on such questions. I say wisely because, though scholars and activists commonly employ the terms "neo-Malthusian" and "Malthusianism" in debate about issues ranging from Darwinism to international development, confusion over their meanings often leads to misunderstanding.

One result of the symposium is this volume of nine essays, *Malthus, medicine,* and morality: 'Malthusianism' after 1798, edited by Brian Dolan. As I began reading the collection I was immediately struck by how controversial the "law" of population has been almost from the moment it was promulgated. Depending upon their moral