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houses and were leaders in their community, often masters of several prosperous apprentices with whom they took substantial premiums. Dr Burnby traces the apothecary's rise and clarifies his place in the confused state of medical practice in the early modern period. She describes too the other scientific preoccupations that we might expect apothecaries to have, including chemistry and botany, and also their wide-ranging cultural interests, buying books and visiting antiquities.

Dr Burnby's survey displays an excellent range of sources, skilfully exploited and often newly used for the purpose of revealing apothecaries, not merely as names and dates but as men in their contemporary setting. Her literary approach fortunately avoids over-reliance on statistical techniques and her grasp of family networks should remind us that acquaintanceship oiled the wheels of early modern England.

Perhaps the great unresolved puzzle to emerge from Dr Burnby's book is why apothecaries were generally held in low esteem by their contemporaries, "the veriest knaves in England" practising a "contemptible" trade. It is easy to see why the surgeon and especially the physician feared the apothecary as a rival, prepared to give professional advice free and make his profits from dispensing drugs. That many apothecaries did so well financially presumably aroused jealousy and envy among their competitors, who took refuge in the peculiarly English response of despising a man for making money unless he had risen from very humble origins. Many of the apothecaries whose careers are described by Dr Burnby were provincial men and it is gratifying to see them studied in detail, since they undoubtedly treated far more of the population than the London practitioners who have hitherto chiefly preoccupied medical historians. The rise of the pharmaceutical chemist is also considered, and Dr Burnby places his emergence earlier in the eighteenth century than has formerly been proved, as well as suggesting that the apothecaries' role in the patent medicine industry has been largely ignored. Dr Burnby's survey of a profession whose origins she knows so well, with many fascinating insights and trenchant comments, will be a most welcome addition to the medical history specialist and the reader interested in the making of early modern England.

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MARIE BOAS HALL, *All scientists now*, Cambridge University Press, 1984, 8vo, pp. xii, 261, illus., £25.00.

Much has been written about the origins and early years of the Royal Society, but this is the first comprehensive account of the nineteenth-century development—a key period in which a club for wealthy amateur scientists, antiquarians, and patrons of science and learning was transformed into the premier scientific society of this country. The book naturally falls into two parts: the first half deals essentially with the administrative changes and controversies within the Society which reflect the shifts in attitude towards scientific research in Britain during this period: the second part is outward-looking and examines the impact made by the Society on science. There is a certain amount of repetition between the two halves of the book, but that is impossible to avoid with this kind of structure. Its strength is that the Royal Society is squarely put into the nineteenth-century context of private and increasingly government-sponsored science.

The way the Society evolved by degrees from dilettantism to scientific professionalism is chronicled through the succession of Presidents, starting with the autocratic Sir Joseph Banks, who reigned as a benign despot for forty-one years, from 1778 to 1820. Younger Fellows began to react more and more against a Society which they felt to be too entrenched in the antiquated world of the eighteenth century, and the first hints of reform came with Banks's death. The Presidency of Sir Humphry Davy in the 1820s heralded the Society's increasingly scientific orientation, but the dilettante aristocratic element remained strongly represented, as signified by the election to the Presidency of HRH the Duke of Sussex in 1830. He, too, instigated reform, and during his term of office, presidential authority was weakened and that

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of the Council strengthened. Scientific standards were also raised.

Reform was too slow for firebrands like Babbage and his supporters. Dr Marie Boas Hall has presented a very balanced account of the ensuing debate on the decline of English science. No one today can accept without reservation Babbage's hysterical outburst on this subject. His views were based on a misapprehension of the function of the Royal Society, and on a misplaced sense of personal grievance. As pointed out by the writer, this conflict was really between the new "professional" scientists and the wealthy amateurs who were professional only in the spirit of the seventeenth-century foundation of the Royal Society—Babbage (a wealthy amateur himself) never recognized this. A thorough revision of the statutes eventually took place in 1847 under the Presidency of the Marquis of Northampton, and a truly scientific society for the scientific élite had then been created. In the second half of the century, the present-day administrative structure evolved, with the President acting as chairman of the governing Council, and the Treasurer and Secretaries as executive officers.

In the second half of the book are described the Royal Society's encouragement of science through its honours and awards, the judicial election of Fellows from what later came to be called the "pure" and "applied" sciences, the awarding of grants first from the Wollaston Bequest and later the Government Grant, and in its capacity as adviser to the government on scientific matters. Also dealt with are the Society's interest in scientific exploration, and its relation with the emerging specialized scientific societies (on the whole, extremely harmonious). Singled out is the Society's long-standing interest in terrestrial magnetism and meteorology. Later expeditions in which the Society was active were more concerned with medicine and biology. The history concentrates on the organizational aspects of this work and not on its scientific content. The Royal Society was also actively involved in the dissemination of scientific information, and in the late 1850s, following up a suggestion by Joseph Henry of the Smithsonian Institution, began the *Catalogue of scientific papers*. Such a catalogue was at that time a very novel concept.

Dr Boas Hall has fully succeeded in her intention to produce a readable introductory survey, useful to both the Fellows of the Royal Society interested in their past, and to professional historians. We learn a great deal about the changing structure of English nineteenth-century science, as mirrored by the premier scientific society which, throughout these changes, remained true to its Royal charter to improve "naturall Knowledge".

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RICHARD ALLEN SOLOWAY, *Birth control and the population question in England 1877–1930*, Chapel Hill and London, University of North Carolina Press, 1982, 8vo, pp. xix, 418, £23.20.

It would only be a slight exaggeration to describe most writing about fertility over the past century as demonstrating the futility of men telling other men what women ought to be doing. Either by decrying the fall in the birth rate, in the fashion of most eugenicists, or by adopting a neo-Malthusian stance welcoming the arrival of contraception, most commentators on population trends told us much about ideology and relatively little about the determinants of fertility. Of course, we should not be too harsh on these individuals, since present-day demographers have not done much better in unravelling the mystery of fertility decline.

What is most striking about the underlying ideology expressed in writings about population is their profoundly pessimistic character. As Professor Soloway's stimulating book shows, amateur demography was (and probably still remains) an attractive vehicle for the educated expression of social fears. It would be a mistake, though, to locate such opinions only on the margins of politics. Many socialists and neo-Malthusians as well as birth controllers like Marie Stopes were steeped in the same social prejudices held by their most unyielding adversaries.

In effect, the wealth of detail Soloway has amassed about the period 1880–1930 suggests that population questions touch the deepest concerns of thoughtful Englishmen in roughly the same way as religious questions did a century earlier. Professor Soloway, the author of a