

Book Reviews

Sir Henry Savile, and Harvey) as the result of Venetian attitudes towards the Inquisition. This is an opportunity missed, for it is clear that the reputation of the university was not by itself always sufficient to attract students all the way from England. Nor was a Paduan degree in medicine always as attractive as most medical historians have assumed, for several years might elapse without the presence of an English medical student.

Such wider considerations rarely surface in this carefully written and well-researched book, which sets out in great detail what is known about the English in Tudor Padua. If more is sometimes claimed for some of its teachers, e.g. Leonico Tomeo, or its humanistically inclined graduates than is warranted by the meagre evidence, that is a small price to pay for this extremely valuable book, which makes clear why Shakespeare had his Lucentio arrive at "Fair Padua, nursery of the arts" for "a course of learning and ingenious studies".

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Andreas-Holger Maehle, *Drugs on trial: experimental pharmacology and therapeutic innovation in the eighteenth century*, Clio Medica 53, Wellcome Institute Series in the History of Medicine, Amsterdam and Atlanta, Rodopi, 1999, pp. 378, £65.00, \$110.00, Hfl. 200.00 (hardback 90-420-0793-1), £18.00, \$30.50, Hfl. 55.00 (paperback 90-420-0783-4).

The author's research into eighteenth-century pharmacotherapy, which forms the subject of this book, adds to the knowledge of the early history of pharmacology. Half a century ago experimental pharmacology was

regarded as a development of the early nineteenth century with the physiologist François Magendie the acknowledged "father" of the science. In the 1960s historians traced the experimental tradition in pharmacology to the eighteenth century drawing attention to early methods of animal experimentation, dose-effect relationships and theories of the mode of action of drugs and poisons, all aspects significant to modern scientific pharmacology. In this book the author places these early studies in a wider context, examining and elucidating the relations between the experimental approach, pharmacological theories and therapeutic principles.

In an introductory review of features of eighteenth-century pharmacology, attention is drawn to the numerous articles on materia medica, pharmacotherapy and poisons published in journals between 1700 and 1799. There are three case studies: 'Dissolving the stone', which describes the search for lithontriptics, 'Opium', which the author calls an ambiguous drug, and 'Peruvian bark', the quinine containing cinchona bark used as a specific febrifuge. In the first of these reference is made to Joanna Stephens who, in 1736, offered to reveal the secret of her remedy for the stone for a sum of £5,000. The full details of this incident have been fully documented elsewhere, here the author concentrates on how evidence to test her claims was produced and how this further shaped the methodology for the study of lithontriptics. This study also provides an early illustration of chemistry as one of the constituent sciences of pharmacology. The rigorous investigation of the therapeutic use of opium and the experiments to determine its effects is a valuable contribution to the already extensive literature on the drug. Peruvian bark was regarded as a specific, a term which Dr Maehle carefully examines and concludes that there was a change in its definition towards the end of the eighteenth century.

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In each of the subjects under discussion there were intense efforts to determine chemically the active constituent of the medicine. It was success in this field, with the isolation of the alkaloidal constituents of opium, cinchona bark and nux vomica in the first decades of the nineteenth century, that supported the view that scientific pharmacology had its origins at that time. In this interesting monograph the author argues that experimental pharmacology and therapeutic innovation were already prominent features in eighteenth-century practice.

M P Earles,
Eltham, London

Richard Allen, *David Hartley on human nature*, SUNY series in the Philosophy of Psychology, State University of New York Press, 1999, pp. xxiv, 469, \$24.95 (paperback 0-7914-4234-9).

Though arguably amongst the half-dozen leading intellectuals of eighteenth-century England and a man of immense influence in psychology and pedagogics, David Hartley has been oddly neglected: he rarely makes more than a passing appearance in histories of the Enlightenment and there is no recent biography. Amends have partly been made in Richard C Allen's study—a work which combines deep erudition with a very congenial manner and an engaging prose style (it is, all too predictably, the work of someone who is not currently an academic).

It should be made clear from the outset that, though investigating particular episodes of Hartley's life in some detail, for instance his suffering from the stone and quest for a lithontriptic—matters now dealt with more satisfactorily in Andreas-Holger Maehle's *Drugs on trial: experimental*

pharmacology and therapeutic innovation in the eighteenth century (Amsterdam, Rodopi, 1999)—this is not a conventional biography. In particular, it is frustrating that Allen has so little to say about Hartley's crucial Cambridge years and contacts.

The focus of Allen's attention is Hartley's *Observations on man, his frame, his duty, and his expectations*, published in two volumes in 1749. That is a work whose significance has often been touted by those, from Joseph Priestley onwards, who have butchered or twisted it in various ways for their own ends. In his re-edition of the *Observations*, Priestley for his part, while at least valuing Hartley's materialism, completely expunged his theory of nervous vibrations; while later Utilitarians, though setting him up as one of their forefathers, pretended that Hartley had written a secular theory and thereby entirely ignored the second volume. Allen aims to restore the *Observations* to its original historical context and to recover Hartley's intentions.

In that endeavour he is largely successful. He is equally well-read in modern scholarship on, and expert in the byways of, early-Georgian philosophy of mind and neurological controversy (were the nerves hollow or not?), and so proves very effective in explicating the theory of nervous vibrations which was (literally) the pith and marrow of the physiological-psychology which made Hartley's theory of human nature so distinctive. In this regard, Allen rightly stresses the salience to Hartley of Newton's *Opticks* and its notions of the vibrations of light—that is why this book's lack of interest in Hartley's Cambridge career is so frustrating! Allen is also strong in re-establishing the religious framework of Hartley's materialism. That was, as so often in the English Enlightenment, in part the product of a temper radically unsympathetic to the verbal gibberish of a spiritual realm comprised of "fictive entities". But it also followed from a