

to the philosophical underpinnings of medical change.

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L S Jacyna, *Medicine and modernism: a biography of Sir Henry Head*, Science and Culture in the Nineteenth Century Series, London, Pickering & Chatto, 2008, pp. viii, 353, £60.00, \$99.00 (hardback 978-1-85196-907-4).

This is a most interesting and meticulously told biography of the eminent late Victorian and Edwardian English neurologist, Henry Head (1861–1940). Head was a fascinating and in some ways provocative character in the promotion of scientific medicine, but there has been no previous biography or, indeed, proper appreciation of the full range of his life, which was devoted to literature as well as medicine and to a moving relationship with the woman, Ruth Mayhew, who was to be his wife. It is indeed possible, as Stephen Jacyna suggests, that Head's biography gives us more insight than any other comparable "life" into the personal relationship between devotion to science, a medical career and the private world of love of beauty and idealization of a partner who sustained and enriched the latter while, it scarcely needs saying, she eased the arrangements for the former. The biography will, I think, captivate doctors, medical historians and anyone interested in the shift from Victorian to twentieth-century British intellectual culture.

At the centre of the work is the exceptional archive of letters and "Rag Books", or personal books for literary quotations and reflections on all manner of subjects, which Jacyna has drawn on. He has self-consciously shaped what he has to say as a close and veridical narrative derived from the archive and other sources of letters. He has very well organized the material, choosing not to tell a strictly chronological story (though he gradually unfolds the life before the reader)

but arranging chapters thematically, beginning with childhood, then proceeding through "the making of a neurologist" (with significant periods in the universities of Halle and Prague), the establishment of a career as both Harley Street consultant and doctor in "the London", the London Hospital in the city's East End, and his constant struggle to sustain a research interest in nervous physiology, driven by an almost religious ideal of science ("fire from heaven", in Head's words, quoted p. 101). The account of Head's notorious experiment on himself, assisted by W H R Rivers, to study the functional basis of sensation, is extremely clear. Only then do chapters turn to his very extended friendship with Ruth Mayhew, their marriage, the world war and the European world of literature, the theatre and the arts, including Head's own poetry, which was utterly central to their individual lives and to the intimacy of the couple. Finally, the biography has to conclude with Head's Parkinson's disease which touched and rapidly came to dominate the last twenty years of their life together. Head completed his *magnum opus*, *Aphasia and kindred disorders* (1926) just before the disease made such work, and indeed any work, impossible. Jacyna's style of writing and scholarship, which shapes the biography closely around the factual record, works well as this record is so rich and evocative of its authors' personal world. His manner deals with emotive matters like Head's anti-Semitism (in some contexts) and his illness with considered calmness. Head appears a brilliant and enormously dedicated scientist, a tenacious modernizer in medicine, an unquestioning elitist in social life, a maker of both professional friends and enemies; and we see a private man enormously informed about the arts and devoted to their cultivation, humanized through a remarkable relationship. All the complexities and contradictions of an engrossing if in ways difficult and arrogant Englishman emerge.

If I have reservations, they are these. Firstly, the biographer is reluctant to make judgments which would help situate Head in

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relation to the development of neurology as a medical specialty and to knowledge of the brain. (This in part perhaps reflects the lack of archival material on Head's scientific work.) In particular, Head's career as a theorist draws on the work of John Hughlings Jackson, work which, so Head claimed, had been almost totally ignored. Had it? What reception did Head's theory of sensation have? The biography does not enable us to judge Head's originality. (For Jackson, one should turn, perhaps the message is, to Jacyna's earlier fine study, *Lost words: narratives of language and the brain*, 2000.) Head's functionalist way of thinking encouraged him to mix physiological and psychological languages and therapies. How special was this? Secondly, the book does look "outwards" from the archive, as opposed to using the archive to illuminate the man, in two regards. The first of these, naturally, is to use the individual career to illustrate contemporary medical practice. In addition, however, Jacyna proposes a large thesis, which gives the book its title, that Head's manner of life and work makes him an exemplary "modernist". That he was "modern" is well shown: he vehemently supported a scientific basis for medical education, he was a rationalist in ethics and an unbeliever in religion, and he responded with warmth to the innovations of modern literature—to Flaubert, Ibsen, and, influenced by Ruth Mayhew, to Henry James and, later, Virginia Woolf. He also had a deep appreciation of Shakespeare, Goethe, Wagner and so on. He certainly thought that it is the privilege of the individual and special mind to judge and to appreciate the arts. He was prone to believe that he had great personal insight into individual psychology and he thought about people in psychological terms. He had an anti-modernist's revulsion to urban life. Thus, I would have welcomed a more systematic discussion of the senses in which he could be described as "modernist". If, as Head's theories supposed, "the mind was an *artificer* that actively created the world with which it interacted" (p. 150), in what sense was this "modernist" in a way which the

arguments of Kant or Goethe, or indeed Alexander Bain, were not?

This "life" will give great pleasure and interest to many readers, perhaps most of all to those who, like Head himself, find both the sciences and the arts personally indispensable.

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Roy Church and E M Tansey, *Burroughs Wellcome & Co.: knowledge, trust, profit and the transformation of the British pharmaceutical industry, 1880–1940*, Lancaster, Crucible Books, 2007, pp. xxvii, 564, illus. £19.99, \$39.99 (paperback 97801-905472-07-9).

This work, based on detailed research of the firm's archives, aims to tell the history of Burroughs Wellcome, founded by Silas Burroughs and Henry Wellcome in 1880, which eventually became the largest British pharmaceutical manufacturer. The authors focus on how Burroughs Wellcome applied new methods to the marketing side of the business, paying attention to product development, branding, advertising, salesmanship and market research, and how the company invested in and promoted innovative medical research. It discusses the tension between the commercial and scientific side, the establishment of major laboratories, and the legal and regulatory challenges, such as obtaining permission to perform animal experiments.

The first part of the book, covering the years 1878–1914, starts by discussing the firm's founding and early days, the introduction of American business methods, management and organization, tensions in the partnership, the difficult relation with the retail trade, the creation of the major research laboratories from 1894 onwards, the production of vaccines and sera (important before antibiotics became available), and the transformation of Burroughs Wellcome into a