

## Book Reviews

*Times* for Poor Law changes. He was a willing collaborator: he likened their secret, ostensibly independent manipulations to working like “pickpockets in a crowd”.

Their complementarity is engaging. He was compassionate, attracted by her frailty, and ponderously gallant. He appears to have enjoyed her sisterly scolding, until it became bitter in the 1870s and age attenuated their relationship. She fed on his concern and the gossip he retailed from the country houses. Neither could, as Jowett confessed of himself, “separate Benevolence from the Love of Power”.

These racy, wide-ranging letters will absorb any reader interested in matters Victorian, but students of medical history will find few surprises. Jowett in 1863 saw deeper into the complexities of Contagious Diseases legislation than did Nightingale. In 1865 he was still having difficulty persuading Balliol “Men of ability” to take up medicine. She successfully undermined his respect for John Simon and thrust at him hopelessly muddled dicta on “infection” and “contagion”. She lied to him about her opinion of Agnes Jones, the workhouse nursing heroine. She drew on him, as she did with other male correspondents, to reinforce her in decisions she had already made, as when she refused to be caught up in the agitation against the Contagious Diseases Acts. Occasionally Nightingale’s prejudices were bossily absurd: Michael Faraday “was absolutely without imagination” (against Jowett’s generous and acute appraisal); open windows comprised the safeguard against smallpox, not vaccination.

Finally, three small additions to the annotations: Daniel Home was probably *not* descended from the earls of Home and near certainly not from the tenth Earl; the unidentified book in letter 302 is very likely *The true history of Joshua Davidson, Christian and Communist* (1872) by Eliza Lynn Linton (it is intriguing that Jowett should read such an outré novel); and the untraced sentence attributed to Carlyle in letter 346 reveals a delicate piece of misremembering. The Negroes whom Jowett insisted were “up to their knees in pompions”, were, Carlyle wrote in ‘The Nigger Question’, “sitting . . . with their beautiful muzzles up to the ears in pumpkins”. Jowett was ever a refiner.

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WENDY ALEXANDER, *First ladies of medicine: the origins, education and destination of early women medical graduates of Glasgow University*, Wellcome Unit for the History of Medicine, University of Glasgow [5 University Gardens, Glasgow G12 8QQ], 1988, 4to, pp. 84, illus., £4.50/\$9.00 post free (paperback).

The short title of this slim monograph is misleading. It is not about the “first ladies” of professionalized medicine in Britain at all. Rather, it is a study of a sample of the second generation of medical women who, entering medicine after the legal battles were over, faced opportunities and constraints different from those experienced by their pioneer predecessors. Alexander focuses on women graduating in medicine from Glasgow in 1898–1900 and 1908–1910, making some useful comparisons with their male peers. Drawing mainly on university records and the *Medical Directory* she analyses the women’s fathers’ occupations, performance at medical school, and subsequent careers. She documents the importance of Carnegie grants for women, who were ineligible for most established bursaries; other institutionalized barriers identified include women’s persistent exclusion from examiners’ classes and from resident posts in prestigious hospitals. But marriage and medical practice were by no means incompatible for these women.

In a study that began as an undergraduate project, Alexander has made a very valuable contribution to our historical knowledge of British medical women. But its limitations might also be attributed to its undergraduate origins. There are a few howlers. For example, her assertion that women who obtained training abroad could not practice legally in Britain after the 1858 Medical Act (p. 3) is not only wrong, it suggests that she has misunderstood the debates over women’s medical education in the early 1870s that she is discussing. The limited sources used provide little insight into the women’s motivations and personal experiences. On occasions, Alexander inappropriately employs a late-twentieth century framework in analysing her

## Book Reviews

sample's careers, particularly in her discussion of specialization. Finally, she might have benefited from more time to reflect on the challenge her own evidence poses to the over-simple model of unified male opposition to women in medicine, a model that she draws upon in her first chapter. I very much hope that she has an opportunity to do so in the future.

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L. J. RATHER, PATRICIA RATHER and JOHN B. FRERICHS, *Johannes Müller and the nineteenth-century origins of tumour cell theory*, Canton MA, Science History Publications, 1986, 8vo, pp. ix, 193, illus., \$15.00.

No single scholar has done more to make classic texts of German pathologists accessible to an English-language readership than L. J. Rather. Following the substantial volumes of Rudolf Virchow's *Collected essays on public health and epidemiology* (1985), he has compiled an excellent edition of papers relating to Johannes Müller's contribution to the origins of tumour cell theory. An extended essay on the parts taken by Müller, Schwann, Schleiden and Henle in elucidating the nature of plant and animal cells is followed by a translation of Müller's seminal paper 'On the Finer Structure and the Forms of Morbid Tumours'. Particularly welcome is the republication of Schwann's three preliminary papers on cell theory in which he developed the theory that plant and animal cells show a unity of structure. While such a rarity would have merited parallel German and English texts (as with the Loeb classical editions), one must congratulate the translators for their accurate and readable rendering of the text. While no attempt is made to assess contemporary responses to these publications (abstracts of foreign papers in British medical publications also provide an excellent way to verify terminology), these two papers elucidate a central and neglected problem in the history of cell biology by specifying the exact nature of the contributions by Müller and such other leading researchers as Purkinje to the origins of cell theory.

Given that Schleiden, Schwann, Henle and Virchow were all Müller's students, it is necessary to reconstruct the fruitful exchange of ideas among this brilliant group of budding biologists. Rather points out that Müller's interest in tumours led to recognition of cartilage corpuscles, which corresponded to Schwannian cells. Müller appreciated the analogy between plant and animal cells, which Schleiden's essay developed. What Müller referred to as 'cells' were empty containers. Despite further refinements, Schwann retained the view of the cell as a membrane containing a structureless ground substance.

Rather is sensitive to nuances of terminology and to the prevailing cultural and medical contexts. It is important to recognize how such basic biological concepts as "the cell" arose from pathological investigations. Despite his excellent knowledge of primary sources, Rather cites neither general studies of the history of cell theory, nor some very relevant secondary literature. This would include Kisch's classic study of Remak (an important corrective to an over-emphasis of Virchow's role), and the general accounts of cell theory by Baker and Hughes. If he had done so, the originality of Rather's contributions to the history of cell theory would have become clearer. The judicious selection of the important texts by Müller and Schwann will ensure that this volume is of lasting value.

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MARY A. B. BRAZIER, *A history of neurophysiology in the 19th century*, New York, Raven Press, 1987, 4to, pp. xiv, 265, illus., \$83.00.

Studies of nineteenth-century neurosciences have recently received two fillips. The first of these was the publication late last year of Clarke and Jacyna's *Nineteenth-century origins of neuroscientific concepts*; the second is the arrival of Brazier's next volume of the history of neurophysiology, following her much acclaimed study of seventeenth- and eighteenth-century neurophysiology (*Med. Hist.* 1985, 29, 225–26).