officer of health and the failure to develop an attractive vision of nursing in the future. Telling too is the section on the rise of environmentalism and the de-regulation of personal life with the coming of the pill.

For 1974 to the 1990s the account of the main health policy drama of the 1990 reforms misses out on the crucial role of fund-holding reflecting perhaps a lack of focus of the role of primary care throughout the book. The review of new developments such as the campaign against AIDS and the contribution of the Acheson Report to reviving public health are useful. The eroding power base of medicine is well described, as are the rise in consumerism and new approaches in health promotion. As in the earlier phase there is little information on the very considerable regional factors in the NHS, with the North West and Wessex acting as regional leaders.

The book includes a useful bibliography with comments on sources. This could have been better organized and is certainly not comprehensive with some preference for middle of the road sources. The author would appear to have a blind spot for radicals whether of left or right. The works of Enoch Powell, Lees and Buchanan surely deserve some attention, together with those of Abel Smith, Doyal and Iliffe. This book deserves a place on seminar reading lists throughout the land and will provide a good trigger for discussions: but it would be best taken in conjunction with the *British Medical Journal* volume *Our NHS: a celebration of 50 years*, which supplies personal accounts by key participants across all the wider health areas—and which generally provides a far more critical and personal picture of the NHS (G Macpherson (ed.), *Our NHS: a celebration of 50 years*, BMJ Press, 1998). In protecting the students from shocks, Virginia Berridge may also have deprived them of some feeling for commitment.

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Mark W Weatherall, *Gentlemen, scientists and doctors: medicine at Cambridge 1800–1940*, History of the University of Cambridge Texts and Studies 3, Woodbridge, Boydell Press in association with Cambridge University Library, 2000, pp. x, 341, £50.00, $90.00 (hardback 0-85115-681-9).

At the turn of the twenty-first century, in an age of big science, Cambridge University occupies the high-tech end of medical science. This seems natural: medicine has become high science, appropriately situated in a university campus with a research hospital attached. Mark Weatherall's history of medical education at Cambridge between 1800 and 1940 shows how recently this seemingly "natural" relationship was established.

In the early nineteenth century, medically minded young men went to Cambridge to gain a liberal education appropriate for physicians to the gentry. Then they moved to London to acquire clinical experience, which the small charity hospital, Addenbrooke's, could not provide in Cambridge. Scurrilous poems mocked the ignorance of the regius professors: "Sir Isaac, Sir Busick;/Sir Busick, Sir Isaac;/ 'Twould make you and I sick/To taste their physick."

By the mid-nineteenth century, things began to change. The sciences began to claim a prominent place in the general, liberal arts curriculum, with the introduction of the science tripos in the 1840s. The London hospitals were setting new standards for practical medical knowledge which Cambridge could no longer ignore. Colleges began to offer scholarships to attract students. Trinity College appointed the outstanding experimental physiologist, Michael Foster, to teach natural science. From this position, Foster built up the pre-clinical science departments across the University and taught modern experimentalism to students. (His lectures were less successful: "the

recognized method of taking notes from the distinguished Professor of Physiology was to follow in his manual and cross out whatever he did not say.") By the early twentieth century, the pre-clinical school at Cambridge occupied a position of national prominence, enjoying funding, patronage, and prizes.

As well, an ambitious new generation of medical faculty sought to establish a complete clinical school at Cambridge, to stem the migration to London. In 1884, a series of clinical lectureships were established in seeming fulfilment of this ambition. But the clinical school never prospered and, from the turn of the century, clinical posts were left vacant or abolished altogether. The clinicians could not get a proper foothold in the hospital, which was run by charitable laymen. Therefore, leading British clinicians refused Cambridge appointments. The very success of the pre-clinical school also hindered the development of the clinical school. The scientists waged a successful battle for autonomy and control of the curriculum, blocking the clinicians' ambitions. In 1884, when the two schools supported rival candidates for the chair of pathology, the scientists won, ensuring that this strategic discipline remained in the hands of a physiological pathologist. Even after clinical research became established in the London teaching hospitals, Cambridge clinicians were too weak to introduce it on the Cam. The account breaks off in 1940 when the Regius Professor of Physic, John Ryle, quit in disgust over the rejection of his plans for a clinical research school.

Weatherall draws on recent scholarship which, by revealing struggles between clinicians and scientists to control medical practice, tempers traditional accounts of the triumphant march of medical science. Weatherall, however, largely ignores practice and focuses on University administration, understanding administration as the arena for formal confrontation over the control and meaning of the curriculum. This approach may exaggerate the importance of intention and agency among the faculty waging their administrative battles. Weatherall notes that the shortage of bodies was one practical restraint upon expansion in the early years; did laboratory or clinical or examination practices impose others in later years? As a contested site, pathology gets some attention, but other straightforwardly medical or scientific fields such as midwifery do not. The reader is left to wonder about the extent to which these other fields were organized around administrative, or pedagogical, or research agendas. This caveat aside, Weatherall's lively and well-written account makes an important contribution to the history of medical education in Britain.

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Elin L Wolfe, A Clifford Barger and **Saul Benison,** *Walter B. Cannon.* Volume 2: *Science and society*, Boston Medical Library in the Francis A Countway Library of Medicine, 2000, pp. x, 644, illus., £19.95 (hardback 0-674-00251-2). Distributed by Harvard University Press.

The authors of this, the second volume of a biography of the distinguished Harvard physiologist Walter Cannon, take no prisoners. They begin where they left off, so anyone who has not read volume one (published by the Belknap Press in almost identical format in 1987) and knows nothing of Cannon begins in the dark. This is true in a second sense for it opens with the First World War and Cannon working on shock in his own laboratory. In 1917 after the Americans entered the war, Cannon went to France where he continued to work on the problem. Cannon considered shock was caused by acidosis, the loss of the alkaline buffering power of