lunatic asylums, the tentative steps towards non-asylum psychiatric practice in the first half of the twentieth century, and the subsequent adoption of a policy euphemistically called "community care". Busfield has read quite widely in the recent secondary literature, and draws upon a diverse range of scholarship (MacDonald, Parry-Jones, Kathleen Jones, Hunter and Macalpine, Aubrey Lewis, Scull), as well as on a limited range of primary materials (Maudsley's writings, the Reports of Royal Commissions in 1926 and 1957), to construct her own account of these developments. Once again, all this is sound enough (though one is tempted to quibble here and there); but it offers little in the way of new information or research.

Overall, then, this is a book which surveys a rather broad terrain. Parts One and Two of the work are only weakly linked to each other, and the general level is of an advanced undergraduate text, rather than a monograph offering new research or a striking new synthesis of available materials. As such, it is a reasonably useful volume which can be recommended to those seeking an initial acquaintance with recent issues in the field. Specialists, however, will find little here with which they are not already familiar.

Andrew Scull
University of California, San Diego

JAMES C. RILEY, *The eighteenth-century campaign to avoid disease,* London, Macmillan, 1987, 8vo, pp. xvii, 213, £29.50.

Historians of preventive medicine have concentrated their attention primarily on the nineteenth century, It is pleasant, therefore, to encounter a balanced monograph which does not merely recognize how powerful a current prevention formed within eighteenth-century medicine, but which lucidly demonstrates how it flowed from the deeper cultural wellsprings of the Enlightenment. Drawing on Montesquieu and the Enlightenment neo-Hippocratic movement, Riley shows the convergence of eighteenth-century notions of Nature and man's power to transform it, of scientific causation, of progress in the environment as well as within society, and, not least, of the formation of man by circumstances. Having demonstrated this union, Riley suggests that environmentalism thus formed the most rational theory of disease, creating optimism for the conquest of sickness on the basis of the transformation of the environment.

In successive chapters, Riley offers judicious summaries and analyses of the writings of Arbuthnot and Short in Britain, and Ramazzini, Hoffmann, Burggrave, Behrends, Finke, and Frank on the Continent, to highlight the sorts of environmental factors that loomed largest in atmospheric and miasmatic theories of epizootic crises: climate, gases, standing water, exhalations, filth, and refuse. He then proceeds to analyse the practical remedies which these theoretical perspectives generated, paying attention to attempts to ventilate buildings, to clean up towns, and, above all, to drain swamps. And in the concluding sections of the book, he asks the crucial question as to whether medical environmentalism in theory and practice was to any significant degree responsible for declining mortality and rising aggregate population during the century. It is a case he finds generally not proven, though suggesting, following Mary Dobson, that the man-made decline in malaria, thanks to drainage projects, might have been significant.

Riley's discussion is to be welcomed so far as it goes. Unfortunately, it does not advance the state of understanding as far as it might have done. The book contains little which will not be familiar already to readers of Clarence Glacken, George Rosen, Major Greenwood, and other standard authors. Possibly, it is mainly intended to be a textbook survey of the state of the art for student use, but in that case, it suffers from a patchiness which will diminish its usefulness. For example, it is surprising that so little attention is paid to the extensive controversial writings on disease causation and public precautions generated on plague by the Marseilles outbreak (no mention of Paul Slack's admirable history). Smallpox, too, receives oddly little attention, given that inoculation surely proved the most successful of all the eighteenth-century campaigns to prevent disease, and just possibly a significant demographic factor (none of Razzell's books is listed).

Likewise, one would have expected more prominent discussion of contemporary debates about the shifting public health of London (the old but still useful analyses by M. C. Buer and Dorothy George could have been drawn upon: they do not figure in the notes or bibliography). Similarly, in discussing the relations between medical prevention and population shift, Riley's account suffers from not taking into consideration any of the work of Wrigley and Schofield published since their mammoth 1982 book. And the whole "medical police" movement also receives surprisingly little attention. This monograph is selective in its coverage, and the grounds for selectivity are not always clear.

In general, Riley's analyses of environmentalism are cogent and illuminating. Occasionally, perhaps suffering from the benefit of hindsight, and in particular an awareness of later bacteriology, he cannot resist accusing its proponents of unscientific trains of thought. He talks of their "curious . . . failure to become sceptical about the validity" of the theory of environmental influences (p. 87), as if, by proper scientific criteria, it might have been self-evident that the theory should have been falsified; somehow they were slovenly in their methodology ("they observed both too many things and too few things": p. 73). This hint of anachronism is perhaps also present in Riley's use of the modern generic term "epidemiologists", and his talk of eighteenth-century "reasoning about pathogens"; probably both notions, useful though they be as shorthand terms, beg too many questions.

Overall, however, it would be silly to end on a negative note. Professor Riley has produced a stimulating essay which does well to focus our attention once more on the Enlightenment roots of public health. Given that most histories of public health are now superannuated, it is hoped that his work will provoke new interest in the subject.

Roy Porter
Wellcome Institute

WALTER B. CANNON, *The mechanical factors of digestion,* reprint of 1911 ed., with introduction by Horace W. Davenport, Canton, Mass., Science History Publications, 1986, 8vo, pp. xxiii, 195, illus., $20.00.

W. B. Cannon's 1911 classic *The mechanical factors of digestion* is probably already familiar to most physiologists, if only by reputation. Whether this reprint will extend its audience is debatable as, in the laudable interests of economy, several not-so-laudable sins of commission have been made: it is indifferently printed on poor quality paper, the photographs and radiographs are so badly reproduced that they serve merely as irritative stimuli, and even the line drawings are often badly set within the text. Combined with these is a major sin of omission—the absence of any editorial commentary that would place this book in context and highlight its importance. An attempt to do so, bravely made by H. W. Davenport in his short introduction, is a step in the right direction. However Professor Davenport has written elsewhere, and more extensively, on Cannon's contributions to integrative physiology, and reference to these papers and a bibliography of Cannon's later works would have been a valuable and not too costly addition to compensate for the lack of annotation.

This book is undoubtedly a classic that does deserve reprinting. Cannon was a pioneer in the use of X-rays and radio-opaque media to study the movements of food along the gut, previous access to the region having necessitated surgical interference. And the results of this early experimental work are still in everyday use, much modified of course, as part of routine radiographic diagnostic procedures. His work was at a time when the hazards of X-rays were unknown and there are chilling reminders of the consequences in the introduction: Cannon was "one of the few early Roentgenologists to live to old age", becoming "an old man suffering from at least three kinds of cancer as a sequel to his early x-ray studies". Cannon's approach, which characterized much of his later writings, addressed broader issues than those that were of immediate experimental interest. This allowed him to see gut function as a continuous process and to consider questions such as the influence of food composition on gastric emptying and the