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Methods of manufacture and storage are fully described, together with the advance from primitive apparatus as used by Davy and Wells to the controllable nitrous oxide/oxygen percentage and pressure devices of Bert, Hewitt, and others.

Dr Smith pays attention to the no less important social aspect of his subject. He reproduces playbills advertising demonstrations of nitrous oxide and the title sheets of two comic songs, *Laughing Gas.* Smith fully discusses the mysterious *Dr Syntax in search of the grotesque* and concludes that this is unlikely to have been written by William Combe, author of the authentic Dr Syntax series, but is a pastiche. It is interesting that Smith should have considered Coleridge as a possible author, thus providing a direct link with Davy, but he leaves the question of authorship open. *In search of the grotesque* is of importance to the early history of nitrous oxide because it contains an apparently authentic description of a dental extraction under nitrous oxide anaesthesia in Paris before 1820, thus antedating Wells's famous experiment by over twenty years.

Two criticisms must be made. First, the presentation as a series of unedited papers is not altogether satisafactory. There is some repetition; for instance the same photograph of T. W. Evans appears on p. 75 and again on p. 93. Reference to a previous paper is muddling because the papers do not appear in the same order as originally published. Dr Smith explains in his preface that cost dictated this method of presentation. Second, the title *Under the influence*, illustrated on the dust-cover by a humorous print from Dr Syntax, is misleading, giving the impression that the content is suitable for light reading by the general public.

These are minor criticisms. The book may be regarded as the classic history of nitrous oxide. It is well produced with a generous number of illustrations, and is fully documented. A work which should be read by every anaesthetist who is interested in his subject and which should find a place in the library of the medical historian.

> F. F. Cartwright Milverton, Somerset

MARTIN V. MELOSI (editor), Pollution and reform in American cities, 1870-1930, Austin and London, University of Texas Press, 1980, 8vo, pp. xii, 212, \$15.00.

Urban pollution was recognized to be more than just a nuisance in the cities of industrializing America. Smoke-stacks, horse-choked streets, and the ever-present din were taken to be signs of prosperity, but the problems of waste disposal and air, water, and noise pollution plagued administrators, stimulated reformers, and consumed the efforts of public health workers. Historians of public health and sanitation have generally focused on the growth of public health departments, the activities of physicians in fighting contagious disease, and the medical and epidemiological aspects of urban life. But the character and extent of pollution have not been equally analysed. Nor have municipal efforts to control urban degradation been approached in a way which can help historians of medicine understand the social and political context of public health campaigns.

This is a collection of essays on the history of those threats to health, safety, and comfort. Medical men and public health activists take a back seat to the emerging speciality of municipal engineer and groups such as the Ladies' Health Protective Association. Historians of medicine will be most interested in four of the essays in this volume, those on water supply, waste water control, clean air, and refuse pollution. But the supposed threat which street noise presented to sanity and the political activism which paralleled the growth of public health departments are also intriguing topics.

With a set of problems seen to pose health risks, it is not surprising that reformers turned to medicine for hints on curing this illness of the city. In the 1890s, streetsweepers in New York City were issued with medical style white uniforms. Their leader, the street-cleaning commissioner "Colonel" George E. Waring jr, turned his 2,000 men into a regiment which formed the shock troops of public health. Although their white smocks were hardly practical for the job, their association with cleanliness certainly attracted attention and helped form a useful *esprit de corps*.

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While these essays are not exactly inspirational, they are all based on careful and extensive research and as a whole do an excellent job of defining this important aspect of urban history. The need for such a collection which identifies areas for further work is made clear in a useful bibliographical essay on urban pollution problems. While other social scientists have studied the urban environment in depth, historians have not yet contributed their share. This volume effectively illustrates what can be done.

Jonathan Liebenau Business History Unit London School of Economics and Political Science

VIVIAN NUTTON (editor), Galen: problems and prospects. A collection of papers submitted at the 1979 Cambridge conference, London, Wellcome Institute for the History of Medicine, 1982, 8vo, pp. iii, 281, £13.00 (£14.00 overseas).

This collection of multilingual papers falls into two parts, the first six being about Galen as a writer on medicine and philosophy, while the second six pursue his fortune through the Syriac, Hebrew, Arabic, and medieval Latin traditions to the sixteenth century. It was a shrewd idea to bring together authorities to discuss these topics, for which the organizers (Dr A. Z. Iskandar, Dr G. E. R. Lloyd, Dr V. Nutton) and the Wellcome Trust (whose enlightened and munificent patronage Galen would have appreciated) deserve our gratitude. The papers are faithful to the title of the conference: problems abound, and the prospects for future work are there at least by implication in most. The end-result is a useful work of reference on the present state of Galen studies, in which each paper deserves mention.

Jutta Kollesch with sharp authority examines (pp. 1-11: German) Galen as a figure of the strange intellectual milieu known as the "Second Sophistic". She is against facile explanations of Galen's ideal of philosophical medicine as the product of classicizing and competitive fashions. It is Galen's differences which count, and for these the explanation is specific: the situation of medicine in his time and the need to come to terms with and exploit a legacy of scientific development. Her paper thus opens up a matter which directly or indirectly concerns all the contributions to the volume. Why does Galen matter? Because successive epochs were taken over by a system which, whether we call it scientific, rational, dogmatic, or philosophical, offered a sure method for processing any technical, professional, or pedagogical problem which the medical man was likely to encounter. Michael Frede, writing on Galen's epistemology (pp. 65-86: English), examines the credentials of this technological juggernaut: was Galen "just" an eclectic, or did he have a carefully thought out position on the roles of reason and experience such as would make him a worthy object of philosophical attention? Frede thinks he does. But this is a dangerous antithesis to apply to Galen, whose intellectual opportunism evades any of the senses of eclecticism which Frede defines. This makes it peculiarly difficult, without prejudging the whole question, to treat Galen as a philosopher, the evidence for whose philosophy lies in his writings. Reason and experience figure again in Luis Garcia Ballester's very professional examination of Galen's medical practice (pp. 13-46: English) and in Mario Vegetti's study of conflicting models of medicine (pp. 47-63: Italian). Garcia Ballester's paper, which concentrates on diagnosis, avoids the objection referred to above, since he is concerned with Galen's habitual attitudes and dispositions towards practical matters. He describes Galen's practical resolution (a "negative legacy") of the tension between his desire for a "scientific" nosology, and the contingencies of clinical experience. I find it easier to believe in the reality of this tension for Galen than in that of the somewhat similar tension which Vegetti suggests between Galen's medical science, based on anatomo-physiological demonstration and an optimistic view of "Nature", and his clinical medicine, where contingency and failure suggest a very different view. Finally in this section, Paul Moraux gives an authoritative survey of Galen's writing on natural philosophy (pp. 87-116: French); while Fridolf Kudlien (pp. 117-130: English), examining Galen's religious belief, takes up the difficult question of his attitude to the god Asclepius: Galen saw in Asclepius a reflection of that rational (once again!) medicine in which he himself devoutly believed, and disapproved of attempts to attribute supernatural miracle-working to the god.