

Book Reviews

handsome, lavishly illustrated, book promises answers to both questions.

After moving to London at the age of nineteen, Sloane pursued early studies in chemistry and botany. Professionally inspired by Thomas Sydenham and philosophically influenced by John Ray, Robert Boyle and Joseph de Tournefort, Sloane took up medical practice as an ideal calling that allowed him to combine work and virtuosic diversion. Like many early collectors, his habit began on youthful botanizing trips; a voyage to Jamaica saw it flourish; and growing financial security in his middle years allowed him both to gather more and more objects, and also increasingly to buy up the fruits of other collectors' industry. By 1753, his holdings included some fifteen hundred shells, over twelve thousand vegetables, and no less than twenty-three thousand medals. As John Thackray points out in his chapter, what Sloane lacked in discrimination he more than made up for in comprehensiveness.

Timed to coincide with the 250th anniversary of the opening of the British Museum, this volume is an assessment of Sloane's collecting activities presented in some sixteen curatorial divisions ranging from insects to ethnographic collections. Almost every chapter is crammed with fascinating details: for example, that unlike Linnaeus, Sloane arranged his botanical collections with more than one specimen per page, thereby reducing the possibility of rearranging pages for the sake of reclassification; that Sloane gathered his collection of Egyptian antiquities inspired by a profound hostility to what his contemporary John Woodward called a "barbarous and uncouth" culture; that a number of the 760 specimens in his *humana* collection were clearly prepared for didactic purposes; and, best of all, that the recipe for Cadbury's drinking chocolate was based on "Sir Hans Sloane's Milk Chocolate".

Particularly successful chapters are Ian Jenkins' on Sloane's classical antiquities, John Thackray's description of his mineral and fossil collections, and Marjorie Caygill's analysis of the establishment of the British Museum.

Jenkins sees Sloane amassing his collection of classical material culture in an attempt to explore the "microcosm". For Thackray, the mineral and fossil collections only make sense in the context of contemporary philosophical debates. And Caygill sensibly warns against the teleological temptation of crediting Sloane with an insight into what the British Museum would become, going on to advance a number of speculations about what really lay behind his "visionary" gesture.

What distinguishes these contributions from the majority of others is the care that their authors take to assess the meaning of Sloane's efforts in the intellectual context of his own time. Much of the rest of the book unfortunately adds little to our understanding of either what Sloane was up to or indeed of its significance for us today, beyond a count of what of the original specimens survive. The reasons for this shortcoming are twofold. First, in dividing the book along modern-day curatorial lines many of Sloane's motivations and interests have inevitably been obscured; for the most extraordinary aspect of the story is precisely that all the material was gathered by one man motivated by what he saw as a unified rationale. Second, almost all the authors are themselves museum professionals, which has resulted in many of the essays being of more curatorial than historical value. Thus while Arthur MacGregor is to be heartily congratulated on producing a beautiful book, rich in painstakingly gathered and splendidly compiled facts about the breadth of Sloane's enterprise—many of them new—this book advances us little in assessing what it all actually meant.

Ken Arnold, Wellcome Institute

Richard J Wolfe and Leonard F Menczer (eds), *I awoken to glory: essays celebrating the sesquicentennial of the discovery of anaesthesia by Horace Wells*, Boston, The Francis A Countway Library of Medicine, in association with the Historical Museum of Medicine and Dentistry, Hartford, 1994, pp. xvii, 442, illus., \$28.95 (0-88135-161-X).

This volume of twelve essays by ten Wells enthusiasts was published to coincide with the sesquicentenary of the first use of nitrous oxide as a general anaesthetic. Horace Wells has not had a good press in recent years. The current view was much influenced by Stanley Sykes, who described him as careless, overconfident, irresolute and wayward. These authors set out to redress the balance. By recording aspects of Wells's life and times not previously explored, they have succeeded handsomely.

The chapter on Wells's dental practice, and the complete transcription and analysis of his day book, shows that he was a very successful dentist, attending many eminent local citizens, and attracting patients from as far as 150 miles away. His income was substantial. He invented dental instruments. He had an interest in orthodontics, and was a conservationist, advocating dental hygiene and castigating candy. He ran what must have been one of the most successful and financially rewarding practices in the country. Unfortunately he became associated with W T G Morton, whom he quickly found to be without any principle, deceitful, a liar, and with a strong liking for drink. Wells's distrust of him was such that, as seen in the day book, all Morton's debts to him were certified by a notary.

Wells's contribution to the introduction of general anaesthesia is fully analysed. How much was he likely to have known about Davy's work on nitrous oxide? A search of early nineteenth-century chemistry textbooks leads to the conclusion that the surgical world was unaware of Davy's proposal that nitrous oxide might provide pain relief in surgery. But this author overlooks the account, cited by both W D A Smith and Thomas Keys, of William Allen, who in March 1880, in the presence of Astley Cooper and others, inhaled nitrous oxide until his appearance caused such alarm that the experiment was stopped. Is it not possible that this closed the book on the use of nitrous oxide in surgery for several decades? It is concluded that Wells had no knowledge of the analgesic effects of nitrous oxide before 10 December 1844; hence his recognition of its potential is all the more creditable.

Furthermore, unlike Morton, he had no intention of benefiting financially from his discovery, believing that anaesthesia should be "as free as the air we breathe". Applying the test of causality in its simplest form, we may ask whether things would have been different if Wells had not existed. From what we know of Morton and Jackson it is impossible to conclude that either of them would have played the part they did in the introduction of general anaesthesia, in the absence of the stimulus provided by Wells.

Wells has been criticized for choosing the wrong agent, and Morton praised for selecting the right one. But Wells did try ether, and concluded, correctly, that nitrous oxide was more suitable for his purpose, which was the provision of the brief period of anaesthesia required for dental extraction. Also, after his inadequately prepared and unconvincing public demonstration, he and other dentists continued to use the gas successfully; but as regards his reputation, and any reward for his discovery, he fell among thieves.

There is a most interesting chapter about Wells's friend and confidant, John Riggs, who thought Wells a genius and always regarded him as the discoverer of general anaesthesia. Riggs was a pioneer of the active treatment of "scurvy of the gums", *Pyorrhoea Alveolaris*, also known as Riggs's Disease. Mark Twain was one of his patients, and endured operative treatment sessions lasting nine and five hours on successive days. There is an essay also on C S Brewster, the fashionable American dentist who befriended Wells in Paris, and his successor T W Evans, who reintroduced the use of nitrous oxide to England. The topics range widely. They include accounts of how Wells's correspondence was discovered and collected by W Harry Archer, one of the Archers of Ambridge, Pennsylvania, and descriptions of his portraits and statues, and their provenance.

The book is well produced, well referenced, and well illustrated. Two of the essays are blemished by misspellings, and one author, by his use of a tense that might be called the unconditional prophetic—"in a few years

Beddoes would give up his researches on gases”—has neatly disposed of the argument as to whether all historical knowledge is in the past or in the present. For him, at least some of it is in the future.

This book is strongly recommended as essential reading for all interested in the history of anaesthesia or dentistry.

David Zuck, London

Götz Aly, Peter Chroust, and Christian Pross, *Cleansing the Fatherland: Nazi medicine and racial hygiene*, transl. Belinda Cooper, Baltimore and London, Johns Hopkins University Press, 1994, pp. xvi, 296, illus., \$48.50 (hardback 0-8018-4775-3), \$16.95 (paperback 0-8018-4824-5).

Michael Burleigh, *Death and deliverance: 'euthanasia' in Germany 1900–1945*, Cambridge University Press, 1994, pp. xvii, 382, illus., £35, \$59.95 (hardback 0-521-41613-2), £14.95, \$18.95 (paperback 0-521-47769-7).

Historians are all too familiar with the many episodes in the past that resemble the Nazi era of twentieth-century Germany. Such episodes were exquisitely summarized by Alessandro Manzoni, writing ostensibly of seventeenth-century Italy: “From the inventions of the ignorant, educated men borrowed all that they could reconcile with their own ideas; from the inventions of the educated, the ignorant borrowed as much as they could understand. Out of all this emerged a confused and terrifying accumulation of public folly”.¹

Traditionally, Manzoni’s “educated” men have been politicians, soldiers, priests, lawyers and scholars. In a modern totalitarian society it is now apparent that the list must include physicians, making their own contribution to crimes against humanity. The roots of what was to become a process of medicalized mass murder can be traced to before World War I, when the intellectual atmosphere in Germany was already thick with notions of social

Darwinism, militant nationalism, eugenic theory and anti-semitism, all part of a political tinderbox which smouldered after military defeat and was ignited by the National Socialist regime in the 1930s. The terrible consequences constitute the substance of these two books. Both tell essentially the same story of a programme of medical “euthanasia” cloaking a policy aimed at the systematic destruction of sick populations and involving the active participation of the caring professions.

Michael Burleigh, a British historian, has written a scholarly monograph which is more red-blooded than is suggested by his rather anaemic description of “an attempt to study the relationship between psychiatric reform, eugenics and government cost-cutting policies during the Weimar Republic and Nazi periods”. Euthanasia was always implicit in the rise of eugenics and became a public issue in Germany after World War I with the publication in 1920 of the tract by Karl Binding (a lawyer) and Alfred Hoche (a psychiatrist) entitled ‘Permission for the destruction of life unworthy of life’.² The ways in which the euthanasia debate was subsequently perverted to justify the extermination of countless mentally and physically sick adults and children make up the core of Burleigh’s book. The grim narrative is illustrated throughout with telling anecdotes and individual portraits which constantly remind the reader of the horror behind the documentation and the statistics.

Occupying centre-stage is the role of the medical profession in these events. In the course of the trial of Adolf Eichmann there was a memorable exchange between the judge and Eichmann’s German defence counsel, who “declared the accused innocent of charges bearing on his responsibility for ‘the collection of skeletons, sterilizations, killings by gas, and similar medical matters’, whereupon Judge Halevi interrupted him: ‘Dr Servatius, I assume you made a slip of the tongue when you said that killing by gas was a medical matter’. To which Servatius replied: ‘It was indeed a medical matter, since it was prepared by