

Book Reviews

Annamarie Adams, *Medicine by design: the architect and the modern hospital, 1893–1943*, Minneapolis and London, University of Minnesota Press, 2008, pp. xv, 169, illus., \$27.50 (paperback 978-0-8166-5114-6).

How would the history of medicine read if material and spatial evidence were the focus of historical investigation? This is the methodological question that drives Annmarie Adams's *Medicine by design*, which takes the design, use and representation of late-nineteenth- and early-twentieth-century hospitals as crucial contributory factors in the development of modern medical discourse and innovation. Adams contends that while Victorian hospitals demonstrate affiliations with other charitable institutions of their era, "interwar hospital architecture . . . anticipated and produced medical practices broadly and socially conceived, rather than just reflecting them symbolically" (p. xx). Departing from the widely held view that hospitals simply reiterate or embody the medical practices of the past, Adams uses a lively array of historical sources to show how hospitals create the space of medicine, and thus, shape medical convention and innovation alike.

The Royal Victoria Hospital (RVH) in Montreal is at the heart of Adams's analysis of how hospital architecture is the product of multiple agents and tensions, including architects, benefactors, users, and health-care experts. As a single building that expanded over several decades, the RVH offers the historian of medicine an astonishing array of paradigms to consider. Originally conceived as a charitable institution, this Scottish baronial pavilion hospital opened in 1893 to great acclaim, so popular that postcards with its likeness were prized souvenirs. Its minimalist open wards and historicist exterior details (including non-functional chimneys) expressed a paradox within the late-nineteenth-century

hospital that remains in force for the majority of the buildings considered in Adams's study: hospitals were to be sites of the most up-to-date and forward-looking "modern" medicine, while, at the same time, appealing visually and spatially to conservative social attitudes.

Accordingly, the tools of architectural, visual and cultural analysis, as presented by Adams, offer ways of understanding how the hospital, an immensely complex building type, could simultaneously promise the advances of science and the comforts of home. Adams's book demonstrates, however, how deeply entrenched social norms demanded, for example, that hospitals recreate the larger spatial divisions of the city, through spatial layout, circulation and decorative programmes.

Adams writes compellingly of the Montreal Maternity Hospital, where skilful architectural treatments tempered the medical debate about birth as either a natural or a pathological event. Using photographs, advertisements, written accounts and architectural site plans, Adams shows how the rustic, castle-like exterior of the interwar maternity hospital incorporated two interiors: "homelike" private rooms and non-paying wards (which featured fireplaces, printed textiles and paintings), and highly modern spaces, such as the surgical and birthing suites. But, as Adams demonstrates, the overall design of the maternity hospital was simultaneously a landscape of class distinctions. Adams traces the movements of wealthy and poorer users in the hospital, demonstrating how privileged bodies and working bodies would never meet; the maternity hospital was really two buildings in one. Such spatial organization would inevitably shape the course of medicine; with more women entering the hospital to give birth, the medical profession was able statistically to develop "a model of 'normal' birth" (p. 49).

Adams's rich, satisfying and beautifully illustrated book will be of use to historians of medicine and architecture, as well as scholars whose interests include the relationships between institutional space and material culture. The greatest contribution of this book is the way in which it illuminates, in one building type, the complex relationships between design and space, traditionalism and modernism, gender and class, professionals and laypersons. It also sheds light on the profound changes to the very notion of health care during the years 1893–1943, an era of hospital architecture in Canada that has until now stood largely outside the lens of academic investigation. As such, the book makes a significant contribution to ongoing, interdisciplinary research in the entwined histories of architecture and medicine.

Cynthia Imogen Hammond,
Concordia University, Montreal

William H Brock, *William Crookes (1832–1919) and the commercialization of science*, Science, Technology and Culture, 1700–1945, Aldershot, Ashgate, 2008, pp. xxvii, 556, illus., £65.00 (hardback 978-0-7546-6322-5).

William Crookes figures less in the historiography of Victorian science than he should. He achieved much but is not tied to a single discovery or discipline. He was trained as a chemist, but much of his work lay at its boundaries with physics, on matters of spectra, electricity, and later radiation. On such matters Crookes (with the aid of a succession of under-recognized assistants, J Spiller, Charles Gimmingham, and J H Gardiner, all masters of glassware) was an outstandingly talented experimenter—creative in isolating remarkable effects and testing hypotheses, capable of working at high levels of precision. The discovery of thallium in 1861 was Crookes's first great achievement; thereafter he was a central figure in the difficult distinguishing of the rare earths and the

associated determination of atomic weights. He worked at the margins of public health as an investigator of disinfectants for the Cattle Plague Commission during the mid-1860s and later as an analyst of London's water, as a sewage treatment entrepreneur, and as an advisor on river pollution. He was prophetic on environmental matters and on future technology, bringing attention both to the need to fix nitrogen and to the awesome power of the new-found radiation. Crookes was also a psychical researcher, interested in undiscovered physical forces and, at one remove, matters of cosmology.

Beyond all this, he was a proprietor and an editor of journals, most notably the weekly *Chemical News* (in many ways modelled on the *Lancet*), and the *Quarterly Journal of Science* (at its best, an analogue to the *New Scientist*). Like the *Lancet's* founder/editor Thomas Wakley, Crookes was an adroit publicist, a writer of delightfully iconoclastic leaders on innumerable subjects. He was often at the centre of controversy and kept his lawyers busy. But for the multiplicity of his interests, he might well have become a successful technical industrialist: he had an eye to the patentable, and a few of his investments in novel technologies were profitable, but most crashed (among them transmutation of base metals into gold). In any case he had little patience for systematic development or marketing, though in the case of sewage treatment he kept at it for an unusually long time. Though a superb lecturer at the Royal Institution, he was never a successful academic: independence and impatience would probably have precluded such a career. Finally, though his colleagues often kept him at some distance (only partly from discomfort with his spiritualism), he did become a London scientific insider, serving late in life as president of both the British Association and the Royal Society.

Brock's is a readable, well researched, doorstep biography—an exhaustive account of an exhausting life. He follows his subject across the Atlantic and into South Africa (Crookes had a strong interest in diamonds and