

such sensitivity. Popper has already been mentioned. See also the definition of clinical physiology on page 173.

This is not a book that will satisfy all of the many constituencies with an interest in Laennec. But *To see with a better eye* will be required reading for the serious scholar of nineteenth-century French medicine and of the history of clinical diagnosis for the foreseeable future.

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**Nancy Tomes**, *The gospel of germs: men, women, and the microbe in American life*, Cambridge, Mass., and London, Harvard University Press, 1998, pp. xv, 351, illus., £19.95 (0-674-35707-8).

As I read Nancy Tomes's sparkling account of popular assimilation of the germ theory, I could not help thinking of Howard Hughes. So afraid of contamination with unseen germs that he locked himself away for years and only handled objects wrapped in Kleenex, Hughes is an extreme example of the "antisepticonscious America" that Tomes so engagingly analyses. Though few Americans were as obsessed as Hughes, Tomes shows that belief in the existence of disease-causing germs was instrumental in the transformation of an "extraordinary range" of products and practices. Extra-long hotel sheets, prohibitions on spitting, public fountains, porcelain toilets and a mind-boggling array of other developments date from this period. In thus shifting historical attention away from municipal engineering and towards the "reformation of individual and household hygiene", Tomes delivers an impressive study of public health and its relation to the public's daily life.

Tomes begins by demonstrating that, regardless of physicians' ambivalence towards germs as causes of disease, lay commentators rapidly assimilated germ theory largely

because its early versions harmonized so well with the prescriptions of contemporary domestic sanitary science. The heart of the book, covering the period from 1890–1930, is an analysis of the transformation of germ theory into a code applicable to domains of existence far removed from sewers and water supplies. Tomes illustrates the transformation with extended discussions of the anti-TB crusade and the domestic science movement. These movements are fine examples of Tomes's contention that scientific findings have to be exported outside the lab by interested parties. She nicely outlines the historical context that structured the form that these particular extensions of the theory assumed. The primitive development of state and local public health bureaucracies ensured, for example, that the anti-TB campaign was largely voluntary in orientation. Likewise, the domestic science movement was founded and led by the expanding network of college-educated women who were otherwise excluded from full participation in public life.

A second theme highlighted by these episodes is the central role played by advertising and commercial calculation in the triumph of the gospel. Tomes describes the significance of modern methods of mass persuasion in the TB campaign, but this campaign scarcely represents the full extent of their importance. From the earliest appearance of the germ theory, manufacturers of various sanitary products shrewdly manipulated scientific findings and public opinion in an attempt to peddle their wares. Indeed, Tomes argues that consumer preferences, increasingly formed by advertising, were a more powerful force for sanitary reform than appeals for action by government, and it was the failure of the market mechanisms to provide sanitary deliverance to the poor that necessitated government regulation in the interest of public health.

As she charts the forced migration of germs from the lab into ever-increasing areas of life, Tomes displays the limitations of the narrowing thesis, the notion that a concern with germs deflected attention away from the

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environmental or social and onto individual sources of disease. While episodes such as those of "Typhoid" Mary Mallon demonstrate that germ consciousness indeed led public health authorities to focus on individuals, Tomes shows that germ theory was not necessarily less politically progressive than its sanitarian forebear. Using case studies of New York City garment workers and African-American anti-TB workers in Atlanta, she demonstrates that the "chain of disease" that linked rich and poor alike was just as easily exploited by contemporary progressive activists as conservative.

The final section discusses the waning of germ consciousness under the impact of the apparent decline of infectious diseases and the advent of antibiotics. Yet, as Tomes notes, the resurgence of anti-microbial and anti-social fears during the early stages of the AIDS epidemic reminds us that the gospel has an enduring and ambiguous legacy.

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**W Bruce Fye, American cardiology: the history of a specialty and its college,**  
Baltimore and London, Johns Hopkins  
University Press, 1996, pp. xvi, 489, illus.,  
\$24.95 (0-8018-5292-7).

Cardiology as a speciality has its origins in the early twentieth century when the ability to interpret the newly available electrocardiogram defined someone as an expert in the field. Until World War II, the speciality was sparsely populated, consisting only of a handful of academic cardiologists or general-internists who owned an electrocardiogram. Since then, armed with the cardiac catheter and providing patient benefit from dramatic developments in cardiac therapy, cardiologists in America have become highly trained, certified, superspecialized, professionally organized, and financially successful. Until *American cardiology: the history of a specialty and its college* by W Bruce Fye, this intriguing story

has not been chronicled or analysed. Using his story-telling skills as a leading medical historian, as well as his valuable insight as a practising cardiologist and Chair of Cardiology at a large clinic in Wisconsin, Fye has written a 489 page book that is thoroughly enjoyable to read and illuminating in its documented account of the rapid growth of the discipline and its two major professional organizations. Although the book was initially requested by the American College of Cardiology to record its first forty years, Fye has had the vision to see a broader story that captures the influence of the public health movement, the rise of preventive medicine, the shaping of cardiology training and practice, the influence of federal funding for research, and the role of pharmaceutical companies in supporting meetings and postgraduate education.

The effective strategy of the American Heart Association (AHA) to "declare a war on heart disease", by convincing the public that heart disease was the number one killer and that the war could be won if only enough money can be raised, is a fascinating story of effective public relations. How many still remember *The walking man contest on Truth or consequences* where the identification of the mystery person (Jack Benny) raised funds for the AHA? Perhaps the most interesting section deals with the splintering tensions of elitism and discrimination that wracked the AHA and led directly to the founding of the American College of Cardiology in 1949 by Franz Groedel and others. The spectacular rise of the American College of Cardiology and its evolution from despised upstart to collaborative sister of the American Heart Association is a compelling example of how two organizations, sharing similar interests and membership, can eventually work together to mutual advantage. Along the way, the importance of research funding, exciting advances in technology, especially coronary care, pacemakers, open heart surgery, cardiac catheterization and angioplasty, and the expansion of postgraduate education are woven into a glamorous picture of a speciality that has gone from triumph to triumph.