

narratives have more to do with middle-class anxieties, pressures, and privilege, as well as with the shifting global conjunctures of industrial and financial production. My point is that whenever we elevate certain cultural narratives, we do so by ignoring alternative others. Or put differently, we lend our voice to our own cultural narrative, one that is perhaps much more coherent than we realise.

This is admittedly an old-fashioned even unfashionable critique of a currently fashionable historical approach. Harrington's book is very good. It would be useful in the classroom, and it has already established its broad appeal. But perhaps the book can best serve to push younger historians to ask questions about our own storytelling strategies. Or, put more precisely, why we have adopted the cultural history approach.

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Christoph Gradmann, *Laboratory Disease: Robert Koch's Medical Bacteriology*, Elborg Forster (trans.), (Baltimore: Johns Hopkins University Press, 2009), pp. viii + 318, £18.00/\$35.00, hardback, ISBN: 978-0-8018-9313-1.

Most noteworthy biographical revisionism these days tends to remove the fig leaves of former hero worship from what Sigerist called the Great Doctors to reveal men and women as much of their times as anyone else. Yet I am hard put to think of any current work that strips any of these earlier superstars so naked that not an atom remains of genius, technical inventivity, moral leadership or whatever quality was deemed by their contemporaries to mark their greatness. So it is with Christoph Gradmann's Robert Koch. In this excellent study, we see much more of the petty bourgeois, much more of the laboratory worker who arrived at and tested a 'germ theory', much more of the world out of which that theory came and into which it dissolved so as to make its truth obvious, yet in the end we

are still left with that unique, enigmatic kernel, that composite of intellectual originality, practical creativity and amazing patience that made Koch an extraordinary medical innovator.

Gradmann's study is divided into four parts. The first on 'Lower Fungi and Diseases; Infectious Diseases between Botany and Pathological Anatomy, 1840–1878' is one of the best introductions I know of to that world of disease aetiology that looks so hideously complicated in the light of modern germ theory. This section, besides synthesising the secondary literature, endorses Koch's own claim that he was doing something new. He turned away from pathology – pyaemia, septicaemia, etc. – as the object of study and investigated the symptoms of infectious disease in experimental animals and the specific micro-organism that supposedly caused them. Gradmann convincingly claims that Koch's insistence on a constant one-to-one relation between bacterial species and symptoms was original – 'the classification of disease, correlated with the classification of bacteria' (p. 58). Quite where Koch got this from is not revealed. We await Andrew Mendelsohn's study of Koch for more on this.

The second part of the book deals with 'Tuberculosis and Tuberculin: History of a Research Program' and part three, 'Of Men and mice: Medical Bacteriology and Experimental Therapy, 1890–1908' explores the relations between the germ theory as a laboratory science and clinical medicine. But since the focus of this latter part is mainly the clinical testing of tuberculin it continues the story begun in part two. That tuberculin, Koch's cure for tuberculosis, was a failure and brought him some disgrace is well known. What Gradmann provides in these two sections is a better contextual understanding of this episode in terms of Koch's character and the contemporary comprehension of and enthusiasm for germ theory. Most striking is that the very qualities that enabled Koch to provide substantial evidence for his germ theory abandoned him in his search for a TB

therapy. He seems to have been impatient and hasty in his endorsement of data. Gradmann also deals here with the development of an experimental therapy for sleeping sickness and once again a similar tale of rushed conclusions emerges. The bigger picture here seems to be that if, at this time, in the world of diagnosis it was difficult to move the laboratory into the clinic in the universe of therapeutics it was almost impossible.

The final section 'Traveling: Robert Koch's Research Expeditions as Private and Scientific Undertakings' is both revealing as case study of the exportation of the medical laboratory as a colonising instrument and more so as an instance of the allure of Africa at this time and, personally, Koch's love of hunting. Science in his later career seems rather like an excuse for bagging 'everything that moved, from hippopotamuses to crocodiles, from herons to eagles'. Koch's delight at having shot 'a beautiful blue heron' reminds us the past was a foreign country not very long ago (p. 223).

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Kathleen L. Hull, *Pestilence and Persistence: Yosemite Indian Demography and Culture in Colonial California* (Berkeley: University of California Press, 2009), pp. xiv + 374, £30.95/\$45.00, hardback, ISBN: 978-0-520-25847-1.

What was the impact of introduced disease on Native American communities? This enduring question in American ethnohistorical studies provides the frame for Kathleen Hull's *Pestilence and Persistence: Yosemite Indian Demography and Culture in Colonial California*. After outlining the scholarly debate surrounding the biological assaults of colonialism, she focuses on three issues: the timing, magnitude and cultural consequences of fatal epidemics. Hull distils the debate into three scenarios. One theory is that population collapse was early, catastrophic, preceded direct contact with newcomers, and resulted in

devastating cultural consequences including the loss of traditional knowledge and the collapse of social structures. The second scenario posits that population decline due to introduced disease was certainly early and devastating, but the event was neither unique nor did it result in significant cultural change. Over the long term, shifts in population size were common in small-scale societies; colonial-era depopulation was but one, and not the most significant fluctuation, resulting in cultural continuity not collapse. The third theory suggests that demographic change from introduced disease was neither early nor significant. According to this argument, depopulation occurred well after initial contact and was caused by the destructive forces of colonialism, and the loss of land and access to resources. Cultural change and depopulation thus reflected the economic, military and political impact of newcomers, not their pathogens. Not surprisingly, given her title, Hull argues for the second scenario, that in the case of the Yosemite 'Indians' epidemic disease was not sufficient to force abandonment of region or culture. Relatively distant from newcomers and with about fifty years to recover from the initial demographic impact of infectious disease (probably in the late eighteenth and early nineteenth centuries), the Yosemite 'were able to rebuild their traditional lives with continuity in tradition, story, and song' (p. 30). Despite the clumsy use of 'traditional' that historians (at least) eschew for its woolly reference to some unchanging past, Hull concludes that Non-Native economic and military assaults, rather than introduced disease as such, spelled fundamental change.

Pestilence and Persistence is organised around sources – historical, anthropological, and archaeological – rather than chronologically, and leads the reader back in time. After the first chapter's analysis of the theoretical approaches to the demographic and cultural consequences of introduced disease, the second chapter examines the interdisciplinary nature of the sources. Hull argues that ethnohistory with a long-term