

forms, the accumulation and persistence through time of modes of engagement with knowledge, of ways of knowing, rather than their successive superseding.

The first two chapters consider the British venture of American film entrepreneur Charles Urban, the first systematically to unite scientific knowledge with filmmaking in order to produce artifacts circulated in the urban networks of a nascent mass entertainment industry. Each chapter considers in turn the work of one of Urban's collaborators. First is naturalist and microphotographer Francis Martin Duncan, notably responsible for *The Unseen World*, "the first series of popular-science films in the history of cinema" (p. 16). Then, in one of the strongest parts of the book, comes the turn of Duncan's successor, Frank Percy Smith, whose films of "juggling flies" and plant growth are his main claim to fame. In addition to his film work, Smith also wrote detective stories. Filmmaking and writing nurtured each other; both encouraged and built on a taste in audiences "for intellectual puzzles and spectacular displays" (p. 82). The literary form served as a narrative template to structure the films. It provided Smith with a rationale for using ingenious filmmaking techniques to make scientific knowledge publicly accessible, inviting audiences to participate as witnesses in the resolution of a puzzle. These two chapters highlight continuities with older forms of scientific displays, such as magic lantern shows, but also innovations, like Smith's "trick films," which prompted audiences to wonder "how the thing was done" (p. 65). In the third chapter, the British case is contrasted with French popular-scientific film production during the 1910s, through discussions of the work of Jean Comandon, of Leon Gaumont's project of a film encyclopaedia, or of the popular-science series *Scientia* from the company Éclair. Here Gaycken further typifies the confluence of entertainment with instruction that increasingly came to characterize popular-science films as the century progressed.

The last two chapters concentrate on the circulation of these films. Gaycken first discusses George Kleine's *Catalogue of Educational Motion Pictures*, which recycled much of the Charles Urban Trading Company's own catalogue and whose eclecticism leads Gaycken to compare it to early modern cabinets of curiosity. Films here are once more positioned at the junction between old and new modes of display of knowledge. The final chapter, the necessity of which is not immediately evident, considers how popular-scientific cinema was incorporated in other film genres. Besides the repurposing of sequences, new genres like crime melodrama emerged and circulated the ideas and ways of seeing that had developed in popular-science films. Like Smith's films, crime melodrama showed "the strange and the fantastic" in the fabric of everyday life (p. 168). Structured around the figures of "the scientific supercriminal" and "the scientific detective" (p. 188), they exposed cinema audiences to a scientific worldview and could be considered scientific films in their own right.

Overall, *Devices of Curiosity* is a mine for researchers interested in the history of popular-scientific cinema, but also and more broadly in the history of the public performance of science. Despite evidence that the text would have benefited from more editorial guidance (e.g., a passage repeated between pp. 98 and 135), it is a well-written and substantial addition to the scholarship on science in its public contexts. The deployment of the concept of curiosity, showing how it helps make sense of popular-scientific films, is a productive contribution.

Jean-Baptiste Gouyon

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Anne Hardy. *Salmonella Infections, Networks of Knowledge, and Public Health in Britain, 1880–1975.* x + 249 pp., tables, bibl., index. Oxford: Oxford University Press, 2015. £60 (cloth).

The book under review reveals that the world of *Salmonella* is an intriguing place to historians with different backgrounds, including historians of science and medicine. The group of *Salmonella* bacteria is

diverse, inhabits a wide range of host animals, including humans, and is related to many different environments and parts of societies as a consequence. Anne Hardy's *Salmonella* study is a rich history of science, veterinary medicine, public health, animals, human and animal excrements, food, and food business. The book studies relations between microbiologists who researched *Salmonella*, public health officials attempting to prevent outbreaks of infection, humans and animals spreading *Salmonella*, fishers and farmers trading infected animals, and public food scares. One important theme is the difficulties associated with the translation of knowledge generated in laboratories into public health policy and actions. Indirectly, via human voices, *Salmonella* bacteria themselves are major protagonists, existing in many varieties named after the places where microbiologists and epidemiologists first encountered them, and traveling almost anywhere via human and animal excrements—*Salmonella* is “locally named and globally distributed” (p. 230). Nevertheless, Hardy focuses on the geographical area of Great Britain, and on England and Wales in particular.

Part I, “Pathways in Nature,” studies the research of the many different pathways through which humans and animals can become infected with *Salmonella* (e.g., via humans, shellfish, flies, and livestock) and the attempts to prevent the spread of infections before the World War II. In Part II, “Laboratory Pursuits,” the focus shifts to international laboratory research networks in the interwar period and their mapping of major changes in the “bacterial landscapes in Britain and America” (p. 156) after the World War II, closely linked to the major changes in agriculture, food production, and international trade. In this part, Hardy broadens her geographical scope by looking at important developments in Denmark and the United States. Part III, “Sites of Infection,” links these developments to the theme of contamination of both agricultural and kitchen environments, and the ongoing difficulties in controlling *Salmonella* bacteria.

Thus, the book under review is a valuable contribution to a relatively new historiographic approach combining history of science and medicine and environmental history to study relations between humans, animals, and microorganisms, and the creation of “pathological sites and pathological landscapes” (p. 12). Hardy correctly argues that the public health and environmental effects of the modernization of agriculture in the second half of the twentieth century deserve more attention because of their large societal impacts and complexity. Veterinary medicine and veterinary public health are key domains here, and it is a fruitful development that the number of historians interested in veterinarians is growing, as Saurabh Mishra’s “Veterinary History Comes of Age” (introduction to a special virtual issue of *Social History of Medicine* [2015]) attests.

Major strengths of the book fit within this context of histories of animals, disease, and environment: its ample attention to human-animal-bacteria relations, its network approach, its environmental thinking, and its global perspective on a national case. My favorite chapters in this regard are “The Hygiene of the Sea” (Ch. 2) and “Field and Farm” (Ch. 8), which vividly show that human activities and encounters with either marine or domestic animals created new “pathological landscapes” in which *Salmonella* could thrive.

A disadvantage of the book’s broad environmental and network perspective is that the reader sometimes gets lost within all the different themes addressed. Regarding sources, archival documents would have enriched the published materials on which Hardy bases her analysis. Archival materials would have provided more insight into, for instance, the influence of vested business interests on *Salmonella* research and control measures. The cover cartoon of a walrus and a cook’s shared suffering as a result of *Salmonella*-infected oysters strengthens the written argument of Chapter 2, and it is a pity the other chapters lack illustrations.

This book is recommended to historians of science and medicine interested in the complex environments shared by humans, animals, and bacteria, as well as those interested in food production and food-borne illnesses.

Floor Haalboom

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Melinda Baldwin. *Making “Nature”: The History of a Scientific Journal.* vii + 309 pp., figs., bibl., index. Chicago/London: University of Chicago Press, 2015. \$45 (cloth).

Historians of science have been studying the content of scientific articles for as long as the discipline has existed, but only recently has analysis been directed toward the publications in which they appeared. Rather than viewing these journals as passive (and self-evident) entities, historians have begun asking more critical questions about their role within the communities they serve and are no longer taking their very existence for granted. *Making “Nature”* significantly expands this small body of work by tracing the development of a single journal from inception to the present day. *Nature* has been published on a weekly basis since 1869, and its development is intimately tied to nineteenth- and twentieth-century shifts in the concept of science and identity of scientists. Its continuous publication across this period allows Melinda Baldwin to explore questions about the changing nature and perception of scientific journals, and also of the community that utilizes them.

Making “Nature” is divided into eight chapters, roughly chronological with each covering a particular theme central to its period. Thus, the early chapters, following Norman Lockyer’s lengthy reign as editor from the journal’s inception up until 1919, are primarily concerned with the late nineteenth- and early twentieth-century “professionalization” of science. Chapters 4 and 5 consider internationalism in science, the former looking at *Nature*’s role publishing radioactivity research from across Europe and America in the early twentieth century, while the latter explores *Nature*’s relationship with German science during and after the World War I and then-editor Richard Gregory’s promotion of British science. The subsequent two chapters delve deeper into publishing practices: Chapter 6 reveals how as late as the 1960s the journal held a high reputation without adopting peer review for all articles, while Chapter 7 shows how two editors, John Maddox and David Davies, transformed the journal into its modern, highly international form. Finally, Chapter 8, which takes us up to 1995, looks at Maddox’s role during two scientific controversies (homeopathy and cold fusion).

In bringing these various strands together, Baldwin’s case study of a single journal serves as a much broader history of publishing, science, and culture. This is possible in part because of the flexibility of *Nature*. Unlike, for example, the Royal Society’s journals (which have recently attracted considerable historical interest in the year of the *Philosophical Transactions*’s 350th anniversary), *Nature* was not managed by a committee or affiliated with any institution (grand or otherwise), and the editors were able to assert their own visions of what the journal should be. With these different characters at the helm of *Nature*, a fascinating and varied history emerges. In addition, as Baldwin is careful to show, contributors and readers also shaped the development of the journal, using it to settle debates and construct their identities as practitioners. In creating themselves, these various historical actors and communities also helped to create a modern scientific journal. By moving beyond the editors, this book reveals how *Nature* has shaped scientific research, not merely as a gatekeeper of knowledge, but also as a site for scientists to define the very nature of their discipline.

Above all, *Making “Nature”* is a fascinating account of the multiple factors at play in the emergence of the present-day *Nature*, perhaps the most prestigious scientific journal in the world. The timing is apt, for as historians are paying closer attention to the medium’s past, scientists and publishers are becoming more concerned with its future. With recent increases in electronic publishing and open access (both touched upon in Baldwin’s conclusion), we are currently in the midst of dramatic changes in how the outputs