Webster on Steere-Williams, 'The Filth Disease: Typhoid Fever and the Practices of Epidemiology in Victorian England'

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For decades, public health practitioners have located the origins of epidemiology in Britain in the mid-nineteenth century, with John Snow’s famous study of the 1854 London cholera epidemic. His spatial analysis implicating the Broad Street Pump and the Southern and Vauxhall Water Company is often seen as a work of unparalleled inspiration and heroic scientific genius. However, in The Filth Disease: Typhoid Fever and the Practices of Epidemiology in Victorian England, historian Jacob Steere-Williams unveils a vibrant world of Victorian epidemiological practice and emerging professionalization far more expansive than this traditional narrative suggests. In this engaging look at nineteenth-century British public health, Steere-Williams explores the origins of the field of epidemiology, looking to high-profile and explosive epidemics of typhoid fever to trace how epidemiological practice formed, how its boundaries were negotiated, and how evolving theories of transmission and investigative practices shaped etiologies of typhoid. Crucial to this analysis is Steere-Williams’s methodical examination of the extensive Medical Officer of Health Reports produced by urban and rural sanitary officials in their search for the index case in outbreaks of the “Filth Disease.” Through these reports and Steere-Williams’s sharp analysis, the dual role of typhoid in public health becomes evident: first, as a lens through which to examine the changing nature of public health and the emergence of epidemiology as a unified profession; and second, as a model disease, shaping epidemiological practice, public health epistemology, and urban and rural conceptions of cleanliness and filth during the same period.

Steere-Williams articulates both the prominence of typhoid in the British imaginary and its stakes by opening the book with the highest profile cases of typhoid to strike the British Isles in the nineteenth century: the death of Albert, Prince Consort, and the imperilment of the life of the heir to the throne, Prince Albert, due to typhoid infection. Through his examinations of the intimate diaries and updates of Sir William Withey Gull, the physician who primarily attended the ailing Prince Albert, Steere-Williams provides intimate insight into the pathology and treatment of typhoid fever in the 1870s, drawing on qualitative descriptions, sketches, and fever charts. Steere-Williams considers these artifacts to be indicative of Gull’s acceptance of the “new science” of medicine through his employment of the “new technologies of measurement and visibility,” a set of epistemologies and practices that were concurrently transforming the practice of public health in Britain at the population level (p. 46). What is more, this highly public event brought typhoid to the front and
Moving beyond this introductory case, the sophisticated organization of the book draws the reader through a changing epidemiological landscape in the second half of the nineteenth century, while simultaneously exploring the varied “nascent ecologies” that came under scrutiny at various points in the study of typhoid. The period from 1865 to 1880 saw the primacy of waterborne theories of typhoid, and the many reports on typhoid outbreaks “demonstrated how typhoid spread differently in urban and rural areas and how the contamination of deep versus shallow wells influenced the distribution of the disease.” It also “revealed the inefficacy of numerous methods of excrement removal, sewerage, and waterworks construction” (p. 78). Milk-borne theories of typhoid transmission emerged concurrently with waterborne theories in the wake of major outbreaks at Maryleborne and Islington, two episodes which highlighted that no one was safe from typhoid and lent momentum to the growing calls for increased regulation of the milk supply. Steere-Williams then moves into the 1880s, when the discovery of the Eberth/Gaffky bacillus introduced questions of the bacillus’s “saprophytic existence” (or, its life outside the body). The engagement with the bacteria, in addition to “traditional” qualitative and quantitative epidemiological methods, produced what Steere-Williams calls a “decidedly ecological vision for public health” with an increased focus on soil pollution (p. 177).

In the final section of the book, Steere-Williams traces typhoid out of Britain and into the empire, to examine how typhoid susceptibility and transmission were racialized in the contexts of India and South Africa and how adoption of epidemiological knowledge formulated in England was “uneven” in both civilian and military spaces (p. 228). Military and colonial public health officials overwhelmingly focused on typhoid mortality among white soldiers, denying that Indians or South Africans were susceptible to typhoid—a “racialized exceptionalism” that was only slowly overturned in the 1890s when the increasing integration of bacteriology into colonial public health revealed the pervasiveness of *Salmonella enterica* infections in colonial spaces (p. 230).

Steere-Williams draws together these diverse cases and facets of typhoid epidemiology by tracing both method and intellectual lineage. In each chapter, he zeroes in on the outbreak investigation as the major tool of Victorian epidemiology, using one or two high-profile examples of this method to elucidate each mode of transmission. He argues that outbreak investigations conducted through the medical department showcased a burgeoning “epidemiological toolkit,” composed of qualitative and quantitative epidemiological methods, “such as experimentation, case tracing, interviewing, statistical analysis, and visual strategies such as making diagrams and maps” as well as the search for the so-called index case (pp. 79, 118). Looking to individual outbreaks and the medical officers of health responsible for each investigation, he convincingly demonstrates how the case study became a major persuasive and analytic tool in public health and importantly how rural typhoid outbreaks had lasting impacts on typhoid knowledge and epidemiology.

Perhaps the most valuable insight in a book otherwise filled with important interventions is the centrality of rural outbreak investigations to the development of British epidemiology—a building block of public health epistemology that is often overlooked by the urban-centered narratives that dominate the field. What is more, *The Filth Disease* provides a convincing argument for the importance of typhoid to British imaginaries of filth, rurality, and the foundations of epidemiology as a scientific practice. With these insights, Steere-Williams’s work supports and enriches the works of
public health history scholars like Anne Hardy and Christopher Hamlin, whose works themselves correct the balance of a field saturated with works on cholera and tuberculosis. *The Filth Disease* is a nuanced study in the history of epidemiology that, while somewhat necessarily reliant on the middle-class men who comprised the medical department during this time, actively works against “heroic scientist” narratives common to histories of British epidemiology—and should be required reading for anyone interested in the formation of this field.


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