

home to camp was emblematic of more fundamental changes in how medicine and public health could take care of all citizens moving forward.

One such fundamental change, as Humphreys reveals in wonderfully nuanced fashion, was in the feminisation, as it were, of orthodox medicine. The Civil War certainly made nursing a respectable activity (much as it made the hospital a respectable place to receive care for middle-class and upper-class patients), setting the stage for the professionalisation of nursing that would follow in subsequent decades. It provided some (albeit, limited) opportunities for women physicians to practise directly, and may have provided an inspiration for many others serving in the war as caregivers to go on to become physicians (a possibility Humphreys encourages others to pursue). Still more fundamentally, though, the efforts of the USSC and others to instil the importance of hygiene and of the support of the patient – alongside the heroic efforts of surgeons, whose ligatures would fail to hold in scurvy-ridden patients – contributed to a very feminisation of medicine itself (and of war as well, for that matter).

Perhaps nowhere would such consequences be felt as strongly as with respect to the war's ultimate impact on surgery and the acceptance of the germ theory. Surgeons and sanitarians alike were forced to confront the practical implications of contemporary debate over the contagiousness of smallpox, yellow fever, cholera and especially gangrene. Disinfectants and antiseptics came into wide use, as did the isolation of seemingly contagious patients. While considerable debate prevailed concerning the nature of such contagion, the widespread exposure of surgeons to such infections, disinfectants and debate alike – mediated by the top-down delivery of instructional manuals and the hierarchical monitoring of care – helped prepare the ground for the uptake of germ theory and antiseptic and then aseptic surgery in the decades to follow.

In unexpected ways, then, the American Civil War unified the medical profession – north and south alike – around common problems and care models, and behind science itself (a theme that historian Shauna Devine has developed further in her own excellent 2014 book, *Learning from the Wounded: The Civil War and the Rise of American Medical Science*). Margaret Humphreys has written an important and elegantly constructed work; in so doing, she has ensured that historians no longer have the luxury of ignoring the Civil War's impact on American medicine in the nineteenth century and beyond.

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doi:10.1017/mdh.2016.13

Graham Mooney, *Intrusive Interventions: Public Health, Domestic Space, and Infectious Disease Surveillance in England, 1840–1914* (Rochester, NY: University of Rochester Press, 2015), pp. 292, £80.00, hardback, ISBN: 9781580465274.

In his review of Michael Worboys's *Spreading Germs* (2000), Graham Mooney called the book 'authoritative', noting that it did 'the history of medicine a huge favour by complicating the linear view of the emergence of the germ theory of disease, exposing it instead as a multi-layered transitional period'. Mooney was quite right, and *Spreading Germs* has stood as the authoritative account of Victorian public health. It is now time that Mooney himself should be thanked. His newly published *Intrusive Interventions* does for the history of public health what Worboys was so deft at accomplishing fifteen years ago – complicating our grand narrative of the changes that occurred with the coming

of laboratory-based bacteriology in the late nineteenth century. What was missing from *Spreading Germs*, even Worboys has recently reflected, is an account of germ practices, particularly the performative ways that germs were managed. We now have such an account, itself authoritative, in Mooney's *Intrusive Invasions*.

The broad themes here are familiar enough. Notification, isolation and disinfection have long been heralded by historians as the pillars of the new – particularly modern – public health infrastructure of the late nineteenth and early twentieth century. Worboys has called these activities 'exclusive', while Peter Baldwin favours 'neo-quarantine', and David Barnes suggests 'sanitary-bacteriological synthesis'. Public health activities, we have long believed, became individualised with the coming of laboratory-based bacteriology. Mooney demonstrates that this long-enshrined view is not only much too simple, but deeply problematic. The chief contribution of the book, then, is to show that the practices of the new public health – Mooney prefers, as the title suggests, the term 'surveillance' – began before the ascent of bacteriology, and both population-level thinking and practice continued into the twentieth century.

The key to Mooney's claim, while not wholly original, is nonetheless profound and instructive, that 'infectious disease surveillance in Victorian Britain demonstrates that public health *was* political rights' (p. 43). The practices were a mixed and non-uniform lot; the notification of sickness to local authorities, the removal of patients to isolation hospitals, the disinfection of homes and personal goods, and the watchful eye on schools all called into question a new era of public health citizenship. As such, isolation hospitals, disinfecting stations, laboratories, schools and homes were 'spaces of risk and opportunity' (p. 11). Contextualising public health and citizenship has been done by Mary Poovey and Pamela Gilbert, but Mooney's insight comes from the examination of germ practices, which shows anew how public health activities often pitted state coercion against liberal subjectivity and the home.

Organised into two parts, Part one, 'Making Infectious Disease Surveillance' unpacks the administrative and political construction of what became infectious disease notification, particularly the thorny issues of designing and implementing local systems of sickness data. Bringing general practitioners into the fold was particularly complicated, and local implementation from the 1870s was often obstructed by a brace of the demands of medical practitioners and radical liberals, who both painted local Medical Officers of Health (MOH) as panoptical 'medical despots'. But rather than straightforwardly promoting 'intrusive interventions', early systems of sickness notification, Mooney demonstrates, often provoked the late Victorian liberal schemes of health education and moral betterment through respectable self-help. This theme reappears in a later chapter on tuberculosis.

Part two 'Spaces of Risk and Opportunity' is where most of the novel findings of the book occur. In chapter three 'Sequestration and permeability', for example, Mooney shows that there was more resistance from the working class to being removed to isolation hospitals than we have previously argued. Local authorities used coercive methods in getting poorer patients to isolation hospitals. Though compulsion via magistrate order was rare, more subtle tactics included MOH's advising employers of sickness in the homes of workers, if the latter refused a removal order. There was a steady stream of working-class resistance to local coercion in the period 1870–1900, a topic that begs for further study.

Chapters four and five work in brilliant concert, and stand out as the most original of the book. Here Mooney explores how the practices of disease surveillance entered Victorian

homes (chapter five) via schools (chapter four), often through what became known as 'following up', a practice codified in the early twentieth century through the School Medical Service. But it was no easy co-operation between MOHs, general practitioners, school boards, teachers and parents. The case of measles, in chapter four, is especially instructive.

Chapter five, on disinfection practices in homes, is fresh, lively and, in my mind, the best chapter of the book. It is here where Mooney finally fulfils the promise set out in the introduction to further Worboys's call to examine the performative aspects of the germ theory. Mooney argues that municipal disinfection practices – what he calls 'materialising domestic infection' – to eliminate biological risks were mobile and minimally intrusive, thus counteracting the supposed idea that disinfection was an all-out invasion of Victorian domesticity. The material on the disinfecting experiments of the Manchester bacteriologist Sheridan Delépine, a sorely neglected figure, is particularly well done.

Domesticity and disease surveillance dominate the second half of the book. The public health focus on the home as a space of the liberal ideas of citizenship by the late nineteenth century gave way to the realisation that domestic spaces were often faulty, necessitating such steps as disinfection measures. Chapter six seems the anomaly as a stand-alone chapter on the gradual process whereby tuberculosis was made a notifiable disease in 1912. Yet it works, and the various strands of the book come together in neat fashion; notification of tuberculosis depended on the construction of the domicile tuberculosis patient, particularly through self-help manuals and new commercial goods. The critical finding here is that the home was the focus of tuberculosis care, not the more popularised sanatoria.

The group that most comes to the fore from Mooney's analysis are Medical Officers of Health, and their political dealings with local officials, patients and general practitioners. To his credit Mooney utilises a wide variety of archival sources, from Manchester and Liverpool in the north-west, to Birmingham, Nottingham and Leicester in the midlands, and London.

What Mooney unravels in *Intrusive Interventions* is exciting and insightful. We should do well – I now do after reading this account – to rethink late Victorian public health along the concept of 'surveillance'. Those familiar with Mooney's previous work will not be surprised at his use of geography and spatial thinking in framing this concept. In this way, I think, Mooney – along with Chris Otter and a few others, is ahead of the historiographical curve.

My quibbles are minor. Some material is unnecessarily protracted, particularly in Part one on the political and administrative nature of sickness notification. Chapter five serves as a critical example of germ practices, but we need much more. Poor Law Medical Officers of Health, especially their voices, always seem at arm's reach, and so too do the everyday inspectors who were actually disinfecting homes, clothes and hospitals. Chapter three, likewise, sets out to examine urban and rural spaces, but we get very little of the latter, an omission not singular to Mooney but a much larger problem in the field. These are relatively minor points, however, and should not detract from my central belief that this is the most important book on Victorian public health since Worboys's *Spreading Germs*.

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