Discovering Tuberculosis: A Global History, 1900 to the Present

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At the start of the monograph, McMillen points out that in the first two decades of the 21st century, one billion people will become infected with TB. The WHO's Stop TB Strategy addresses TB's synergistic relationship with HIV/AIDS as well as drug-resistant TB. Private philanthropies like the Gates Foundation and the Global Fund to Fight AIDS, Malaria, and TB give the disease a top spot among the pantheon of contemporary killers (p. 1). The monograph highlights the contradiction that despite the existence of effective treatments for TB since the Second World War, the disease kills more people now than it ever has in history. McMillen attempts to investigate the contradiction with rigorous archival research, supplemented by field visits to TB clinics in South Africa to gain a first-hand understanding of the difficulties inherent in TB control in resource-poor settings.

Eight lines on page 11 capture the essence of McMillen's argument:

This book, then, is not arguing against technological solutions to TB, nor is it suggesting that we wait for a radical change in social conditions for the decline of the disease. What the book offers are words of caution about persistent problems in the world of TB work, problems that date back to the earliest days. Ideas about who patients are, for one, are important. Race-based theories about who is and is not susceptible to TB have done, and can still do, great harm and have not been shown to do much good. Likewise, notions that patient compliance is at the heart of drug resistance are misguided and simplistic. So, too, is the notion that drug resistance is itself something new.

Despite significant breakthroughs in TB control in the 21st century, McMillen focuses on the setbacks while being at pains to emphasise that the monograph does not focus on a single culprit impeding control of the disease. The book does not focus on individuals but on institutional structures which enable and constrain decisions and actions of individuals and organisations in TB control. Amongst the structures, he includes the discourse of race, cost effectiveness, the 'trap of compliance' that led to a focus on patient behaviour, and the 'well-meaning though lumbering behaviour of a global bureaucracy' (p. 228).

Since Randall Packard's influential monograph *White Plague, Black Labor: Tuberculosis and the Political Economy of Health and Disease in South Africa*

(1), various studies have been published, documenting TB control in international and national contexts, the most recent ones being Helen Bynum's *Spitting Blood: The History of Tuberculosis* (2), and Niels Brimnes' *Languished Hopes: Tuberculosis, the State and International Assistance in Twentieth-Century India*. (3) In his monograph, Brimnes contends that the history of TB has exposed two incarnations of the state in India. The late colonial state was largely non-interventionist in public health matters and was well-served by a social and cultural framing of TB. Specific initiatives to control the disease were few and scattered. The post-colonial Indian state, in contrast, was imbued with the rhetoric of nation-building. The campaign against disease, TB in particular, fitted with the nationalist vision of socio-economic planning. Brimnes illustrates that the mass BCG campaign in India was a classic exemplar of high-modernism, i.e. detailed planning and military organisation. But, Brimnes' account of TB control in India is state-centric. The monograph overlooks the role of transnational linkages – particularly critical for understanding the question of drug resistance – which have retarded progress against the disease in the 21st century.

McMillen's interpretation of medical modernisation differs conspicuously from that of Brimnes. McMillen points out that the BCG vaccine and the antibiotic treatment for TB were not aimed at restructuring traditional societies along a Western-led trajectory to development as neither of the two measures involved large-scale social engineering. McMillen has eloquently written about how the notion of cost-effectiveness in global public health has undermined science in shaping TB control during the 20th century. The monograph unfolds in three discrete parts, each linked by a common theme.

The first part deals with the rise of race as a causal factor for explaining the susceptibility of native populations to the disease that assumed epidemic proportions in Native American populations (p. 19). Next, McMillen highlights how social factors such as inadequate nutrition – and not race – accounted for the continued endemicity of TB.

In the second part, McMillen focuses on TB control measures. With the advent of proverbial magic bullets, particularly the BCG vaccine (*Bacillus Calmette-Guérin*, named after French bacteriologists Albert Calmette and Alphonse Guérin), and wonder drugs, especially isoniazid, there was a growing hope and hubris on the part of the World Health Organization (WHO) and UNICEF (United Nations Children's Emergency Fund) leadership that the disease was surmountable. McMillen highlights the paradox that due to their association with post-war economic development, the campaigns against diseases like yaws and malaria were apparently successful whereas the situation with respect to TB was worsening by the late 1950s. (p. 61). Always polemical, McMillen suggests that the story of BCG was symptomatic of all the issues plaguing TB control: search for an affordable solution to a seemingly intractable problem, the hubris and the uncertainty of science, and the difficulties of translating trial results to the real world (p. 76). As far as prevention of TB was concerned, the mass resistance to the BCG vaccine in South India highlighted fears appertaining to the vaccine's efficacy and safety. With respect to treatment of TB, case studies from Nairobi and Madras revealed common problems associated with universalising treatment (p. 64). McMillen argues that neither the BCG campaign nor the antibiotic treatment were attempts to transform newly-independent countries on the Western model of development (p. 67). These two medical interventions did not involve large-scale social engineering schemes but infiltrated the daily lives of individuals as a conduit for modernity (Ibid).

The third part of the monograph examines the response of the WHO and international aid agencies to TB from the 1980s to the present. Whereas by the late 1970s international aid agencies hoped that TB could be controlled with short-term chemotherapy, by the early 1980s – with the emergence of HIV/AIDS – TB programs received a setback.

The monograph's greatest strength is the ability to approach the history of TB control from a transnational perspective. McMillen's narrative effortlessly connects the history of the disease in Kenya, the Indian reservations in the United States, and the resistance to the BCG in South India to policy discussions at the WHO headquarters in Geneva. Yet, the transnational perspective is not without its drawbacks. McMillen's narrative makes a tenuous link between decolonisation and TB control, especially in Kenya (pp. 122–3). The end of Empire raises several important historical questions. McMillen's narrative alludes to but does not

critically interrogate how independence ushered in a new hope for tuberculosis control for Kenya between the late 1950s and 1970s. The narrative is at times repetitive (pp. 39–40), and jumps back and forth chronologically, especially in chapter two. In chapter five, the author notes that the French use of BCG was a part of their unfocused approach to TB (p. 87). But, the narrative fails to sketch the historical context that led to the large-scale use of BCG by UNICEF and the WHO in international health. Initially, the WHO expressed reservations regarding the large-scale use of BCG as the vaccine had never been used for mass-immunisations across the US and had a low shelf life. The French were solidly behind the UNICEF in promoting the use of BCG in the global campaign against TB during the 1950s.⁽⁴⁾ In narrating the history of tuberculosis control as a failure, the monograph could have been further enriched with a nuanced discussion related to the inner tensions in international health between the notional magic-bullet approach (that refers to the perfect drug to cure a disease with no side effects), and a more holistic approach that related public health to the exigencies of post-Second World War national reconstruction. Perhaps a prosopographical focus on Carroll Palmer, Maurice Pate, or Johannes Holm in chapter five could have unearthed some of the inner tensions in international health that impeded TB control during the 1950s.

While the narrative portrays the paradox of a world free of TB – with the introduction of wonder drugs, and BCG – and the disillusionment of TB workers regarding the curtailment of research funds for TB from international aid agencies, more could be said about the nature of international aid (pp. 64–5). The monograph does not examine the differences between the Medical Research Council (MRC) and the WHO that impeded commitment to fund TB research in Kenya and South India ⁽⁵⁾, or whether a reduction for TB funding in Africa and South India by the early 1960s was symptomatic of the larger Cold War anxiety of post-colonial states jealously guarding their political sovereignty in public health from superpower intervention? In the post-Second World War period, did the WHO continue the work of the colonial government in TB control?⁽⁶⁾ A good deal more could be said in the monograph about the political landscape of international health during the 20th century, and the way in which the rediscovery of TB during the long 20th century helps historians in understanding the transition from international to global public health, particularly with reference to the Stop TB Campaign.⁽⁷⁾ The monograph cursorily mentions but does not investigate how treatment for tuberculosis under the umbrella of community health services served as a precursor to the evolution of Primary Health Care.⁽⁸⁾ An unanswered question in the monograph is a sociological investigation of patient non-compliance, with respect to antibiotic treatment (p. 158). Whether non-compliance with antibiotic regimens was an illustration of the limits of the magic bullet approach?

How then does the book contribute to furthering our understanding of international health, in the context of TB control? The monograph's longue durée approach – in investigating how tuberculosis was discovered and rediscovered in the 20th century – to understand policy failures stands out as its most valuable contribution to historical scholarship. McMillen's aim has been to investigate the missed opportunities of tuberculosis control, especially during the 1950s when multi-drug resistance emerged. As he points out in the introduction, up until the Second World War there was a great deal of attention paid to the correlation between race and susceptibility of primitive populations to TB although little was done to combat the disease (p. 8). After the war, UNICEF and the WHO mobilised the BCG vaccine as a prophylactic against the disease. By the mid-1950s, antibiotics were discovered and TB was attacked on two fronts: prevention and cure. But the interests of the WHO and member states in TB control waned around 1967, as priorities shifted towards the eradication of smallpox, and, by the end of the 1970s, TB was relegated to the status of a neglected disease only to resurface in global public health discussions with the advent of HIV/AIDS by the 1980s. The trajectory of TB control in the long 20th century challenges the notion of 'history as progress'. The monograph encourages readers to approach public health problems from a historical perspective, i.e. taking context and contingency into account. As such, the book should be a recommended reading for any course on international health.

Notes

1. Randall Packard, *White Plague, Black Labor: Tuberculosis and the Political Economy of Health and Disease in South Africa* (Berkeley, CA, 1989).[Back to \(1\)](#)

2. Helen Bynum, *Spitting Blood: The History of Tuberculosis* (Oxford, 2012).[Back to \(2\)](#)
3. Niels Brimnes, *Languished Hopes: Tuberculosis, the State and International Assistance in Twentieth-Century India* (Hyderabad, 2015).[Back to \(3\)](#)
4. Vivek Neelakantan, 'Tuberculosis control in postcolonial South India and beyond: fractured sovereignties in international health, 1948–1960', *Wellcome Open Research*, 2 (2017) <doi: [10.12688/wellcomeopenres.10544.1](https://doi.org/10.12688/wellcomeopenres.10544.1) [2]> [accessed 27 March 2017].[Back to \(4\)](#)
5. See, for example, Helen Valier, 'At home in the colonies: the WHO-MRC trials at the Madras Chemotherapy Centre in the 1950s and 1960s', in *Tuberculosis then and Now: Perspectives on the History of an Infectious Disease*, ed. Flurin Condrau and Michael Worboys (Montreal, 2010), pp. 213–34.[Back to \(5\)](#)
6. Henrice Altink, 'Fight TB with BCG: mass vaccination campaigns in the British Caribbean, 1951–56', *Medical History*, 58, 4 (2014), 475–97.[Back to \(6\)](#)
7. Theodore Brown, Marcos Cueto, and Elizabeth Fee, 'The World Health Organization and the transition from international to global public health', *American Journal of Public Health*, 96, 1 (2006), 62–72.[Back to \(7\)](#)
8. Margaret Jones, 'Policy innovation and policy pathways: tuberculosis control in Sri Lanka, 1948–1990', *Medical History*, 60, 4 (2016), 514–33.[Back to \(8\)](#)

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