The Technological Indian. By Ross Bassett. (Cambridge: Harvard University Press, 2016) Pp. 400. Hardcover, $39.95

"For eradicating the undesirable and establishing the desirable in society, there is no option but to follow and spread widely the art of mechanization" (1). These words, spoken in 1884 by Indian high school headmaster M.M. Kunte, expressed creeping concerns that whether it was for food or freedom, only mastery of mechanization – more commonly today called technology – would guarantee progress in India. Indians and their land were regarded as uncivilized, an agricultural-dependent British backwater. When describing the people, Sir Richard Temple, the former Governor of Bombay [now Mumbai], had remarked that, "the Hindus are not a mechanical race" (2). One of the questions driving author Ross Bassett's splendid international history of India and its relationship to technology is: "How did 'Indian' and 'technological' go from being mutually exclusive to being practically synonymous for the Indian middle class?" (3)

Bassett's work began with a dire assessment of where India stood at the end of the nineteenth century. British efforts to transform India's economy – through irrigation systems and other infrastructure – served only Britain's interests and left India poorer year after year. Indians, especially those in the growing nationalist movement, believed their country was being left out of an important transformation as scientific methods and large-scale industries were ushering in an era of global capitalism. To alleviate their technological anxieties, Bassett's Indian subjects, in cities like Poona (now Pune), Bombay, and Gujarat recognized that they needed to rebel against claims of British technological superiority and chart their own paths for scientific progress. As England slipped from its own prominent scientific standing, challenged by France and Germany, one nation in particular caught the Indian middle-class' attention: the United States. With little knowledge of its programs and facilities, the Massachusetts Institute of Technology (MIT) came to represent the vanguard of U.S. technological education. Selecting MIT as their model, Indians believed the university would train a generation of engineers and scientists and usher India into a new era of technological progress and middle-class modernity (11-12).

To tell this story, Bassett dove deep into MIT's faculty and administrative archives, as well as Indian newspapers, particularly the records of the Indian English-language newspaper *Mahratta*. This paper and *Kesari*, a Marathi-language sister publication, consistently argued for India's industrialization. *Mahratta*, speaking mostly to middle-class Indians, advocated for the construction of technical institutes in India or that Hindus travel abroad in search of a superior technical education. The editors of *Mahratta*, such as nationalist Bal Tilak, not only tapped into fears that the rest of the world was modernizing and that India risked being left behind, but also called for Indians to reform their society along more scientific and modern lines and fashion a more independent, enterprising outlook toward national development (15, 74). Unaware of how they got their hands on them, *Mahratta* and *Kesari* editors published excerpts from annual MIT reports and wrote of the university as a type of academic Eden. The editors believed the Indian students (nearly all male) traveling to MIT would gain the knowledge necessary to start businesses and industries and thus transform India from a nation of farmers to a nation of scientists (36).

Bassett noted that India's fascination with the United States, and its institutions like MIT, seemed implausible in light of the fact that U.S. laws barred Indians from entry (except as students); a 1923 Supreme Court decision also ruled that Indians were not eligible for American citizenship. Yet more and more Indians came to MIT through the end of the nineteenth century and the numbers increased further in the first decades of the twentieth century. As Indians returned home to establish steel and hydroelectric plants, these acts of technological independence ran smack into calls for political independence. No account of twentieth century India and the emerging nationalist movement would be complete without discussion of Mohandas Gandhi. Bassett challenges perceptions of Gandhi as an "un-technological Indian" and recasts him less as a foe of industry and instead as a visionary of personal industry (80) The Mahatma argued that Indians could unravel the Industrial Revolution; by hand spinning on a charkha – to supplement incomes, provide clothes for the poor, and instill a Weberian work ethic – they could "reweave it in a distinctly Indian fashion" (104).

Once India emerged as an independent nation in 1947, the number of its citizens studying abroad in Europe, especially in England, plummeted and by far more were studying in the United States. Besides the dozens of Indians every year studying abroad, another proposal gained increasing support: the creation of an "Indian MIT, what would later become the Indian Institutes of Technology (IITs). As Bassett documents, Indians going abroad in the 1960s and beyond spent less time studying older engineering fields, like metallurgy and civil engineering, and instead, studied electrical, chemical, and mechanical engineering (281). With this development, Indians demonstrated that although India missed out on the Industrial Revolution, it did not intend to miss out on the IT revolution (262).

Although Bassett is upfront that his book profiled a tiny elite of Indian Brahmins, a larger critique is to what extent was this urge for technological advancement concurrent in other parts of India? Bassett's focus is almost entirely the then-princely state of Bhavnagar, but what about other areas of British India experimenting with scientific breakthroughs like Lahore and Calcutta? Bassett's study could have benefitted from a discussion of the relationship of science to the Hindu religion, similar to the approach accomplished by Gyan Prakash in his 1999 book, *Another Reason*. Nonetheless, Bassett's book is an innovative and engaging book about the relationship of technology to state building and the power science wields on humanity's imagination, even half a world away. Bassett, author of an excellent book on the creation of the MOS transistor and the dawn of the digital age, remains one of the foremost historians of technology and its impact on the twentieth century and beyond.

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