

Sen, D. (2013) 'An Absent-Minded Casteism?'. *Seminar*, 645. URL (consulted 12 October 2021), from https://www.india-seminar.com/2013/645/645_dwaipayan_sen.htm

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Suvobrata Sarkar, *Let There Be Light: Engineering, Entrepreneurship and Electricity in Colonial Bengal, 1880–1945* (Cambridge: Cambridge University Press, 2020), xliii + 266 pp.

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This book refreshed my childhood memories about associations we had with 'light', growing up in *mofussil* towns in India in the 1970s and 1980s, when the power supply in many towns was either erratic or new. We would feel 'liberated' when there was a power-cut, because by now light-electric supply had started shaping the routine of our life. Some people would fold hands when the power supply resumed or would accuse someone of being a liar as the moment of his/her speech and a power-cut coincided. By now, electricity supply has reached almost every corner of India and the hyphenated relationship of electricity and light has acquired a new meaning, whereby there cannot be any light of life or knowledge without continuous power supply.

Sarkar's analysis of Bengali responses to electricity supply during colonial times offers a different historical vantage point to understand engineering and entrepreneurship in the then-emerging India. Since the 1990s, interdisciplinary research and writings on various themes related to the History of Science and Technology have proliferated. Many aspects remain unexplored, as numerous micro-discipline studies in the history of science and technology are just collections of data and facts or chronological sequences of inventions. Sarkar's book reflects the process of transfer of technology from the coloniser to the colony. It highlights the changing character and Indianisation of these technologies in the process of transfer. Against the backdrop of the Indian national movement, historians also showed the indigenisation of western engineering education.

Focusing on the intellectual, sociocultural and economic history of light in colonial Bengal, Sarkar also provides a nuanced analysis of the complex history of science and technology in the colonial context. Apart from the introduction and conclusion, this book has five chapters, many illustrations and an exhaustive bibliography. It cogently highlights various debates and ideas related to the establishment of light in India, with a complex alignment with engineering, entrepreneurship and electricity in colonial Bengal. Focused on electricity, this book shows the correlation between technological knowledge and industrial performance. Numerous archival and literary sources have been explored to understand the varying viewpoints of the coloniser and the colonised. The use of vernacular source materials adds strength to this study. Arguments built upon pamphlets, tracts and articles in

Bangla provide a fascinating glimpse of the local Bengali population's response towards electricity and related technologies. Along with archival records, Sarkar also uses the private papers of pioneers like T.W. Bernard, R.H.G. Johnston and Colonel R.E.B. Crompton, as well as small and medium entrepreneurs who exploited technology for their business ventures to unravel the encounter between electricity and Bengalis in the colonial era.

Chapter 1, 'Technical Knowledge and its Institutes', traces the institutional history of modern technical knowledge in Bengal. Simultaneously with the growth of the Bengal Engineering College in Shibpur and the College of Engineering and Technology in Jadavpur, Bengali intellectuals—in response to the Swadeshi movement—started developing a national educational system in the early years of the twentieth century.

Chapter 2, 'Entrepreneurship, Industry and Technology', examines the people's response to these modern technologies, explaining their interconnectedness. Sarkar here explores several techno-socio-political aspects of electrification. In continuation, Chapter 3, 'Electrification: Shaping of a Technology', discusses the establishment and management of light and power facilities in colonial Calcutta. Tracing the convergence of electrical engineering education to entrepreneurship, Sarkar delineates the 'tool of empire' hypothesis by putting forth the role of Bengalis in the growth of the electrification process. Bengalis may have accommodated and even welcomed the new 'technology' of power and entrepreneurship, but this does not entail that this was an act of benevolence or the white man's burden to 'light up' the lives of colonial subjects. Rather, akin to many other technological introductions, this was to economically strengthen, socially consolidate and culturally show the might and marvel of the ruler.

Sarkar introduces various entangling strands beyond the dichotomous relationship of the metropolis-periphery framework to explain Indian responses to new knowledge in Chapter 4, 'Domesticating Electricity'. This explores how colonial society negotiated the wide range of transformations shaped by electricity. It emphasises the role of the local Bengali community in developing this technology and its appropriation. The report of a committee headed by Binoy Kumar Sarkar was a turning point in the history of technical education in India. Recommendations to establish technological institutes based on the lines of MIT in the four regions of the country for the growth of India reflect the vision of policymakers at that time. In 1945, Binoy Kumar Sarkar described Jadavpur University as 'the Indian MIT of today' (p. 230). But why is MIT still the world's leading University in 2021 and Jadavpur University stands nowhere near it?

The gap between MIT and Jadavpur Engineering College is indicated in their respective motto, reflecting the social foundation of these institutions. MIT's motto, '*mens et manus*' (mind and hand), signifies the fusion of academic knowledge with practical purposes and engagement. The goal set in 1906 by the founding members of Jadavpur University was 'to achieve self-reliance ... through Global Knowledge' (<http://www.jaduniv.edu.in/>), which hardly talks about coordination between mind and hand, and implicitly shows caste divisions of Indian society.

Chapter 5, 'Assimilation of Technological Ideas', unravels the imagination of the *bhadralok* Bengali community and their initiatives to make practical use of technological knowledge by establishing industries to turn India into a self-reliant nation. Sarkar emphasises upfront that 'the history of technology in India is not simply a history of the Indian techno-scientific tradition. It is basically a history of India, the history of its people' (p. ii). But somehow resistance towards electricity-light has been missed. This study only shows that Indians wholeheartedly and enthusiastically accepted electricity. Any resistance was only related to establishing control over power production and its supply. But introduction and expansion of electricity in colonial Bengal also took away the traditional jobs of fan pullers (*punkha-wallahs*) and lamplighters (p. 161). It would have been interesting to read more about how these workers resisted this new technology which actually took away their livelihood.

Sarkar's book expands the boundaries of the historiography of technology in India. Notably though, all characters in this study, ranging from engineering students to entrepreneurs to consumers, are males. It would certainly be pertinent to research how women responded to electricity, or how their life got revolutionised through electrical lights and power. It would have been even more intriguing to see how women carved out their niche in the education and profession of engineering.

While Sarkar is silent on the women's questions, some light comes from two recent sources. The very first woman engineer of India from Madras University in 1945, A. Lalitha, joined as technical assistant in the Indian Government office of the Electrical Commissioner (Chhajer, 2020). A recent historical blog by G. Gooday & E. Rees, dated 2 July 2020, found in *Woman Engineer*, the journal of the UK's Women's Engineering Society, identifies that Usha D. Desai, an eminent early engineer, published an article in 1946, describing how women who wished to pursue engineering had to face lots of domestic and cultural pressure. She herself was rejected twice in getting admission to the Engineering College.

Sarkar's study is a stimulating volume for scholars, teachers and students of sciences/social sciences, Engineering, Technology and for anyone who yearns to know about the socio-political history of illumination and the intellectual, social and cultural history of electricity and light in colonial Bengal.

Reference

- Chhajer, S. (2020, June 22) 'Celebrating 5 Pioneering Women Engineers Who have Inspired Later Women to Dream'. URL (consulted 14 October 2021), from <https://www.womensweb.in/2020/06/pioneering-indian-women-engineers-international-women-engineers-day-jun20wk4sr/>

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