

BOOK REVIEW

Jagdish N Sinha: *Science, War and Imperialism: India in the Second World War*, Leiden & Boston: Brill, 2008; XIV/278pages.

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This is an important book by a historian—well-documented and executed in terms of research, documentation, and argumentation. It also covers a ground in history and political science that is not frequently explored and analysed, especially in India. Beyond it, this book is difficult to classify from the perspective of science, rather the study of science, itself: it is neither a history of science nor one on philosophy of science nor even on sociology of science. It is appropriately published as volume 18 in a series called “Social Sciences in Asia”. Moreover, this study is focused essentially on the first half of the 20th century in India. The story of science and philosophy of science (epistemology, logic, theories of knowledge) in India has a peculiar structure: much of the stuff has to be found in ancient and modern times, with a vanishing “middle”, in the sense that the stream appears to have been dried up in the medieval period, except for some developments in the technology of war (gun and gun powder) and irrigation. The *Akbar nāma/Āin-i-Akbarī* has a section that merely reproduces an account of Hindu astronomy and astrology without any documentation of new discoveries! Sinha gives some interesting vignettes of modern Indian scientists and their significant contributions. The main concern of the book is with science/technology policy, application of science and technology in social sector development (education and public health) and economic development (agriculture and industry), and war in British India.

The main argument of the author is that India’s natural growth in science and technology was decisively hampered by British imperialism and colonialism. Even the boost the Second World War could have provided for spurt in development in these fields was also thwarted by the British Raj. Political and military requirements and economic interests of the Raj were the main determinants of official attitude and policies. India’s needs and aspirations as well as past achievements were

largely peripheral at best and consciously suppressed at the worst. Political nationalism (*swarāj*) and economic nationalism (*swadesī*) have received a good deal of attention by Indian and foreign historians of India. Sinha's book breaks new ground, exploring both primary and secondary sources in a critical and comprehensive way, in bringing forward the nationalist discourse on science and technology in research and its application to economic, social, and political development and why it did not fructify. The official policies are also adequately discussed, but the initiatives were mostly marred by non-implementation for a variety of reasons having to do with sincerity of motivation and compulsions of political conditions and wars. There are interesting examples of the British rulers cleverly using progressive ideas and policies in the political realm to kill progressive ideas in the domain of scientific and industrial development. For instance, the government appointed the Industrial Commission in 1916 which augured well for some significant advance in this area. However, the Motegue-Chelmsford constitutional reforms of 1919, introducing diarchy of "reserved" subjects under British bureaucratic control and "transferred" subjects under elected Indian ministerial control in the provinces, negated the optimistic prospects of real development, "as most of the subjects concerned with science were transferred to the provinces without any resources to develop them"! (p. 28).

Nevertheless, the Industrial Commission Report marked a significant break in the official apathy or adhoc approach to the role of the colonial state in the field of science policy. The author underlines two significant points about its importance, even though it remained largely academic: "... First, if the government decided to go by the recommendations, it would have to formulate and pursue a definite, long-term policy in the matter; and second, in case it did so, the policy thus formulated would have to take into account the local needs and welfare of the indigenous population" (pp. 29-30). Indian responses to the official report are equally, in some ways, more important and more revealing. Gandhi, well-known in the context of his historic political role in South Africa and for his tract *Hind Swarāj* (1909) and its trenchant critique of modern industrial civilization, was still rather new on the Indian political stage. He would be predictably highly critical of the official thinking on the science policy on India. Particularly revealing and interesting response to it was from Pandit Madan Mohan Malaviya, one of the Indian members of the Commission and a major national leader of the time. Malaviya wrote a dissenting note to the Commission's Report. Sinha discusses

this important nationalist intervention in the debate on the subject and concludes quoting Shiv Viswanathan, that Malaviya “argued that the de-industrialization of India and the history of the industrial revolution in the West were integral parts of one process, that colonialism preceded and help create industrialization in Britain” (p. 32). Malaviya thus anticipated or presaged the post-World War II dependency theory that emerged to challenge the bland development theory of the same vintage!

In the pre-World War years and during the war itself, the colonial government, the elected Congress provincial governments, the nationalist movements led by the Congress as well as Muslim League, industrialists, individual Marxist and Gandhian leaders like M.N. Roy and J.C. Kumarappa respectively, showed a great spurt of fresh thinking and deliberative activities and outputs that more than made up for the passivity and unproductive activities for lack of follow-up and implementation of the past. Particularly notable are the works of the National Planning Committee (Chair Jawaharlal Nehru) appointed in 1938 by the Indian National Congress in the National Movement and provincial governments, the Bombay Plan (1944) formulated with the initiative of leading industrialists, the Department of Planning and Development created by the Viceroy in 1943 and put in charge of Sir Ardeshir Dalal, an ICS officer and a member of the Bombay Plan group, and J.C. Kumarappa’s attempt to elaborate a scheme of Gandhian Plan. These would appear to be more consequential to the future schemes of national reconstruction of India that would really begin following the tumults of war and the Quit India Movement of the Indian National Congress that eventuated in the legal transfer of power to the Indian Nationalists in 1947.

Sinha must be complemented for having written a wholesome history of an aspect of British India that is both empirically sound and theoretically fruitful in the Enlightenment-engendered discourse on Modernity. I would have expected Jagdish N Sinha in a book published in 2008 to at least suggestively conclude with a nodding reference to the rethinking on the modernist paradigm evident in the Limit to Growth School and postmodernist paradigm produced not only from the phenomenological perspectives but also from the more recent discourses on global warming/climate change and safety of nuclear power. Neo-traditional critique of modernity in Gandhi does figure in the book, but then Sinha seems to have a split vision on Gandhi in view of his own almost axiomatic belief in the developmental

dividends of science and technology and his subsequently crediting Gandhi with having been “quick to perceive the pernicious implications of the Western technology for the country and articulated the issue into his political agenda” (p.56).

All in all, I strongly recommend this significant work in Indian history to anyone interested in the relationship between nationalism, imperialism, and war in relation to scientific and technological and economic development in British India.