

India's scientific legacy

Technology at the Core:
Science and Technology with Indira Gandhi
by Ashok Parthasarathi
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348 pp. \$29.99

The end of the Second World War saw the beginning of decolonization in many countries. Among the nations that became free, India is unique in having a firm science and technology base. This exists because the nation was led by a visionary prime minister, Jawaharlal Nehru, who strongly believed in directing science and technology for the development of the emerging nation. Nehru's dialogue with high-ranking scientists, such as Shanti Swarup Bhatnagar, Homi Bhabha and Daulat Singh Kothari, led to practical solutions for how to achieve it. Another fortunate circumstance was that Nehru had a long tenure of 17 years at the helm, during which India enjoyed political stability.

It is against this background that one should read *Technology at the Core*. The author's father, the late G. Parthasarathi, was a senior diplomat and close confidant of prime minister Indira Gandhi, Nehru's daughter. And author Ashok Parthasarathi worked for several years in her secretariat, making him eminently qualified to write an account of how she handled issues relating to science and technology. Indeed, in several places he cites instances showing the informality of her interaction with him.

Mrs Gandhi, as she was widely known, succeeded her father two years after his demise, and like him, she had a soft spot for science and technology. "It was Indira Gandhi who brought scientists, engineers and technocrats into policy-making and managerial positions," explains Parthasarathi. Nehru, by contrast, saw them more as laboratory workers and thinkers.

This book focuses on the years 1967 to 1977

and 1980 to 1984, when Mrs Gandhi was in power and when Parthasarathi was able to observe, report on and somewhat influence the events that were important enough for the prime minister's intervention. Since Nehru's time, major science and technology issues in India, such as space and atomic energy, have been handled by the prime minister. Parthasarathi was initially appointed special assistant to Vikram Sarabhai, the Chairman of the Atomic Energy Commission. In 1970 he was moved to the prime minister's secretariat, where his job was administrative in nature but required good scientific knowledge. His varied roles included briefing the prime minister, preparing drafts of her speeches, acquainting her with the progress of meetings — including complaints about bureaucratic delay — and reminding her of previous enabling decisions of the cabinet.

One might imagine that science-related decisions would be taken rationally. That image receives a knock if one reads the accounts in this book. One learns that Sarabhai gave an unrealistic future estimate of nuclear power generation without consulting his second-in-command at the Atomic Energy Commission, Homi Sethna, who had the engineering experience. The Department of Atomic Energy continued to have internal quarrels between engineers and scientists. The book also describes controversies from the Council of Scientific and Industrial Research, with one director-general reportedly victimizing the favoured staff of his predecessor.

There are hints of bigger controversies. When the Indian National Satellite System was being constructed, Mrs Gandhi insisted on finding out who was involved in the tendering procedure. She suspected that one of her senior ministerial colleagues was trying to influence the bids. Advance payments were reportedly sent to suppliers of defence equipment in the United States shortly before the US government was



Indira Gandhi at the site of India's first nuclear test, part of her vision for the country's development.

expected to ban the sale of such equipment to India. Parthasarathi also discusses his own role in the investigation of Monkombu Sambasivan Swaminathan, the distinguished agricultural scientist known for developing high-yielding Indian wheat varieties. He describes how Swaminathan was exonerated after being accused of falsifying scientific claims.

Occasionally, there are glimpses reminiscent of the British sitcom *Yes Minister*, when decisions approved by the cabinet or the prime minister were stalled in the corridors of power. The administration was even divided

between the technocrats and those who came through the regular channel of the administrative service. I recall that during my tenure as member of the Science Advisory Council to prime minister Rajiv Gandhi, the exasperated leader once asked the council: "Tell me, how am I to get this recommendation implemented by my administrators?"

Excellent though this account is, there are serious gaps. Important political events such as the war leading to the formation of Bangladesh, the declaration of emergency with draconian powers assumed by Mrs Gandhi,

her loss of the post-emergency election, and her return to power nearly three years later are mentioned only fleetingly. How did science and technology, especially the prime minister's secretariat, fare during these traumatic events? Even in a purely scientific context, there is no discussion of the 1974 peaceful nuclear test. How much did the secretariat staff know of it? There is frequent mention of Purshottam Narayan Haksar as an important decision-maker whose views were greatly respected by Mrs Gandhi. Yet there is no discussion of why and how he was sidelined during the state of emergency declared in 1975.

A comparison with a political biography of Mrs Gandhi, such as the one by Inder Malhotra, would make this book seem a somewhat dry and oversimplified account of how she functioned and how she ran science and technology in a big emerging nation. *Technology at the Core* is eminently readable as an eyewitness account. But it could have been even more so had the political ambience not been filtered out. ■

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