This is a solid and balanced book that provides an impressive summary of English-language works on Korean history. Compared to other recent English-language histories it is ambitious in scope and it is highly recommended for those who want a comprehensive yet easily read introduction to Korean history. It is especially recommended for those who have an interest in modern Korea but little prior knowledge of the longer trends in Korean history.

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In 1956, the first Indian nuclear reactor, Apsara, went critical. The following year, speaking to the lower house of the Indian Parliament (Lok Sabha), Prime Minister Jawaharlal Nehru bluntly asserted, “The putting up of the swimming pool reactor … was done entirely by Indian scientists and Indian engineers.” In reality, however, the detailed engineering drawings, technical data and enriched uranium fuel rods for the reactor had come from the United Kingdom. The UK was not alone: several countries, including Canada, the United States and France, contributed technical knowledge and artifacts to India’s nuclear program, until the 1974 nuclear weapon test made them rethink such cooperation.

What accounts for such extensive inputs into the growth of a technology that one might expect to be kept closely guarded? Of the multiple factors responsible for this technological exchange, an important one was the emergence of an international class of scientists and technologists in the first half of the twentieth century, who went well beyond their traditional confines of the classroom and the laboratory and established themselves as important players in determining state policies on science, technology, development and defense. Robert Anderson’s book, Nucleus and Nation, is an exhaustive history of the Indian contingent of this international class that was deeply involved in determining India’s nuclear trajectory. It focuses on the period between the 1930s and the 1970s, the crucial decades when the contours of science and technology in India were laid down.

The story that emerges in Nucleus and Nation is of Indian science, technology and defense policy being shaped primarily by a small coterie of scientists: “the nucleus of people who made [the first Indian bomb] possible…and on their relation to the nation and its political leadership” (6). They came from a variety of backgrounds and had vastly different personal
biographies. Many of them had been trained in the United Kingdom and had remained in close contact with the scientists that they got to know there, some of whom had gone on to shape policies in various countries. Such contacts were very helpful when some of these key scientists negotiated agreements with their counterparts in countries like the UK, Canada and France. One British scientist, Patrick Blackett, was to play a key role in setting up the defense research network (205-226).

However, these scientists in India were part of a larger community that included “not just mathematicians and astronomers but also doctors, engineers, lab technicians, industrial and medical researchers, and technologists” (9), who together provide the “texture” (8) of the subject of Anderson’s book. To most students of India’s nuclear history, Anderson is best known as the author of Building Scientific Institutions in India (McGill University, 1975), and this book takes that early effort and moves it much further along, offering wonderfully nuanced and detailed pictures of the same institutions, but adding the vast network of laboratories that are part of the Council for Scientific & Industrial Research (CSIR). The titles of a few sections of the book, representing subjects that some of these institutions grappled with, might help whet the appetite: Graduate MSc Studies in Physics; The Installation of a Computer in Science College; and the Scientific Workers Movement and CSIR. Anderson’s approach is guided by actor network theory, and offers ample examples of how “actors mobilize their resources and allies through their networks” (6).

Nucleus and Nation follows in the tradition of Itty Abraham’s The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State (Zed Books, 1998) and George Perkovich’s India’s Nuclear Bomb: The Impact on Global Proliferation (University of California Press, 1999) in offering us a critical and detailed—and extremely readable—history of India’s nuclear program. Where it distinguishes itself from those works is in its treatment of institutional culture and in its nuanced portraits of key players. The book also carries some excellent photos, including one of the nose cone of a rocket that is being taken to the Thumba test on a bicycle and one of Meghnad Saha addressing an election rally on behalf of the Revolutionary Socialist Party.

Over a decade ago, George Perkovich pointed out that the “absence of an adequately detailed narrative of the Indian nuclear program’s evolution … has impaired the Indian polity’s capacity to debate with adequate knowledge what has been done in the nuclear field, by whom, for what reasons, and at what costs.” Nucleus and Nation offers us just such a narrative, not just to inform debate on nuclear power, but also discussions of science and technology, institutions and policy making, history and politics in modern India.

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