



Abena Dove Osseo-Asare. *Atomic Junction: Nuclear Power in Africa after Independence.* Cambridge: Cambridge University Press, 2019. 296 pp. \$32.99, paper, ISBN 978-1-108-45737-8.

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Abena Dove Osseo-Asare's *Atomic Junction* is a masterful contribution to the growing scholarship on the history of science and technology in Africa. Organized around the development and growth of the Ghana Atomic Energy Commission, begun by Kwame Nkrumah in 1964, the book traces the development of Ghana's nuclear ambitions after independence. Nuclear power played an important role in Nkrumah's vision for an independent Ghana, creating cheap electricity that could electrify and industrialize the new country and put it on the path to economic decolonization.

Like other major investments during Nkrumah's time in office, building a nuclear reactor in Ghana was a bold step toward realizing the dream of true independence that would form the foundation of African-centered development. Ghana's nuclear ambitions, however, were shaped not by the desire for nuclear weapons—Nkrumah had been a powerful critic of what he and other Pan-African activists called “nuclear imperialism”. [1] As Osseo-Asare argues, the nuclear reactor project was part of a broad investment in science, which began in primary and secondary schools and extended to the highest levels of the International Atomic Energy Agency. “Scientific equity” was a central component of plans for decolonized, postcolonial futures (p. 5). Investments in scientific education and scientific research would put

Ghanaians on equal footing with former colonial powers and allow them to participate in international debates as partners. Scientific equity, in other words, was an important marker of legitimacy on the national and international stage. Access to scientific technology and scientific knowledge and the ability to train their own cadre of scientific and medical researchers ensured that the government was able to care for its citizens. Osseo-Asare argues that the establishment of research centers like the Kwame Nkrumah Nuclear Research Institute transformed the country's population from passive “consumers” of scientific knowledge to active knowledge “producers” (p. 5).

Investments in scientific research resonated far beyond the lab or the classroom. Nuclear research and the development of the new reactor was also part of Nkrumah's plans to make Ghana energy independent. Like the Akosombo Dam, nuclear reactors could provide cheap, efficient, reliable electricity that would enable the government to electrify even the most remote areas of the country and fuel the country's industrialization by attracting new forms of economic investment in manufacturing. If electrification would help transform all of Ghana's population into “modern” citizens and elevate the living standards of rural communities, industrialization would provide jobs and free the country's economy from

its dependence on foreign imports and the export of raw materials. Electricity was essential if the country was going to achieve decolonization through Nkrumah's scientific socialism.

These "prestige projects" were often criticized by political opponents and the general public as unnecessary, often tone-deaf expenditures that diverted vital resources away from areas of immediate need. While the Akosombo Dam was hotly debated in the press, other forms of scientific investment like the nuclear reactor, scientific research, and science education seemed less controversial. While the project stalled after the coup that overthrew Nkrumah, it was not fully abandoned, and Ghana's scientists continued to play active roles in international organizations. The reactor dreams may have not been fully realized, but Osseo-Asare details the dogged determination and dedication of the research scientists at the reactor site who struggled to secure the funding and recognition necessary to continue their research, even in the midst of economic decline.

In tracing this history through the archival records of scientific institutions, the journalistic records of public debate, and the life histories of scientists, Osseo-Asare highlights the varied ways in which science is *lived*. The politics of budget, policy, and ideology impacted but did not determine scientific practice in the lab and the classroom. It is this *experience* of science that forms the core of this book and the persistent unevenness of scientific access that it describes. In an introduction and five chapters, Osseo-Asare deftly weaves together international politics, national development, academic research, medical practice, and local protest in order to demonstrate how Ghanaian scientists negotiated various levels of power in their quest to achieve scientific equity. In doing so, Osseo-Asare's narrative evokes a number of recent texts that explore the social and cultural history of economic and political processes. This approach allows us to see the mundane amidst seemingly lofty or heady rhetoric, to explore how history

was lived alongside and often in defiance of the way it was planned or politicked.

Osseo-Asare focuses on science equity as a modernist or modernizing project. But particularly since this narrative was bound up in the politics of decolonization, I kept wondering what these scientists thought about indigenous scientific practices and the various "fitters," "herbalists," and "healers" who helped to support community needs. If the politics of science was focused outwards, what did the domestic politics of science look like and were these scientists even engaged in those conversations? To what degree did or could "scientific equity" incorporate a broader definition of science, as Clapperton Mavhunga has argued?[2] To what degree is "science" actually universal? How might scientific practice be enriched by incorporating African perspectives and practices? Of course, this is not the book that Osseo-Asare intended to write, and these questions are far from criticism. Rather, they speak to the book's potential to generate new lines of inquiry and push the burgeoning literature on science and technology in Africa in new ways. It speaks to recent texts on the history of technology, science, and medicine just as readily as it does to scholarship on the history of modernization and development, even if it does not directly engage with them. As such, it marks an important contribution to these conversations and opens the path for other researchers.

Notes

[1]. Jean Allman, "Nuclear Imperialism and the Pan-African Struggle for Peace and Freedom, 1959-1962," *Souls* 10, no. 2 (2008): 83-102; 84.

[2]. Clapperton Mavhunga, *What Do Science, Technology, and Innovation Mean from Africa* (Cambridge, MA: MIT Press, 2017).

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