

Book Review | Edges of Exposure: Toxicology and the Problem of Capacity in Postcolonial Senegal, by Noémi Tousignant (Duke University Press, 2018)

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A great deal of scholarly and policy work has focused on the problem of “capacity” in African countries—the capacity to create, build, and maintain infrastructures, to secure fulfilling livelihoods, to name just a few. Capacity, as an object of study, has been discursively embedded in Africa’s “lack,” followed by itemized needs to make things work. On the one hand, a lack of capacity is not necessarily an overstatement. On the other hand, it is filled with historical obsessions iterated by those entities that generate African dispossessions and lack in the first place, and echoed by scholars and policy makers the world over.

In *Edges of Exposure*, Noémi Tousignant carefully considers the question of toxin regulatory capacity and nuances its meanings. Rather than analyzing political economies and emergencies that lead to entrenched community toxicities, Tousignant instead offers a necessary history of Senegalese scientific struggles to regulate poisons. Faced with declining resources since the implementation of Structural Adjustment Programs (beginning in 1994), toxicologists have had to draw on their professional networks and resources to build up scientific capacity and work toward the creation of a national regulatory environment. The failure of a federal control mechanism to materialize has less to do with the typical reasons offered for African “lack” and more to do with elusive possibilities at different moments in time. This analysis is accomplished by defining capacity as dynamic,

Peterson, Kristin (2019). Review of *Edges of exposure: Toxicology and the problem of capacity in postcolonial Senegal*, by Noémi Tousignant (Duke University Press, 2018). *Catalyst: Feminism, Theory, Technoscience*, 5(2), page 1-3.

<http://www.catalystjournal.org> | ISSN: 2380-3312

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relational, temporally rhythmic, and dependent upon fluctuating postcolonial visions. That is, “capacity is equipment and supplies that were or might have been, the skills to use them, the actions they allowed” (p. 14).

Tousignant sketches Senegal’s history of toxicology capacity via French collegial relationships, the productive use of machinery, and the creation of lab buildings and other infrastructures located within the Faculty of Pharmacy at the Université Cheikh Anta Diop. The historical iteration marks the “ruins” of the lab. “Ruins” is not used to stress a lack or wreckage but as a way to recover “past and potential movement from the lab’s inactive materials” (p. 27). What did past movement and activity during times of real scientific promise do to “sustain and haunt scientific aspirations over time” (p. 27)? Drawing on oral histories and older, found documents in the lab (where truly the lab is a living archive), the book traces the history of routine and interrupted lab work made possible by both transnational and national priorities and budgets.

At the beginning of the postcolonial era, a number of French and Senegalese scientists worked together to build the logistics and justifications for toxicological research. French epistemological domination of various projects was certainly in place. But as many French scientists scattered back home in the wake of structural adjustment programs, Senegalese attempts were made to “Africanize toxicology.” That is, a Senegalese toxicology got reworked to focus on careers, toxicity specific questions of place and ecology, and developing lab work that could feed directly into a poison control and regulatory apparatus (that unfortunately did not come to light). Prior to structural adjustment, lab routines were based upon the study and delivery of funded scientific projects. But after structural adjustment was implemented, the lab and its scientists were faced with declining budgets that could not maintain the scientific project, much less keep up with equipment maintenance. Due to chronic underfunding, the current lab routine is to draw on pre-existing and new networks (outside of Dakar) that are needed especially for data analysis. These relationships over time have been critical because they often stand in for the very making of scientific capacity—they “were and are about relationships and investments between people” (p. 27). And it is these historical and current relationships that generate the material and epistemological evolution of toxicology practice in Senegal today.

In a later chapter, we see how such practice has evolved. Barring significant state funds, toxicology is made possible via a convergence between international contract work, research, and regulation. Tousignant describes an international study, Project Locustox, which evaluated the environmental effects of locust and

grasshopper control via pesticide use. However, the project evolved into something beyond its initial intentions. Based upon its findings, it called for the creation of an institutional infrastructure in the Sahel that could create a mechanism for sustainable and durable data gathering on local ecosystems. Needed for such a project was equipment, experimental organisms, labs, partnering institutions, etc. Strong arguments were thus made toward these needs based upon the real-life experience of carrying out Project Locustox. As Tounignant argues, the project actually did create capacity because it mobilized a very strong sense for building capacity over the long term. This includes how labs and equipment get mobilized after the project ends. Yet, at the same time, what does not seem to last—and is so necessary for durability—is the “integration of institutional, material, and epistemological/methodological infrastructures as a cohesive unit” (p. 123) over time. These are the networks needed for financial stability and envisioning the future of research and its applicability.

Edges of Exposure is certainly important reading for those interested in the history and anthropology of African health, science and technology studies in Africa, environmental health, and the growing literature on toxicologies. It is a great addition to these fields and greatly contributes to growing concerns over toxins in Africa.

Author Bio

Kristin Peterson is Associate Professor of Anthropology at UC Irvine. She is the author of *Speculative Markets: Drug Circuits and Derivative Life in Nigeria* (Duke University Press 2014).