

Shadows for Sunlight: Epistemic Experiments with Solar Energy in India

Nandita Badami

My book project, *Shadows for Sunlight: Epistemic Experiments with Solar Energy in India*, shows how solar technologies, when deployed at scale, transform fundamental relational categories, including “energy,” “rationality,” “the future,” and “the environment” itself. Chronicling the work of politicians, policymakers, and activists, and drawing extensively from gray literature, the project engages in debates in anthropology, science and technology studies, the sociology of knowledge, political theory, and South Asia studies to chart the “worlding” of sunlight into a modern energy form.

The book is organized around the four categories mentioned above. Chapter 1, “Energy” explores “energy” itself as having a contested conceptual provenance. It tells the story of Indian tax commissioners struggling with a basic definitional problem: how to classify solar as a form of energy. Unlike coal and oil, solar has multiple, independent technical parts like batteries, panels, and wires. At what point in the supply chain do the discrete infrastructural components coalesce into “solar energy”? The chapter demonstrates that solar is often unthinkable without coal and oil—policymakers work with a fossil fuel-conception of energy to anchor their ideas about what energy *is*. In exploring how “thinking solar” is a fundamentally relational project, this chapter also demonstrates the stakes of the dissertation: the question of how to think about solar is not just a methodological one, but also an epistemological one. Chapter 2, “Rationality” appended to a “failed” solar intervention in a rural Indian village in Uttar Pradesh, deemed so because the increased access to light did not result in a measurable increase in rational behavior, defined, amongst other metrics, by the lack of an increase in study time amongst village children. Drawing links between solar philanthrocapitalism and the Enlightenment politics of light itself, the chapter cautions against the regressive epistemics we might unintentionally reinforce by mobilizing light as a measure of rationality. It suggests, in its place, a politics that de-links the expectation of development from the commitment to improve energy access—an epistemics of “endarkenment”—as an alternative mode to theorizing solar as an energy form. Chapter 3, “The Future” illustrates how solar defies the easy assumption that it serves techno-deterministically environmental ends by juxtaposing the practice of solar thermal enhanced oil recovery (wherein solar energy is used to aid in the extraction of oil) against India’s leveraging of solar in its diplomatic bid to claim greater “carbon space.” The chapter mixes the conceptual separation of “dirty” and “clean” energies, deconstructing the assumptions, often overlaid on this binary, of means and ends as distinct moralities that feed into the distinct temporalities of the past and the future. Chapter 4, “The Environment” examines India’s decision to exempt large scale solar from having to conduct Environmental Impact Assessments (EIAs) on the grounds that it is an environmental technology, to ask what this might tell us about how “the environment” gets imagined and defined as a category in relation to large-scale techno-solutions like solar. Chapter 5, the final chapter, titled “Solutions,” addresses the analytical possibilities that follow from the anthropological attention to “solutions” as both a commodity and epistemic framework in a moment of compounding ecological and economic crises.