



# THE ANTHROPOLOGIZATION OF ENERGY

## Book Review

*The Promise of Infrastructure*. Nikhil Anand, Akhil Gupta and Hannah Appel (eds), 2018.

*Electrifying Anthropology: Exploring Electrical Practices and Infrastructures*. Simone Abram, Brit Ross Winthereik and Thomas Yarrow (eds), 2019

Reviewed by Antti Silvast

## Introduction

Over the past years, research on energy and infrastructure has engaged with a number of disciplines from the social sciences and humanities including economics, geography, sociology, social psychology, environmental humanities, Science and Technology Studies (STS), and anthropology. A growing literature in the new field of anthropology of infrastructure has explored the full potential of anthropological approaches to address energy issues and sustainability transitions and to generate new insights to these discussions.

The activity in this field has been evidenced by several recent publications, special theme issues, conference panels, research projects, and the formation of international networks. The active institutes and networks include Durham University's Durham Energy Institute, which has been closely associated with anthropological research and teaching, and the Energy Anthropology Network that is part of the European Association of Social Anthropologists. Rice University in Houston, Texas, hosts the Center for Energy and Environmental Research in the Human Sciences. Another network, the Anthropology of the Contemporary Research Collaboratory, started engaging with topics concerning infrastructures more than a decade ago (Collier & Lakoff, 2008; Collier, 2008; 2011).

These collaborations have resulted in two new collected volumes published almost exactly one year apart. *The Promise of Infrastructure*, edited by Nikhil Anand, Akhil Gupta, and Hannah Appel, stems from an Advanced Seminar in the School for Advanced Research in Santa Fe, New Mexico, followed by panels on the anthropology of infrastructure at American Anthropological Association conferences. The newer volume, *Electrifying Anthropology: Exploring Electrical Practices and Infrastructures*, edited by Simone Abram, Brit Ross Winthereik, and Thomas Yarrow, expands upon research presented at a Wenner-Gren sponsored workshop called

"Electrifying Anthropology" at Durham University, supported by the Durham Energy Institute.

Having two volumes appear almost simultaneously offers necessary resources for scholars of this field. Their publication is particularly useful when reflecting on the new fields of anthropology of infrastructure and electrifying anthropology. They generate important views on how a field defines its own research objectives, its intellectual resources, and its empirical concerns. Discussing what infrastructures are and how the social sciences and humanities might study them has been the subject of decades of research, especially in various strands of STS and socio-technical systems perspectives on energy (see e.g. van der Vleuten, 2004; Silvast et al., 2013; Silvast & Virtanen, 2019), as the readers of this journal will know. These two volumes offer a way to address a question in this situation, namely: What insights does this new research in anthropology bring to the long-standing discussions on large socio-technical systems and infrastructures?

A second, closely aligned parallel to this work runs through anthropology itself. An anthropological focus on infrastructures and energy is not new. As the volume by Anand et al. argues "(t)he relationship between infrastructure, environment, and modernity has preoccupied anthropology since the beginning of the discipline." (p. 7) This focus has included several considerations of energy and culture dating back to the 1940s (Strauss, 2013) and examinations of interrelationships between labor, cultural practices, the environment, and technical systems including energy and irrigation. This observation can be used to reformulate the question: How does the program of research on anthropology, infrastructure, and electricity draw from anthropological scholarship and develop it further? As it turns out, the two books have distinct if related answers to this question.

## Structures and contributions

In addition to an introduction, *The Promise of Infrastructure*, edited by Anand and colleagues, spans nine chapters. These are then divided into three parts focusing on Time, Politics, and Promises. The

chapters on time range from half-built infrastructure projects in Equatorial Guinea and Bangalore to roads in Peru and electrification in Vietnam. Politics is explored through investigations of public



and hydraulic infrastructures in chapters on South Africa and India. The final part concerning promises is markedly more theoretical and conceptual, with chapters relating infrastructures to political aesthetics, interdisciplinarity, and sustainability transformation in energy systems.

*Electrifying Anthropology*, edited by Abram and colleagues, has eleven chapters. Following an introduction, their topics range from metaphors and language of electricity to ethnographies that link these conceptual considerations with a variety of fields and infrastructural issues. These include the politics of electrification in rural India, riding an electric bike in the south of France, electricity billing in Japan, computer models of the Mekong River, state power in electricity grids in Mozambique, electricity grid development in the United States, and public promotion of nuclear power stations in guided tours in Northern England. The volume ends with an afterword by Sarah Pink that draws these disparate research projects together and proposes ways to build them into a research program.

Both books begin with a fundamental issue: defining what this anthropological research field examines and situating it among other academic disciplines that study similar topics – in this case energy and infrastructures. On this point, the two books start on similar grounds but diverge quickly. For Anand et al., their research object is infrastructures in the wide meaning. This includes “roads and water pipes, electricity lines and ports, oil pipelines and sewage systems” (p. 3) among other large structures. This definition includes what are typically understood as material infrastructures – such as electricity distribution. However, it also encompasses what Geoffrey Bowker in his chapter calls “knowledge infrastructures,” e.g. large-scale networked computing or scholarly communication platforms. The research in the volume is not only attempting to contextualize these infrastructures socially or explain them by something more-than-technical. Rather, the point is that infrastructures are already “dense social, material, aesthetic, and political formations” (p. 3) and

inseparable from sociality, everyday life, and future expectations. As the editors summarize, infrastructures are “critical locations through which sociality, governance and politics, accumulation and dispossession, and institutions and aspirations are formed, reformed, and performed.” (p. 3)

In principle, Abram et al. approach the difference between “social” and “technical” dimensions of electricity in a similar fashion. As they note, especially in regards to empirical research, “the ‘social’ and ‘technical’ elements of electricity are inter-defined, imbricated, and distinguished.” (p. 6) Furthermore, the editors want to avoid a distinction between “a ‘real,’ scientific version of electricity” and “a socially and culturally constructed version.” (p. 7) The volume’s contribution is in presenting work that tries to cross this disciplinary and professional divide. But in focusing on this research interest, the differences between the two books emerge.

For Anand et al., infrastructures are the focus of the research; for Abram et al. it is electricity. It is telling that, while *Promise* begins with several empirical chapters that study how infrastructures are envisioned, built, and used – from commercial and industrial buildings to roads and electricity grids – *Electrifying* starts with several chapters that focus on the language and metaphors of the term electricity. Anand et al. look at the wide underpinnings of different kinds of infrastructures – including their relations to governmentality, citizenship, temporality, promises, and political and economic transformations. While many of these issues are also of interest to Abram et al., they pay closer attention to the particularities of electricity and anthropological problematization of what electricity is in itself. For example, this focus implies distinguishing electricity as an object of inquiry from infrastructure and further distinguishing electricity from energy: electricity clearly is part of current energy research, but we should aim at more precise interrogation “of qualities and affordances of one thing (electricity -AS) that is in energy research bundled under a wide category” (p. 202) as Pink notes in her concluding chapter.

## Conceptual and methodological approaches

This different research focus means that the two books draw on different, though related, intellectual resources. *Promise* has a detailed review of earlier studies ranging from urban geography to STS, infrastructure studies, histories of technology, and beyond, while also including earlier anthropological research. *Electrifying* also reviews some of these earlier works, but an extensive literature review is not included. As a result, *Promise* is more conventionally structured. It draws from the stock of earlier academic knowledge and presents thick ethnographies where anthropologists engage with informants – in this case, designers and builders of infrastructures as well as their users – in different field sites throughout the world.

According to *Electrifying*, however, it is not apparent that only designers, scientists, builders, engineers, and related actors possess

expertise on electricity that can be uncovered by ethnographers. When they describe the chapter “Electricity is not a Noun” by Gretchen Bakke, the editors state that expertise on electricity is problematic: “We barely know what electricity is ... even if we are increasingly familiar with its effects (largely true for scientists as well as social scientists).” (p. 13) They continue: “When engineers talk about a flow of charge, ... they knowingly adopt the methods of physics and its use of models and metaphors that serve explanatory purposes without being direct representations of material phenomena.” Hence, both social scientists and engineers try to explain electricity in their studies, albeit doing so in very different terms. Both disciplines also remain at a distance from the material phenomena that they are trying to represent.

These observations correspond with different research styles in the



two volumes, depending on how they perceive the role and impact of anthropology and ethnography. *Electrifying* uses a wide-ranging mix of research approaches, in order to, as Pink characterizes the entire volume, “bring apart most of the concepts that might have been used to define electricity.” (p. 202) These approaches and methods include autoethnography, tourism studies, analyses of energy models and markets, desk-based studies, as well as more traditional anthropological field studies. *Promise* adds historical overviews to ethnographic study, and several chapters develop nuanced theoretical accounts of infrastructure. Yet, except for the conceptual chapters that end the volume, the research builds on the classic field study method: an ethnographer unpacks the infrastructure by being situated in the field where they manifest, usually observing how they unfold over a long duration of time.

Research methods and approaches have become an important area of discussion in the STS of complex interconnected technologies such as infrastructures and electricity distribution (see Silvast & Virtanen, 2019). While infrastructures manifest to us at particular sites – such as households or workplaces – the systems themselves

are interconnected, interactive, and multi-sited assemblages. In his chapter “Sustainable Knowledge Infrastructures”, Bowker speaks of the layered character of infrastructure and recognizes the challenge of navigating between its various scales: including time and space, collectivities, and data. This layered character of infrastructures means that the single-sited field study and its focus on particular, localized, and situated dimensions of technologies offers a necessary but an incomplete account when inquiring into infrastructures.

Against this backdrop, it is important to stress that, while the two volumes draw on situated field work research and use it both systematically and creatively, they are not merely advocating a single-sited study ethnographically or by research design. This is apparent because of their structure as collected volumes, where each chapter represents a different possible field site of various infrastructures and electricity. But it is also apparent within many of the chapters themselves as they move between design, use, construction, state planning, inaugural ceremonies, and political discourse almost seamlessly to expose the different sites where infrastructures are continuously enacted.

## Disciplinary difference or integration?

In this review, I have paid attention to the differences of the two volumes to stress a point on the varieties of anthropological perspectives on infrastructures. This is not meant to understate the many similarities between these volumes. Both volumes are advancing and drawing from the ethnographic method in its various guises. Both situate an interest in what is termed the Global South or non-Western countries, although the volumes, especially *Electrifying*, also consider Western countries. The two volumes advance anthropology both theoretically and in the applied sense. The underpinning of the research, which is explicitly addressed by Dominic Boyer in his chapter “Infrastructure, Potential Energy, Revolution” in *Promise*, seems also to be largely shared. Anthropology of infrastructure and electricity did not emerge just because of an ethnographic curiosity on the “hidden” structures of society, but because of our current ways of life and the need to reconceptualize time, politics, and promises in order to understand the role of infrastructures in these settings. The necessity of sustainability transition in infrastructure provision, especially to mitigate the impacts of climate change, makes this requirement urgent for academics working at the intersections of infrastructures, energy systems, anthropology, and STS.

As such, these two volumes call for even more consideration – more than what they contain – of what happens to the academic discipline of anthropology when it becomes part of research agendas on timely sustainability issues. It is true that several chapters outline a research program that reconstitutes the field, drawing from a general underpinning that is aptly summarized by Pink: anthropology is among many disciplines that “has begun to open up to and whose practitioners have begun to develop

collaborations with design and engineering disciplines.” (p. 206) She cites energy research particularly, and her diagnosis is doubtlessly appropriate in externally funded, collaborative research and development projects and explicit advocacy of interdisciplinary research agendas, which often take shape in cross-cutting interdisciplinary institutes or as parts of research networks. But this collaborative agenda speaks less to the continued importance of conventional academic disciplines – in this case, anthropology – than to an increased level of interdisciplinarity that is assumed to be taking place.

Scholars developing a program on the anthropology of the contemporary (Rabinow et al., 2008) contemplated the state of their discipline a decade ago and explicitly called for establishing the disciplinary community in anthropology, its academic integration, standards, norms, and quality to address challenging contemporary research topics such as infrastructures. Academic disciplines are means for giving scholars the conditions for understanding quality, and they are always associated with specific gatekeepers, publication practices, and ways of recognizing academic reputation. Those embarking on interdisciplinary collaborations with anthropology should pay careful attention to this issue and recognize it when developing their research trajectories. The two volumes point towards a considerable amount of untapped potential in anthropological approaches to addressing complex energy issues all over the world. But, if one wishes to become an active participant in anthropology, more consideration needs to be given to its academic practices and norms and how various experts speaking on behalf of the discipline may recognize scholarly reputation and quality before this participation can be fully realized.



## References:

- Collier, S. J. (2008). 'Enacting catastrophe: preparedness, insurance, budgetary rationalization', *Economy and society*, 37(2): 224-250. <https://doi.org/10.1080/03085140801933280>
- Collier, S. J. (2011). *Post-Soviet social: Neoliberalism, social modernity, biopolitics*, Princeton, NJ: Princeton University Press.
- Collier, S. and Lakoff, A. (2008). 'The vulnerability of vital systems: How 'critical infrastructure' became a security problem', in M. Dunn (ed.), *The politics of securing the homeland: Critical infrastructure, risk and securitisation*, London: Routledge, pp. 40-62.
- Rabinow, P., Marcus, G. E., Faubion, J. D. and Rees, T. (2008). *Designs for an anthropology of the contemporary*, Durham, NC: Duke University Press.
- Silvast, A., Hänninen, H. and Hyysalo, S. (2013). 'Energy in society: Energy systems and infrastructures in society', *Science & Technology Studies*, 26(3): 3-13.
- Silvast, A. and Virtanen, M. J. (2019). 'An assemblage of framings and tamings: Multi-sited analysis of infrastructures as a methodology', *Journal of Cultural Economy*, 12(6): 461-477. <https://doi.org/10.1080/17530350.2019.1646156>
- Strauss, S. (2013). 'Energy: A total social phenomenon', *Suomen Antropologi*, 38(3): 53-56.
- Van der Vleuten, E. (2004). 'Infrastructures and societal change: A view from the large technical systems field', *Technology Analysis & Strategic Management*, 16(3): 395-414. <https://doi.org/10.1080/0953732042000251160>