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Constructing an Anthropology of Infrastructure

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Anand, Nikhil, Akhil Gupta, & Hannah Appel (Eds.). *The Promise of Infrastructure*. Durham and London: Duke University Press, 2018.

Scudder, Thayer. *Large Dams: Long-Term Impacts on Riverine Communities and Free-Flowing Rivers*. Singapore: Springer, 2018.

Infrastructure has become a hot topic in contemporary anthropology. By some accounts, this is a remarkable turnaround. According to Marco Di Nunzio (2018, p. 1), infrastructure was once largely ignored because anthropologists viewed the subject as “unexciting and irrelevant..., boring.” He claims that this supposed lack of interest was not snobbism but an outcome of “modernist representations” portraying infrastructure as “inert, nearly invisible” (p. 1). People generally accepted that modernity, progress, and development meant being enmeshed in networks of wires, pipes, electromagnetic waves, cell towers, roads, ports, and other features of built environments. Yet limitations in delivering or maintaining infrastructural services brought their centrality as features of life to the surface. Anthropologists now recognize that issues involving these services potentially offer deep insights regarding unequal societal power, the state, and markets. The gap between those connected to services and those not connected to services, for example, often forms the dividing line between living a good life and hard times. Awareness rapidly spread in academia that infrastructure mattered. Even if one does not entirely agree with the claim that infrastructure had been ignored (an issue addressed later in this essay), there is no denying Penny Harvey’s statement in the edited volume under review that anthropological studies of infrastructure are currently “booming” (p. 85). Coinciding with such studies are attempts to coin new theoretical concepts—*e.g.*, energopolitical process, technopolitics, infrastructural time, and infrastructural poetics—all of which seek to indicate the presence and interplay of political, economic, ideological, aesthetic, and material considerations.

The Promise of Infrastructure, edited by Nikhil Anand, Akhil Gupta, and Hannah Appel, will likely be considered a key text in this growing literature. The book, which started as a seminar at the School for Advanced Research, consists of a lengthy introduction by the editors and nine single-authored chapters covering ethnographic cases and theoretically-oriented studies. Almost all of the writers are identified as anthropologists. What unites the collection as a whole is its analytical ambition, as the authors seek in their own ways to push forward theoretical, methodological, political, and other agendas regarding the study of infrastructure. In most instances, the authors achieve their aims, offering creative, thoughtful, and often convincing essays that should help stimulate further social research on infrastructure. Yet the value of the volume is somewhat diminished by its limited view of the contributions to theory, method, politics, and policy by previous generations of anthropologists concerned with the complexities of infrastructure. Appel, Anand, and Gupta, in their Introduction, acknowledge that anthropology since its beginning has been “preoccupied” by “the relationship between infrastructure, environment, and modernity” (p. 7) but say surprisingly little about this past. Morgan’s early evolutionism is covered briefly as an example of “techno-developmental teleologies,” but later materialist theorists White, Steward, and Harris are mentioned only in passing. The introduction

also only briefly mentions that dams displace millions and result in highly skewed distributions of benefits; however, it largely ignores the considerable efforts of anthropologists to document such situations and address them through research, lobbying, policy formulation, and other actions. It strikes me as odd that the editors and other authors generally downplay their discipline's history in this way rather than embrace it. At the same time, this very lack of awareness or appreciation of the past may help explain why infrastructure remains a *terra nova* for research, with influence coming from specialists in history and sociology, as well as theoretical perennials such as Foucault and Althusser.

The editors' introduction presents a compelling case for anthropologists and others to take into account infrastructure as "an integral and intimate part of daily social life" (p. 6), affected by and affecting gender, kinship, class, ethnicity, race, and patronage. Infrastructure involves a meeting of "aesthetics, meaning, and materiality" (p. 27), and its many aspects can be explored in multiple ways. The book's title invokes the promises offered by infrastructure for a better life, development, and modernity. The title easily could have been *The Unfulfilled Promise*, however, as the introduction and subsequent chapters generally highlight the disappointments, disastrous outcomes, betrayals of public trust, and other troubles associated with infrastructure. The editors point out that examining infrastructure requires a politically-savvy and sophisticated holistic understanding of its temporal and spatial dimensions, especially given its often lengthy, discontinuous, and uneven unfolding, as well as its likely deteriorating or unwelcome presence into the future. As the editors predict, "Nuclear wastes will probably pollute the earth long after humans are extinct" (p. 19). Greater attention also needs to be paid, they say, not only to the interactions—political and otherwise—of humans, nonhumans, and infrastructure material that compose an infrastructural assemblage but also to the attribution of agency to both human and nonhuman actors. Analyzing infrastructure allows for both greater understanding of and reflection on its future, including "what kinds of infrastructure—epistemic, energetic, political—[we] might...contemplate from the everyday ruins and rubble wrought by infrastructure today" (p. 30). The introduction concludes with an appreciation of how ethnographic studies "can redeem the promise of infrastructure" by increasing its social and political visibility.

The single-authored chapters are divided into three thematic parts: time, politics, and promise, representing key dimensions covered in the introduction. Hannah Appel starts Part I with a chilling account of the arrogantly conceived and generally inefficient infrastructural spending spree by Equatorial Guinea's kleptocracy. What stands out is the callous elite squandering the country's oil wealth and repressing critics while bureaucrats and businesses in the international development industry simply go with the flow of money. Akhil Gupta deals with the temporality of infrastructure by calling for dynamic analyses focused "on movement and process, on the constant struggle between renewal and ruination" (p. 73). The latter is conceived as something endemic to infrastructure, rather than a condition occurring after its lifetime. His examples come from India, including Bangalore's numerous incomplete infrastructure projects. Penny Harvey draws on long-term fieldwork on two Peruvian roads to show how the project comprises political intent and relations among the wide-ranging actors involved. Intentions and relations shifted, often unpredictably in the context of broader societal changes, as the roads project moved from planning to building to everyday use. Harvey stresses that "people's lives will have infrastructural consequences that designers and planners can never control" (p. 96). The importance of the unanticipated in technological change is a theme that dates back to early work by applied anthropologists (see Foster 1962). Christina Schwenkel uses

the power plant smokestack in Vinh City, Vietnam, to explore the shifting fortunes of socialist and neoliberal modernity. Local poets celebrate past collectivist sacrifices, particularly the defense of the power plant against American attacks during the Vietnam War. An emblem of socialist progress, the increasingly inefficient plant closed in the mid-1980s, only its smokestack remaining a national heritage site. Electricity returned only with market reforms, with low-income city residents feeling a sense of betrayal at not reaping the benefits promised by socialism's modernity as they struggle to afford the high rates charged for electricity.

Antina von Schnitzler's chapter, which opens Part II, is concerned with infrastructure as both an "ethnographic object" and "epistemological vantage point" for understanding South African politics, including how many of its poorer citizens have "lived experiences of democracy" (pp. 147-148). Her insightful study emphasizes the still pervasive legacy of Apartheid, the racist regime that ruled the country until the early 1990s. Racial separation manifested itself in differential access to infrastructure. For residents of townships and shanty towns and many rural areas, overcoming this pernicious pattern has proven difficult, especially in the era of economic liberalism, user-fees, and under-resourced governments. The second and final chapter in this part consists of Nikhil Anand's study of Mumbai and India's complex water infrastructural politics. He points out that the rise of the municipal piped water supply during colonial times was both a technical and political achievement, bestowing legitimacy upon the administration. Shifting to contemporary water politics, Anand documents how poor communities obtain or enhance water services through interaction with city councilors and water engineers.

The "Promise" section begins with Brian Larkin's chapter dealing with infrastructure's political aesthetics, which he intends as a theoretical contribution. Those seeking a singular political theory related to infrastructure will have to look elsewhere, however. Larkin's chapter nonetheless offers a useful appeal for the creative exploration of infrastructure, examining material assemblage, political rationalities, and aesthetic fields through both the humanities and social research. Geoffrey C. Bowker ponders the issue of the sustainability of knowledge infrastructure. He notes that most scholarly research disappears from citation within five years, while the institutional structure of academic disciplines is at odds with the growing need for integrative knowledge. Dominic Boyer's closing chapter claims that the emergent anthropology of infrastructure represents an "'anti-anthropocentric turn' in the human sciences," away from Keynesian and neoliberal carbon modernity (p. 227). Using Marxian ideas, he shows how "infrastructure stores the productive powers of labor...[such] that they can be released later in magnitudes that appear to transcend nominal inputs" (p. 229). Boyer argues that although it may play a conservative role, infrastructure can be revolutionary, citing Lenin's vision of electricity's role in building a new proletarian state. He also covers Hermann Scheer's campaign for a decentralized solar economy and societal transformation. Boyer concludes by promoting personal and civilizational processes of "rebecoming," especially among white men, who he holds responsible for the "carbon modernity" causing our current environmental crises.

Taken as a whole, Anand, Gupta, and Appel's edited volume illustrates the wide-ranging possibilities for ethnographic and other anthropological research on infrastructure, furnishing many theoretical, methodological, and political considerations as inspiration and guidance. Some of the chapters feature photographs that support the text. At the same time, *The Promise of Infrastructure* furnishes a limited account of anthropology's actual engagement with this domain of studies. In contrast, Thayer Scudder's *Large Dams: Long Term Impacts on Riverine Communities and Free Flowing Rivers* provides an astounding chronicle of some of the

discipline's broader contributions to this field of study. The book details his six-decade long journey to understand and address the impacts of river basin development, especially large dams, of which more than 50,000 exist worldwide. I view this work as part of a 21st-century trilogy by Scudder, which, taken as a whole, reveals significant continuities and shifts in his thinking. *The Future of Large Dams: Dealing with Social, Environmental, Institutional and Political Costs* (2005) was written after he served as a member of the World Commission on Dams from 1998 to 2000. In it, Scudder elaborated on technical and policy issues covered by the Commission, agreeing at that time with its finding that large dams constituted "a flawed yet still necessary development option" (p. 1). Scudder's analysis drew on his research in 30 countries on three continents, and the book devoted considerable attention to population displacement and resettlement, major aspects of large-scale infrastructural projects.¹ Underlying his work on large dams had always been a broader concern about sustainability, and in 2010, he published *Global Threats, Global Futures: Living with Declining Living Standards*, highlighting the dangerous trends of increasing inequalities, rising fundamentalisms, and global environmental degradation. Distancing himself from earlier neo-Malthusians, Scudder sought to take on Global Boomers (or cornucopians) while acknowledging that he agreed with their belief in the problem-solving capacity of people. His last chapter set forth ambitious, if not revolutionary, strategies for global societal transformation.

Scudder's latest book updates his views on large dams and sustainability. Yet it also offers something much more: an autobiographical narrative. This allows for a frank, richly textured, and nuanced description of his experience working in 30 nations on three continents for a range of international and national entities, usually in highly contentious settings. Scudder writes in a direct manner, eschewing jargon and theoretical acrobatics while interjecting humor and a sense of irony to lighten the sometimes complicated or grim account. Many fieldwork photographs enrich the text. In covering his six decades as an applied anthropologist, readers gain a strong appreciation of the discipline's ability to address politically and technically challenging issues regarding river basin development, dams, resettlement, and land colonization. Still, *Large Dams* is not a tale of anthropology-to-the-rescue. Scudder is forthright about the limitations of anthropological analysis and advocacy to influence outcomes. Governments and international aid agencies often select short-sighted financial and political expediency over benefit-sharing or options that would otherwise support resettled populations and downstream-impact communities in an adequate manner. A key aspect of the book is its portrayal of Scudder's shifting views on dams and wider issues of water resource development. Indeed, his perspectives have always been data-driven, reflecting shifts in the quality of life of resettled peoples and in the assessment of long-term costs, understood broadly. Initial research among resettled populations in Zambia and Egypt showed improvements in the quality of life, though subsequent studies revealed that such gains were not sustained, revealing the need for long-term studies. Scudder now sees big dams "as a major component of a dysfunctional international development paradigm" (p. 17), with unacceptable outcomes and costs, as planners and politicians prove unwilling or unable to carry out mitigating actions.

Large Dams is unusual in its format and organization. Scudder's numbering system, absent in his preceding two books, resembles a report's layout, but the text is not a rehashing of consultancy pieces. Accompanying each number are titles and subtitles which vary significantly in length. I found the numbering and titling to be helpful in following the flow of narratives as it moved from different places or jumped to different times. The numbering system also serves to arrange Scudder's arguments in a very orderly manner. More important is the varying chapter

lengths. The book opens with an introductory chapter that essentially provides a summary timeline of his career. It takes up 25 pages. Chapter two, which runs almost 70 pages, elaborates on the start of Scudder's collaboration with Colson (from 1956 to 1973) and focuses on his own expanding expertise on resettlement and water resource issues, including his fieldwork related to Egypt's Aswan dam, as well as research in Nigeria, Ivory Coast, and Zambia for entities such as the United Nations Food and Agriculture Organization (FAO) and World Bank. The chapter furnishes a lively account of the complicated politics and procedures associated with these organizations, especially as they were unfamiliar with working with an anthropologist. One gets a strong sense of Scudder's own rapid learning in dealing with bureaucracies, including how to deliver persuasive findings based on ethnographic data. It also describes his family within the context of his career progression from advanced graduate student to tenured professor at the California Institute of Technology (Caltech), the only anthropologist on campus.

The third chapter, in 118 pages, presents the activities of Scudder and his colleagues at the Institute for Development Anthropology, a non-governmental organization that Scudder founded with Michael Horowitz and David Brokensha in 1976. A pioneering effort by applied anthropologists to gain greater control over development practice and policy, the IDA lasted more than two decades. In addition, the IDA's work worldwide on river basins and resettlement was its "most important single topic" (p. 153). Scudder had the idea of an anthropology-based consulting firm as early as 1960, but it took combining efforts with Horowitz and Brokensha, also academics with extensive applied experience, to pull it off. They were united in favoring development policies and practices that provided opportunities to poor communities. The three anthropologists funded it by utilizing their own consultancy earnings, and the IDA's fortunes were always tied to contracts. The 1980s were fruitful years, with several projects related to resettlement. The New Lands Settlement Project, sponsored by the US Agency for International Development (USAID), for example, studied spontaneous, voluntary, and involuntary settlement, utilizing a systematic literature review as well as fieldwork in Egypt, Sudan, Sri Lanka, and Nepal. It concluded that "worldwide, the large majority of settlers behave in the same way during the settlement process" and generated a four-stage analytical framework for further study (p. 112). By 1990, the IDA's revenue reached more than \$1.7 million. A significant part of that total came from a three-year World Bank contract awarded in 1988 to examine resettlement in areas being cleared of Onchocerciasis, a severe eye and skin disease affecting millions of people in West Africa. The IDA's fortunes rapidly declined in the early 1990s, reflecting in part decreasing support from USAID. By 1994, when Scudder largely ended his consultancy work, the IDA was barely surviving, its staff greatly reduced. Despite efforts by Horowitz to keep it going, it closed in 2003. Overall, the chapter furnishes a rich history of the IDA's wide-ranging activities, including Scudder's own multi-year engagement with Sri Lanka's Accelerated Mahaweli Project and Botswana's Okavango Integrated Water Development Project. He notes that one of the IDA's chief legacies was the support of young anthropologists, including research associates Muneera Salem-Murdock, Peter Little, Michael Painter, and Thomas Painter.

Chapter four portrays Scudder's "increasing disillusionment" with the planning and managing of large dams, focusing on his disappointment with the World Bank. It takes up only 30 pages. Scudder's lecture to World Bank officials in 1977 criticized their lack of adequate involuntary resettlement policies and failure to catalyze any resettlement policies into action. He worked with Michael Cernea, the World Bank's on-staff anthropologist, to formulate guidelines. In subsequent roles as World Bank consultant or a member of its independent Panel of Environmental and Social Experts (which dealt with contentious projects), Scudder promoted the

implementation of resettlement policies in different settings, including China, Laos, Lesotho, and India. What emerged over the years in places such as India, Zambia, and Lesotho were repeated instances of the World Bank failing, or only reluctantly, fulfilling its obligations, often letting down resettled communities. Scudder claims that by 2000, the World Bank's management concern for social and environmental policy were in retreat. Confirmation was provided by its rejection of the World Commission on Dams guidelines, the World Bank preferring to "reengage with high-reward-high-risk hydraulic infrastructure" (p. 242). Scudder's brief Chapter five (only five pages) cites four experiences that influenced his decision about large dams not being cost effective in the long run. Among the deciding factors were a statistical analysis he carried out with John Gay on large-dam resettlement and several recently published studies. His change of mind is a testimony to life-long learning.

Although *Large Dams* focuses largely on Scudder's anthropological activities, its last chapter consists of a Postscript about the personal lives of he and Eliza, his wife and companion of 67 years. Those seeking insights in Scudder's character and motivations may want to start with it. A self-described loner while growing up, he acknowledges the influence of his father, who left his post as a literature professor at Swarthmore in 1945 to set up the Center for Information on America, a not-for-profit organization that furnished educational materials to working class and young people. Becoming a passionate birder, mountaineer, cross-country hitchhiker, husband, and father proved formative experiences for Scudder, with serendipity also playing a role as he undertook studies, mainly at Harvard. Classes on Africa during a post-graduate year at Yale were "invaluable" in his ultimate career decisions (p. 273). Scudder emphasizes throughout the book that he had not originally intended to make a career of looking at dams, though it turned out to be a topic that matched his interests and personality. Scudder approvingly quotes the characterization of him by Kader Asmal, the South African anti-Apartheid activist and minister who chaired the World Commission on Dams: "Ted's research was never motivated by anything more than an insatiable drive for answers to questions most would rather not ask" (p. 255). *Large Dams* provides overwhelming evidence of the veracity of this assessment of Scudder.

Scudder's autobiographic approach allows for rich descriptions of his fieldwork experiences and his colleagues. For example, he provides a keen portrait of Elizabeth Colson as person and scholar and says that her book *The Social Consequences of Resettlement* remains "the best single source on development-induced involuntary community resettlement" (p. 3) to this day. The pioneering roles of Michael Horowitz (who died in 2018) and David Brokensha (who died in 2017) in the anthropology of infrastructure are also well-represented in the chapter on the IDA. The book is not simply an account of the past but has much to say that is relevant for those interested in the future of anthropology of infrastructure. Lastly, the work is important in telling the story of Thayer (Ted) Scudder himself, a distinguished and truly unique anthropologist.

Notes

¹ At least 40 million people, if not double that number, had been compelled to move due to dams. Elizabeth Colson and Scudder pioneered resettlement studies among the Gwembe Tonga in Zambia during the 1950s—their ethnographic analyses continuing to the present under subsequent scholars, a unique decades-long record of coping with infrastructural development.

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