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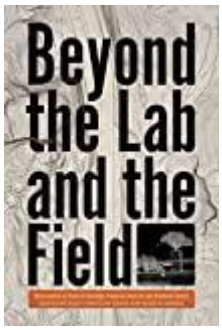
Eike-Christian Heine, Martin Meiske, eds. *Beyond the Lab and the Field: Infrastructures as Places of Knowledge Production since the Late Nineteenth Century (INTERSECTIONS: Histories of Environment).* Pittsburgh: University of Pittsburgh Press, 2022. 300 pp. $60.00, cloth, ISBN 978-0-8229-4637-3.



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The High Modernist House of Experiment

What comes to mind when you consider places and spaces of science, experimentation, and allied forms of knowledge production? The contributors to this insightful volume want us to think far beyond indoor laboratories and outdoor field research areas. As they argue with clarity and cohesion, large-scale infrastructural projects built over the past 150 years—including dams, canals, highways, and pipelines—have provided immensely productive, yet underrated, opportunities for generating new knowledge about natural and human-dominated environments.

The authors of *Beyond the Lab and the Field: Infrastructures as Places of Knowledge Production since the Late Nineteenth Century* use an intriguing concept to make the case for studying megaproject construction sites as places of knowledge production: "scientific bonanzas." In mining terms, a bonanza is a rich vein or mineral deposit. Mining operations and gold rushes often generate spectacular wealth for a fortunate few, while yielding disruption and degradation for many others. "Such ambivalence characterizes the junction of the two fundamental strands of modern history—infrastructure and knowledge—in our collection of essays," as editors Eike-Christian Heine and Martin Meiske explain in their introduction (p. 4).

Employing insights from across the humanities, the social sciences, and the natural and engineering sciences, the authors document an abundant set of scientific and ideological bonanzas that emanated from infrastructure projects spanning a wide geopolitical range. Most of the case studies date to the transformative decades surrounding the turn of the twentieth century or to the high modernist era of the 1930s-1960s, but more recent developments also appear. The space constraints of this review permit only surface-level descriptions, and thus I urge scholars of science, technology, and the environment to delve into these chapters.

Paul Sutter and Martin Meiske address biomedical, ecological, geological, and paleontological bonanzas uncovered by researchers in Panama during the US-era construction of the canal in the early 1900s. Christian Zumbrägel and Benjamin Brendel examine patterns of change and continuity in German, Spanish, and US hydropower and hydroengineering during periods of rapid technological transformation. Eike-Christian Heine provides new insights on Nazi archaeology in the context of the building of the Autobahn. Mining Soviet and Russian archives, Valentina Roxo and Timm Schönfelder respectively explore how Soviet ethnographers promoted Siberian Indigenous knowledge and culture threated by petroleum development, and how Soviet irrigation projects along the Kuban River in the North Caucasus yielded institutional bonanzas but also ecological disasters. In his analysis of European opposition to new electric transmission lines, Vincent Lagendijk highlights the role of local protests against infrastructure projects as an understudied bonanza. Neta Feniger and Roy Kozlovsky analyze the absurdities and opportunities engendered by the Tel Aviv Ayalon Expressway over a multi-decade period of planning, construction, and conflict resolution.

Finally, Christian Kehrt's chapter on successful protests against French Cold War plans for an airstrip in Antarctica provides a fitting conclusion that underscores the late twentieth-century rise of environmental activism as a major force in infrastructure development. It also reminds us that even unfinished or otherwise unrealized megaprojects can yield scientific and ideological bonanzas. It would thus have been helpful for the volume's bibliography to include works by scholars such as Jonathan Peyton and Philipp Nicolas Lehmann.[1]

By advancing our understanding of the complex relationship between infrastructure and knowledge, this volume deserves a place in the intellectual toolbox of historians of science, technology, and the environment. Kudos to the press, editors, and authors for producing a cohesive collection of thought-provoking essays.

Note

[1]. Peyton, ***Unbuilt Environments: Tracing Postwar Development in Northwest British Columbia*** (Vancouver: UBC Press, 2017); Lehmann, "Infinite Power to Change the World: Hydroelectricity and Engineered Climate Change in the Atlantropa Project," ***American Historical Review*** 121 (2016): 70-100.

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