

Antipode

A Radical Journal of Geography

Andrew Needham, *Power Lines: Phoenix and the Making of the Modern Southwest*, Princeton: Princeton University Press, 2014. ISBN: 9780691139067 (cloth); ISBN: 9781400852406 (ebook)

Power Lines should be seen as a sequel in spirit (following some three decades later) to Richard White's (1983) seminal study, *The Roots of Dependency*, as Andrew Needham continues the story of the Navajo Nation's integration into the regional Southwestern economy after White's story ends in the 1930s. In both books, energy production lies at the centre of elite efforts to further development at the cost of environmental justice for indigenous peoples.¹ Specifically, in Needham's case study, the focus of analysis is the dense (yet often obscured) social, economic, and environmental links between Phoenix's sprawl and the Navajo Nation's burgeoning coal industry. His case study of the Southwest demonstrates rare relevance, coherence, and nuance within the sub-field of energy history (still an immature intellectual cluster) and thus may stand as a model for future work. He argues that energy systems are contingent, highly political, and able to catalyse enduring effects.

Power Lines should be seen as the fruit of a wide-ranging cross-pollination of intellectual influences. Following Thomas Sugrue (1986), Needham stresses how government subsidies for suburban life were directed towards whites at the expense of other ethnic groups, thus spatializing racism.² Needham traces the rise of a "booster" elite in Phoenix and the creation of new forms of consumption in the city's northern suburbs. These boosters competed (especially

¹ Full disclosure: the reviewer, Troy Vettese, is a graduate student at NYU; the author, Andrew Needham, is his supervisor.

² Sugrue's (1986) *The Origins of the Urban Crisis* spawned an enormous literature on the spatial production of racism within US cities.

Antipode

A Radical Journal of Geography

against rivals in Los Angeles) to capture riverlets of the gargantuan flows of capital sloshing in the post-war US economy. Phoenix netted a fair share of newly indebted (and federally subsidised) homeowners and the new projects of “military Keynesianism” (epitomised by the aerospace industry) because of its geography and technology; inner-US migrants sought a beautiful landscape newly made accessible by the aeroplane and air conditioner, while the Department of Defense was attracted by clear skies for its military pilots and insulation for its factories and facilities from Soviet submarines and bombers. Moreover, the “smoke-free” nature of the aerospace industry reinforced Phoenix’s self-presentation as a salubrious “Valley of the Sun”. In this way, Needham echoes Matthew Klinge’s (2007) analysis of Seattle as an attempt to reconcile nature and the city for the benefit of the white middle class, while Needham’s analysis of how the white middle class became dependent upon a lifestyle of high-energy consumption and electrical consumer goods for status is clearly influenced by David Nye’s (1998) concept of a “high-energy society” and Lizabeth Cohen’s (2003) “consumer republic”. The hybridity of Needham’s approach provides scholars a sense whereto the momentum of historiographies on the environment, cities, consumption, and energy is currently heading, but perhaps more importantly it allows Needham to compose a rather novel monograph.

The heart of the book is about tracing the consequences of massive demographic growth coupled with high rates of electrical usage by the 1960s. This necessitated a new energy system to keep up the pace set by boosters, yet to obviate federal intervention in energy production and distribution (and thus, potential nationalisation), and, moreover, to compensate for falling supplies of methane, a private regional energy consortium sought the exploitation of coal on Navajo lands. Soon enough, a series of mines and power plants provided fivefold the power produced by the Hoover dam.

Antipode

A Radical Journal of Geography

This vast amount of energy became completely “fungible” and thus indistinguishable from energy produced by dams, the government, or methane—for Needham, this shows how the process of creating electricity (rather than simply combustion) allowed energy to become a perfect commodity. It was a perfect commodity because it became universal in other ways: unlike other forms of energy, electricity could be transported so quickly as to nearly annihilate space as a constraint, and it could be used for almost any industrial process. Tracing the history of capitalism’s ability to create completely abstract forms was a focus of Bill Cronon’s (1991) *Nature’s Metropolis* (another obvious intellectual influence on Needham’s work), though Needham shows how electricity was both similar to and different from the cattle, pine, and wheat that Cronon studied. Electricity does not “flow” like many commodities, but rather “flashes” and thus it was necessary to be sure of a supply of energy—one cannot hoard it until prices are high nor have an inventory in the case supplies were low. This technological requirement coloured the colonial relationship between Phoenix and the Navajo Nation. It was necessary to ensure metropolitan control over peripheral energy production through long-term contracts, the state opening of lands for mining, and reducing the ability to re-negotiate. In this way, like Cronon, but unlike other historians of urban history, Needham is interested in a *regional* rather than urban-suburban scope to understand how development occurs—understanding Phoenix’s growth leads him to the Navajo Nation, and thus demonstrating how a focus on energy changes how historians conceive urban histories.

By the 1970s, two impulses within the Navajo Nation drove efforts to renegotiate their relationship with the empire of the Southwest. Some indigenous leaders, such as Peter MacDonald, sought “a piece of the action” by ensuring future projects (especially a proposed gasification plant) would further local employment and training, and the Navajo leadership’s

Antipode

A Radical Journal of Geography

efforts to direct development. Young Navajo activists, inspired by contemporary black radical politics, articulated critiques of Southwestern colonialism and used paramilitary means to intervene politically (such as an armed sit-in to stop construction). Their insurrection ended MacDonald's efforts at economic nationalist policies and his resignation to the Navajo proto-state being merely a recipient of taxes rather than leading entrepreneurial development. Unfortunately, Needham does not engage with Timothy Mitchell's (2011) framework, developed in *Carbon Democracy*, of energy systems conditioning the possibilities of democratic action, yet there is much food for thought in *Power Lines*. Coal production becomes much like oil extraction: workers labour on the surface (of strip mines); mixing coal with water creates a slurry transported by pipelines; and transmission wires separate production from consumption—the factory from the mine. Yet, it is not clear how energy production in terms of its materiality allows or constrains social mobilisation among the Navajo.

One last observation. Needham provides another example of how “sacrificed” and “pristine” natures are formed through their mutual constitution. He notes that it was rather important for boosters that the Navajo coal industry was located quite far away from Phoenix and other areas fetishised as “natural”. In *Power Lines*, the Sierra Club fight strongly to prevent the damming of the Grand Canyon, but happily advocate strip mining on Navajo land (a striking example of the limits of 1970s environmentalism). This is redolent of Matthew Klinger's (2007) insight that environmental movements can be responsible for displacing rather than reducing pollution.

I have a few criticisms of this otherwise excellent book. Needham only superficially engages with world-systems theory and critical geography. For example, he stresses how capital becomes “fixed in place” as if this makes change irrevocable. Yet white flight from cities to

Antipode

A Radical Journal of Geography

suburbs, or the decline of nuclear power production in Germany and Japan more recently, shows that even massive amounts of capital obsolesces through economic or political changes. Indeed, Needham only seems to heed only half of David Harvey's (2001: 25) assertion of a contradiction between fixed and mobile capital. Capital "...has to build a fixed space (or 'landscape') necessary for its own functioning at a certain point in its history only to have to destroy that space (and devalue much of the capital invested therein) as a later point in order to make way for a new 'spatial fix' (openings for fresh accumulation in new spaces and territories)".³ This interplay of flowing and fixed capital is ignored by Needham, even though the Southwest is a site of dramatic fluctuations. Lastly, Needham contends that compared to other dependent relationships, the centre-periphery axis in the Southwest was reversed, as the coal mines and power plants in Navajo Nation became the centre of the region's economic network and Phoenix was peripheral. Yet, it is not clear where this insight leads, nor if it is even true—were the mines of Potosi not also at the centre of the Spanish empire? Were the cotton fields of the Mississippi not the heart of Lancashire's international textile network? Does importance to an economic system matter as much as where political power lies? Despite these criticisms, the empirical and narrative strengths of *Power Lines* more than compensate for any theoretical weaknesses.

References

- Cohen L (2003) *A Consumers' Republic: The Politics of Mass Consumption in Postwar America*.
New York: Vintage
- Cronon W (1991) *Nature's Metropolis: Chicago and the Great West*. New York W.W. Norton

³ This can be traced back to his earlier work, *The Limits to Capital* (Harvey 1982).

Antipode

A Radical Journal of Geography

Harvey D (1982) *The Limits to Capital*. Oxford: Blackwell

Harvey D (2001) Globalisation and the “spatial fix”. *Geographische Revue* 2001(2):23-30

Klinge M (2007) *Emerald City: An Environmental History of Seattle*. New Haven: Yale University Press

Mitchell T (2011) *Carbon Democracy: Political Power in the Age of Oil*. New York: Verso

Nye D E (1998) *Consuming Power: A Social History of American Energies*. Cambridge: MIT Press

Sugrue T (1986) *The Origins of the Urban Crisis*. Princeton: Princeton University Press

White R (1983) *The Roots of Dependency: Subsistence, Environment, and Social Change Among the Choctaws, Pawnees, and Navajos*. Lincoln: University of Nebraska Press

Troy Vettese

Department of History

New York University

tg208@nyu.edu

July 2015