

ROUNDTABLE

Looking at Suez Canal Infrastructures: Water, Plants, and the Urban Drainage, Sewage, and Bathroom Systems

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They (infrastructures) are political structures and cultural forms that have, for some time, been associated as symbols, promises, and vectors of modernity.¹

Infrastructure is what connects us below the surface through drainage, sewage systems, electrical grids and waterlines. These infrastructures also include various structures above ground intended to link urban areas, such as parkways, highways and walkways, and the numerous design elements that assist in creating a uniform spatial scheme. In an everyday way, residents of cities tend not to think of the infrastructure that links their homes, lives, and the cities and towns in which they live, unless there is a failure within the system. A growing contingent of researchers are now examining the various ways infrastructure is designed and how it is accessed and embodied by users/residents.² Infrastructure can be uneven in its access and distribution across the built environment, but infrastructure is also malleable, with a plasticity that allows it to be changed as needed or as hegemonic interests dictate. This brings us to the social and political history of infrastructure. It takes us out of the architectural framework of design and construction of systems and towards the ways in which infrastructures were accessed by individual users. Most importantly, a focus on infrastructures aids in understanding the responses to failures within said infrastructural systems, thus expanding our broader understanding of the lived built environment. This can be demonstrated through two main questions: Where were the connective nodes broken or ignored? And how did the Suez Canal Company (SCC) respond to issues related to hygiene, in-door plumbing, and flooding?

Turning to the Suez Canal, we find ample work done on the infrastructural history of the canal itself and the built environment of the new cities formed along the waterway.³ Looking at infrastructures outside the dredged, sandy-bottomed Suez Canal offers us unique entry

¹ Nikhil Anand, *Hydraulic City: Water and the Infrastructures of Citizenship in Mumbai* (Durham, NC: Duke University Press, 2017), 14.

² Ashley Carse et al., "Panama Canal Forum: From the Conquest of Nature to the Construction of New Ecologies," *Environmental History* 21, no. 2 (2016): 206–87; Ashley Carse, *Beyond the Big Ditch: Politics, Ecology, and Infrastructure at the Panama Canal* (Cambridge, MA: MIT Press, 2014); Anand, *Hydraulic City*; Khaled Fahmy, *In Quest of Justice: Islamic Law and Forensic Medicine in Modern Egypt* (Oakland, CA: University of California Press, 2018); Shehab Ismail, "Epicures and Experts: The Drinking Water Controversy in British Colonial Cairo," *Arab Studies Journal* 26, no. 2 (2018): 8–42; and Joseph Heathcote, "Infrastructure Designs," in *The Routledge Handbook of Infrastructure Design*, ed. Joseph Heathcote, 1st ed. (New York: Routledge, 2022), 1–16.

³ Céline Frémaux and Mercedes Volait, "Inventing Space in the Age of Empire: Planning Experiments and Achievements along Suez Canal in Egypt (1859–1956)," *Planning Perspectives* 24, no. 2 (2009): 255–62; Claudine Piaton, "Architecture Patronale Dans l'Isthme de Suez (1859–1956)," *Annales Islamologiques* 50 (2016): 11–53; Claudine Piaton and Naguib Amin, eds., *Suez: histoire et architecture/ al-Suways: Tārīkh wa-Imārah* (Cairo: Institut

points to lesser told stories. The movement of fresh water into all neighborhoods was a piecemeal project with stops in flows and inadequate access. The new subsidiary canals and water systems that provided potable drinking water also helped to flush out and expel sewage in the twentieth century, when outhouses and cesspools were added to the sewerage grid. The manicuring of tree-scapes along the freshwater canal, the erection of towns along flood zones, and the new home for plankton, mollusks, and seawater fauna all point to the unique environmental outcomes created by the numerous infrastructural interventions across the Suez Canal. Further, centering narratives around infrastructures, such as uneven access to indoor plumbing, aids in unearthing stories of the French company's fetishization of the bathroom habits of native Egyptians. Narratives of hygiene, disease, flooding, and lack of access to infrastructural systems delineate new ways of exploring the SCC's colonial archive to excavate subaltern experiences.⁴

The infrastructural history of the canal and its port cities is highlighted by the large-scale reshaping of adjacent landscapes. A description of the new towns is a useful place to begin. Port Said and Ismailia were laid out in grids carefully structured and organized into distinct areas demarcated by the different features of the built environment for the various communities that would live there: Europeans—of all nationalities—and Egyptians, similar to the manner in which colonial cities were established elsewhere.⁵ This meant that, in Port Said, buildings in the "Arab" quarters were self-built by Egyptian laborers who migrated to the canal for work.⁶ These distinct urban spaces did not mean that residents could not cross into "European" quarters of town; but, from the outset, towns were spatially organized based on race and class. In Suez, the existing settlement was modernized primarily through the erection of a new port on the Red Sea—at the Gulf of Suez—and the extension of a freshwater canal, the demolition of the city walls built by Napoleon, and the redesigning of the old urban pattern, with an organic built environment of narrow streets that ran towards the Gulf of Suez and Red Sea.⁷ To complete these massive infrastructure projects, tons of sand, rock, water, minerals, plants, and numerous other materials were displaced or moved by both coerced Egyptian labor and European-built dredgers.

One of my larger arguments here is that the Suez Canal Company attempted to unify, through urban design and various infrastructures, a cohesive set of visual imagery in the spatial environment of the canal cities, along the course of several new waterways, and in the construction of numerous stations for passing ships to stop in an emergency, refill water, or allow the passage of other ships in-between the larger canal towns. As such the SCC planned and put in place a uniform physical and natural environment and system along the entire length of the Suez Canal that enabled its builders and others to imagine the canal, its new ports and stations as components of a larger single, unifying project. In this roundtable contribution, I hope to point to what was actually a piecemeal implementation of design and infrastructural projects focused primarily on the landscapes owned and managed by the SCC.

For the SCC, the creation of *gares*—a "station" or "siding"—every five to six miles was part of what made the built environments along the canal uniform. Each *gare* was regularized in plan and designed to include a water tower containing fresh water, trees, other plants, and a garden connected to the main station house in some cases. These stations were situated between the *rigole de service* (freshwater canal) and the seawater channel, allowing

français d'archéologie orientale, 2011); and Claudine Piaton, ed., *L'isthme et l'Égypte au temps de la Compagnie universelle du canal maritime de Suez (1858–1956)* (Cairo: Institut français d'archéologie orientale, 2016).

⁴ Mohamed Gamal-Eldin, "Doing Environmental, Infrastructural, and Urban Histories along the Suez Canal," *Jadaliyya*, 22 October 2020, <https://www.jadaliyya.com/Details/41886>.

⁵ Lucia Carminati, "Būr Sa'īd/Port Said, 1859–1900: Migration, Urbanization, and Empire in an Egyptian and Mediterranean Port-City" (PhD Diss, University of Arizona, 2018).

⁶ Diya' al-Din Hassan al-Qadi, *Mawṣu'at Tarīkh Bur Sa'īd* (Cairo: al-Hay'at al-Misriyya al-'Amma li-l-Kitāb, 2015).

⁷ Radi Muhammad Juda, *al-Suways Madīnat al-Tarīkh: Dirāsa 'Umriyya wa-Iqtisādīyya wa-Jītmīyya wa-Istīrātijīyya wa-Idāriyya li-l-Madīna fī 'Asr Muḥammad 'Alī* (Cairo: Majlis al-'Ala al-Thaqafa, 2006).