

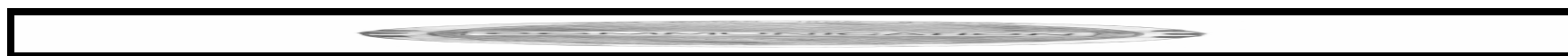
## Little Black Boxes



High-tech Hot Tub, 2014. The colocation of a data center and hot tub creates a new public landscape for Chicago. |  
Illustration by CLARE LYSTER

What does infrastructure look like? Iconic dams, bridges, and highways are one thing; today's information and material networks and flows are harder to visualize. Without monuments or landmarks, they've nonetheless tied together and transformed urban, suburban, and rural environments across the globe. Two recent books explore the invisible architectures of this world: the territory of Walmart and Amazon, from big box store to distribution center, and the data centers that house all the information that tells companies what to put where, and when. In *LEARNING FROM LOGISTICS*, Clare Lyster looks at time-space planning networks — FedEx, RyanAir, and Amazon — arguing that logistics is replacing the city as “the dominant public space of our era.” In *THE RULE OF LOGISTICS*, Jesse LeCavalier studies the studiedly under-designed spaces of Walmart, from its ubiquitous supercenters to its headquarters in northwest Arkansas. With a national footprint that exceeds the surface area of the island of Manhattan, Walmart's rigorous disposition of space in stores, and stores in space, expresses not architectural symbolism but the accumulation of a vast number of data points. Cities could benefit, Lyster argues, from architectures that integrate these networks with social space, housing, and transportation in a brave new landscape. LeCavalier is less sanguine, but wishes, too, to align logistics with collective aims beyond instant gratification.

At the origins of both Lyster and LeCavalier's accounts of the logistical landscape we inhabit is the Universal Product Code (UPC) bar code, first deployed in 1974. This simple device transformed how information is stored and processed, allowing companies to track the movements of products and the actions of consumers, and then changed the form their operations took on the ground. Bar codes, as LeCavalier points out, are inscrutable: “a language written by machines for machines.” The lack of transparency extends to every aspect of the logistical landscape; a lack of maps of fiber optic cables or access to data centers led Ingrid Burrington on her quest to see “where the internet lives.” The result is an illustrated field guide to the visible manifestations of the city's data networks. *NETWORKS OF NEW YORK* traces where information flows underground and over rooftops, describing what can be gleaned by peeking into an open manhole or what lurks behind the walls of the “carrier hotels,” where private networks exchange information. Observation and extrapolation compensate for public access. Information about networks and their locations is hard to come by, and closely guarded as proprietary information, even as the smooth functioning of society depends on them.



Mystery Manhole | Reprinted from *Networks of New York* by Ingrid Burrington, courtesy of MELVILLE HOUSE

Today's veiled and proprietary information infrastructure could have been avoided, Winifred Gallagher suggests, if the United States Postal Service had not absconded its role in the digital age. The original distributor of goods and information across the American territory worked differently from 1792 until the 1960s, promoting new technologies and expanding connectivity across the country, often where the private market had no incentive to go. *HOW THE POST OFFICE CREATED AMERICA* details how the Postal Service — steward of newspapers, parcels, and savings accounts — not only grew along with the United States but made it possible for citizens to determine the shape of the nation and its

communications grid. Early on, as the Postal Service established new offices and routes to serve them, it “turned clusters of cabins in the middle of nowhere into villages with names, and rutted trails through dense forests into roads on a map.” Innovations like Rural Free Delivery and Parcel Post turned a dispersed population into a national market, and brought people anything they could dream of right to their home (even a new home—the post shipped bricks). The post office’s feats in quickly sorting and moving vast quantities of goods and information across vast distances make Google, FedEx, and Walmart’s logistical prowess less original and impressive by comparison. Indeed, the post office’s universal service mandate (with equal rates for all users), UPLIFTING PUBLIC ARCHITECTURE, and social centers in rural settlements compare quite favorably with their digital progeny. Today, with the end of net neutrality and stratified access to communications infrastructure, and a declining retail landscape that has hurt main streets and malls, connectivity paradoxically sows division.

*PUBLIC THINGS* like the Postal Service have long been under attack, as political theorist Bonnie Honig powerfully argues in the publication of a series of lectures on “democracy in disrepair.” Writing against the culture of “OPTING OUT” of public services, spaces, and systems, Honig defends public infrastructures as the things that bind people together, the very things democracy is made of. Pools and pipelines, reservoirs and bridges, publicly owned, subject to public oversight, or secured for public use, bring people together in their concern for each other and concern for the future. Without them, Honig writes, only extraordinary crises retain the power to bring citizens together. LeCavalier begins his examination of Walmart with a cautionary tale: when Hurricane Katrina decimated areas of Louisiana and Mississippi in 2005, the company’s advanced logistical systems had already anticipated the storm’s strength and supply shortfalls, well ahead of the National Guard and National Weather Service, and its response was cited as an example to the Federal Emergency Management Agency. Walmart’s emergency response was good for public relations and an example of what contemporary logistics can accomplish. But when the next disaster strikes — and before — we should weigh the consequences of depending on corporate largesse, rather than holding ourselves accountable for our collective wellbeing. Neither data, nor care and concern for one another, should follow only the routes of profitability.



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