

Book Review

Riding the New York Subway: The Invention of the Modern Passenger— Stefan Höhne (Cambridge, MA, USA: MIT Press, 2021, 373 pp.)

Reviewed by A. David Wunsch

University of Massachusetts Lowell
Lowell, MA 01854 USA

■ **HISTORIANS LOOKING FOR** first-hand accounts of the experience of riding the New York subway have their work cut out for them. Such information is elusive. Recently, we were given a small vignette of what was once going on in the mind of the well-known American fiction writer, Flannery O'Connor. In 1943, at age 18, she traveled from her home in rural Milledgeville, Georgia, to New York City. Riding on the New York subway, she ensured that her two female cousins sat on either side of her lest she is placed next to a Black person. The arrangement was reported back to her mother in letters she sent home. Published in 2014, they are a window into Flannery's racism.

This kind of information, both valuable and interesting, is not easily found. In his doctoral thesis, which resulted in the book reviewed here, Stefan Höhne dives into a wealth of letters—correspondence sent to the New York City Transit Authority in the period 1955–1968. Most of these—at least the ones described—involved complaints, typically about the behavior on the subway of Blacks, Hispanics, Jews, beggars, and (in the few public toilets) homosexuals. The authority took these charges so seriously that sometimes the correspondent

was given an interview with the transit police. One wishes that Höhne, whose work here is pioneering, had taken note of the home addresses of the senders—this might have given a clue to their race and income. The archive of letters ended in 1968 which is unfortunate as the two following decades were a period of great change, a sharp decline in ridership, and a disturbing episode: in 1984, Bernhard Goetz, an electrical engineer, aged 37, shot four Black teenage youths on the subway, seriously wounding one of them, who became paralyzed and brain damaged. Goetz claimed he was acting in self-defense after the youths demanded money. The case and subsequent trial gained national attention and seemed to confirm in the minds of much of the public that subways were, as Walter Benjamin had once put it decades before, “a modern incarnation of the ancient underworld.”

The chapter containing the letters is the one with the most original material in the book—much has been written about the New York subway, and this work invites comparison with the earlier highly readable and attractively illustrated *Subway City* by Michael W. Brooks published by Rutgers University Press (1997). Höhne begins with what might be seen as the beginning: 27 October 1904, when the New York subway began service—a day of great celebration

Digital Object Identifier 10.1109/MTS.2022.3216697
Date of current version: 8 December 2022.

and invited guests who could now ride underground from City Hall in Manhattan to 145th street in the Bronx—a distance of 9 miles. New York was the first city to build a large underground system that ran on electricity. Höhne fails to mention a technology developed by Frank Sprague, (1857–1934) in the mid-1880s that made this possible: a constant-speed, nonsparking dc motor capable of regenerative braking, that is, when used in trolleys and, later in the subway, it could return power to the system when a train or car was slowed. Höhne's history is social—not technical—but Sprague's invention is so important as to deserve being mentioned. It would explain a chronology such that in 1899, New York would make a contract for the construction of its first subway: an agreement between the city and Augustus Belmont and John B. McDonald. The physical subway would be city property but company ownership and operation would lie in private hands. The cost was \$35 million—the largest sum the city had paid until then to private individuals. The line was called Interborough Rapid Transit Company, known to generations of New Yorkers as the IRT. New York was not the first city to have a subway—Boston, London, and Budapest, for example, beat New York—but New York went on ultimately to have the largest system. However, there is a prehistory of the subway that is barely mentioned by Höhne that deserves attention: the rapid transit elevated trains that served a number of cities almost a generation before the subway. Known in New York as “the ELs,” they are a system of tracks elevated and supported high above street level (one still sees this in Chicago) and they trace their origin in New York to the Gilbert Elevated Company which ran a line along the sixth avenue, starting in 1878 powered by a steam locomotive—a technology that would be impossible for the underground subway. The EL systems expanded so that there were lines along the sixth, ninth, and third avenues. Although now taken down, a portion remained in use in the Bronx until 1973, and today sections of the original subway system remain elevated in Brooklyn. Many of the problems faced in the 20th century by the subway system must have been confronted by the elevated system: crowding, fare collection and evasion, assaults on women, friction between the races, complaints about repugnant body odors and begging, and methods of coping with these problems surely must have guided, at first,

those responsible for subway operation. Although the EL contributed to a redistribution of parts of the city population to less crowded areas in the Bronx and Harlem, it had blatant downsides—one being that the locomotives spread smoke, hot coals, and ashes into the streets below; it is no surprise that when the first subway line opened in 1904, the ELs had already been switched to electrical locomotion, thanks to Sprague's technology.

The subway came into being in what is called the era of scientific management. The period was ushered in by *Taylorism* in the late 19th and early 20th century, and *Fordism* which dates from the period 1910–1920. Taylorism was a system of factory production promoted by Frederick Winslow Taylor (1856–1915) that involved workers performing repetitive tasks whose time for execution was specified owing to prior time-motion research. The system could be so inhumane that it led to strikes, most notably one at the Watertown, MA, USA, arsenal resulting in Congress passing a law that prevented time-motion studies or incentive payments in government facilities.

Fordism started and evolved in Henry Ford's Model T Ford plant and it became a standard for automobile and other mass production industries. Höhne frequently employs the term Fordism to describe the New York subways. The word has a slippery meaning: in most instances, it pertains to the use of a production line in which semi- or unskilled laborers perform a repetitive task without moving from their workplace. And they are paid enough to afford to purchase the mass-produced goods that come out of the factory. Its application to the subway rider is imperfect: the masses of riders are not producing an artifact—like Model T Fords—that they could hope to purchase. However, measurement and management of both time and motion are germane to managing the flow of passengers on the subway. Höhne remarks, “Regulating the flow of passengers through the technical workings of subway cars and stations urgently called for new means of *subjectivation*” [italics added]. The word subjectivation in this context may be unfamiliar to the reader. The subway passenger had to be managed as an element in a complex machine and this management was carried out through a system of rewards, discipline, and punishment. These words are redolent of the French post-modern

theorist Paul-Michel Foucault (1926–1984) who wrote widely and effectively on how the state exercises power and social control over its subjects. Thus, in reading Höhne, one must be attuned to terms imported from Foucault’s French and which the translators from Höhne’s German elected to preserve. Thus, in referring to the infrastructure of the subway he would rather use the French *dipositive*. Foucault is invaluable to Höhne’s analysis, but a little theory goes a long way and he crosses a line from the useful to the ludicrous in a quote he uses from the American cultural critic and U. C. Berkeley Professor Judith Butler since 1956:

“When the ‘I’ seeks to give an account of itself, it can start with itself, but it will find that the self is already implicated in a social temporality that exceeds its own capacity for narration; indeed when the ‘I’ seeks to give an account of itself, an account that must include the conditions of its own emergence, it must as a matter of necessity, become a social theorist.”

A salient example of Foucault’s concepts of discipline and punishment as exercised by the state shows itself in the subject of tuberculosis. When the subway opened in New York, the leading cause of death in the United States was tuberculosis, and it was known that spit from those carrying the disease contained the bacterium that spread the infection. Signs prominently warned subway patrons of fines and imprisonment for spitting. Höhne shows us a poster from 1939 threatening malefactors with as much as a year in prison as well as a \$500 fine, which would have represented six-month’s pay for the average male worker. In the COVID era, when we learned about the Spanish flu epidemic of 1918, I found myself wondering how subway riding was affected in that year. Perhaps, a later edition of this book might supply that information.

Höhne’s book is rich in describing how the crowds that frequented the subway were managed: details such as fare collection, turnstiles, seating, and policing. Eventually, a transit police force was organized that put a police officer on every subway train from 8 P.M. to 4 A.M. This grew to be the fifth-largest police force in the country. Subway ridership declined seriously and subway crime spiked in the period 1970–1985 along with the general decline of

quality of life in New York. The cash-strapped city nearly went bankrupt in 1975.

That crowds of people were seen as a kind of fluid of discrete particles needing to be efficiently circulated within the machinery of the subway was perhaps most effectively first described not by any postmodern theorist. It has often been remarked that the origins of Fordism lie in a 19th-century model: the slaughterhouse. Charlie Chaplin famously riffs on this in the opening scene of his anti-technology film *Modern Times* (1936). A group of lambs is seen streaming together in a closely spaced phalanx, apparently to be slaughtered. From there, Chaplin cuts to a packed mob emerging from the subway on their way to work in a big city. I would have thought that Höhne would have alluded to this famous image.

I’m old enough to recall some painful scenes of the New York City subway from the 1940s and 1950s: these were of men (it was usually men) on crutches who struggled to negotiate the subway turnstile. Some were probably chaps who had lost a leg in one of the World Wars, others had perhaps been victims of polio that arrived in cities in frequent epidemics. The entire problem of how the disabled dealt with the subway is never addressed in this book. A major question in subway history is the presence or absence of elevators by which a disabled person could descend from the street level to the underground platform. After reading Höhne, I have no idea how many stations had elevators. And one wonders too how the blind managed on the subway. The subject of the disabled on the New York subway calls out to be a PhD thesis topic.

HÖHNE’S BOOK LIES in the MIT Press’s series on Infrastructure—a collection now of over 30 volumes. I would encourage the series editors to exercise some care in editing. Searching for a reference in the endnotes can be annoying—at the top of each page of these notes, there should be a label indicating the chapter from which they are derived. And Höhne makes an error that surely should have been caught by the Press’s reviewers: he asserts that “the subway altered the structure of the city more profoundly than any prior infrastructural element... The city rose to become the nation’s leading center of trade and industry.”

Aside from smacking technological determinism, it happens to be wrong. If one were to choose a single engineering project that propelled New York as a leader in trade and industry it would be the Erie Canal completed in 1825, which provided a water route for commerce between the eastern seaboard ports and the American Midwest. The canal helped make New York the nation's primary port and banking center. ■

A. David Wunsch is a professor emeritus with the Department of Electrical and Computer Engineering, University of Massachusetts Lowell, Lowell, MA, USA. He is a book review editor for *IEEE Technology and Society Magazine*.

■ Direct questions and comments about this article to A. David Wunsch, University of Massachusetts Lowell, Lowell, MA 01854 USA; david_wunsch@uml.edu.