

transportation infrastructure on accessibility. Methods for evaluating accessibility for public transit, social equity, and nonwork trips, meanwhile, have dedicated chapters.

In these practically focused chapters, however, some of the challenges of translating accessibility into specific, quantifiable measures become apparent. For example, a key input in the authors' accessibility analysis is trip generation rates, the myriad problems of which are overlooked in the book. As the authors acknowledge, interpreting accessibility metrics is not intuitive: The meaning of a change on the authors' 0 to 100 accessibility scale is less obvious than, say, minutes of travel time savings. And the diminishing returns to accessibility (Metz, 2010) are not accounted for: Once there is one Walmart within 15 min, what benefit is derived from the second or third? The inclusion of international examples might have strengthened the practical applicability of the tools. For example, London (UK) has made active use of accessibility metrics in the planning process for 2 decades (Inayathusein & Cooper, 2018).

Overall, however, the limitations of current methods highlight the work that is still required to translate the concept of accessibility into practical planning tools. Levine, Grengs, and Merlin marshal a compelling case to shift to accessibility-oriented planning, providing much-needed conceptual clarity as to what accessibility is and is not. But their book also represents a major step toward transforming accessibility from a vaguely defined aspiration into concrete measures that can guide planning decisions.

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<https://doi.org/10.1080/01944363.2020.1841511>

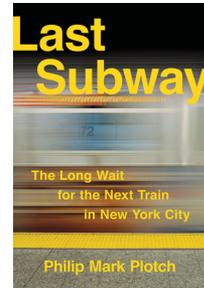
Last Subway: The Long Wait for the Next Train in New York City

Philip Mark Plotch

(2020). Ithaca, NY: Cornell University Press, 352 pages. \$29.95 (hardcover)

Reviewed by Floyd Lapp, Independent Consultant

New York City (NY) has 472 subway stations, the largest number of any rapid transit system in the world. In 2017, a 1.5-mile subway extension (the Second Avenue Subway) with three stations opened at a staggering cost of \$4.6 billion, the most expensive ever built in the world. The main question of Philip Mark Plotch's *Last Subway* is why it took so long to complete the subway extension, as reinforced in the subtitle "The Long Wait for the Next Train in New York City."



Plotch identifies three significant factors that caused the delay: high real estate values, powerful unions, and environmental sensitivities. But these factors could apply to other major transit projects across the country. Hence, we need to ask what unique problems the Second Avenue Subway faced to cause such delays and high costs. Although Plotch provides an excellent and meticulous historical analysis of the Second Avenue Subway project's sporadic progress, the background story needs more detailed development, explicitly concerning the expanded regulatory review process and the changing role of the authority mechanisms involved.

After World War II there was a major development shift to the low-density, automobile-dependent suburbs. The federal government reinforced this trend with 90% funds allocated to highways in 1956; they did not provide transit funds until 1964, and then at a much lower amount. In retrospect, the federal government should have provided a more balanced multimodal funding approach.

Although the Second Avenue Subway was authorized in 1920 and there were proposals in 1922 and 1929, the construction process was delayed mainly by the Great Depression, World War II, and the postwar budget shortfalls. Capital funds were approved in 1951 but were then diverted. Finally, a bond issue was approved in 1967, and the Metropolitan Transportation Authority (MTA) was charged with building the Second Avenue Subway in 1968. The National Environmental Policy Act was passed in 1969 and required the review

of environmental impact statements, which called for elaborate public participation and alternative analysis processes. As a result, large transportation projects took years to complete and were costly to resolve. In New York, this is further exacerbated by requiring separate city and state environmental review processes. The Second Avenue Subway also faced race and equity issues because the northern portion is located near Harlem, the nation's major African American population center. In addition, the southern area is one of the country's most affluent neighborhoods, Manhattan's Upper East Side. The juxtaposition of these neighborhoods provided extra tensions and scrutiny for the review process. Unfortunately, Plotch does not delve into these important neighborhood issues or city-state regulatory policies, which are vital to understanding project delays and high costs.

Plotch does astutely observe that New York City could build 11 expressways at less cost than one new subway line. With less than 10 miles of rail, the Second Avenue Subway would have cost about \$500 million between the late 1940s and mid-1950s. For approximately \$1 billion, the state built more than 500 miles of highway from the Bronx to Buffalo by generating money from tolls to pay for construction. In contrast, the meager subway fare could not cover subway maintenance and expansions. Interestingly, Robert Moses, who directed numerous automobile-oriented transportation authorities and led the nation in building hundreds of miles of roads, bridges, and tunnels between the 1920s and 1960s, did not produce 1 mile of the subway! The federal government did not provide transit funding, and roads were the focus during Moses' reign. The federal government lacked a more balanced multi-modal funding approach. Plotch does an excellent job of providing a thumbnail sketch of how Moses got his projects completed in a timely fashion and how he efficiently used authority mechanisms to finish the projects.

There was an assumption that the MTA, as a new authority, would provide more rail for New York. But the public authority structure, which originated in the 1920s, provided financial independence and small boards of directors separate from the people, with little public engagement. Hence, democracy was put on hold. State officials and civic leaders accepted this autocratic approach to timely completion of highway projects, as described by Doig's (2001) *Empire on the Hudson*. This authoritarian administrative structure was difficult to apply to rail's limited revenue fundraising abilities and the emerging, more democratic, and extensive public participatory regulatory review process. Altshuler and Luberoff (2002) characterize this period beginning in the 1970s as an era of "do no harm." As a result, the MTA lost the autocratic, historical role

that Moses played with New York transportation authorities.

Without autocratic leadership, many political leaders recommended large projects, which affected funding and drew attention away from the Second Avenue Subway's timeline. Examples include Mayor Rudy Giuliani's extension of a Queens rail line to LaGuardia Airport, Mayor Mike Bloomberg's extension of a Times Square subway line to Manhattan's West Side to support what became an ill-fated Olympics bid, Congressman Jerold Nadler's proposed rail tunnel under the New York–New Jersey Harbor, and Senator Alfonse D'Amato's rail tunnel from Long Island City to Grand Central Terminal. Although Plotch mentions these projects, it is only in passing. More insight into the group dynamics of political parties and urban-suburban dichotomies should have been provided to reflect their impact on the Second Avenue Subway project.

In this instance, Governor Andrew Cuomo did not make the same mistakes for which Moses was widely known, such as the destruction of communities of color and lack of attention to equal opportunity as described by Caro's (1974) *Robert Moses and the Fall of New York*. Phase 2 of the Second Avenue Subway will reach 125th Street, the economic center of Harlem.

Overall, Plotch does an excellent job of describing how this project was finally implemented. According to Plotch, Governor Andrew Cuomo came to the project's rescue and—in this regard—emulated the ghost of Robert Moses by micromanaging autocratic behaviors and assuming the informal role of the project manager to complete the small portion of the Second Avenue Subway by the scheduled due date in 2017.

Despite some of the shortcomings I mention, I recommend this book to a vast audience: not only transit gurus but also academics, young planners, and policy-makers. They will all at least begin to understand how politicians and their personalities influence the administrative structure and the ebbs and flows of large project implementation.

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