



Jon Scott Logel. *Designing Gotham: West Point Engineers and the Rise of Modern New York, 1817-1898.* Conflicting Worlds: New Dimensions of the American Civil War Series. Baton Rouge: Louisiana State University Press, 2016. 280 pp. \$45.00, cloth, ISBN 978-0-8071-6372-6.

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The US Military Academy at West Point was for a long time in the nineteenth century the premier engineering school in the United States. Founded in 1802, it educated many people who would go on to make contributions to some of the largest US engineering projects of the time, especially before the Civil War when there were few other schools in the nation. Its engineers worked on the construction of the Erie Canal and many railway and water development projects as documented by such historians as Forest G. Hill, Daniel Calhoun, and Todd A. Shallat. In *Designing Gotham*, Jon Scott Logel, an associate professor in war gaming at the US Naval War College, seeks to broaden our understanding of the place West Point engineers had in civil society during the nineteenth century by investigating their role in New York City. West Point engineers were part of the rapid ascent of the metropolis to American and global preeminence. As the city expanded in size, local and state governments built infrastructure to sustain its growth, such as the Croton aqueduct. Logel's ambition, however, goes beyond documenting how West Point engineers contributed to New York's infrastructure and politics. He also seeks to argue that they played a vital role in "the emergence of modern America" through their presence in New York (p. 178). By this he

means that on the one hand, West Point engineers "helped create a genuine identity that the civilian New Yorkers aspired to, respected, and assimilated" (p. 180). On the other, they also had a hand in building the physical fabric of a city that would draw together millions of people. In these two aims Logel succeeds better at demonstrating the local impact of West Point engineers than their importance for the nation as a whole.

In the first chapters, the book gives the early history of West Point from its founding in 1802. The school was inspired by the French engineering model of centralized formal education for engineers. The school was reorganized in 1817 by Sylvanus Thayer, who deepened the connection to the French model by reorganizing the curriculum with a mathematical and scientific theory as was the case at the École Polytechnique in Paris. Although the administrators at West Point struggled to provide an education adequate for both the military and civil demands their graduates could potentially face, West Point-trained engineers had success in the Mexican-American War in combat and in civil projects, such as railway construction. For example, Herman Haupt worked at various railroads including the Pennsylvania Railroad, where he became its general superintendent. The Civil War was more difficult for the school be-

cause although many of its alumni distinguished themselves during the war, there were a fair number who rejected the loyalty to the army that the school taught and joined the rebel cause.

The book's focus then shifts to antebellum New York City, where a small group of engineers founded the American Society of Civil Engineers (ASCE) in 1852. A couple of years earlier, the census had revealed that there were all of 512 civil engineers in the United States, of whom 58 were West Point graduates (p. 72). From an original 12 members, the ASCE grew slowly to 1,019 by 1886, making it the leading engineering association in the nation in the nineteenth century. The association relied on the prestige of West Point engineers to claim that their profession was important and demanding. This professionalism, however, had a difficult encounter with some of the corrupt politics of New York, especially in the form of the Tammany Hall group which influenced the Public Work Commission. Nor did the first engineers in New York do much to break into the city's business elite. They nevertheless worked on projects, notably the Croton aqueduct and a number of bridges spanning the Harlem River.

Among the West Point engineers Logel describes, Egbert Viele is one of the most prominent. Raised in New York and educated at West Point, he spent much of his career in the city and served in the Mexican-American War and the Civil War, a record he relied on to gain a prominent place within New York society more comfortable than many of his West Point peers who had preceded him. His engineering work in the city featured two notable cartographic achievements: a map of Central Park and a water map of the island of Manhattan so detailed and reliable that it was the resource of record until well into the twentieth century. Although not as creative as his state government-backed rival Frederick Law Olmsted, Viele's skills in surveying kept him in demand among the city's politicians and planners, especially in water matters. Viele promoted sanitation

through improved sewerage in the city. He was not above self-enrichment as he was also involved in promoting the development of the Upper West Side, where he owned property.

The period after the Civil War marked the arrival of many West Point engineers in New York at a time when the city's growth had doubled. The prospect of new opportunities drew the likes of Generals Ulysses S. Grant, William Tecumseh Sherman, George Greene, and George McClellan. The Brooklyn Bridge, the best known of the post-war projects, was built with the encouragement of Henry Slocum, another veteran from West Point. When Slocum returned from the war, he invested in the bridge company and became a congressman and promoter of the project. Logel also describes the role of women, such as Emily Roebling, the wife of the bridge's chief engineer Washington Roebling, who helped her husband after he fell ill from caisson disease. West Point of course was not open to women in that period, but Emily's brother was an alumnus. McClellan's role in the city was largely political, although he was the chief engineer of the New York docks for a short period. Although it had not been the goal of these engineers, their projects, such as the Brooklyn Bridge, and their contribution to the city's administration helped the eventual consolidation of the five boroughs into a single city in 1898, by which point the influence of Civil War veterans in the city had faded. Many veterans also came to the city to seek a redemption of sorts after a difficult war. Fitz John Porter, another West Point graduate and later a general in the US Army, was disgraced when a court martial convicted him in 1863 for disobeying orders in battle. Returning to civilian life, he became a police commissioner in New York, where the local Democrats who were in the ascendant looked favorably on his engineering expertise. After many years of work in the city reestablishing his professional reputation, he was finally pardoned and reappointed by President Grover Cleveland in 1886. Like many of his West Point peers, Porter was the sort of compe-

tent and energetic professional that New York politicians relied on in the late nineteenth century not only to do engineering work but also to run many boards and bureaucracies, such as the Public Work Department.

In the final chapter, Logel summarizes the book and sets out his argument for the influence of West Point alumni beyond New York City. This began with their building and maintaining “the New York that was the core of progress and change.” This they did by trying “through engineering and science to emplace order over an increasingly disordered metropolis” (p. 189). They had limited success, yet the Progressive Era inherited their interest in bringing order to New York, an ambition that extended beyond the city. This argument for further influence is not, however, developed in the book and is left as a suggestion. Perhaps it is true the Progressives of the late nineteenth century looked to what West Point alumni had done in New York, but it will require further research to draw out these connections. The important contribution this well-researched book makes is in showing how West Point engineers guided and reshaped New York’s infrastructure, especially after the Civil War. It would be a fine addition to any course on the history of engineering in the United States.

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