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Domenic Vitiello. *Engineering Philadelphia: The Sellers Family and the Industrial Metropolis*. Ithaca, NY: Cornell University Press, 2013. xiv + 267 pp. ISBN 978-0-8014-5011-2, \$35.00 (cloth).

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In *Engineering Philadelphia*, Domenic Vitiello seeks to shift the focus of historical analysis from the question of why cities declined in the second half of the twentieth century to how they grew so prosperous in the nineteenth century. To do so, Vitiello examines four generations of the Sellers family, a collection of machinists, engineers, and tinkerers who helped make Philadelphia the workshop of the world. Studying this family, Vitiello argues, illuminates how a network of business elites shaped the first and second Industrial Revolutions, built educational and cultural institutions, and unofficially planned the development of urban America well before professional urban planners came on the scene at the dawn of the twentieth century. *Engineering Philadelphia*, ultimately, is a book about how elite people, in the quest for “economic development,” have “shaped the fortunes of cities and their place in the wider world” (10).

With their migration from the North Midlands of England to Philadelphia in 1681, Samuel and George Sellers participated in a transatlantic flow of industrial knowledge from the Old World to the New World. Their knowledge, skill, and business acumen helped make Philadelphia a center for an early American capitalism that, Vitiello argues, had “much more to do with industry than most history books suggest” (13). By the early nineteenth century, the Sellers family had built firms that focused on textiles, metalworking, and transportation: the building blocks of the first Industrial Revolution that featured wage labor working in mechanized factories driven by mineral sources of energy (29).

Despite their business success, the Sellerses understood that economic and urban development required more than establishing and running industrial firms; they needed to play a role in the political, cultural, and educational life of Philadelphia. Members of the family served on the city council, helped run the American Philosophical Society, and backed Charles Wilson Peale’s Museum of Natural Science. They particularly invested in two types of institutions: “those that cultivated specialized knowledge among mechanics and manufacturers, and those that spread basic education among broader publics” (40). They wanted to build a better society, and they wanted to prepare a workforce to labor in their factories.

Although the Sellerses were largely successful in building their businesses in Philadelphia, expansion to the West and South in the first half of the nineteenth century brought meager results. Cities such

as Cincinnati seemingly offered opportunity to build metalworking factories, but the region lacked access to capital. Turning south, Charles Sellers found Nashville nearly devoid of modern transportation lines. He also felt that he needed to solve a labor problem by renting slaves from local owners. The Sellers family, Charles included, was Quaker, and putatively opposed to slavery by religious disposition. Many members of the family could not forgive Charles's expediency on a moral issue.

Refocusing their efforts on Philadelphia, the Sellers family helped make the city an industrial titan in the last half of the nineteenth century. Their firms, working in concert with area textile mills, shipyards, and railroads, played key roles in equipping and moving the Northern Army to win the Civil War. During the war, and especially the decades after, the city's elites increased their influence by integrating mercantile, financial, and manufacturing capital. This power enabled them to construct a dynamic regional economy and influence federal trade policy (118). "New York," as Vitiello points out, "was the financial capital of [the American] empire, [but] Philadelphia was its workshop" (137). The Sellers family and their allies even took on the city's burgeoning Republican political machine, although not always to great effect.

In the late nineteenth century, the Sellers family, William in particular, remained a force in Philadelphia industry. William Sellers's Midvale Steel was a major producer of American armaments and the site of Frederick Winslow Taylor's experiments in scientific management (146). His machine designs played a key role in the emerging trend of melding form and function in industrial tools (158). William also worked with Joseph Wharton to establish at the University of Pennsylvania the first university-based business school in the United States, where students would learn "finance, accounting and mercantile law [as well as] the basics of elite capitalists' vision of economic development and their own place in the economy and society" (133).

Even a family as vibrant as the Sellers could not go on forever. The national capitalist economy grew in size and strength to the point that it eclipsed regional networks like those in Philadelphia. Urban reformers also argued that factories marred the city landscape, with railroad lines and pollution endangering the population. The Sellers family, which had done so much to build the physical city and its educational institutions, now seemed a part of old Philadelphia. They embodied a city that had grown without planning, an economy that depended on factories as the heart of the urban order. The construction of Philadelphia's parkway eliminated William Sellers's factory from the city, which was followed by the removal of Baldwin Locomotive Works, auto factories, and many other businesses along

North Broad Street (202). The Sellerses, like many of their class, settled on rural estates as they sold their firms or moved them to the suburbs. For Vitiello, this pre-World War II story highlights the deep roots of deindustrialization and helps to better historicize developments in the economy of the late twentieth and early twenty-first centuries (193).

*Engineering Philadelphia* is theoretically rich, deeply researched, and admirably covers a great span of time. It gives historians, urban planners, and policy analysts not just a deeper, more historically grounded understanding of deindustrialization but also contributes to an understanding of how industrial cities reached their heyday in the first place. My critiques of the book are few and limited. For historians of Philadelphia, the city at times seems to be merely a setting in which the Sellers family happened to run their firms rather than a particular place with its own social and political contexts. In part, this stems from Vitiello's greater historiographical engagement being with the literature on network theory rather than on Philadelphia's history. The tight focus on the Sellers family can also obscure the connections to other leading industrial families in the area, such as the Disstons (Disston Saw Works) and the Baldwins (Baldwin Locomotive Works). It is undoubtedly too much to ask for a single volume to cover multiple families over the centuries, but greater explication of the connections among family networks would have enriched this analysis of Philadelphia's economic and urban development. These, however, are minor reservations about an important book that gives readers a new way to think about how a family of tinkers could play a leading role in developing an American metropolis.

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