

For two decades or so, the question asked by historians of the American steel industry was: Who had the best angle on accessing the long-closed archives of U.S. Steel? For in these voluminous corporate papers were the necessary raw materials for a definitive history of steel in the “American century.” In recent years Kenneth Warren gained access to and successfully mined the closely related riches of the Frick papers, first for his Triumphant Capitalism, a business biography of Henry Clay Frick (1996), and then for Wealth, Waste and Alienation, an account of the Connellsville coal district (2001). Now Warren has cracked the mother lode itself. His Big Steel is based on three research visitations in the U.S. Steel Corporation’s archives, partly funded by the U.S. Steel group of USX Corporation, as well as 12 hours of interviews with company executives. Footnotes reveal that he has examined minutes of the powerful Executive, Finance, and Corporate Policy committees as well as drawn extensively on a 200-volume consulting study from the 1930s. Readers will find his account invaluable as a description of the corporation’s far-flung activities. Quantitative data on the corporation’s steel output, operating costs, market shares, and much else are given in 122 tables.

Warren’s central theme is the persisting tension between the massive economies that ought to have benefited the nation’s first billion-dollar corporation in the scale-intensive steel industry and its rather prosaic history of repeatedly fumbling opportunities for innovation and growth. In each decade since its organization in 1901, U.S. Steel lost market share to smaller and more nimble domestic rivals -- and then to foreign competitors. In the first half of the century, U.S. Steel flatly rejected or slowly adopted such key product innovations as heavy structural shapes and electrical-welded pipe (missing out on the skyscraper and oil booms of the 1920s) as well as such central process technologies as electric furnaces and continuous hot-strip mills. Warren points out that the demanding market for automobile steels went largely to other companies. After World War II, when American steelmakers bulked up on outmoded open-hearth furnaces, U.S. Steel was especially slow to adopt basic oxygen steelmaking and continuous casting. The industry’s failing worldwide leadership was hinted at as early as 1959 when steel imports first exceeded steel exports (imports today stand at around one-quarter of domestic consumption). In 1965, oxygen furnaces made 55% of Japan’s steel, but just 17% of America’s. Five years later, in 1970, Nippon Steel displaced U.S. Steel as the world’s largest steelmaker.

As Warren makes clear, U.S. Steel for its first three decades was more of a diversified holding company -- with vast raw material and transportation holdings along with scattered steelmaking and processing facilities -- rather than a tightly integrated operating concern. In the 1930s Myron Taylor, who took over the reins from the stability-minded Elbert Gary, pushed through a thoroughgoing company-wide modernization. The separate Carnegie and Illinois steel divisions were merged into a single entity, operations and sales were moved to Pittsburgh, leaving financial matters only with the once-
powerful central offices at 71 Broadway in New York, and the new corporate structure was chartered in Delaware. Ironies abound. When commissioning the massive external consultant’s study in support of these changes, Taylor spoke approvingly of being “a little old-fashioned” and ventured that “some of the modern ways are not ways that this group would care to follow.” (p. 151)

The leadership of U.S. Steel in subsequent decades was preoccupied with a second theme to which Warren gives prominence, that of analyzing and trying to maximize location advantages. In many chapters, one recalls Warren’s indispensable locational history of the American steel industry. For most of its history U.S. Steel had three great centers of steelmaking: Chicago, including its state-of-the-art Gary works; the greater Pittsburgh-Great Lakes region (stretching from Lorain, Ohio, through the legendary mill towns of Homestead, Duquesne, and Braddock to the Monongahela Valley); and Birmingham, Alabama. The corporation responded to the rise of steel consumers on the East and West coasts, and the availability of cheap imported iron ore, by buying or building mill complexes in Utah, California, and northeastern Pennsylvania. The result was a geographically spread out steelmaking and -processing complex. In the end, one is forced to conclude that despite many determined attempts over the years, U.S. Steel never overcame the several liabilities of its “huge size and unmanageable structure.” (p. 127)

Although Warren's book succeeds as a description of U.S. Steel as a “lumbering giant”, it leaves many important themes undeveloped. I wanted to hear much more about the high-profile antitrust proceedings (1911-20), the debates about “administered” prices in the 1950s and 1960s, and the recurring question of protectionism. I was also disappointed with Warren's treatment of the great collapse of the U.S. steel industry in the early 1980s, which he interprets as a successful instance of rationalization accompanied by an “extreme pruning of its workforce” (p 339). Ouch. It seems a definitive history of steel in the “American century” remains to be written.

Thomas J. Misa is author of A Nation of Steel: The Making of Modern America 1865-1925 (Johns Hopkins 1995), co-editor of an interdisciplinary volume on Modernity and Technology (MIT Press 2003), and author of a wide-ranging interpretation of technology and culture since the Renaissance, Leonardo to the Internet. (Johns Hopkins 2004)