

DEPARTMENT: REVIEWS

Review of *Productivity Machines: German Appropriations of American Technology From Mass Production to Computer Automation* by Corinna Schlombs

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Productivity Machines: German Appropriations of American Technology from Mass Production to Computer Automation [1] provides a methodologically innovative and archivally rich story about the idea of productivity and the machines that promise to deliver it. Speaking to audiences across the histories of technology, diplomacy, economic ideas, labor, and political economy, Corinna Schlombs offers a novel transatlantic framing of capitalism in the middle of the 20th century and its relation to technology, including computers. At the heart of the book are a series of interactions between workers, managers, and political figures from the United States and Germany, from the Weimar era to the 1950s about the notion of productivity and how it should be pursued. Among the first insights is the observation that the relationship between technology and increased output is not always clear. The meaning and values of technical projects to improve productivity, Schlombs re-emphasizes in the conclusion, are always subject to “interpretive flexibility” [1, p. 249], and in this account, a wide range of actors—from union leaders to their rank-and-file members, from politicians to business people—debate local and national issues in and through debates about technology’s effects on productivity.

Productivity Machines is in the MIT Press *History of Computing Series* edited by William Aspray and Thomas J. Misa, and contributes to the histories of the computer business and digital technology, in addition to economic, business, and diplomatic history. Two contributions of particular interest to readers of the *Annals* are first, the book’s international approach to IBM’s postwar corporate culture in chapter seven, and

second, the treatment of debates about computer-driven automation in US industry in chapter eight, which it situates in a long history of domestic and international debates about productivity technology.

By showing the movement of “productivity culture and technology” [1, p. 5] between the United States and Germany, as well as points of friction in this movement, the book grapples with the idiosyncrasies of each nation’s views on technology and economic policy. The book begins in the 1920s—when the US Bureau of Labor Statistics introduced a productivity index—and concludes in the second half of the 1950s when the specter of a computerized, fully automated factory without workers loomed largely. Among the fascinating stories, the book tells are of Weimar engineers’ visits to the United States, German perceptions of US factories, social distinctions, and abundance, and Marshall Plan-era programs to boost German productivity and spread a U.S.-style of industrial culture.

The book starts by narrating the goals of and challenges faced by the US Bureau of Labor Statistics in the 1920s as it studied industrial productivity, and constructed representative models that captured it and its changes over time. Debates about the causes of changing productivity—its relation to wages, mechanization, or to the way work sites were organized—were manifold. But as the author shows, those debates were often obscured as “the seemingly objective index numbers eradicated . . . judgments and uncertainties.” [1, p. 29]

The malleability of productivity as a concept and its relation to industrial technologies, in particular, becomes even more clear in chapter two when the author describes interwar interactions between German and United States industrialists and workers, including German thinkers involved in the “rationalization” movement. While Germans who visited the United States were broadly impressed with the productivity of plants like Ford’s, they had occasionally differing views about what its underlying causes were

and what elements would work in Germany. Chapter three shifts to the postwar environment as U.S. reconstruction administrators incorporated a “productivity program” into the Marshall Plan. The program attempted to create no less than a “social revolution” in Europe—to “convince Europeans of American business values” [1, p. 104] in everything from technical practices like cost accounting and work standardization, to the broader, distinctly U.S. industrial politics of “high wages, low prices, and cooperative labor relations” [1, p. 87]. Chapter four addresses internal divisions among United States participants in these efforts; notably between organized labor—especially the AFL and the CIO—and different sectors of the United States business community. United States labor leaders criticized the Marshall plan for its “technical orientation”—especially toward quantifiable productivity enhancements—“with little attention to social reform, because the Marshall administration prioritized economic recovery over social justice” [1, p. 126]. This orientation was strategic, Schlombs suggests, “allow[ing] Marshall officers to redefine the political issue of inequality between social classes in economic terms by promising that higher productivity would raise the standard of living” [1, p. 134].

The next three chapters address German responses to United States productivity ideas during the 1950s—a complex and pivotal period of German economic history. The fifth chapter describes German postwar visits to the United States, especially under year-long work-study programs that brought more than 550 people to the United States. Schlombs uses a set of remarkable archival documents from Germans’ accounts of these programs to describe attitudes toward U.S. industrial practices, affluence, and social relations in the country. Some Germans dismissed the program as a “public relations” exercise—the goal of which was to proselytize a generation of future leaders inspired by the style of labor relations and technology-oriented productive enhancements of the United States. Chapter six addresses an important episode in German economic history; that of the origins of “codetermination”—the requirement of worker representation in company boards. The push for codetermination is deftly contextualized within the broader debates about productivity and United States involvement in the postwar German economy. U.S. business campaigns to critique codetermination are given a particular and fascinating analysis by the author. Chapter seven uses the history of IBM to explore how an American firm fared in Germany in this period. The story will be particularly interesting to those interested in how tech businesses have approached labor-management issues.

Schlombs’s richly conceptualized account focuses on the rhetoric of the “family” at IBM, and how U.S.-style welfare capitalism [and IBM’s favoring of “decisions by managerial fiat” [1, p. 197]] collided with the German work culture. The final chapter treats discussions of industrial automation and computerization in the United States in the mid-1950s. The author’s accounting of computer-driven automation offers significant new insight into a familiar story—situating it amidst longer historical and transatlantic encounters between German and United States workers and managers, and providing a wealth of new sources from labor history. In one particularly evocative section of the chapter, the author describes Norbert Wiener’s correspondence with U.S. labor leader Walter Reuther on the threat of automation. Wiener, Schlombs reports “had turned down an offer to serve as a consultant for the construction of an automatic production line because he thought automation would ‘undoubtedly lead to the factory without employees,’ and in the U.S. capitalist system, ‘the unemployment produced by such a plant can only be disastrous’” [1, p. 234].

Schlombs’s story of automation offers an innovative model for work at the intersection of the history of capitalism and computing. In drawing on a comparative analysis of the German and United States experience of productivity in the middle decades of the 20th century, *Productivity Machines* casts new light on the relationship between technology and political economy. Automation and other managerial efforts to enhance productivity were controversial in both countries, the author shows, not only because they augured job losses, but because they revealed the contours of each nation’s “variety of capitalism” [1, p. 7] and laid bare the power relations within it. Discussions of productivity made clear the limits of, or need for, labor power in corporate decision-making, revealed the vulnerability of a welfare system based on employer benefits, and drew attention to the limited benefits of mass production when untethered from wage gains that could sustain mass consumption. As the author notes succinctly, “the automation debate was not merely about computers as technological objects; it raised larger issues about the economic system, relations between employers and employees, and the role of the state in economic questions” [1, p. 246].

BIBLIOGRAPHY

- [1] C. Schlombs, *Productivity Machines: German Appropriations of American Technology from Mass Production to Computer Automation, (History of Computing Series)*. Cambridge, MA, USA: MIT Press, 2019.