



Volume 4. Forging an Empire: Bismarckian Germany, 1866-1890
Werner von Siemens' Enterprise (1872)

A scarcity of skilled workers came with the economic boom that immediately followed German unification (1871) and lasted about three years. As this letter from Werner von Siemens makes clear, the companies that profited from this prosperity – including his own Berlin-based electronics enterprise, Siemens & Halske – sought to overcome this labor shortage by expanding their mechanized production. The results of mechanization included falling labor costs and new opportunities for innovation.

I. The Modernization of Production at Siemens & Halske: The “American Hall”

The enterprise in all of its versatility and complexity has become too big and the lack of workers is outright unbearable. We now have plenty of empty workshops, but we can't find workers to fill them. And we're supposed to keep deadlines here! For this reason we have been trying hard, especially over the last year, to do everything with special machines, like the Americans, so that we can produce quality products even with poor workers. This has already proved a brilliant success. For instance, we made the 1,200 torpedo indicators that England (i.e., our English branch) had ordered from us in an amazingly short time, exactly on schedule, and also at about half the wage expenditure that we set for London as our own [production] costs. This project was very useful for us in testing the capacity of our facilities, but unfortunately it has held us up with respect to other things. Now everyone is convinced that the implementation of American working methods is our future salvation and that we have to change our entire management accordingly. Mass production alone must be our goal from now on – with it we will manage to satisfy each and every need and overcome all competition! In order to achieve mass production, however, we will need to put a certain amount of pressure on our customers and push our designs on them. We can do this by delivering our “fabricated” designs very cheaply, smoothly, and quickly, while delivering the others expensively and slowly or not sending them at all. [. . .] The problem is that our dear engineers and workshop supervisors cannot stop designing and inventing things. [. . .] However, now we have lowered prices for fabricated designs so much that no one can keep pace with us. Nevertheless our bottom line is in splendid shape, because mass production offers unimagined resources. That will be our strategy. Making arbitrary modifications to our fixed designs would be as ridiculous as someone ordering a modified sewing machine. If the customer wishes to get it, he will have to set up a factory of his own or have it manufactured by hand for ten times the price. [. . .]

Source: Werner Siemens, letter from March 13, 1872, published in Conrad Matschoß, ed., *Werner von Siemens. Ein kurzgefaßtes Lebensbild nebst einer Auswahl seiner Briefe* [*Werner von Siemens: A Summary of His Life Together with Selected Letters*]. Berlin, 1916, pp. 354-55.

Original German text reprinted in Gerhard A. Ritter and Jürgen Kocka, eds., *Deutsche Sozialgeschichte 1870-1914. Dokumente und Skizzen* [*German Social History 1870-1914. Documents and Sketches*], 3rd ed. Munich: C.H. Beck, 1982, pp. 151-52.

Translation: Erwin Fink

II. The Workers' Reaction: A Company Foreman

Because operating the machines mainly required training ordinary workers – if at all possible those among the established staff – and putting them on piece-work, the so-called “American hall” soon became the target of bitter Socialist attacks. Employees simply did not like the massive acceleration of the work process. It took a long time for the old artisans in the workshop to resign themselves to it.

Source: Recollections of the foreman Jacobi [Werner von Siemens-Institut, Munich] cited in Jürgen Kocka, *Unternehmensverwaltung und Angestelltenschaft am Beispiel Siemens 1847-1914* [*The Siemens Business Administration and Workforce 1847-1914*]. Stuttgart: Klett, 1969, p. 126.

Reprinted in Gerhard A. Ritter and Jürgen Kocka, eds., *Deutsche Sozialgeschichte 1870-1914. Dokumente und Skizzen* [*German Social History 1870-1914. Documents and Sketches*], 3rd ed. München: C.H. Beck, 1982, pp. 151-52.

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