

MARK ALDRICH, Safety First: Technology, Labor, and Business in the Building of American Work Safety 1870-1939 (Baltimore: The Johns Hopkins University Press, 1997. Pp. Xx + 415; illus. ISBN 0 8018 5405 9, \$49.95).

Safety First is the first comprehensive history of changes in workplace safety in the United States. It places these changes in the context of the dramatic changes in technology, management, regulation, and labor organization in the U.S. during the late nineteenth and early twentieth centuries. As such it will be of significant interest to scholars in labor and management history, as well as those interested in the particular issue of occupational health and safety. Aldrich manages to accomplish many difficult tasks in this manuscript, both providing a human face - literally naming names - to the many anonymous victims of workplace accidents and addressing more abstract economic issues, such as the effect of changes in legal liability and industry structure on firms' incentives and ability to improve safety. But Aldrich takes care not to reduce changes in workplace safety to a mechanical response by firms to economic incentives. He successfully describes the role of culture, both workers' culture and the newly created culture of "safety experts," and the role of politics in influencing both the kinds of safety changes that were made and the limits of their success.

Safety First describes in detail the worsening problem of workplace safety during the nineteenth century, with separate chapters on manufacturing, railroads, and mining. Aldrich displays a command of the technology in each industry that is rarely found in studies by economic and business historians who are not trained as historians of technology. This is especially significant in a discussion of workplace safety, as any particular technology's effect on safety depended on t

he economic and managerial context in which it was employed.

Aldrich places American workplace safety in a comparative context to explain why safety was worst in the richest country in the world. He identifies several culprits. The U.S. legal system's "employer liability" - that allowed employers to escape liability by blaming accidents on the injured worker or co-workers - provided no incentive to improve safety. The U.S. adopted a workmen's compensation system, which Aldrich says provided increased incentives to improve safety, later than its European competitors. Any such incentive effects must have been very modest, however, as there was no relationship between accidents and workmen's compensation costs for most firms. That workers compensation provided much weaker incentives than a system of real employers' liability would have is not considered by the author, but surely was by the firms that supported the adoption of workers compensation at the beginning of the twentieth century.

Aldrich also identifies the peculiarly American process of industrialization - with high rates of labor turnover, a drive system with supervisors pushing for ever-greater output, piece rates payment systems encouraging workers to increase production at the expense of increased risk, and the increasing separation of mental and manual labor - as important contributors to the dangerous American workplace. While Aldrich identifies the technological changes that increased work dangers - his descriptions of workers caught up in the belts and pulleys that arrived with power driven machinery are quite moving - he is careful not to blame technology per se, but to focus on the economic, political, and cultural contexts of its adoption in order to understand why some technological changes improved safety and others increased the toll on workers' lives and limbs.

Aldrich argues that the single most important factor in improving workplace safety during the twentieth century was the Safety First movement, begun by U.S. Steel and pursued by firm

s, such as DuPont, that business historians have come to be familiar with as the leaders in the systematic management movement. This reinforces the work of others, from Alfred Chandler to Sanford Jacoby, who have argued that the rise of bureaucratic management is the defining characteristic of twentieth-century U.S. firms. Analogously to Jacoby's argument that personnel policies were often an attempt to deter unionization, Aldrich argues that Safety First was often a response to the threat of regulation. But he also argues that, by building on the expertise and self-initiative of firms, Safety First was often more successful than regulation. He ignores the possibility that stronger regulation than was adopted by the weak U.S. state might have been more successful yet. Here a continuation of the comparative perspective of the first section of the book would have been useful.

Aldrich argues that Safety First transformed the focus of safety work from education to eliminate "worker carelessness" to re-engineering the workplace. Aldrich argues that improvement in safety required managerial control of the workplace. In fact, he often blames safety problems on workers having too much independence in a context where they had no financial incentive to improve safety. But surely workers have an incentive to protect their own health; what he observes is that there was almost always a tradeoff between income and risk. He does not consider the possibility that increasing workers' control, through organizations that insisted that safety not come at the cost of incomes, might have led to even greater improvements in safety. Again, a comparative perspective to countries with stronger unions and stronger state apparatuses would have illuminated the successes and the limitations of Safety First.

Aldrich argues that while Safety First experts often phrased their recommendations in a language that appealed to firms' interest in lower costs and higher profits, they also developed the

ir own professional identity. Like the bureaucratic managers described by Skocpol and Jacoby, their professional conception of themselves as engineering experts shaped how they solved problems and led to a more aggressive attitude toward safety than an instrumental analysis can explain.

But as “experts” they tended to search for technological solutions, rather than solutions that were predicated on the cooperation or knowledge of either workers or managers.

The appendices to the book provide data on workplace injuries that will be very useful to some readers.

Bibliography

Jacoby, Sanford M. Employing bureaucracy : managers, unions, and the transformation of work in American industry, 1900-1945. New York : Columbia University Press, 1985.

Skocpol, Theda. Bringing the state back in. Cambridge: Cambridge University Press, 1985.

Chandler, Alfred Dupont. The visible hand : the managerial revolution in American business. Cambridge, Mass.: Belknap Press, 1977.

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