

The Shopfloor Politics of New Technology. By Barry Wilkinson. Exeter, N.H.: Heinemann Educational Books, 1983. 120 pp. \$14.50.

The aim of Wilkinson's book, as stated in the preface, is to "uncover the ways in which the values and interests of managers, engineers and workers profoundly influence the choice and use of technology, and thus the work organization which emerges." The focus of the study is upon the adoption and implementation of computer-controlled equipment in manufacturing firms in Great Britain. Given the rapid spread of computer-based technology in the last decade, this work represents an analysis of an important social change at the workplace. The spread of computer technology offers the potential for a major reorganization of work processes, as Wilkinson points out.

The author explores the effects of the new technology in four case studies of small-batch manufacturing plants in the West Midlands. These plants were selected from an initial set of 12 firms that had applied electronic control systems to manufacturing processes. The issues of why these particular firms were chosen for intensive study and whether they differed in any systematic way from other adopters of the technology are not addressed in any detail. The four firms of the study are two small organizations (each with approximately 50 employees), a metal plating company and an optical lens production company, and two medium-sized organizations (employing between 350 and 450 workers), a rubber molding plant and a machine tool manufacturer. All but the metal plating firm are subsidiaries of larger corporations. Information was collected from these firms primarily through a combination of open-ended interviews with managers and workers regarding their attitudes toward the technological changes, and observation of the employees at work.

The results of the study provide support for Wilkinson's primary contention that neither the adoption of particular technologies nor the organization of work based upon those technol-

ogies is objectively determined. Instead, both are the result of informal political negotiations between management and workers. Much of the previous work on the impact of technology on organizations has assumed, at least implicitly, that the adoption of technical innovations is determined by the pressures of competitive survival, and that the requirements of particular technologies largely dictate the form of work arrangements. Wilkinson is critical of such assumptions, and his research clearly supports these criticisms. It also addresses the problems of radical analyses of the Taylorization of work in capitalist societies, in which the role of workers as active negotiators in the determination of work relations is downplayed.

Wilkinson's findings suggest a general model of technological change in which patterns of work organization accompanying the use of a new technology are determined both by managerial intentions and workers' efforts to control their work. Consistent with earlier case studies of organizational change, this work indicates that workers' success is frequently a function of unanticipated problems of technological changes, which inadvertently increase their power. The extent to which managers can succeed in taking control of work processes away from workers is strongly affected by pre-existing work arrangements. These arrangements, in turn, are the result of prior negotiating processes between management and workers and, presumably, represent shared understandings of worker-management relations.

That the adoption of a particular technology and the way in which it is used are not objectively determined, but are instead a matter of social definition, is an important caveat for those interested in studying the impact of changing technology. Wilkinson does not fully exploit the opportunities presented by a comparison of cases, however. This is unfortunate, since the potential for comparative analysis is a clear advantage of this study over other case studies of single organizations. Thus, a central limitation of his analysis is the failure even to tentatively specify any of the patterns that underlie such a process of social definition. The author does not, for example, venture any specific hypotheses about factors that enable workers to play a larger role in determining the procedures of work to accompany a new technology. A careful reading of the four cases does suggest some of these factors affecting worker intervention, including the extent to which the workers involved in the change are skilled craftsmen or largely unskilled and the degree to which responsibility for implementation is assigned to middle or to senior managers. Unfortunately, by not drawing out such implications, Wilkinson makes the research less valuable than it could be.

Despite this limitation, *The Shopfloor Politics of New Technology* offers an important insight for research on technological change: the adoption and use of technical innovation cannot be understood apart from the attitudes and interests of those affected by the change. The cases are interesting and the book is well written. It serves a useful function in sensitizing researchers and policymakers to a number of subtle issues raised by technological change at the workplace.

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