

SYMPOSIUM: TECHNOLOGICAL CHANGE AND INDUSTRIAL RELATIONS

Introduction: Technological change and the labour process

Lying at the very heart of industrial relations, the impact of technological change began to receive widespread attention in New Zealand about 1979. The debate grew out of overseas experience with micro-electronics (particularly in Britain, West Germany, France and Australia) in the context of the anticipated widespread application of similar technology to New Zealand. Although among industrial relations practitioners the impact of new technology maintained a high profile during 1979-80 (see for example Young (Ed.), 1980), it was soon overshadowed by other more immediate and pressing industrial relations matters, such as the reform of the wage fixing system, voluntary unionism and the price and wage freeze. Though only of relatively brief duration, the debate was intense and marked by the deterministic attitude on the one hand that technological change was both inevitable and beneficial, and on the other, that the changes could and should be controlled because the "benefits" might by no means be shared evenly among the participants. Government and employer groups typified the former view, and trade unions the latter.

More recently, the change of government has understandably served to shift public attention away from the impact of new technology, although the rate at which it continues to alter the shape of work has been increasing. For example, the last 2 or 3 years have seen the introduction of automatic tellers in banks, microcomputers in offices, in schools and in the home and the spread of computer-controlled machine tools in factories. "Point of sale" terminals were only recently introduced in Auckland and will shortly be introduced in Wellington. This symposium provides a further and timely reminder of this.

The issue of new technology has always been a major preoccupation of academics from a wide range of disciplines, industrial relations included, and has been vigorously debated from many and varied standpoints. In industrial sociology generally, and in industrial relations in particular, the debate has been given a fresh impetus by renewed interest in the analysis of the labour process following the publication in 1974 of Braverman's important and influential book *Labor and monopoly capital: the degradation of work in the twentieth century*. The main thrust of Braverman's argument is that under monopoly phase capitalism there has been a continuous trend towards deskilling in which jobs have become increasingly routine, fragmented, depersonalised, and devoid of intrinsic satisfactions. The origins of this trend are to be found neither in the imperatives of industrialisation nor the "needs" of particular technologies, but in the requirements of management (as agents or owners of capital) to remove control over the labour process from potentially recalcitrant and unreliable workers. According to Braverman this has been achieved mainly by applying the principles of scientific management to the labour process: dividing work up into the management function of *planning* and the labour function of *executing* prescribed tasks. At the same time, new forms of technology have been introduced which embody the workers' former skills and knowledge, and this also serves to increase the momentum of deskilling and tighten management control over the labour process. Hence Braverman's thesis directly challenges the conventional view, and one espoused by "post-industrial theorists" (Bell, 1974; Dahrendorf, 1975; Galbraith,

1974; Kerr, Dunlop, Harbison and Myers, 1973; Schumacher, 1973), that technology is an autonomous force with self-generating properties, and that technical change results in a net upgrading of skills in the workforce.¹ Since new technology is designed and used in the interests of capital, it is therefore an instrument of control over the workforce.²

Labor and monopoly capital has stimulated a wide-ranging debate in industrial relations and related disciplines and the adoption of the concept of the labour process as a useful analytical framework for carrying out research. A number of perspectives have emerged which, whilst acknowledging Braverman's contribution, maintain that his thesis is inadequate as an explanatory framework and therefore requires modification and/or extension. Accordingly, the deskilling thesis has been extended and refined in a number of key respects. Four of the central critiques of Braverman are:

- (1) He underestimates the resistance of labour to management's initiatives in introducing new technology;
- (2) the deskilling of work, through the application of the principles of scientific management and the introduction of new technology, is only one of a range of control strategies utilised by management;
- (3) skill is a complex phenomenon having a number of different elements, for this reason the concept cannot simply be defined in terms of technical job requirements;
- (4) new technologies may be introduced for reasons unconnected with control, and deskilling may be an outcome, but not necessarily the intention of such introduction.

This volume of the *journal* comprises 5 original papers. Four are industry case studies and the fifth an attempt at integration and synthesis. All are written from within the broad parameters of the post-Braverman labour process debate, and they focus upon 4 separate industries in which the above 4 critiques are illustrated. They highlight the impact of technological change on specific occupations within meat freezing, printing, the Public Service and banking — all industries in which new technology continues to have an impact upon work arrangements. Kerr Inkson and Peter Cammock's paper is a product of a long term interest in the freezing industry. It explores the extent to which Braverman's analysis may be applied to the introduction of the chain system in New Zealand meat works. Roberta Hill's paper arises from her extensive research project on the newspaper publishing industry. In the paper she explores the dynamics involved in the change from traditional methods of newspaper production to modern computerised methods. The remaining 2 industry papers represent analyses of technological change in workplaces which expedite the movement of information: banking and office work. Paul Couchman's paper derives from his on-going research work into the introduction of word processors into a government office. The paper's focus is on likely future, as well as historical and recent, changes in office technology, and is therefore also concerned with what could happen with the recent development of the automated office. John Brocklesby explores technological change in banking with particular emphasis upon the impact of computerisation on the banking labour process and on industrial relations. The final paper attempts a synthesis and summary of the main themes to emerge from the industry studies. All papers use Braverman's analysis of changes in the labour process as a starting point, and seek to explore the strengths and weaknesses of Braverman's approach for understanding the nature and impact of technological change.

David F Smith
Symposium Editor

1. See also Wood, 1982, p. 11, for a more detailed exposition of this view.
2. See Brocklesby, 1983, for a more detailed review of recent contributions to the labour process debate and a discussion of the relevance of this form of analysis to industrial relations.

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