TECHNOLOGICAL CHANGE UNDER COLLECTIVE AGREEMENTS*

1. The Impact of Technology


In the second portion of this volume the authors examine in broad but meaningful terms the impact of the new technology on labor requirements, labor productivity, employment, and occupational distribution. They emphasize the imperative necessity of understanding human relations if technological changes are not to result in “waste and human misery.”


Essentially an account of the economic and technical changes wrought by invention and improvement in industrial processes, Chapters IX and X of this book analyze the factors determining the rapidity of mechanization in industry and the effects of mechanization on labor requirements, wage structures, and employment.


A survey of modern technology in the major branches of economic activity, and an analysis of its economic, social, and political products lead the authors to the conclusion that the people must exercise in the future greater social control over the utilization of inventions. They are optimistic that this can be done through the democratic process without destroying the essential attributes of a free society—initiative and incentive.


* Items from this list should be ordered directly from the publisher. Addresses are given in connection with each reference.
Within the larger context of an investigation into the relation of technology to the concentration of economic power, this study describes the effects of labor-saving methods and devices on workers' security. Unemployment, the displacement of skill, the effects on the status of the older worker, and the problems of industrial fatigue, accidents, and disease are reviewed as problems related to technical change.

2. Trade Union Policy


An extensive descriptive and analytical account of the impact of new and modified printing machinery on the skills and employment status of employees in the commercial printing industry. The emphasis is on technological unemployment. The author points out that the incidence of unemployment on the various printing crafts was an uneven one, the higher skills gaining with the expansion of the market for printed matter.


Professor Barnett's classic chapters report the reactions of skilled craftsmen to the displacement caused by the introduction of the linotype machine, the stone-planer, and the semi-automatic and automatic glass-bottle machines. Trade union policies are classified and analyzed. The author concludes that maintenance of wage rates for hand workers is easier than the prevention of displacement, and that there are no universally valid policies for a union faced with any particular change.


Union policies toward the introduction of new methods and machinery are discussed topically as minimization of displacement, maintenance of earnings, reduction in the hours of work, and security of job tenure. The scope and limits of union-management cooperation are discussed in the last chapter. The author indicates that union interest in managerial problems is a by-product of an increasing technology which affects workers' security of income and job tenure.


Trade union policies toward technological change are classified as obstruction, competition, and control. The factors producing these policies and making for their success or failure are analyzed, and numerous examples are supplied for illustration. The author believes
that, because of the possibility of breach between rank-and-file and leadership, ". . . unions should not assume too much responsibility for setting job assignments or production standards."

3. Managing Changes in Work Assignment


Believing that successful protection against unrestrained labor extension is only possible through unionization and an established procedure, the author places considerable weight on the arbitration process when joint agreement over new terms and conditions cannot be reached. "It [arbitration] bridges the space between autocratic or benevolent industrial relations and democratic collective bargaining," he concludes.


The Director of Research for the Textile Workers Union of America finds that the ordinary grievance procedure is inadequate to make the adjustments in terms and conditions of employment, which are disturbed by changes in the level of work effort, new processes and machinery, tools, or product. "What is really required," he states, "is a series of regulations especially developed to reconcile management's need to make such alterations with protection of the workers' interests and the right to negotiate concerning the terms of the change."

The experience of the Textile Workers has been translated into a specialized set of procedures which is set forth here in clear detail.


A brief but comprehensive description and analysis of the problem of technology in both men's and women's clothing industries. The author points up the fact that few new machines were introduced prior to unionization, but union policy encourages machinery because it means reductions in hours, fatigue, and greater regularity of employment. Arbitration has a major part in adjusting terms and conditions to new processes and equipment.


"The Naumkeag Experiment" in "joint research" is described in narrative form. Labor extension came about at the initiative of the union in an effort to forestall the stretchout and large displacement of labor. The author infers that union-management cooperation broke down in the face of the depression because of the failure by both sides to define clearly and to maintain the limits of their responsibilities and interests.

The author believes that employee attitudes toward technological changes are substantially affected by the manner of their introduction. Excessive control of the initiative and installation by management leads to restriction and limitation of output by the union. Formal procedures, however, are not alone sufficient. A direct, positive emotional appeal is necessary. Samples of contract clauses are given, but no procedure is described because the author believes that such techniques must be individualized to meet particular cases.


Resistance to changes in work assignments is a natural response of employees because of the disturbance to emotional patterns associated with the work. The author analyzes the emotional factors, and makes five proposals for improving the employer-employee relation during the process of installing a change.


This volume analyzes and emphasizes the psychological and social aspects of the incidence of technological change on both the labor force and management. Addressed primarily to management and industrial relations executives, it points up the delicate nature of employer-employee relations during the period of installation of a change. Management is warned against shifting responsibility for proper adjustment to union officials, and that its own adjustment process is proportionately as great as that of the employees.


Professor Smith insists on the necessity of planning the human as well as the technical aspects of technological change. The bulk of the article provides a check-list useful for this purpose.


Illustrative provisions extracted from union agreements demonstrate the variety of restrictions and safeguards designed to aid in the adjustment to technological change.