**Relations industrielles
Industrial Relations**

Urs E. GATTIKER, Laurie LARWOOD : *Managing Technological Development. Strategic and Human Resources Issues.* Berlin, Walter de Gruyter, 1988, 232 pp., ISBN 3110110849

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Citer ce compte rendu

planifiée de longue date. Le fait que le volume est sous la responsabilité d'un comité d'édition est un élément d'information qui nous inquiète, non pas que les comités fonctionnent toujours mal, mais parce que la qualité de l'intégration y gagne habituellement lorsqu'un individu en fait «son affaire». Toujours au niveau des faiblesses, il faut dire que le travail d'édition et de correction n'a pas été impeccable. Voilà pour les faiblesses.

Au niveau des points forts, mentionnons la diversité des contributions. Il y a des articles de Québécois, de Français, d'Américains et de Britanniques. Cela ajoute beaucoup de valeur au volume, qui ne se laisse pas emprisonner dans une vision étroite.

On y aborde les thèmes habituels du domaine des relations industrielles: la participation, la consultation, la QVT et les cercles de qualité. Il y a de très nombreuses références à la nécessité de dépasser le taylorisme et la bureaucratie. On pourrait même dire qu'il s'agit là du véritable fil conducteur du volume, mentionné entre autres aux pages 28, 40, 70, 83, 90, 94, 113 et 116.

Un autre élément intéressant vient d'un consensus qui se forme peu à peu, et parfois laborieusement, sur l'impact des nouvelles technologies sur le travail. C'est un progrès qu'il faut noter, même si des écarts d'opinions demeureront nombreux. Par ailleurs, nous en arrivons à dédramatiser l'effet de l'informatique des organisations, tout en mesurant toute son importance.

Dernier point. Les articles sont de qualité inégale, ce qui est habituel dans ce genre de recueil. Presque tous, par contre, soit par l'aspect empirique, théorique ou par les qualités de synthèse, comportent un certain intérêt. Les textes des auteurs britanniques, américains et français m'ont paru particulièrement réussis, mais cela est peut-être attribuable à mon incorrigible intérêt comparatif.

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Managing Technological Development. Strategic and Human Resources Issues, by Urs E. Gattiker and Laurie Larwood, ed., Berlin, Walter de Gruyter, 1988, pp. VIII + 232, ISBN 3110110849

With the progressive acceleration of technological change in modern business there is a growing need of scientific assessment of organizational and managerial consequences. This first volume of the book series Technological Innovation and Human Resources deals with the macro side of technology (the first part), as well as with the micro perspective on human resources. The questions considered are: how to obtain innovation, what kind of cultural differences are influencing its development, what kind of strategies are successful to gain a competitive edge, what kind of costs and benefits are involved, how managers use electronic workstations and computer technology, how the managers differ in the acceptance of technology from the support office personnel, which problems arise in teaching employees to use new technology.

Radical product innovation meets several bureaucratic obstacles originating from the hierarchical organizational arrangement, suppressing the collegial professionalism and the absence of an adequate form that would liberate creativity. In most large organizations the ap-

propriate climate is missing to allow an open and uncompleted product design (L.T. Perry and R.W. Sandholtz). Professional values need to be reinforced in order to motivate the employees to fully involve themselves in the pursuit of new solutions. Social organization of the creative workplace needs to be much different than the traditional forms in order to promote an open design and not to force people to satisfy themselves with the existing technological solutions. It is necessary to give priority in personnel selection to creative individuals, redefine leadership accordingly, reframe organizational loyalty, promote academic values, give priority to innovative products, give full autonomy to creative teams, reinforce the professional standards of performance.

The cooperative multinational research and development ventures are the object of study done by R.N. Osborn, H. Strickstein, and J. Ôlson. These ventures are both administrative systems and interpretative negotiated orders. There are a variety of explicit and implicit expectations of getting involved in cooperative international agreements. In order to avoid disappointment in this respect it is necessary to acknowledge the existing cultural differences. «Managers should construct meanings with their counterparts and devote resources to bridging cultural gaps and merely assume the parties are communicating» (p. 51).

The case of major weapon systems in the US is analysed by F.L. Edwards and L. Larwood in order to reveal political-organizational manipulations beyond those publicly exposed. According to the authors, «Inducement, persuasion, coercion, and obligation strategies can each help a contractor, but are seldom efficient to determine success in obtaining the contract by themselves» (p. 68).

The study by M.A. Hitt, R.D. Ireland, and I.Y. Goryunov deals with the effect innovation context: corporate growth strategies, the firm's principal industry type, and the extent of the firm's diversification. This study shows problems with the difficulty of effectively using R&D allocations in firms that have attempted to maintain communalities (or relationships) among their product lines (or businesses). «The manner in which R&D investments were managed in related diversified firms in this sample was negatively dated to their performance» (p. 89). Small firms are more innovative but R&D funds are concentrated in large firms (p. 87).

The study by B. Gibbs, K. Keen, and R. Lucas deals with innovation and human resource productivity in Canada. It shows that actually low technology industries provide an engine for productivity equal or superior to that of the high technology sector. Variations in labour productivity associated with investment in research and development are more than matched by the productivity outcomes derived from investment in machinery and equipment. The low-tech sector seems better able to minimize productivity reductions than does the high-tech sector (p. 94). The authors come to the conclusion that Canada should avoid policies that reward high-tech firms at the expense of low-tech firms. Low technology industries are not necessarily less innovative than their high technology counterparts. High technology industries appear to be less capable of implementing the fruits of R&D than are low technology industries. The adoption of process innovations by low technology industries results in a drop in employment shortly after such adoption. Industrial innovation is needed in both industries: high tech as well as low tech.

The study done by S.W. Floyd points to the importance of fitting the electronic workstations (EW) to the work of managers. The time saved on peripheral activities is substantial but much more important is how much EWs contribute to the organization's mission. It is basic how EW enhances the manager's core work and contributes to the organization's purpose (p. 139). The question of how EW is linked to the components of core managerial work seems to be crucial.

The study by J.A. Verdin focuses on the impact of information technology on the perceived changes in jobs and career opportunities for the human resource department users. Increased skill requirements, increased computer monitoring and increased interaction were ascertained. «The increased amount of information is being used by many managers, the quality of decisions is perceived to be better, and (for about one fifth of the sample) less time is devoted to decision making» (p. 155). Productivity and quality of output both have improved.

The study by V.E. Gattiker examines personal beliefs about computerization and the perception of career success. Intelligent workstations are far more positively perceived than main-frame terminals. The perception of career success is here also influenced. «A person's beliefs about technology predict his/her perception of job success. The only item which did not predict was control. This is interesting, since job attitude research revolves around job enrichment» (p. 178). However, only 12% of a person's perception of career success is influenced by his/her belief about technology at the workplace. It is necessary to add that women appear more afraid of computers than men. Also women were more skeptical about the impact of their computers on communication. They were sensitive about their work speed being controlled by computers. «Female respondents were less positive about the computer than their male counterparts when it came to both control and communication» (p. 180).

The study by J.E. Ettlie deals with the first-line supervisors in advanded manufacturing technology. They are vulnerable to change stressors in coping with new technology and this is particularly evident in the early stages of system startup. The role of the first-line supervisor is sensitive to technological change; the span of control decreases due to labour cuts; new coping behaviours are necessary when facing shifts in task content; the amount of influence exercised by the first line supervisors changes when new systems are actually installed; the job content becomes more routine, there is less autonomy; there is greater emphasis on human relations. «The problem is that of coping with the stress of learning new skills and potential insecurity forced by a new technology» (p. 203).

Papers included into the book deal with the variety of important problems. Organizational forms and micro-cultures supporting technological innovations are much needed. International cooperation in the technological field is a very sensitive matter. Institutional bargaining is vulnerable to distortions. Industrial innovation does not necessarily lead to increased profits. Low tech firms can and do create as many new jobs as high tech firms. Negative attitudes to technology have several consequences. There are several communication problems. There are differences between various computer users. First-line supervisors need an upgrading of their skills when facing computerization.

It would be very important and useful to systematize modern technology in terms of some basic socio-existential dimensions. The same equipment may reinforce isolation or group contacts depending how it is spatially located, what kind of organization structure is applied, how skilled are the employees, etc. On the other hand, different models of a given equipment may create substantialy diversified demands on people.

As long as a penetrative sociological classification of technical equipment and its organizational setting is missing, the research on social consequence of modern technology is handicapped. Such variables as analyzability, variety, interdependence, coordination, routine, etc. may be creatively utilized for the classification above mentioned.

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