The potential for work redesign within contemporary organizations

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THE POTENTIAL FOR WORK REDESIGN WITHIN CONTEMPORARY ORGANIZATIONS

CHRIS DU BOULAY
Human service organizations should be leading the way in the development of satisfying, meaningful and productive job or work design. The underlying principle upon which all human service organizations should be based, is the respect of the individual. If the individual (whether client or employee) is considered important and valuable, then surely the management needs to design and redesign work in consultation with those individuals.

The major implication for human service organizations is the level of employee satisfaction. If the human service employees are satisfied with their jobs, then the service they provide the clients will be excellent.

The level of job satisfaction is affected by factors such as, amount of autonomy, type of supervision and control, variety of tasks, level of skills required, quality and frequency of feedback and extent of employee participation in decision making. The challenge is for human service agencies to lead the way in developing a caring and supportive environment for their clients and employees.
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ABSTRACT

Work redesign is not only important for the wellbeing of the employee, but it has also captured the imagination and zeal of some employers. Recent studies (Hendry, 1990; Cordery, Mueller & Smith, 1991) have indicated that employees become more positive and enthusiastic towards their jobs and employers experience gains in productivity. Over the years many people have examined the concept and need for work redesign (Hackman & Oldham, 1976; Galbraith, 1984; Pasmore, 1988). Concepts such as work simplification, job enrichment, job enlargement, socio-technical redesign, alternative work arrangements and quality of work life programmes have been introduced, developed and implemented. This paper seeks to ascertain the possibility of redesigning work in organizations, by examining instances where this has occurred, where it is occurring and where it could possibly occur.
INTRODUCTION

Redesign is necessary for an organization or department when it is experiencing problems such as: failure to innovate, low productivity, redundant work efforts, extensive 'red tape', ineffective communication, inability to use workers' skills effectively and failure to respond rapidly to demand (Gordon, 1987). The two main approaches developed to address the potential for work redesign are the job characteristics approach and the socio-technical systems approach.

The job characteristics approach was taken up and developed by Hackman and Oldham (1975) who identified five core characteristics or job dimensions. These are skill variety, task identity, task significance, autonomy and feedback, which are linked to internal psychological needs. The problems with this approach are, firstly work has changed since the models' inception, secondly there is more pressure for employers to develop more thinking jobs, thirdly there are more than five characteristics such as: intellectual requirements, contact with clients and the degree of physical risk, and fourthly new skills must be valued and used if they are to enrich the workers' jobs. Oldham and Hackman (1980) have conceded that the redesign of jobs in isolation from their organizational context is less effective than dealing with the design of work and surrounding organizational systems simultaneously.

The socio-technical systems approach, from its inception in 1951, has encouraged this simultaneous examination and implementation. Trist and Bamforth (1951) saw the need to examine the social needs of the workers and the technical requirements of the job and combine them for joint optimisation, not emphasizing one above the other. They emphasized the importance of autonomy and feedback and thus the need for the formation of autonomous work groups. The commonality of the two approaches occurs in their emphasis of both autonomy and feedback. Implementation of these two factors determine how effective the work redesign will be (Cherns, 1976). Little (1988) states that the socio-technical approach emphasizes joint optimisation of the social and technical systems by providing relevant levels of autonomy, variety, learning, support, meaningfulness and opportunities.

Using a socio-technical approach to work redesign in a climate of increasing use of advanced manufacturing technology (AMT), there is potential for:
- the formation of autonomous work groups,
- revision of supervisory practices,
- broadening skills,
- AMT to increase control of employees and deskill them.
AUTONOMOUS WORK GROUPS

Autonomous work groups are also referred to as self-regulating, composite and self-managing. These groups involve members with a range of skills in order to work on a relatively whole task. The group exercises a certain degree of discretion in relation to work methods and schedules, allocation of tasks and control of variances. Therefore, the locus of control moves slightly away from the supervisor and towards the group (Cummings, 1978).

Trist and Bamforth (1951) studied the effects of a Durham Valley coal mining company changing from autonomous work groups to large shift groups in its bid to mechanise the industry. In this case the traditional method (short wall method) of work design was more satisfying for the workers than the new mechanised system (long wall method). Using the short wall method, the workers organized themselves into groups of 3 or 4. They worked on a short face of coal and were responsible for their production, hours of work, pace and goals. The coal they mined was brought up and sold to the mine owners. The mine owners decided to mechanise the procedure in order to make it more productive and efficient. They organized the workers into large groups, working in shifts on a single long face of coal. What this new method achieved was a greater production of coal, but it also created many problems. As the small groups' cohesion, loyalty and autonomy were lost, problems such as absenteeism, need for external supervision, need for maintenance crews, lack of care and the fragmentation of jobs occurred. So obvious was the backward step (from both the employees' and employers' perspective), that Trist and Bamforth (1951) developed a system that sought to address both the technical needs and the social needs of an organization, the Socio-technical System.

The potential of this work design feature (autonomous work groups) is confirmed by a recent study. Cordery, Mueller & Smith (1991) conducted a longitudinal study (two years) to examine the possible impact of autonomous work groups upon workers' attitudes and behaviour. The setting of the study was within greenfield and established mineral processing plants in Australia. At the commencement of a new processing plant, it was decided after negotiation with stakeholders that it would be organized around the basis of autonomous work groups. This decision was prompted in part by the success of a similar group within the established site. The evaluation, was therefore based on the comparison of the three groups; "...Greenfield, autonomous work design vs Established site, autonomous work design vs Established site, traditional work design..." (p.6). The results supported the hypothesis that claimed workers in autonomous work groups have more favourable work attitudes than workers within the traditional work
design. In addition to the added dimension of gaining and using extra skills (multi-skilling). This provided intrinsic value (task variety) as well as extrinsic value (monetary increase commensurate with extra skills acquired).

SUPERVISORY PRACTICES

If work redesign is going to be implemented in whatever form, then the role of first-line supervisors must be examined and redesigned as well. There is an intimate relationship between work redesign and supervision (Cordery and Wall, 1985). If the supervisors treat the employees as before (prior to redesign), that is giving little autonomy, feedback or opportunity to use their newly acquired skills, then the whole purpose and effort of redesign is wasted. Oldham and Hackman (1980) mention that when employees' jobs are enriched, their relationship with the supervisors tends to be strained. A common reaction is for supervisors to over-control and become excessively critical.

Unless supervisors' jobs are concurrently redesigned, problems will occur including the elimination of supervisory positions, as occurred in the following case. Wall and Clegg (1981) were involved in a study of FAB Sweets Ltd., a British confectionary manufacturer. The aim of the study was to examine problems experienced by one department. The problems were, "...a high level of labour turnover, six new managers in eight years, production which consistently fell below targets...and high levels of scrap." (p.19). The workers had little input in decision-making, there was limited feedback and low motivation and job satisfaction. There was also rivalry between the production and packing groups. The shopfloor workers were given more autonomy and feedback on how the processing was going, however this enrichment of their jobs left the supervisors with little responsibility. Therefore, the supervisors' jobs needed to be redesigned, however in doing so the recommendations impinged on the manager's job. The end result was the amalgamation of the roles of supervisor and manager. The two positions of supervisor were eliminated.

The job redesign should not stop at the manual and office workers, as this has contributed to the failure of some job enrichment projects. The process should involve the entire organization (Hofstede, 1984).

One of the major roles of the supervisor is to check for and control variance (problems or faults in production). If autonomous work groups are implemented, they will control variance themselves. What should the redesigned supervisor role include? Their role could be one of boundary maintenance and management, and coordination of the work groups' inter-relationship (Cordery and Wall, 1985). As boundary maintainer, supervisor and co-ordinator, they should set clear limits
to the work groups’ discretionary power, they should provide frequent and accurate feedback to the groups as they are in a position to see the overall picture of production and where each group fits in. Supervisors should be encouraged to develop a coaching, consultative, supportive role rather than a controlling role (Cummings, 1978).

**BROADENING SKILLS**

In order for autonomous work groups to be successful in terms of productivity and employee motivation, the broadening of employees’ skills through multi-skilling or cross-skilling is essential. In 1987 ‘cross-skilling’ was introduced at Automotive Glass because the plant required employees to possess and practice a broader range of skills. It was noticed that this redesign feature produced the positive externality of improved labour efficiencies and employees’ motivation. Therefore, the trend towards ‘responsible autonomy’, with its minimal job specification and supervision, continued (Hendry, 1990).

Multi-skilling is "...the process of increasing the skill repertoire of workers in such a way as to improve the ability of an employee to work in more than one narrowly defined occupational speciality." (Cordery, 1989). Cross-skilling has a similar meaning. This is an important redesign feature as it is required if shopfloor employees are to cope with AMT. Australian private and public sector organizations have been prompted into action by reports from the OECD (1986) and the Australian federal government (Kirby Report, 1985), the latter expressing concern at Australia’s narrow skills base. The push for this has not always been motivated by the need to enrich employees’ jobs, but to remain competitive and increase productivity.

From the employees’ viewpoint, multi-skilling may result in the organization adopting broad banding, thus making it easier for employees to move across different areas. It may result in retraining opportunities that did not exist before. It may result in job rotation, giving employees an opportunity to use their newly acquired skills and the accompanying reward.

However, from the employers’ viewpoint, it is also likely to reduce the need for as many employees due to gains in productivity and the breakdown in job demarcations resulting in less need for relief coverage. Employers are likely to benefit from labour intensification, that is a greater proportion of the day being productive (Cordery, 1989).

**ADVANCED MANUFACTURING TECHNOLOGY (AMT)**

A number of studies have been undertaken in the area of AMT and its potential (both positive and negative) for
work redesign. Mueller et al. (1986) reports that some management felt that it was necessary to in fact remove that locus of control away from the shopfloor employees to the specialists. Their justification for this was that it would reinstate their control of the shopfloor in terms of improving performance and quality, and that the automatic machines were too expensive. This is of course a backward step in work redesign as supported by the socio-technical systems approach. The bias is towards the technical system.

This aspect and use (perhaps misuse) of AMT is likely to lead to de-skilling. Blackler (1988) writes initially about the pessimism associated with the growth of AMT, particularly in terms of the limits of choice. He later mentions that this early pessimism was overstated. The supposed massive job losses have not occurred and it has not resulted in large scale de-skilling of employees, if anything it has provided opportunities for gaining new skills. The introduction of AMT has been guided to a large degree by socio-technical interventions, which had provided a balance between the social and technical needs, as Susman and Chase (1986) mention. They also state that AMT has placed a premium on feedback, it has therefore increased the need for shopfloor / supervisor / management communication, due to the speed at which possible mistakes are magnified.

The following case supports the positive aspect of AMT in terms of employee opportunity. Hendry (1990) reports that Automotive Metals began to introduce Computer Assisted Design (CAD) and Computer Assisted Manufacturing (CAM) in 1984. They were aware of the impact this would have on established jobs and were thus prepared to redesign these. They introduced multi-skilling across the firm. For example, operators became loader, labourer, setter, inspector and maintainer. The task of setting changed from pushing the appropriate buttons to programme editing and some programme writing. The firm encouraged and provided training, including sponsoring workers through engineering degrees. They were aware that the work redesign would eliminate some traditional jobs, such as direct operations, labouring and first-line supervisors and reduce the need for as many administrative staff. Therefore, they made a conscious effort to retrain and redeploy the affected workers. An indication of greater motivation stimulated by increasing the task variety, autonomy and feedback is provided in the following expression by a former machinist:

"You don’t do a lot on ‘new tech’, the machine does it all. But you’ve got the knowledge about what its doing, whereas on ‘old tech’ you just pressed a button. You’ve got the satisfaction of knowing, if it does go wrong, you can do something about it." (Hendry, 1990, 38).
EMPLOYEE PARTICIPATION

Finally, there is potential for employee participation in planning, goal setting and decision making, during the normal course of events and during the redesign or restructuring process (Pasmore, 1984). Joint goal setting is a technique which is effective in enriching employees' jobs and meeting production deadlines. If employees are involved with the supervisors in setting goals, they assume the responsibility (they own the goals) of meeting them. The employees should be given regular and accurate feedback on the progress in meeting the goals (Cordery and Wall, 1985).

Little (1988) mentions the importance that the Australian federal government places on employee participation. It was the central topic of the 'Green Paper' on Industrial Democracy and Employee Participation (D.E.I.R., 1986). This paper presented a strong case for increasing participation on the grounds of: economic development, human resource development, improving industrial relations, utilising new technology and development of social justice and equality in the workplace.

This participation could take place by direct participation by employees and by indirect means through union representation. The extent to which they are given the opportunity to participate is closely related to their degree of autonomy.

CONCLUSION

The socio-technical systems approach has much potential and empirical support, and it is the only system for work redesign that seeks to balance the social and technical needs of an organization and its employees. It promotes an organic organizational structure rather than a mechanistic one. It seems able to address and incorporate each important potential for work redesign. It recommends: the formation of autonomous work groups, the revision of supervisory practices, the broadening of skills, methods to cope with AMT and greater employee and union participation. By combining the social and technical systems, this approach tends to add bonuses to the social system and efficiencies to the technical system.

Who is to be the socio-technical designer? It is not to be one individual or a particular set of individuals, it is to be a truly representative group (Cherns, 1976). This group will be advised by a consultant, but the work redesign task will be the group's. The key to the whole work redesign process is participation; with this as the central point, gains can
be made, problems worked through and the real potential for work redesign can be realised.
REFERENCES


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