

Effect of technology on de-skilling



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Critically assess the contention that the introduction of new technologies into an organisation inevitably leads to de-skilling?

As technology becomes ever more prominent in working practices the de-skilling debate is becoming more crucial. The following arguments will look at the effects of new technology with regard to de-skilling from the social deterministic point of view, particularly within the craft and service industries. The social deterministic view is that technology has no impact whatsoever on an organisation, apart from the strategic choices made by those who control the organisation. Marxists believe that the introduction of new technology has negative social connotations, arguing that technology is introduced by management with the sole intention of controlling and de-skilling labour. This perspective has been adopted by Braverman. Managerialists however, favour the positive social impacts of technology, believing it is management choices that determine the effects that technology has.

Braverman's (1974) de-skilling thesis, based on Marxist theories, focused on the Taylorist aspects of breaking down complex skilled work into simple unskilled tasks. This enabled the introduction of technology to replace workers. Braverman also theorised that the introduction of new technology into the workplace, was carried out with the intention of replacing workers or making them work faster, as in the case of Ford's production line assembly. Braverman argued that together, these were the two principal factors which led to the degradation and de-skilling of work. Braverman (1974: 171) states, "The unity of thought and action, conception and execution, hand and mind, which capitalism threatened from its beginnings, is now attacked by a

systematic dissolution employing all the resources of science and the various engineering disciplines based upon it” Braverman argues that the introduction of capitalist equipment is introduced with the intention of de-skilling workers by simplifying tasks in a Tayloristic manner, or by simply replacing workers roles with technology. Much of Braverman’s theory was based upon his own personal experience as a sheet metal worker, and subsequently an office worker. Braverman’s de-skilling theory is associated mainly with the craft and service style proletariat industries. However, skills today can be perceived as something very different to skills in the 19th century. Certainly the jobs today differ greatly from those in the past.

Barron and Robinson (2007) use the more recent example of the catering industry. New technology has enabled the outsourcing of production, provisions and labour. In essence this has lead to the de-skilling of catering workers, through the removal of many of their tasks. For example, chefs in many of the hospitality industry sectors are no longer allowed to demonstrate individuality and creative flair, but instead produce a standardised product. . “ Standardisation, or industrialisation, in foodservice, aims to guarantee consistent output while controlling the production process. Typically, this involves the replacement of skill with technology.” (Barron and Robinson, 2007). Here the Tayloristic aspects of Braverman’s de-skilling thesis are evident as the production process is broken down into simple controlled tasks, whereby new technology can replace workers. This process may be even more evident in multi-national corporations, where the same standard of product and service is expected worldwide.

The Tayloristic principles adopted by many fast food restaurants, particularly noticeable in McDonalds, have led to repetitive and un-skilled tasks (Ritzer: 2004). Ritzer argues that many of these have been made possible by developments in technology. Braverman's theory is demonstrated perfectly here. A Tayloristic management style coupled with the introduction of new technology has led to the simplification of jobs and ultimately their de-skilling. Ritzer also examined how the principles implemented in McDonalds were becoming more apparent in other sectors of society, such as call centres, supermarkets and even hospitals.

The development of technology alongside Tayloristic management principles has meant it is possible for companies to outsource call centres, from Western European and American countries to India and other developing third world countries. Marxist theorists view the introduction of capital as a way for managers and companies to control and de-skill labour by reducing bargaining power and use value (Corbett: 2009). The outsourcing of call centres is removing jobs from employees in Western Europe and America. Employees and knowledge are replaced by technology, so diminishing the bargaining power of the labour force. Outsourcing also employs lower skilled labour which translates to reduced wages and increased profits. Hence, the capital introduced has been employed to control and de-skill workers.

Marxists have a radical perspective of how workers should accept the means and ends of a firm, arguing that workers should resist against the firm. They argue that the introduction of capital is exploiting workers as a higher value product is created, but wages are generally not increased (Roberts: 2009). Profit made by workers is disproportionately divided between employees,

managers and owners and as such a conflict of interest arises (Roberts: 2009).

Braverman's hypothesis and Marxists views on social determinism are not without detractors or limitations. The social -deterministic managerialist perspective of new technology holds the view that technology has no impact whatsoever on de-skilling. The decisions to de-grade or up-grade the skill of workers are the strategic choices of those who control the organisation. This perspective is supported by the ' New Technology Power Loop', which demonstrates that the design and choice of new technology, that is the strategic choices of management, can shape the control of a workforce. This in turn defines the level of expertise needed for implementation. The social-deterministic managerialist perspective holds the view that the expertise of the workforce has an influence over the design and choice of the technology at the beginning of the loop. Looking back to the example Barron and Robinson use of the hospitality industry it can be said that it is managements decision to standardise products and menus through the simplification and de-skilling of jobs and the subsequent introduction of new technology.

Wood (1987) considers the decisions of management regarding the introduction of technology, " Certain tasks may be de-skilled in content because of technological changes, yet this may not amount to the de-skilling of any particular individual. Unskilled men may be allocated to these jobs, which for the purpose of argument may require a higher level of skill than they previously exercised, and skilled men who occupied the job prior to the change might be moved to superior skilled jobs, for example, the maintenance of new technology." Here Wood argues that, with the right job

reorganisation technology can lead to the upgrading of skill. Atwell (1987) examines the work of data entry clerks in an insurance company. These are relatively unskilled workers who are able to enter the insurance claims onto the system and then pass them onto the examiner to process. In this example the examiners job is upgraded as the lower skilled tasks have been removed. The data entry clerks have also gained new skills as the introduction of technology has enabled them to begin entering insurance claims, a more highly skilled task than they were previously completing. The de-skilling effect, which the introduction of new technology can bring, can be revoked by management's strategic choices. The introduction of new technology, and the de-skilling effect it may or may not have, cannot be fully divorced from the context in which it occurs.

The social-deterministic model also supports the theory that the successful introduction of new technology can be reliant on the tacit knowledge and skills of employees, as the choice of technology made by managers is affected by the expertise of employees. Wilkinson (1982) uses the example of the optical lens manufacturer. When new technology was introduced, the highly skilled staff were retained in order to exploit their knowledge and experience of the production processes. This indicates that not all skills can be degraded with the replacement of workers with technology. Jones and Wood (1984) also argue the importance of existing working knowledge and tacit skills to the effective implementation of new technology. As a result, it is impossible to say that new technology completely de-grades workers skill as the tacit knowledge that many have would still be regarded as a skill. Furthermore, the social-deterministic technology power loop model suggests

that the tacit knowledge is necessary for successful introduction of new technology. Although some aspects of a workers job may have been de-skilled the worker has the ability to enrich their job with other tasks, perhaps more complex than their prior job, thus wholly up-skilling their job.

Managerialists support the social -determinism theory and “ talk of technology as ‘ enabling’ organisational change and improvements” (Corbett, 2009) Fincham and Rhodes (2005 need to check whether this is a direct quote and add page number) stress that “ technological development should be seen as a positive force, as part of the progressive elimination of alienating working conditions and their replacement with work which is more socially integrating is happening more or less as part of industrial evolution”. In the instance of outsourcing, although the introduction of new technology is initially de-skilling, it is removing the lower skilled jobs from the economy and making way for more highly skilled jobs to be created as part of the economic development. Therefore, although in the short term technology has increased job mobility by providing temporary job cuts, it can have positive effects, such as en-skilling, as workers learn new trades. New technology may well have had an effect on the increasing number of career changes, but if this is leading to workers gaining new skills in new careers then surely it is re-skilling (the growth of wholly new skills) in the long term. Littler (1982, 1990) and Littler and Salaman (1982) critiqued Braveman’s work arguing that “ if industrial capitalism itself can create new skills there can be no simple de-skilling process” Fincham and Rhodes (2005: 396).

The managerialist perspective holds the view that, “ technology has no impact on people or performance in an organisation independent of those

who would use it and the responses of those who have to operate it” (Jones, 1982: 199). This suggests that the introduction of technology has no impact on a firm, unless a resistance against technology is made by those who have to use it or operate it. Managerialists have a unitarist perspective on workers co-operation with management decisions. They believe that management should be able to make strategic choices that benefit the firm and that will have the desired economic outcome. Workers, from this perspective are required to co-operate with the means and ends of the firm as management will have the workers best interests at heart. The means of a firm relates to how work is organised, and the ends, the creation of private profit (Roberts: 2009). In relation to the introduction of new technology, the managerialist view is that workers should co-operate with the strategic choices made by firms. It can however, be said that it is un-realistic to presume that managers always have employee’s best interests at heart. From this point of view a Marxist approach can be adopted, holding a negative opinion of the social impact of technology. They believe that management introduce capital with the sole intention of control and de-gradation of working practices and skill.

Thus to conclude, the managerialist social-deterministic view that technology can have a positive social impact on working practices, disproves the contention that the introduction of technologies inevitably leads to de-skilling. Management’s strategic choices, regarding job re-organisation, job numbers, and the type of technology employed, will always have an effect on the level of de-skilling which occurs. Subsequently, the level of de-skilling cannot be divorced from the context in which it occurs. Many factors can revoke the level of de-skilling, be it the tacit knowledge of existing

employees or management's re-organisation of job roles once technology has been introduced. Furthermore, managerialists hold a unitarist perspective of how workers should re-act to change. The underlying belief that managers have workers best interests at heart would encourage employee's co-operation with the means and ends of a firm. In addition, managerialists view the introduction of technology as a method of enabling change and economic development within an organisation, and should be viewed as a positive force.