

# High Performance Work Strategies: Empowerment Or Repression For The Working Class?

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## ABSTRACT

*A brief overview of work organization from pre-industrial times to today is presented. The importance of lean production and just-in-time inventory (JIT) as high performance work organization techniques in manufacturing assembly operations is highlighted as important business strategies for firms competing in the global auto industry. Lean production and JIT strategies, when properly implemented, positively impact the need for manufacturing flexibility and customer demands for high quality and short delivery time. However, there is growing concern that these strategies are having an unintended and negative impact on worker well being. Recent empirical work on the lean production and JIT in auto assembly plants is presented in light of its impact on workers. In addition, an assessment is made as to whether these strategies empower or repress members of today's working class.*

## WORK STRATEGIES: AN HISTORICAL PERSPECTIVE

The beginning of the industrial revolution is widely acknowledged as coinciding with the publication of the book by Adam Smith in 1776 titled *The Wealth of Nations*. Smith discussed the basic organization of work (i.e., a detailed division of labor that formed the basis for functional specialization of tasks) that was starting to be adopted by the factories toward the latter part of the 1700s. Prior to that time, the manufacture of goods was primarily performed by highly skilled craftsman who assumed responsibility for virtually all stages of the production process. Pre-industrial work was typified by workers exercising high levels of problem solving, discretion, skill, and control over the methods and pace of their work. The basic nature of work organization began to change with the advent of factories that made extensive use of machinery in manufacturing operations. As the process of industrialization unfolded, the dominant role once occupied by skilled craftsman diminished, along with their opportunities to exercise creativity, skill, autonomy, and control over their work.

Toward the latter part of the 1800s the work practices in manufacturing environments were greatly influenced by Frederick Taylor's approach to work organization. Taylor's approach to work organization became popularly known as scientific management. In essence, industrial engineers, adopting Taylor's approach, established work practices that essentially eliminated workers' autonomy and control. Under scientific management, decision making was transferred from workers to managers as much as possible; not even the smallest work detail was left to the individual worker. By prescribing in exact terms how workers were to perform their jobs, and by providing the right tool for the right job, productivity gains of up to 400% were achieved when scientific management principles were correctly applied to the work organization of industrial jobs (Bartok & Martin, 1998). In the early 1900s, Henry Ford took work organization to the next level through his innovative use of mechanized assembly whereby the average assembly time of a chassis and motor decreased more than 800 percent (Drucker, 1973). Owing to Ford's success in implementing the principles of scientific management, the organization of work in the U.S. auto industry has been referred to as the Fordist model during most of the 1900s.

During the past decade, the organization of work in the global auto industry has undergone further evolution. The rigid Fordist hierarchy, based on the principles of scientific management, has been giving way to more flexible forms of

work organization to attain further increases in manufacturing efficiency. As Babson (1995) observes, there are many management buzzwords that have been used in conjunction with the new forms of flexible manufacturing (e.g., advanced manufacturing techniques, just-in-time inventory systems, lean production, reengineering, and synchronous manufacturing). The common element that integrates these strategies is management's desire to achieve greater productivity in the face of increased global competition by seeking an improved form of work organization where worker involvement in decision making is a key feature. Providing workers with the necessary training and skills to meaningfully participate in decision making is a wide departure from traditional management practices based on the principles of scientific management inherent in the Fordist model of work organization. Wood (1989) suggested workers be trained to develop multiple skills so they can reengineer their own jobs to increase functional flexibility, and thereby improve workplace productivity. Perhaps the work of Womack, Jones, and Roos (1990) best describes this emerging form of work organization under the rubric of "lean production." As a form of work organization "lean production" is indeed lean "because it uses less of everything compared with mass production -- half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to produce a new product in half the time" (Womack, Jones, and Roos, 1989: 13). An important element of lean production is a just-in-time inventory system whereby inventory costs can be substantially reduced and the work associated with maintaining unnecessary inventory eliminated.

### **WORK ORGANIZATION AND WORKER WELL-BEING**

The evolution of work organization in industry has been driven by the desire to attain increased levels of productivity. However, the types of work organization that have evolved in industry are often criticized for the negative impact they have on workers. The influence of the industrial work environment on workers' health and safety has been recognized since the beginning of the industrial revolution. The relationship between work organization and worker-well being was recognized as early as the mid 1800s when Karl Marx argued those who labor under the principles of mass production suffer alienation from their work due to a separation of the worker from his work. Twentieth century commentators, such as Erickson (1986), still argue that the work organization of traditional manufacturing setting results in workers being alienated from their work for two primary reasons: 1) machine dominated work separates the work of the hand from the work of the brain, and 2) workers became separated from their co-workers when their work makes them so tired and competitive that their interpersonal relationships with others suffer.

For much of the 20th century occupational accidents and disease were associated with unhealthy working environments resulting from workplace toxins, unsafe work practices, and poorly engineered tools and machines (Levi, 1983). However, there has been longstanding concern that worker well-being is not limited to such obvious types of physical hazards.

Even as Taylor's ideas were being widely adopted in industry, it was observed that the implementation of scientific management often made jobs overspecialized. This overspecialization resulted in workers being resentful, bored and the quality of their work and work-life suffered as a result (Bartol and Martin, 1998). The Fordist model of work organization also was criticized for the negative effect it had on workers' well-being. The Detroit doctors in the 1930s believed that the stressful Fordist working conditions were bad for one's health (Karasek and Theorell, 1990). Such working conditions were seen as causing the "Ford Flu" which was described as "an illness brought on by the unique combination of heavy workloads, severe job insecurity, and limited control over the pace and rhythm of work" (Lewchuck and Robertson, 1997:39).

During most of the 20th century the boring, monotonous, and stress-producing industrial jobs were generally accepted by society as the price that had to be paid to achieve high levels of productivity and the concomitant high standard of living that accompanies such productivity. However, an emerging form of work organization in the auto industry makes use of a lean production system using just-in-time inventory practices. Advocates of this new form of work organization see it as a way to relieve the negative consequences on workers so long associated with scientific management and the Fordist model of work organization.

A gradual shift in the focus of occupational health research has occurred during the past decade. Researchers have begun examining the impact of work organization on employee well-being within the broader context of organizational

health (Cox, 1988; Rosen, 1991; and Murphy, 1996). Organizational health comprises two factors: 1) the performance of the organization (e.g., profit, productivity and competitiveness) and 2) worker health/satisfaction outcomes (e.g., the worker's physical and mental health and worker job satisfaction) (Jaffe, 1995). An emerging concept of organizational health has recently appeared under the rubric of Healthy Work Organizations (HWOs) (Murphy, 1995; 1996). A "healthy work organization" is defined as "one which maximizes the integration of worker goals for well-being and company objectives for profitability and productivity" (Sauter, Lim and Murphy, 1996). Healthy Work Organizations (HWOs) are important in the development of a national strategy to prevent the negative effects of occupational stress on employee well-being (Quick, Murphy and Hurrell, 1992; Sauter and Murphy, 1995). HWOs provide a balanced production equation; balanced from the perspective that both the needs of the organization and those of the employees are in equilibrium.

### **LEAN PRODUCTION, JIT, AND EMPLOYEE WELL-BEING**

There have been several studies on how the high performance work strategies of lean production and JIT affect the well-being of workers in the auto industry. Lewchuck and Robertson (1996) studied 1,670 workers from sixteen auto components supply plants to assess how lean production impacted worker empowerment and quality of work life. The results from this study suggested that lean production had a negative effect on operative level employees. Overall, this study characterized the impact of lean production on workers' well-being at plants where lean production is employed as significantly worse on most of the measures of working conditions (e.g., hard to get time off to leave work station; level of surveillance by management of workers was increased; not enough time to perform assigned work; too fast a work pace; not enough people to do the work) and empowerment" (Lewchuck and Robertson, 1996).

Lewchuck and Robertson (1997) conducted another study that examined the relationship between lean production and worker well-being. Self-report data were collected and analyzed from 2,424 auto assembly workers from nine different work locations that were in various stages of implementing lean production work practices. The expectation being promoted by management at facilities implementing lean production was that workers were to become more empowered (e.g., have more control over how to design their jobs and participate in day-to day problem solving). The results from this research showed that lean production does little to empower workers or to improve the quality of their work life (e.g., workers had difficulty in varying the pace of their work or to change things they did not like about their work). These researchers concluded that management's goal in implementing of lean production was to gain greater control over work processes, and that worker empowerment may be counterproductive to that goal.

Parker, Wall, and Myers (1995) studied the effects of JIT on employees' jobs and their well-being. Although only 35 employees were studied in depth, these researchers found that when employees were involved in implementing JIT-related initiatives (as opposed to having such initiatives forced on them unilaterally by management), that the resultant jobs were less physically demanding and experienced greater empowerment when they were not involved in work organization changes relating to JIT.

Jackson and Martin (1996) conducted a longitudinal study on the impact of JIT on employee well-being that included 83 employees. In essence, these researchers conducted surveys on a variety of measures of worker-well being (e.g., worker control over work timing and work methods which served as a surrogate measure of worker empowerment, and job satisfaction) and related these to changes in work organization related to JIT implementation. The research results support the claim that JIT does not empower workers (JIT reduces worker control and increases production pressures) nor does it increase the quality of their work life (e.g., job satisfaction).

Angelis et al (2004) gathered information from 1,391 factory workers representing across-section of industries in the UK. This study showed that "inappropriate tools, poor ergonomic design and lack of control over their own working hours were some of the things workers found particularly stressful. One of the more surprising results was that while lean methods bring about increased stress in workers in the short term, in the longer term the stress levels fall back again.

## CONCLUSION

Based on the research that was reviewed on lean production and JIT, neither of these high performance work strategies has been empirically demonstrated to improve worker well-being. Rather, it seems that when management fails to meaningfully involve employees in implementing a high performance work strategy like JIT, or seeks as its primary objective to gain greater control over work processes via lean production, that the well-being of workers will suffer. In such instances, new forms of work organizations that employ lean production and/or JIT may be viewed as repressing, rather than empowering members of today's working class.

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