Article

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New Jobs, New Workers?

Organizational Restructuring and Management Hiring Decisions

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Recent studies of work have argued that organizational restructuring and the introduction of technology are altering the nature and experience of work. In this paper, we examine whether recent change has affected managerial perceptions of the characteristics and abilities required of workers. Drawing on interviews with human resource managers in three industries (chemicals production, transportation equipment manufacturing, health services) in Southwestern Ontario, we conclude that management across these industries is indeed seeking a "new" kind of worker, and is placing new demands on their workers. Implications of these changes for employment and for workers are discussed.

Organizations as workplaces are undergoing substantial change. In recent years, management in large and small organizations has committed to "restructuring": altering their internal organization, redefining jobs, and changing expectations about employment. The ideology of restructuring often involves the adoption of new technologies, and these technologies themselves have an impact upon employment within organizations. They

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alter the demand for labour and change the scope of jobs (Rifkin 1995; Dunkerley 1996). Moreover, they facilitate the reduction of organizational hierarchy and the elimination of middle-management jobs (Leicht 1998). Downsizing is another key aspect of the restructuring trend. Organizations are cutting back on the number of full-time workers they employ. Those workers who remain employed in the organization work in restructured jobs, quite different in nature from those they used to hold.

While studies of the nature of organizational and occupational change are numerous, there has been less discussion of the impact of these management strategies on the demand for labour (Dubé and Mercure 1999). Will recent changes to management's thinking about the organization of work lead managers to change what they look for in a worker? Do these "new" jobs require "new" workers?

In this paper, we draw upon interviews with human resources managers in three industries in southwestern Ontario to evaluate their perceptions of the nature and extent of restructuring occurring in their industries, and to examine what skills and characteristics managers believe are now required for work in restructured organizations. We consider whether managers appear to be altering their ideas about what makes a good worker. Moreover, we discuss the implications of these changes for employment and for workers.

ORGANIZATIONAL RESTRUCTURING AND CHANGING WORK

The drive to restructure organizations has become a topic of much research and discussion. There is considerable consensus that recent changes in technology, work organization and employment have implications not only for the present and future experience of work, but also for social inequality and social stability (Rifkin 1995; Dunkerley 1996; Moore 1996; Glenday 1997). While the numerous studies on approaches to organizational restructuring all have a slightly different perspective on the issue, the trends they identify are fairly consistent. We will discuss four of the major themes highlighted in the literature.

First, there is a strong commitment to increasing the use of technology. Downsizing is facilitated by replacing people with technology (Dunkerley 1996; Rifkin 1995; Robertson and Wareham 1993). Technology requires a different use of workers, different workers with different skills, and it facilitates the elimination of middle-management jobs (Leicht 1998; Rifkin 1995; Robertson and Wareham 1993; Rinehart 1986).

A second important trend is the adoption of Japanese-style management techniques of lean production. Lean production involves using

technology and reorganizing jobs and production processes to produce more with less labour and fewer resources (Rifkin 1995). It has as its goal to improve output continually while reducing labour and resources. The adoption of lean production is generally associated with a series of concrete changes which include the reduction of inventory and adoption of "just-in-time" delivery systems, organizing workers into work teams, broadening the scope of workers' duties, encouraging workers to participate in the smooth running of the organization by finding ways to speed up their own work, and hiring as few workers as possible, while insisting that existing workers are steadily busy during their working day (Rifkin 1995; Dunkerley 1996; Rinehart, Huxley and Robertson 1997; White 1997; Armstrong et al. 1997). The adoption of lean production methods have spread from manufacturing to the services sector, and variations have been employed in public sector organizations such as health care institutions (Armstrong et al. 1997; White 1997).

Third, mangers seek to broaden jobs and to make work more intense. Workers are increasingly being asked to do more work than in the past, and often, more varied work (Rinehart 1986; Rinehart, Huxley and Robertson 1997; Rifkin 1995; Robertson and Wareham 1993; Dubé and Mercure 1999). While many organizations describe this as "multi-skilling", suggesting that workers are learning and exercising more skills in their work than in the past, most researchers suggest it is better described as "multi-tasking". Workers are doing more work, but it is by no means clear that they are exercising more skill at work (Rinehart 1986; Rinehart, Huxley and Robertson 1997; Shaiken, Herzenberg and Kuhn 1986). Recent research suggests that while some "reskilling" may be occurring, it is accompanied by deskilling and elimination of jobs (Bernier 1999). The impact of skill change even on individual jobs is complex. Job restructuring and multi-tasking has also led to increased demand for more flexible workers (Dubé and Mercure 1999).

Finally, there is a belief that organizations must become "flatter". Workplaces will become less hierarchical as middle-management and supervisory positions are eliminated (Rifkin 1995). While some organizations have retained their hierarchy, they have downsized to become "thinner" — they have fewer workers at every level in the hierarchy, especially in the top layers. Organizational restructuring is also associated with changes in the job mix, occupational distributions, and skill mix within organizations. While the nature of these latter changes is variable, it often takes one of two directions. Where work is labour-intensive — as in caring for patients in hospitals — management attempts to cut back on high-priced, skilled labour, replacing it, where possible, with less-skilled labour (Armstrong et al. 1997; White 1997). Where work is more capital-intensive

and technology driven — such as in certain manufacturing organizations — the trend is towards employing fewer less-skilled workers (typically unionized), and employing more technological specialists and highly-educated workers (non-unionized) (Robertson and Wareham 1993; Shaiken, Herzenberg and Kuhn 1986).

These changes associated with organizational restructuring have had a substantial impact upon workers. Work has become less stable and less permanent (Moore 1996; Glenday 1997). Moreover, there is evidence that people who do work full time are being asked to put in more hours, and work harder while they are at work (Rinehart, Huxley and Robertson 1997; Rifkin 1995; Armstrong et al. 1997).

Organizational restructuring is also altering the kind of work that is available and the kinds of skills and abilities demanded of workers. In particular, the literature has stressed, technologically knowledgeable and sophisticated workers are best placed to take advantage of these changes in work (Dunkerley 1996; Rifkin 1995; Robertson and Wareham 1993). Those with little knowledge of technology are at risk of being squeezed out of the economy altogether (Dunkerley 1996).

In our study, we looked more closely at how new management theories of work organization influence the perceptions of managers about the organization of work in their companies and the skills and abilities that are needed in these new organizations. Have efforts to change the nature of work altered the characteristics that managers and employers look for in a worker?

METHODS AND DATA

Data for this analysis were drawn from a series of studies of employment trends in selected industries in Southwestern Ontario done by McQuillan and associates (1997, 1998a, 1998b) for Human Resources Development Canada. The data used here are drawn from studies of employment in health care organizations in London, Ontario, and transportation equipment manufacturing organizations (primarily automotive assembly and automotive parts producers), and chemicals producers in Southwestern Ontario.

For each study, human resources specialists in organizations within the three industries were interviewed either in person or over the phone about employment within their organization and their industry as a whole. The primary goals of the studies were to discover the employment needs of organizations in these industries, and to identify the skills and characteristics that workers would need to gain employment. In each firm, we

spoke to the person in charge of hiring workers: typically, human resource managers, but some were general managers, or managers in charge of recruitment. In the interviews, informants were also asked to discuss any recent or ongoing changes in the nature of employment and work within their firms. Specialists in human resources may be more attuned to newer management philosophies and may be inclined to overstate the degree of change occurring in their firms. However, our focus is on how their perceptions of the needs of their establishments influence hiring patterns.

Nineteen interviews were conducted with human resources specialists within organizations providing health services in London. The interviews in the health sector included human resource directors at major hospitals as well as managers at small clinics and nursing agencies. Given the diversity of respondents, we have not quantified the responses from the health sector. In the transportation equipment sector twenty-one interviews (out of thirty-two contacted) were conducted with informants in organizations involved in automotive assembly, automotive parts (original equipment and aftermarket) and other related products like aircraft and specialty vehicles. In the chemicals sector, twenty-three human resources managers (out of twenty-eight contacted) were interviewed about employment in Southwestern Ontario both in the petrochemicals industry and pharmaceutical, agricultural, soap and cleaning, and "other" chemicals industries. In all three sectors we attempted to identify and contact all large firms in the region and a cross-section of medium-sized and smaller firms.

The length of interviews varied widely, from as little as fifteen minutes in length to as long as two hours. The interviews were semi-structured, and they were conducted either over the phone or in person at the office of the informant. We also spoke with educators, trades people, and others associated with these industries to increase our knowledge of employment, employment trends, and skill demands within the industries. All of our informants were able to provide a great deal of insight into how organizations had been restructured, how jobs were being altered, and what new skills and credentials managers were demanding of new and future workers.

In this paper we are concerned with the changes managers believe to be occurring in the nature of work in their organizations. The data do not provide information on what skills are actually required on the job; what they do provide is information on *management perceptions* about skills and employment, and how these perceptions influence their hiring decisions. By examining these perceptions about work and skill across three different industries, we may gain insight into how changing management theories shape both the organization of work and the selection of workers. While much of the literature on organizational restructuring has given primary attention to work in the manufacturing sector, our analysis will

show that ideas built around restructuring extend into other industries as well. In the sections that follow, we consider the nature of organizational restructuring experienced by firms in the three industries and, then, how this restructuring seems to have altered the qualities that managers seek in workers.

ORGANIZATIONAL RESTRUCTURING

Our first goal was to explore managers' views on the changing organization of work in their companies or institutions. A large majority of respondents in all three sectors reported that substantial efforts at restructuring were occurring. While some had experienced significant change in the past few years, others were in the midst of downsizing and reorganizing, and others expected to be changing some time in the near future. Sixty-five percent of respondents from the transportation equipment, and seventy-five percent from the chemicals sector mentioned that they had been experiencing some substantial organizational and/or occupational change recently, while all the respondents in health care sector referred to the effects of the restructuring of health care. The nature of this restructuring is similar across the industries, and typical of restructuring as described in the literature. Managers emphasized three aspects of change: downsizing, the broadening of jobs and intensification of work, and the creation of new divisions of labour and organizational hierarchies (see also Statistics Canada and Human Resources Development Canada [HRDC] 1998: 16).

TABLE 1

Organizational Restructuring in the Transportation Equipment and Chemicals Production Sectors

	Organizational Restructuring		*Downsizing*		*Work Intensification/ Broader Jobs*	
	%	*N*	%	*N*	%	*N*
Transportation Equipment	62	21	38	13	77	13
Chemicals Sector	71	21	47	15	87	15

Downsizing

Although our study did not directly ask about recent organizational downsizing, a number of respondents volunteered that they had recently

downsized or would be downsizing soon. Of all chemicals sector managers interviewed, twenty percent mentioned downsizing, as did thirty percent of their counterparts in the transportation equipment sector. Looking at only those firms who openly stated they were or had been restructuring, the percentages are slightly higher: thirty-eight percent of transportation equipment managers and forty-seven percent of chemicals managers volunteered that they had or were in the process of downsizing their work force. In the health-care sector, all hospital officials interviewed drew attention to the widespread effects of budget cuts and the downsizing that followed. But interestingly, even in those organizations not involved in downsizing, respondents emphasized that keeping employment down was an organizational goal. In both the transportation equipment and chemicals production industries, recent increases in shipments and sales have not been accompanied by commensurate increases in employment. This finding is in keeping with trends noted in the literature. For example, Rifkin (1995) argues that through restructuring and the adoption of new technology companies have been able to increase productivity while at the same time reducing their workforce (see also Dunkerley 1996).

While downsizing is occurring in all three sectors examined, the nature of this trend differs slightly from industry to another. For instance, in health care, public sector institutions are experiencing substantial downsizing. As well, employment in health care is shifting from the public sector to the private sector. Downsizing in health care also seems to be affecting some employees more than others. Nurses have been particularly hard hit by downsizing (White 1997), but other occupations in the hospital sector including lab technicians and service personnel such as orderlies were also being reduced.

In the transportation equipment sector, lean production has become popular. Companies have been restructuring to continually increase their output, while decreasing the size of their labour force. Employment in this sector has also been volatile in recent years. In addition to a general downsizing trend, the industry has also been hit by many plant closings that result in even more substantial job loss. While some smaller firms (particularly those producing automotive parts) are expanding, or just being established, job gains in these firms cannot make up for the jobs lost through plant closings and downsizing in larger firms. Given the global nature of production in this industry, plant closings are a reality that local producers are constantly concerned about, and managers expressed insecurity about their organizations' future prospects. Many felt that they had to compete for survival not only with other organizations within the same field, but with other production facilities within the same company.

In the chemicals industries, there have been substantial lay-offs in recent years, particularly within the petrochemicals sector of the industry.

Downsizing trends are still ongoing. Within the industry there is an overall emphasis on keeping employment down. However, fewer firms feel they are threatened with possible closure than in the transportation equipment sector.

Although each of the three industries differs slightly from the others in the exact experience of downsizing and job loss, managers in all three industries viewed minimizing the use of labour as a critical goal. Moreover, in all three industries, downsizing is associated with a number of other changes in organizational structure and traditional divisions of labour.

Work Intensification and Broader Jobs

Work intensification and the broadening of job descriptions typically accompany substantial organizational downsizing. Informants in all three industries argued that jobs were broader and that work was generally more intense now than in the past. In eighty-seven per cent of the chemicals firms that were restructuring, and seventy-seven per cent of such firms in the transportation equipment sector, managers stated that work was now broader than it had been. Given that we did not directly ask respondents about whether work was broader, but simply asked if/how work had changed recently, these percentages are remarkable. Managers in health care also stated that workers are now being asked to do more, and more varied work than in the past. In all three industries, employers frequently expect more overtime work of their employees, and they expect workers to complete work tasks, even if this means working past regular working hours.

To summarize, job redefinition generally accompanied organizational downsizing in the firms we studied. These different aspects of organizational restructuring also generally alter divisions of labour and hierarchies within organizations.

Changes in Organizational Structure

Many of those managers interviewed stated that their firms had recently undergone, or were currently experiencing, some organizational and occupational restructuring. In the chemicals sector seventy-five percent of managers stated that their firms had been/ were restructuring. One other firm, created a mere eight years ago, already had the kind of structure older firms were moving towards. In the transportation equipment sector, approximately sixty-five percent of managers said their firms were experiencing such changes. Managers in the major hospitals drew particular attention to the wide-ranging changes taking place in health care, while

those outside the hospitals saw themselves as responding to the changes that resulted from hospital restructuring.

The main restructuring trend is towards "flatter" or less hierarchical organizations, and "thinner" organizations, whereby organizations keep most of the levels in their hierarchies, but thin the ranks of workers at each level. Reducing the amount of hierarchy in an organization necessarily entails some job reorganization. There are fewer job ladders, and much shorter job ladders. Jobs are broadened in scope. Workers take over some of the tasks that used to be performed by supervisors and superiors, as well the tasks that were performed by others prior to downsizing. Restructuring has encouraged a team approach to production. About ninety-five per cent of managers interviewed in both the chemicals sector and the transportation equipment sector stated that working in teams was important within their companies. Such a team approach has also been recently emphasized in health care.

Overall then, our respondents stressed that their organizations were in the process of undergoing substantial change. Many expected this change to continue in the years to come. The next question to address is how this occupational and organizational change affects their perceptions of the characteristics and skills needed in new workers.

WORKER CHARACTERISTICS AND SKILLS

A significant majority of our informants, seventy-five percent in the chemicals industries, and sixty-five percent in the transportation equipment sector, stated that they believe new skills and/or occupations are gaining importance in their firms. The relatively low percentage of firms in the transportation equipment sector who stated that skills or occupations are changing is the result of the diversity of this sector in our sample and the presence of many smaller firms producing specialty vehicles. Looking at only firms that were reorganizing, fully ninety-two percent of transportation equipment sector respondents and eighty percent of chemicals sector respondents stated that they require new skills from both existing and incoming workers. Thus, a large majority of respondents in each sector for which we have data said that they look for different abilities and qualities from their workers than they did in the past. Health care managers also express these sentiments. While to some extent, the skills and characteristics required from workers vary across organizations and industries, many appear to be commonly in demand. In particular, managers stress the importance of hiring workers who are educated, willing to learn, flexible, and able to work with technology. The strong emphasis on flexibility echoes the findings of Dubé and Mercure (1999) for four industries in Quebec.

Managers also desire workers who possess a number of "soft skills" currently valued under present managerial philosophies, including the ability to work with and communicate with others, the ability to handle a diversity of tasks, and some problem- solving skills. We will discuss each of these skills in turn.

Education/Training

Many of our informants argued that they now require higher levels of education and training from incoming workers than they did in the past. A majority of firms in both manufacturing industries stated that they require more education and training from new workers. These same firms also generally prefer to hire workers with previous experience. Jobs in manufacturing that used to require less than a high school education now typically require a high school diploma; jobs that formerly required such a diploma now demand a college diploma or university degree.[1] Moreover, many research jobs in chemical firms used to require only a university degree; however, managers stated that their most recent hires for these positions held masters and doctorate degrees. The health care sector has, of course, always placed great emphasis on credentials, but the changing organization of work has raised requirements even for those in such service occupations as orderlies.

There are a number of reasons why education requirements are increasing. First, there has been a certain amount of credential inflation. Companies often hire the most educated workers available to them, and given the fact that there has been a surplus of workers at virtually every skill level in recent years (Sharpe 1993 in Livingstone 1997), educated workers end up applying for jobs they are technically overqualified for. As one manager for a chemicals manufacturing firm explained, his company only requires a high school diploma for the basic production job of process operator. However, many of their new hires have a college or university education, and some have professional degrees and PhDs. The surplus of candidates with higher levels of education sometimes encourages companies to raise their "official" education requirements. Even if they do not do so officially, education requirements are often raised unofficially, as those with better education are preferred.

Managers regularly cited a second reason for increased education standards: they believed jobs require a more educated and knowledgeable

1. The increasing education qualifications for even low-skill jobs contrasts with Dubé and Mercure's (1999: 38) conclusions for low skill workers in Quebec.

TABLE 2

Management Perceptions of the Changing Skill Requirements of their Workforce

Industry	*Percentage of Managers in the Chemicals and Transportation Equipment Industries who Reported Seeking Various New Skills in Workers*									
	New Skills in General	*Increased Education*	*Flexibility*	*General Knowledge of Technology*	*Specialized Knowledge of Technology*	*Soft Skills*	*Communi-cation*	*Multi-task*	*Trainable*	*N*
Chemicals (all)	75	55	75	90	80	100	95	53	80	20
Chemicals Restructuring	80	67	87	93	87	100	100	80	87	15
Transportation Equipment (all)	65	55	50	90	85	100	90	53	74	20
Transportation Equipment Restructuring	92	54	100	92	100	100	100	90	54	13

worker. In particular, education was taken as an indicator of an individual's ability to learn and adapt. Many managers suggested that their current workforce had not adjusted to restructuring and technological change as well as management had hoped. It was sometimes said that existing workers were slow to learn, and that they lacked the literacy skills to keep up with written training and safety procedures that frequently changed with rapid technological change and changes in job duties.[2] As many mangers commented, they needed workers who were "continually able to learn new tasks, learn more tasks, and learn them faster".

Many organizations also wanted to have workers who were well-trained, and who had been trained prior to being hired. While a large number of organizations performed on-the-job training, this training was largely in the areas of health and safety, and in some simple on-the-job tasks that composed part of a worker's job description (see also Statistics Canada and HRDC 1998: 30). Increasingly, employers expected to have many of their workers come to them already trained, and preferably with a great deal of job experience. This was particularly true in the transportation equipment sector, where fifty-three percent of companies stressed (without being prompted) that they preferred to hire workers with experience and previous training. While generally this prior training involved previous job experience, many companies were also willing to hire graduates from college co-operative programs, especially if they had the relevant practical experience in job placements. A number of companies seemed to be less willing to do this training themselves. As Moore (1996) points out, companies are reluctant to invest money in providing their workers with "portable" skills, fearing that they may not accrue the full benefits.

This strategy is particularly salient in a climate where downsizing, and therefore work instability, is common. In this climate, industry is working together with local colleges to establish programs that train graduates according to their needs and specifications, without organizations having to bear the full cost of such training. All three industries have established co-operative programs with local educational institutions. These programs replace some of the training that individual firms formerly provided to their workers "in house."

Flexibility

Human resource managers in our study also stressed the need for "flexible" workers. Seventy-five percent of informants in the chemicals

2. The focus on literacy is striking in light of the results of Statistics Canada and Human Resources Development Canada's (1998: 29–30) Workplace and Employee Survey finding that few firms include literacy skills in their training programs.

sector — and eighty-seven percent of those in restructuring organizations — mentioned they desired their workers to be flexible. In the transportation equipment sector fifty percent of managers, and all managers in firms that were restructuring, stated they wanted a flexible workforce. By "flexible", managers mean a number of different things. First, managers want workers who will be flexible in their skills and in terms of the work that they do. Flexible workers have the ability and skill to do a variety of work tasks. Working in teams, workers are typically cross-trained, and they need to be flexible enough that they can do all the different tasks for which the team is responsible. Moreover, managers want workers flexible in their abilities and skills so that the company can move them around to different occupations or work areas as they see fit, with the knowledge that the worker can adapt and perform.

Second, managers want employees who are flexible and adaptable in terms of their attitudes and approach to work. Ideally, workers should be willing to do anything a company wishes them to do. Flexible workers are willing and able to work where the company wants them to work, and willing to be transferred to a new department if the company deems it appropriate. Flexibility in terms of attitude also means that when workers are finished with their work, they are willing to help others with their tasks.

Third, managers want workers who can be flexible in terms of location. Increasingly, some types of workers have jobs in which they are expected to work at different locations. This can mean moving from location to location and organization to organization to find work, as is becoming more common in some skilled trades and in health care, especially for nurses. However, people are also being expected to move around within their organizations. Some firms expect their workers to perform duties at a number of different sites in a region. For instance, some chemical firms we interviewed had a number of small (often unmanned) work sites that shared a staff. Managers and maintenance staff would have to divide their time between these sites in a region, visiting all of them within a week. One company had recently formed a maintenance group that provided maintenance for work sites around the country. These workers had to travel across Canada to provide maintenance assistance wherever they were needed. Furthermore, many large multinational corporations expect that their managers and some other workers will not spend their working lives at one company location, but will regularly move every few years between company sites around the world. In fact, these workers' promotion and success within these multi-national corporations are predicated upon such mobility and flexibility.

Last, companies also want their workers to be flexible in terms of their working hours. They want people who are going to stay on the job until

the job is done. They want workers who are willing to work overtime when necessary. Of course, this trend has been well-noted in the literature: companies would rather have their existing employees work regular over-time, than hire extra workers (Rifkin 1995).

Overall, managers in all three sectors emphasized the importance of flexibility in their workforce. While not every company stresses all four kinds of flexibility, most emphasize at least one or two aspects. Firms that were restructuring were even more likely than those who were not to emphasize flexibility as a valued characteristic.

Technology

A number of studies have stressed how technology is changing the workplace. These studies argue that technology is altering the nature of some jobs, and eliminating others. In fact, some claim that within a generation or two, the principal jobs remaining in the economy will be those that involve making, programming, maintaining or interpreting technology (Dunkerley 1996).

Indeed, our interviews with human resources managers do suggest that technological change is altering the workplace and has changed the kinds of workers that management wants to hire. There are two principal ways in which technology appears to affect hiring decisions.

First, companies are expecting virtually all employees that they hire to be able to deal with and work with new technology. For instance, virtually all incoming employees, in health care institutions, transportation equipment sector enterprises, or chemicals production firms are expected to be computer literate. Even the most basic worker in many organizations needs to know how to use a computer. In fact, ninety per cent of our respondents in both the chemicals and the transportation equipment sectors stressed that almost their entire workforce needed to have some basic or general knowledge of technology and especially computers. The demand for workers with greater education and training, discussed above, is partly geared towards ensuring that incoming workers will be computer and technologically literate, and that they will be able to adapt to future technological innovations.

Second, organizations in all three industries expressed interest in hiring workers who possessed specialized technological knowledge. As much as eighty percent of chemicals industry managers and eighty-five percent of transportation equipment sector managers interviewed (one hundred percent in those firms that were restructuring) said that demand for technological specialists had increased in their firms, and they expected demand would continue to be high in the future. The fact that this demand is high

in a context where few companies are hiring more generally is significant. Demand is particularly high for computer and automated systems specialists, especially in the chemicals sector. People with knowledge of electronics are in demand in both manufacturing sectors to work with and maintain the technology. The transportation equipment sector has been experiencing a shortage of tool and die makers with knowledge of automated systems technology. Demand for engineers is typically high in both sectors; engineers and engineering technicians and technologists are seen as adaptable and flexible workers who are knowledgeable about technology. Demand for various specialists is so high that college programs are being altered and tailored to meet the needs of industry for technologically sophisticated workers. In the health care sector, even orderlies previously charged with moving patients about the hospital and delivering meals were now expected to be able to record relevant patient information on computerized files.

To summarize, technological change does appear to be influencing the hiring decisions of human resource managers within health care, transportation equipment and the chemicals industries. Even basic workers hired need to demonstrate that they can work with the technology and be computer literate. Workers in demand are those that have knowledge of new technology, how to operate it and maintain it.

Soft Skills

Managers also emphasized certain "soft skills" that workers need to possess if they are to work effectively within their organizations. Soft skills were mentioned by virtually every manager interviewed. All respondents in the transportation equipment sector and in the chemicals industries mentioned at least one soft skill that they sought in workers. Informants in the health care sector also stressed soft skills as being important. The soft skills most often mentioned were communication and teamwork skills. Managers sought to hire workers who got along well with others and who liked to work with others. Given the emphasis on work teams within these organizations, this characteristic was seen as essential. As one manager explained "I could have a really smart employee, but if he wanted to work by himself all the time, he would be of no use to me. I don't want independent types."

In their efforts to hire workers who work well in teams, managers not only look for extroverted people who are able to communicate well, they also look for workers who are similar to those who are already employed by the company. They want workers who will easily fit in. Team work is more successful, they felt, if team members are similar to each other.

When hiring workers for team-based work, managers also look for workers with good language ability and, for many jobs, good writing skills as well. People working in teams need to be able to communicate with each other about their work, and about problems that arise. Within management, technical, and research areas of an organization, employees are generally expected to be able to write a clear report for their colleagues. The importance accorded to good writing and communication skills for this latter group has increased as organizations have virtually eliminated clerical positions. Administration workers now have to perform the clerical duties that a secretary would have formerly done for them, such as typing and writing reports, writing memos and handling correspondence, and answering the phone.

Communication and team work skills were seen as necessary for virtually every worker within an organization. This was stressed by managers in the major hospitals who spoke of the change to team approaches to patient care. Here, physicians, nurses, therapists, and support personnel re-labeled as "patient care associates" might work together as a health care team. Managers stressed the problem of communication among workers from such diverse backgrounds with very large differences in education and training.

Another soft skill, frequently mentioned by management, was the ability to deal with an intensified work load or the ability to "*multi-task*". The ability to multi-task was mentioned by fifty-three percent of managers in both manufacturing industries as a soft skill they looked for in workers. In restructuring firms, the ability to multi-task was important to eighty percent of chemicals and ninety percent of transportation equipment sector managers. The ability was also emphasized in the health care sector. With jobs being broadened, managers sought workers who were able to handle the extra work load and perform a diversity of work tasks in a working day. This extra workload was also often a source of pressure upon workers. Many of the managers in the transportation equipment sector linked the ability to multi-task with the ability to "handle stress". In these latter managers' eyes, the work environment was now so stressful, because of the ever-increasing demands being placed on workers, that workers had to be able to handle stress to cope. The ability to multi-task is one that has only recently become essential, and it is clearly related to organizational restructuring, downsizing, and lean production.

A further soft skill or characteristic emphasized by managers has been alluded to earlier: the ability to learn, or what some called "*trainability*". Management wanted workers who had a demonstrated ability and willingness to learn. As noted above, managers expressed frustration at workers who had shown resistance or inability to adapt to new job descriptions

and technology. They felt that technology and production were changing so quickly that the future work force would have to learn continuously, learn more, and learn it faster. Workers who were trainable would be flexible and adaptable to any future changes that occurred within organizations. Thus, eighty percent of respondents in the chemicals sector, and seventy-nine percent of those in the transportation equipment sector felt that any incoming workers would have be willing and able to learn.

While the above-mentioned soft skills were the ones most frequently mentioned by respondents, a number of other skills and abilities were also stressed in our interviews. Most commonly mentioned were abilities in leadership, decision-making, initiative and self-motivation, and problem-solving. In the transportation equipment sector many managers also mentioned numeracy skills as being important. Many of these characteristics also appear to be related to new management styles, technology and organizational restructuring. Leaders are valuable in team production. Decision-making is seen as more important now than in the past because workers are being asked to make more decisions at the point of production, and to solve problems independently when they arise. Self-motivation and initiative are also important in settings where there are fewer supervisors and middle-management to urge workers to do their work. Rather, companies are relying on technology, work load and the workers themselves to keep the pace of production high (Rinehart, Huxley and Robertson 1997).

To summarize, organizational and technological change do seem to be altering the characteristics that managers seek from their workforce. The managers we spoke to certainly believed that they needed to hire workers with a different set of skills, abilities, and characteristics than were emphasized in the past. In particular, they wanted workers who were educated, experienced and trained, flexible and adaptable, and able to work with new technologies. Moreover, they wanted workers with good social and communication skills, who were eager and willing to learn, and who could perform a wide range of tasks and handle a heavy work load, often in a high-stress environment.

DISCUSSION

Management theories that emphasize the need to restructure organizations have had a profound impact on front-line managers in many sectors of the economy. Human resources managers in all three sectors studied — chemicals manufacturing, transportation equipment manufacturing, and health care services — believed that work in their organizations was undergoing substantial change. In light of this change, most were demanding new skills and characteristics from their labour force and were changing

their recruitment standards. Of course, our findings do not offer convincing evidence that work really has changed substantially with restructuring. The literature is mixed on this point. Some studies point to substantial change in the nature of work (Leicht 1998; Dunkerley 1996); yet others suggest that restructuring is merely extending trends in work rationalization identified a century or more ago (Rinehart 1986; Ritzer 1996; see also Giles et al. 1999). For instance, as Dubé and Mercure (1999) argue, demands for flexibility and multi-tasking from workers have accompanied further work rationalization: some workers have more tasks to do at work, but those tasks are narrow in scope and highly subdivided. Moreover, Bernier (1999) shows it is difficult to isolate any clearcut trend in skills, as skills are not simply increasing or decreasing, but being redistributed amongst different types of workers, and some jobs are disappearing altogether. Regardless of whether the need for specific skills at work has changed fundamentally or not, our study suggests that managers feel it has changed enough for them to start altering what they look for in a worker.

What are the implications for workers of these changes in recruitment standards? First, workers are going to have trouble finding jobs in these industries unless they are skilled and knowledgeable in the technology, computer systems and software that the industries rely upon. This fact may be particularly bad news for those workers who have been employed in these sectors, but have lost their jobs due to downsizing and plant closures. Older workers can find themselves under-qualified for jobs similar to ones they have been performing for years, because of rising education standards and changing technology.[3] Perceptions that older workers are not able to multi-task, are unwilling to learn and adapt, and/or inflexible may hurt their chances for employment as well. As Livingstone (1997: 219) suggests, this generation of workers with little education may be "squeezed out" of the new economy with re-organization and technological change.

Second, clearly workers who will gain employment are going to be those who not only have knowledge of technology, but also good writing and communication skills, and a willingness to learn. These requirements may be met by the rising number of technologically-oriented and business-oriented college programs, and those new collaborations between universities and colleges. Students completing these programs may be among those in the best position to meet current organizations' criteria for employment.

Third, the demand for a flexible workforce may pose problems for workers. As dual- income families become the norm, men and women may

3. Many of the plants closing down or downsizing are the least technologically sophisticated.

find it increasingly difficult to work the longer hours and be as mobile as their employers wish. This kind of flexibility is very difficult for those trying to co-ordinate their careers with their spouse's, and still find time for their children. The demand for more flexible workers may favour men over women. Traditionally, men have been more able to commit themselves to longer hours at work than women who have greater family and household responsibilities. Moreover, traditionally men have been their families' primary income earners and, thus, families have been more likely to move to accommodate their work than that of women. Indeed, a recent study by Ranson (2000) of men and women engineers working in the chemicals industry in Alberta indicates that men tended to be more flexible workers, moving from place to place and contract to contract. In this manner, they broadened their knowledge of the industry and became highly-valued employees. Women tended to find more stable work in large companies. Given that flexibility is now seen as a necessary component of professional success and advancement, men may advance more quickly within the profession than women (Ranson 2000). For men and women in two-income families, the demand by industry for more flexible workers will likely exacerbate work-family conflict.

Fourth, restructuring and employer preferences may affect sex segregation at work. Leicht (1998), in a review of a number of studies on restructuring and globalization, suggests that a decline in organizational hierarchies may result in a decline in gender inequality at work, and by implication, sex segregation as well. While a declining hierarchy and broader jobs may in fact serve to reduce sex segregation, this end is by no means certain. Historically, changes in work organization and in hiring practices have often served to redefine sex segregation rather than eliminate it altogether (Milkman 1987; Reskin and Roos 1990; Cohn 1985). Moreover, hiring practices that are designed to produce cohesive work teams may serve to perpetuate ethnic and sex segregation at work. When managers hire workers who they think will fit in with existing work teams, they may hire people who resemble their present employees in terms of gender, ethnicity or race. In this manner, sex and ethnic segregation will be reproduced at the level of the job (Bielby and Baron 1986). Exactly what impact organizational restructuring will have on sex segregation remains to be seen. Nevertheless over the past few decades, sex segregation appears to be in decline (Fox and Fox 1986; Jacobs 1989; Reskin and Cassirer 1996).

The rapid growth of technology and heightened competition, resulting in part from the increasing globalization of production, have brought new pressures to bear on organizations. Even in the public sector, the pressure brought on by budget cuts has forced organizations to reexamine the way

work is done. In response, managers have adopted ideologies that favour restructuring and re-engineering, global concepts that enforce a distinct vision of the organization of work. As managers seek to put in place policies that flow from these theories, they have developed a new sense of what constitutes a desirable worker. Whether these theories, and the employment policies that they support, will increase efficiency is open to question. Some approaches, such as Total Quality Management, have been abandoned as quickly as they were adopted. And some efforts at downsizing — the layoffs of nurses in Ontario hospitals — have been rapidly reversed. Nevertheless, the broad acceptance by management of the need to reorganize work has significantly changed the perceptions of managers regarding the qualities needed in workers. This will have widespread consequences for both workers and organizations in the years ahead.

REFERENCES

ARMSTRONG, Pat, Hugh ARMSTRONG, Jacqueline CHOINIÈRE, Eric MYKHALOVSKIY and Jerry P. WHITE. 1997. *Medical Alert: New Work Organizations in Health Care*. Toronto: Garamond Press.

BERNIER, Colette. 1999. "Mutations du travail et nouveau modèle de qualification/formation." *Relations Industrielles/Industrial Relations*, Vol. 54, No. 1, 51–79.

BIELBY, William T. and James N. BARON. 1986. "Men and Women at Work: Sex Segregation and Statistical Discrimination." *American Journal of Sociology*, Vol. 91, 759–799.

COHN, Samuel. 1985. *The Process of Occupational Sex-Typing*. Philadelphia: Temple University Press.

DUBÉ, Annette and Daniel MERCURE. 1999. "Les nouveaux modèles de qualification fondés sur la flexibilité: entre la professionnalisation et la taylorisation du travail." *Relations Industrielles/ Industrial Relations*, Vol. 54, No. 1, 26–50.

DUNKERLEY, M. 1996. *The Jobless Economy? Computer Technology in the World of Work*. London: Polity.

FOX, Bonnie J. and John FOX. 1986. "Women in the Labour Market, 1931–81: Exclusion and Competition." *Canadian Review of Sociology and Anthropology*, Vol. 23, No. 1, 1–21.

GILES, Anthony, Paul-André LAPOINTE, Gregor MURRAY and Jacques BÉLANGER. 1999. "Industrial Relations in the New Workplace." *Relations Industrielles/Industrial Relations*, Vol. 54, No. 1, 15–25.

GLENDAY, Daniel. 1997. "Lost Horizons, Leisure Shock: Good Jobs, Bad Jobs, Uncertain Future." *Good Jobs, Bad Jobs, No Jobs*. A. Duffy et al., eds. Toronto: Harcourt Brace, 8–34.

JACOBS, Jerry. 1989. "Long-Term Trends in Occupational Segregation by Sex." *American Journal of Sociology*, Vol. 95, 150–173.

LEICHT, Kevin T. 1998. "Work (if you can get it) and Occupations (if there are any)." *Work and Occupations*, Vol. 25, No. 1, 36–48.

LIVINGSTONE, David. 1997. "Living in the Credential Gap: Responses to Underemployment and Underqualification." *Good Jobs, Bad Jobs, No Jobs.* A. Duffy et al., eds. Toronto: Harcourt Brace, 217–239.

MCQUILLAN, Kevin, Michelle CHANDLER and Alison HENRY. 1997. "Employment in the Health Care Industry in London." Report prepared for Human Resources Development Canada, 43 p.

MCQUILLAN, Kevin, Tracey ADAMS and Kimberley WOOD. 1998a. "Employment in the Transportation Equipment Sector: London and the Surrounding Region." Report prepared for Human Resources Development Canada, 47 p.

MCQUILLAN, Kevin and Tracey ADAMS. 1998b. "Employment in the Chemicals Manufacturing Sector: London, Middlesex, Elgin, Oxford, Huron, Lambton." Report prepared for Human Resources Development Canada, 47 p.

MILKMAN, Ruth. 1987. *Gender at Work.* Urbana and Chicago:University of Illinois Press.

MOORE, Thomas S. 1996. *The Disposable Workforce: Worker Displacement and Employment Instability in America.* New York: Aldine de Gruyter.

RANSON, Gillian. 2000. Personal communication with authors.

RESKIN, Barbara F. and Patricia A. ROOS. 1990. *Job Queues, Gender Queues: Explaining Women's Inroads into Male Occupations.* Philadelphia: Temple University Press.

RESKIN, Barbara and Naomi CASSIRER. 1996. "Occupational Segregation by Gender, Race and Ethnicity." *Sociological Focus*, Vol. 29, No. 4, 231–243.

RIFKIN, Jeremy. 1995. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era.* New York: Putnam.

RINEHART, James W. 1986. "Improving the Quality of Working Life through Job Redesign: Work Humanization or work Rationalization?" *Canadian Review of Sociology and Anthropology*, Vol. 23, No. 6, 507–530.

RINEHART, James W., Christopher HUXLEY and David ROBERTSON. 1997. *Just Another Car Factory? Lean Production and its Discontents.* Ithaca and London: Cornell University Press.

RITZER, George. 1996. *The McDonaldization of Society.* Thousand Oaks: California: Pine Forge.

ROBERTSON, D. and J. WAREHAM. 1993. "Technological Change and Shifting Labour Requirements." *Work in Canada.* G. Lowe and H. Krahn, eds. Toronto: Nelson Canada, 315–326.

SHAIKEN, H., S. HERZENBERG, and S. KUHN. 1986. "The Work Process under More Flexible Production." *Industrial Relations*, Vol. 25, No. 2, 167–183.

SHARPE, A. 1993. "The Rise of Unemployment in Ontario." Paper presented at the conference Unemployment: What is to be Done? Laurentian University, Sudbury, Ontario, March.

STATISTICS CANADA and HUMAN RESOURCES DEVELOPMENT CANADA. 1998. *The Evolving Workplace: Findings from the Pilot Workplace and Employee Survey.* Ottawa: Minister of Industry.

WHITE, Jerry. 1997. "Health Care, Hospitals, and Reengineering: The Nightingales Sing the Blues." *Good Jobs, Bad Jobs, No Jobs*. A. Duffy et al., eds. Toronto: Harcourt Brace, 8–34.

ZEIDENBERG, J. 1993. "The Just-in-Time Workforce." *Work in Canada*. G. Lowe and H. Krahn, eds. Toronto: Nelson Canada, 236–240.

RÉSUMÉ

Nouveaux emplois, nouveaux travailleurs?

Tout comme les lieux de travail, les organisations connaissent actuellement des changements drastiques. Au cours des dernières années, les petites et grandes entreprises ont procédé à des restructurations: redéfinition des postes de travail, modifications à l'interne et changement des attentes au plan de l'emploi. Cet article a pour objectif de vérifier dans quelle mesure des changements récents de la philosophie de gestion au plan de l'organisation du travail ont incité la direction de ces entreprises à modifier leurs attentes à l'endroit des travailleurs: est-ce que le nouveau travail fait appel à de nouveaux travailleurs?

Pour répondre à cette question, nous avons puisé dans des rapports d'entrevues avec des directeurs de ressources humaines de trois types d'industries de l'Ouest de l'Ontario (les équipements de transport, les produits chimiques et les services de santé). Nous avons ainsi cherché à évaluer l'ampleur des restructurations qui ont cours dans ces secteurs et la perception que les dirigeants se font de la nature des habiletés et des caractéristiques des travailleurs maintenant exigées par ces restructurations. Les dirigeants dans ces trois secteurs décrivent la nature des changements en cours en termes d'aplatissement des structures organisationnelles, de redéfinition des postes et de l'insertion de ces derniers dans une nouvelle structure. De plus, ces mêmes dirigeants nous révèlent que ces changements ont modifier leur vision de ce qu'est un bon travailleur. Ils ont donc changé la nature des caractéristiques recherchées chez un travailleur.

En premier lieu, ces dirigeants souhaitent un niveau de scolarité plus élevé, une formation préalable plus accentuée et de l'expérience différente de celle exigée dans le passé. Ils croient que le rythme récent des changements technologiques, associé à une tendance vers un agrandissement des tâches, fait appel à une main-d'œuvre plus scolarisée et mieux formée. De plus, dans plusieurs cas, ils veulent de moins en moins assumer les coûts inhérents à un relèvement des niveaux de scolarité et de formation.

En deuxième lieu, ces directeurs de ressources humaines souhaitent une plus grande flexibilité chez les travailleurs, flexibilité qui reçoit diverses

significations: des travailleurs plus polyvalents, mieux adaptés à des emplois de plus d'envergure qu'on retrouve maintenant dans les entreprises allégées. Cette flexibilité peut aussi revêtir des caractéristiques personnelles de l'ordre d'une réponse aux besoins de l'entreprise et d'une volonté de travailler au moment et à l'endroit où cette dernière l'exige. Les entreprises valorisent aussi une flexibilité qui implique des changements de lieux de travail d'un établissement à l'autre à l'intérieur d'une province, d'un pays et dans le monde entier. Ces entreprises recherchent des personnes qui sont prêtes à travailler selon différents horaires et aussi à accepter de faire du surtemps.

En troisième lieu, ces directions de ressources humaines souhaitent l'arrivée de travailleurs qui peuvent se servir des nouvelles technologies plus que dans le passé. Elles manifestent également un plus grand besoin de salariés qui peuvent faire l'entretien et la programmation de ces technologies et de salariés sans spécialité qui peuvent utiliser des ordinateurs ou d'autres équipements informatiques dans l'exécution de leur travail.

Quatrièmement, ces directions mettent l'accent sur certaines habiletés douces (d'ordre relationnel), telles que la capacité de communiquer et de travailler en équipe. Les entreprises font appel au travail d'équipe beaucoup plus que dans le passé, de sorte que la communication interpersonnelle devient de plus en plus importante. Les directions recherchent aussi des travailleurs capables d'accomplir des tâches multiples et d'assumer un élargissement de leurs responsabilités. La capacité d'apprendre est aussi une préoccupation de ces directions et elle est associée à une croyance que l'entraînement et la formation bonifiés sont nécessaires pour se tenir à jour face au changement continuel de la technologie et des lieux de travail.

Des changements au niveau des attitudes des directions ont des effets sur l'emploi et les travailleurs. Au fur et à mesure que le niveau de formation exigé par les entreprises s'accroît, les travailleurs possédant peu de scolarité sont poussés hors du marché du travail. Par conséquent, les travailleurs susceptibles d'obtenir et de conserver un emploi sont ceux qui sont mieux formés, qui possèdent une bonne connaissance de la technologie nouvelle et les habiletés relationnelles alors exigées. De plus, la demande de main-d'œuvre plus flexible semble en opposition avec l'accroissement du nombre de familles à double revenu et de familles monoparentales. L'obligation pour ces familles de satisfaire aux exigences de deux carrières et aux responsabilités inhérentes à l'éducation des enfants vient de façon évidente limiter la flexibilité des travailleurs.

Sans égard à la nature exacte des changements en cours dans les organisations, la reconnaissance chez les dirigeants d'un besoin de repenser le travail vient changer de façon significative la perception qu'ils se font des qualifications exigées chez les salariés. Ces changements auront donc des conséquences largement diffusées tant chez les travailleurs que dans les organisations au cours des années qui viennent.