

Technology in Today's Workplace

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IDS 128

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The world is definitely changing as technology continues to invade every part of life, especially work. Today almost every job requires some knowledge of electronic systems or the daily use of electronic devices. Statistics show that five of the ten fastest growing occupations are computer-related. However, half of the new jobs created by 2008 will still be in traditional, labor-intensive sectors such as retail or trucking. One in two jobs, and two in three new ones, is in small companies, with less than 100 workers. Even large companies, like General Motors, are moving toward networks of small, autonomous businesses to reduce the overhead associated with large traditional companies. (Vaknin, 2002) Technology is facilitating this process.

Technology in general has been a strong influence in the workforce since the invention of steam-powered machines. The workforce moved from the farm into industrialized cities to work in factories. The landscape of future work will be shaped by technological change and globalization. (Vaknin, 2002) Older workers are forced to catch up and new workers have to learn more to start working. Today's employers demand greater flexibility and technical abilities in their employees.

Today the invention of new technologies has made many advances in the workplace. From leveling the playing field between large companies and small companies, to making more possible with less people in less time, technology has changed many aspects of work. More freedom from the office using streaming media via the Internet, working from home via high speed networks, and finding a job and posting

résumés have all been a part of the changing workplace. This is possible because of the strong technological backbone in American companies and industries.

As these latest innovations are becoming common in today's workplaces, time has been compressed for us and more must be achieved in less time. Charles Grantham (2000) uses his Rule of Twos to demonstrate just how quickly people are expected to work: two minutes to take action on a request for your attention, two hours to hold face to face meetings, two days to respond to e-mail, two weeks to assemble a work team and commit to a plan, and two months to identify a business opportunity and test it. And even if employees can work quickly enough, the demand for their education to keep pace with current technology is out-pacing their ability to learn.

According to predictions by Marvin Cetron (2001), in ten years ninety percent of what an engineer knows will be available on a computer. The education level required for even the entry level jobs today are much more than they were in the past. Not only do the employees have to be educated, but also familiar with technology; they now must be able to use personal computers, fax machines, copiers (which get more complex every day), PDA's, and thousands of other more specialized devices that are supposed to make work easier. Employees have to constantly educate themselves even after starting a career. (Cetron & Davies, 2001) Even though college graduates already earn twice as much as people with a high school diploma, (Vaknin, 2002) the demand to stay current has led many professionals to continue their education either formally in master's degree programs or informally in seminars and workshops.

In an effort to remain competitive, the companies themselves are forced to become more flexible. High-tech, high-volume manufacturing and production lines will need flexible workers. (Chun, 2001) Employers are calling this high-tech production upgrade a “win-win” situation. Chun notes, “Teamwork, job rotation, and quick thinking on the line are replacing the monotony and routine associated with mass production.” Companies now rely on multi-skilled workers; workers that can operate new machinery and constantly adapt to new tasks. (Chun, 2001)

So what about the workers who can't operate the advanced machinery? They are pushed to the margins in manufacturing. Employers are quick to dump employees that are not able to do the work. This, along with economic growth, encourages job-hunting, job hopping and job-shopping as opportunities for skilled workers open up in other markets and industries. Job tenure has decreased markedly in all age groups over the last two decades, but only among men. (Vaknin, 2002) This leaves the workers on their own to educate themselves and develop marketable skills. As the manual labor work moves overseas, the domestic shift is toward higher paying knowledge work. (Cetron & Davies, 2001)

For industry and production, flexibility comes in two forms: subcontracting and contract manufacturing. The first method, subcontracting production, is labor intensive and the regularity of work depends on the employer's ability to maintain contracts. In a highly competitive market, production costs are kept to an absolute minimum which causes intense competition between individual workers. Fear of instant layoffs and production shutdowns force employers to recruit the most knowledgeable people to

minimize training. Flexibility for the employer is achieved through hiring “qualified disposable people.” (Chun, 2001)

The second method of industry and production flexibility is contract manufacturing. It is more highly automated and the assembly lines require a skilled workforce. This workforce is more educated and is able to adapt to changing market demands. The employer relies on employees being impersonal and profit driven. In both cases technology has led workers to experience unexpected layoffs, compulsory overtime, production shutdowns and continual market uncertainty. (Chun, 2001)

As flexibility is a major contributor to almost any company, Grantham (2000) uses the example of Hollywood as a place where flexible teams of people converge to complete a project and then disband to work on other projects. A production team is quickly assembled to create a product, a movie for example, and when they have completed the contracted work each individual is left to find his next contract. This principle is now being applied to areas like manufacturing.

In their paper Information Technology, Workplace Organization and the Demand for Skilled Labor: Firm-level Evidence Timothy Brenahan, Eric Brynjolfsson, and Lorin Hitt (1999) explain that the demand for skilled labor is increasing and that it has been for twenty-five years. They report that the distribution of wages and earnings has been spreading out; the rich are getting richer much faster than the low and middle income workers. With employers' demands shifting toward jobs that require talent, training, autonomy, and management ability, Brenahan, Brynjolfsson, and Hitt put forth that the

integration of information technology has resulted in a change in the organization of work.

Dickinson & Schaeffer explain work this way in Fast Forward, Work Gender, and Protest in a Changing World (2001), "Work is hard. Everybody works. People work hard at different things to survive. And how people work shapes the ways they participate in politics. The world is vast and varied. But in general, people do four different kinds of work, some work is to subsist as workers, other work involves sharing with others and some helps them earn money on their own account by being enterprising. And some work involves working for others, finding jobs that pay wages." It is those that are enterprising that will be the most flexible and able to accomplish the jobs available today and in the future.

Telecommuting is one organizational change currently taking place in America's workplace. It has become an option for more and more people as the technology that supports it has become more available. With the added flexibility of not having to work at the office, many people are seeing an increase in productivity. High speed Internet connections and powerful personal computers available in the home have made going to the office unnecessary for some workers. If you drive an hour to work to sit in front of a computer monitor, why not do that at home if possible? Telecommuting is suited well for professions such as realtors, brokers, programmers, writers, and telemarketers where most of their work can be e-mailed or faxed to the main office. (Corbett, 1996)

Technology, through the trend toward telecommuting, is dispersing rather than concentrating the population. While millions of people continue to pour into urban

settlements in the remaining industrialized parts of the world, all the countries at the forefront of information technology and robotics are experiencing a reversal of this flow. London, Tokyo, Glasgow, Zurich, and dozens of other major cities are all losing population while middle-sized and smaller cities are showing gains.

Some drawbacks to telecommuting are that employees get less face time with their bosses, and co-workers sometimes become isolated. Another drawback occurs when an employee overworks because they never leave the “office”, and overworking can lead to burnout. Work-at-home frauds are also a concern for potential contractors. Some people have been lured by advertisements promising work-at-home jobs with high pay. Most of these scams require a “good-faith deposit” that is never seen again. (Costello)

As technology invades the workplace, concerns arise about employee privacy and to what extent employers can be connected to their employees. Many people now carry cell-phones and other wireless communication devices, either given to them by their employers or their own. So what are the limits to an employer's intrusions into employees' lives? If employers use these devices to contact employees, what are the limits to their use? Employers look to establish workplace standards and to maximize work efficiency, but according to Don Cozzetto (1997) there are five major areas which trigger privacy matters in the public sector: background checks, cognizance of off duty activities and life styles, drug testing, workplace searches, and monitoring of workplace activity. These problems only get worse as technological advances increase the employer's ability to monitor and communicate with the employee.

The nature of work is changing because of technological advances in communication and time management devices. (Cozzetto & Pedeliski, 1997) Privacy is based on an employer respecting the employee's inherent dignity. With technology comes monitoring, and as employers work to get the most out of their employees by managing employee time, the line between privacy and management gets blurred.

Since the industrial revolution of the early 1900's, another revolution has occurred, the global transition of the 'information revolution.' The information revolution has changed everything in business, and the effects are being felt by every employee. First was the industrial revolution, steam-power, then the second, electric-power, which made possible the third, the information revolution, ushering in the information age. All three revolutions have changed work, and all three are revolutionary in scope. (Thurow, 1999) All three share some fundamental characteristics that lump them together. With each revolution also came the need for an increase in employee education and devotion to the company that continues to promise less and less in return. Additionally, none of the previous revolutions has replaced the other; they just continue to build to new levels of complexity. For example, someone still has to manufacture your laptop computer. But if you count everything that is processed and distilled to create your 10 pound computer, going all the way back to the mines for materials and wellheads for energy, the weight will be as much as 40,000 pounds. Not much has changed over the years since the beginning of the industrial revolution except the sophistication of the finished product. (Anderson, 2000)

Technology has brought a lot to the world in terms of physical comfort and health, but this comfort and health does not come without a price. Individuals, employees, are giving up their time, privacy, and predictability of employment to enjoy this technology.

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