

Technology in Today's Workplace

Charles Eichmann

IDS 128

Technology in Today's Workplace

There are many predictions of what is to come in tomorrow's workplace. The world is defiantly changing as technology continues to invade every part of life, especially work. Today almost every job requires some knowledge of electronic systems or requires 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 -- are in small companies, with less than 100 workers. Even large companies, like General Motors, are moving toward networks of small, autonomous, businesses. (Vaknin, 2002)

Technology has compressed time for us, more must be achieved in less time. Charles Grantham (2000) uses his Rule of Twos to demonstrates 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.

Many people say that it is good, that technology has leveled the playing field between large companies and small companies. Others say technology is good because it allows more freedom from the office. Streaming media via the internet, working from home via the internet, finding a job and posting résumés on the internet, technologies have brought the whole world of work to the network of the internet. All because of a strong technological backbone in American companies and industries.

Technology in general has been a strong influence on the workforce since the invention of steam powered machines. The workforce moved from the farm and into the industrialized cities to work in factories. The landscape of future work will be shaped by technological change and globalization. (Vaknin, 2002) Older workers have had to catch up and new workers have had to learn more to start. Today's employers demand greater flexibility, this has changed the way employees look at 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 of today and tomorrow.

According to predictions by Marvin Cetron (2001) in ten years 90% 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 tech savvy. Employees 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. Future employees will have to constantly educate themselves even after starting a career. (Cetron & Davies, 2001) College graduates already earn twice as much, in real terms, as

people with a high school diploma whose inflation-adjusted earnings are dwindling. (Vaknin, 2002)

In an effort to remain competitive, companies are forced to become more flexible. High-tech, high-volume manufacturing and production lines will need flexible workers. (Chun, 2001) Employers are calling the high-tech production upgrades a “win-win” situation. Chun notes that “Teamwork, job rotation, and quick thinking on the line are replacing the monotony and routinization associated with mass production.” Companies will rely on multi-skilled workers, workers that can operate new machinery. (2001, p127)

Economic growth encourages job-hunting, job hopping and job-shopping as opportunities for skilled workers open up in other markets or industries. Recessions foster downsizing and bankruptcies where even the best employees find themselves out of work. As usual most jobs are obtained through business networking. (Vaknin, 2002) 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. 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 towards higher paying knowledge work. (Cetron & Davies, 2001)

For industry and production, flexibility comes in two forms, subcontracting and contract manufacturing. Subcontracting production is labor intensive, and the regularity of work depends on the employer's ability to maintain contracts. In a highly competitive market the production costs are kept to an absolute minimum and this causes intense

competition between individual workers. Fear of instant layoffs and production shutdowns force employers to recruit the right 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, p149)

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. This principal 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 and the resulting changes in organization.

Telecommuting is one resulting organizational change brought about by changes in technology. Telecommuting has become an option for more and more people as the

technology that supports telecommuting 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 available in the home and powerful personal computers 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 home if possible? Telecommuting is suited well for professions like realtors, brokers, programmers, writers, and telemarketers where most of their work can be e-mailed or faxed to the main office. (Corbett, 1996)

Some drawbacks to telecommuting are that employees get less face time with their bosses and co-workers sometimes becoming isolated. Another drawback occurs when an employee overworks because they never leave the "office", and overworking can lead to burnout. There is also some work at home frauds as well. Some people have been lured by advertisements promising work at home jobs with high pay. Most 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 personal.

So what are the limits to an employer's intrusions into employees' lives? 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 communications devices and time management devices.

(Cozzetto & Pedeliski, 1997) Privacy is based on an employer respecting the employee's inherent dignity. With technology comes monitoring, employers work to get the most out of their employees by managing their time. Technology only helps this cause.

Since the industrial revolution of the early 1900's another revolution has occurred, the global transition of the 'Information Revolution'. One effect of de-industrialization is that it 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, Glasgow and dozens of other major cities are all losing population while middle-sized or smaller cities are showing gains. Global cities such as Bangkok are experiencing unprecedented population growth, comprising of a combination of local and international migration. (Fleurieu Communications, 1999)

As we move towards tomorrow today has become quite a challenge itself. 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. Each has only added onto the next becoming yesterday's news. For example, someone still has to manufacture your laptop computer. If you count everything processed and distilled into the manufacture of those 10 pounds, 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)

With each revolution also came the need for an increase in the employee becoming more educated and more devoted to the company that continues to promise less and less in return. High school dropouts are four times as likely to be unemployed as college graduates (Vaknin, 2002) and soon college graduates will be looking for work themselves.

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 are giving up their time, privacy, and predictability of employment in the future.

References

- Anderson, R. C. (2000). The next industrial revolution. Forum for Applied Research and Public Policy, Winter 2000 v15 i4 p23. Article is adapted from book, Mid-Course Correction (Atlanta, GA: Peregrinzilla Press, 1998).
- Bresnahan, T. F., Brynjolfsson, E., & Hitt, L. M. (1999). Information technology, workplace organization and the demand for skilled labor: Firm-level evidence. Unpublished, Massachusetts Institute of Technology.
- Costello, B. (2000). Providence Business News December 2000. p1B
- Corbett, M. L. (1996). Telecommuting: The new workplace trend. Black Enterprise, June 1996. p257.
- Chun, J. J. (2001). The critical study of work, labor technology and global production. Edited by Baldoz, R., Keober, C., & Kraft, P. Philadelphia: Temple University Press. p149.
- Centron, M. J. & Davies, O. (2001). Trends now changing the world: Technology, the workplace, management and institutions. The Futurist March-April 2001. pp27-42.
- Cozzetto, D. A. & Pedeliski, T. B. (1997). Privacy and the workplace: technology and public employment. Public Personnel Management. v26 n4 p515(13).
- Dickinson, T. D. & Schaeffer, R. K. (2001). Fast forward, work gender, and protest in a changing world. Lanham: Rowman & Littlefield. p.23.
- Grantham, C. (2000). The future of work. CommerceNet Press p22
- Thurow, L. (1999). Building wealth: The new rules for individuals, companies and nations. HarperBusiness (2000).
- Vaknin, S. (2002). Analysis: The future of work - I. United Press International, June 27, 2002 p1008178w0987.
- www. Geocities.com/heartland/6897equity.html (1997). Social isolation, poverty, job prospects, re-definition of work and social values in cities. 1999 Fleurieu Communiations