



**Romel Cabiling** ▾



Home

Home > My courses > Social And Professional Issues > 13 Empowering Computers In The Workplace > Lesson Proper for Week 13

# Lesson Proper for Week 13

## Introduction

We begin this chapter by looking at some of the debates concerning the effects of computerization on levels of employment/unemployment and on the quality of people's working lives. We shall be addressing two concerns in particular: firstly, whether computers have been replacing people, leading to greater unemployment, but also creating new kinds of jobs in the process; and secondly, whether computers have affected the quality of working life (by 'de-skilling', psychological effects and health and safety hazards). We then address the issues of computerized monitoring and surveillance in the workplace, outlining arguments for and against such practices. Finally, we look at the advantages and drawbacks of telecommuting (working from home).

## Computers and Employment

The impact of new technologies in the workplace has long been a source of controversy. As computer technologies became increasingly accessible, dire predictions were made about the impact of this latest new technology on employment levels in the manufacturing industry and commerce. However, according to Forester and Morrison (1994) the impact was not as great as first envisaged – for three main reasons

- The introduction of computers into the workplace was slower than expected (due to financial, technical, human and organizational problems – including oversell by the computer industry)
- The alarming rate of unemployment (that existed at that time) was not seen to increase dramatically
- Particularly in the US and Europe, the baby boom generation's entry into the workforce was largely complete by the end of the eighties, and the arrival of the baby bust generation in the 1990s saw some shortages of labor developing.



## Computers and the Quality of Work

Some argue that computers provide an opportunity to increase worker skills, and introduce variety into otherwise mundane jobs. Many reports suggest that workers engage with the technology, are pleased to develop IT skills, and see potential for promotion as a result of increased technical abilities.

However, another, more cynical, point of view arises from the idea that skilled workers are a threat to management because they can set their own pace and control the work process. Therefore, by introducing new technologies, management can maintain control of the workforce and exploit them. This argument – of 'automating the office' – is supported by the following quotation which describes a less empowering environment for the office worker:

Our principal point is that the lessons of the factory are the guiding principles of office automation. In large offices, clerical work has already been transformed into factory-like production systems. The latest technology – office automation – is simply being used to consolidate and further a well-established trend. For most clerical workers, this spells an intensification of factory discipline. For many professionals and managers, it signals a gradual loss of autonomy, task fragmentation and closer supervision – courtesy of computerized monitoring. Communication and interaction will increasingly be mediated by computer. Work will become more abstract ... and opportunities for direct social interaction will diminish. (Mowshowitz in Kling (ed. 1986).

In the manufacturing industry, this transfer of skills to machines reduces the jobs available for skilled workers, and increases employment for less-skilled 'machine minders'. Also, despite the promise that new technology can improve the quality of working life, many of the new jobs being created in futuristic factories are every bit as tedious, fast paced, and stressful as the old-style assembly line jobs.

However, it can be argued that new technologies require different skills, and the unreliability of IT systems actually increases the dependence of managers on their skilled workforce and not vice versa. The new technologies introduce new modes of machine failure, new flaws in the control systems themselves, and new challenges to the design of jobs. In such settings, workers must control the controls. Far from deskilling the workforce, computer technology demands that employers need to constantly improve staff quality through learning and retraining. This lack of stability can lead to stress and staff disillusionment.

One argument for the introduction of new technologies is the need to compete in the marketplace, and 'move with the times'. This implies that the pace at which new technologies are introduced has gathered its own momentum – it is outside the control of any individual or company.



There are indications that the introduction of computerization in offices has resulted in increased levels of stress for workers.

Automation is often seen as the solution to a messy office problem. But automating a mess only creates automated mess. Many workers are inadequately trained for new technology and they need help in coping with the stress arising out of change. Stress in the modern office leads to loss of job satisfaction, low morale, and absenteeism and poor management labor relations. (Cox [1986])

From an ethical perspective, it has been suggested that interaction with computers – instead of people – leads to a reduced sense of personal responsibility.

Interactions with computers tend to depersonalize both the user community and the application itself. The resulting sense of anonymity can inspire a lack of respect for the system and its resources, and a diminished sense of ethics, values, and morals on the part of the affected people. The depersonalization can increase the temptations to commit misdeeds, diminish human initiative, and cause the abdication of decision-making responsibility. The sense of ethical behavior seems much more diffuse, even though in principle it should be no different from ethical behavior in general. (Neumann [1988])

### ***Health and safety hazards***

There are indications that prolonged use of video displays can have a detrimental impact on health. In the 1980s there were concerns regarding harmful radiation from CRT-based displays. In 1985, a Japanese study of 13,000 workers reportedly found a high level of miscarriages, premature births and stillbirths among computer operators. In 1987 a study of 1,600 women clerical workers who had become pregnant since 1984 found that expectant mothers who had spent more than 20 hours per week at terminals were more than twice as likely to suffer miscarriage as other clerical employees. However, a Swedish study of 10,000 programmers concluded that there were no statistically significant differences between the pregnancies of women who had experienced low, medium or high levels of exposure to computer displays.

Other research has highlighted effects from monitors resulting in eyestrain, double vision, neck and shoulder problems, and depression.

Excessive use of computer keyboards, and other hand-held input devices (e.g. mouse) can lead to injuries to the arm, hand and fingers. This type of physical stress is commonly known as repetitive strain injury (RSI).

### **Computerized Monitoring in the Workplace**

A more recent issue that has caused considerable controversy is that of computerized monitoring and surveillance of employees. In the past, employees were monitored directly by progress chasers, foremen and supervisors. But these days, monitoring can be done surreptitiously by computer technologies. Computerized monitoring is constant, cheap and reliable. Supervisors are no longer limited by what they can observe with their own eyes. A complete record of employee performance can be recorded. Consider the following case (from Forester and Morrison, 1994):



At Pacific South West Airlines' offices in San Diego and Reno, the main computer records exactly how long each of their 400 reservation clerks spends on every call and how much time passes before they pick up the next one. Workers earn negative points for such infractions as repeatedly spending more than the average 109 seconds handling a call and taking more than 12 minutes in bathroom trips beyond the total one hour allocation they have for lunch and coffee breaks. If employees accrue more than 37 points in any single year, they can lose their jobs.

Computerized monitoring in call centers is now a routine practice. What is more recent? However, is the monitoring of employees' computer and Internet use in workplaces? This trend has emerged in response to the growing problem of employee misuse of company computers. This includes abuse of company time by browsing the Internet, downloading illegal software and 'inappropriate' content such as pornography, exchanging that content with work colleagues, sending abusive e-mails, and conducting private or personal work during company time.

To protect themselves, and to monitor their employees, companies are increasingly installing employee Internet management (EIM) software. EIM is a new class of software which is able to detect, among other things, the presence of particular file types on a network (such as music or video files); changes in hardware or software; particular content or text strings stored on a computer network (for example, pornographic material or abusive e-mails); excessive use of certain applications; browsing on unauthorized websites; and monitoring bandwidth consumption (for example, the downloading of large files).

### ***In defense of monitoring in the workplace***

The Internet Misuse Survey 2002 was conducted among 544 human resources (HR) managers and officers from some of Britain's largest corporations, employing an average of 2,500 people. Among its key findings were:

- 72% of UK firms have had to deal with Internet misuse in the workplace
- As many as a quarter of the UK companies surveyed have dismissed employees for Internet misconduct
- 69% of all dismissals were associated with online pornography.

After pornography, web chat rooms (26 per cent) and personal e-mail browsing (23 per cent) were the second and third most frequent complaints brought to the attention of the HR department. Such activities can have serious implications for companies which have to be careful of falling foul of the law and/or offending other employees. Organizations have ethical and legal obligations to protect themselves against illegal activities in the workplace, particularly from allegations of libel (involving, for example, defamation of other companies or individuals) and the existence of illegal software or obscene material on a company's computer network. For example, it is understood that the mobile phone company Orange dismissed 45 staff in 2000 from its offices in Darlington, Hertford and



Peterlee, for downloading 'inappropriate material'. Files such as MP3 and video not only take up space on a network, consuming valuable resources, but also expose a company to liability for copyright infringement. E-mails can also be a source of embarrassment for companies.

As well as protecting themselves against illegal activities, organizations also use monitoring to improve productivity and competitive performance. Computer monitoring provides clear, accurate performance measures and, in principle, enhances the ability of managers to motivate employees.

Many companies have also suffered from industrial espionage and employee thefts. Because of the growing sophistication of manufacturing processes and office information systems, mistakes are more costly and computer systems are more prone to employee sabotage.

As part of this general defense, supporters of computer monitoring argue that it is also used to provide incentives for employees and effectively rewards individuals for true merit and reward. They also point out that what is being measured is factual, and that workers tend to favor such systems – they have seen too many cases of the wrong people being promoted for the wrong reasons. Armed with the facts that the computer gathers, diligent workers can legitimately argue a case for better pay and conditions and, in theory, this case does not rely upon personal opinions and personalities.

Furthermore, these systems can help eliminate rampant waste: for example, employees telephoning long distance for private uses, a team carrying the load for an unproductive team member, identifying the theft of materials by matching the stock used with the amount processed by line workers and discovering discrepancies. Monitoring on a computer network can assist in troubleshooting and fine-tuning of a system, as well as streamlining job design and fairly apportioning workloads.

Management argue that monitoring is an important tool for keeping records of transactions, maintaining quality of service and ensuring that employees are dealing with customers in the correct manner, particularly in call centers. By having a record of conversations to refer back to in the event of customer complaints or abusive calls, employees can be protected. Monitoring also allows companies to identify the training needs of individual employees.

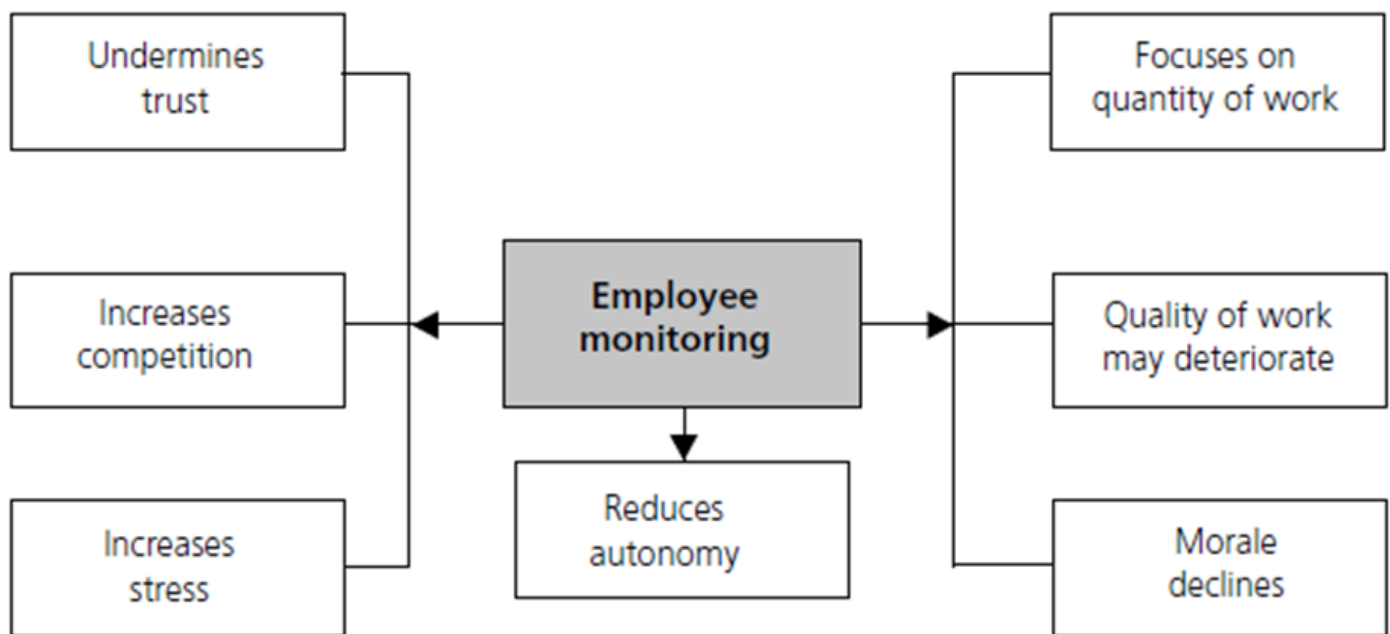
### ***Arguments against monitoring in the workplace***

Critics suggest that computerized employee monitoring undermines trust, encourages competitiveness among co-workers and is more concerned with measuring *quantity* rather than *quality*. For example, although reservation clerks may be given an incentive to process more calls when they are being monitored, it may also eliminate any human spontaneity or friendliness in their communications with clients. It is argued that the practice of monitoring in itself causes stress and is ultimately counterproductive because employee morale declines and with it productivity. By reducing employees' autonomy, there is a danger of turning workers into 'battery hens', denying them job satisfaction and eliminating the human element from their work. Most fundamentally, computerized employee monitoring represents an intolerable invasion of privacy and disregards the human rights of workers. Moreover, it is often seen as 'the thin end of the wedge' – that is, as a precedent for other invasive practices.



## Ethical and legal issues

One of the principal ethical issues in the case of computerized monitoring in workplaces has been how to balance the rights and expectations of employees with the obligations and objectives of employers. Forester and Morrison (1994) state that profits are clearly important to the continued functioning of capitalist societies, and profit itself is dependent upon competitiveness. However, just how far we are willing to proceed in the pursuit of competitiveness and profitability is a matter of judgement. For example, the use of cheap child labor was once regarded as a sensible business strategy, but now our ethical sense and labor protection laws prohibit this practice. It remains to be seen in which direction our ethical institutions will take us in determining the nature of future employment: whether we can all be monitored in the interest of profit and accountability, or whether we shall see a renewed interest in designing jobs for people.



**Figure 8.1:** Some possible negative consequences of employee monitoring

In addition, we need to ask what kind of precedent computer-based monitoring of employees will set for other invasive practices. For example, similar arguments can be marshalled for the compulsory drug testing of key personnel such as pilots, train drivers, and power plant operators. If these people have the potential to kill thousands by accident, then do we not have the right to ensure that they are in a fit state to work? On the other hand, why not also monitor the alcohol purchases of convicted drunk drivers? This highlights the most contentious aspect of any form of computer-based monitoring; it is not so much the harm it may currently be causing, but what it represents.

One answer is to establish a 'code of ethics' on workplace monitoring. A five-point code of ethics to control the use of computerized monitoring and to safeguard privacy is proposed in Forester and Morrison (1994):



- Applying to monitoring the same protection that applies to pre-employment background checks, that is, permit only information to be collected which is directly relevant to the job
- Requiring employers to provide employees with advance notice of the introduction of monitoring as well as appropriate mechanisms for appeal
- Requiring people to verify machine-produced information before using it to evaluate employees
- Providing workers with access to the information themselves and providing mechanisms for monetary redress for employees whose rights are violated or who are victims of erroneous information generated by monitoring systems
- Applying a 'statute of limitations' on data from monitoring. The older the data, the less potential relevance and the greater the difficulty employees have in challenging it.

## Telecommuting

Telecommuting or teleworking are synonyms for the use of telecommunications and Internet technologies to work outside the traditional office or workplace, usually at home or in a mobile situation. In the United States, the International Telework Association & Council (ITAC) estimated that, in 2004, there were 44 million US teleworkers, and furthermore that a teleworker with broadband in the home can save their employer up to \$5,000 a year.

([www.workingfromanywhere.org](http://www.workingfromanywhere.org))

Technologies that have enabled telecommuting include faxes, laptops, modems, PCs, mobile phones, e-mail, video conferencing, high-bandwidth computer networks, and satellite and telecommunication technology. With the arrival of the Internet and the Web as a kind of standard for groupware, a number of organizations developed as virtual organizations, whose members work almost entirely through telecommunications, with occasional face-to-face meetings. These technologies have enabled people in organizations to work across large distances, and across different time zones.

### *The benefits of telecommuting*

One of the most obvious benefits of telecommuting is the associated reduction of office space required for employees. For example, it is understood that IBM took away the desks of more than 5,000 of its employees and told them to work at home, in their car, or at their clients' offices. By doing so, IBM expected to save between 15 and 20 per cent in space requirements. Other benefits, described by Quinn (2004), include:

- **Increased productivity** (studies indicate that teleworkers show increased productivity)
- **Reduction in absenteeism** (less likely to take time off work)
- **Improved morale** (e.g. more freedom to schedule their work)
- **Improved recruitment** (employees can work from a wider geographic area)
- **Benefits to the environment** (less commuter traffic – reduced carbon emissions)





- **Lower costs for the worker** (e.g. child care expenses, 'office' clothes, travelling).

There are also significant health benefits to telecommuting. These include:

- **Reduced spread of communicable diseases.** People, who can stay at home and work rather than bringing a cold, or the flu, for example, into the office, are preventing illness from spreading to other co-workers (and their co-workers' families). Conversely, by staying home, they are not becoming infected by communicable diseases from coworkers, who bring them into the office
- **Reduction in stress-related illnesses.** Commuting itself, is enough to cause stress related illnesses for many people and sometimes just the distance and time involved in commuting to and from work can cause unnecessary physical and mental discomfort
- **Reduced production of pollutants that lead to increased health problems.** Because they are not producing as much pollution by commuting every day back and forth to the office, telecommuters are improving not only the quality of the air they breathe, but the air that everyone breathes
- **Improved access to individual health needs for persons with existing health problems or disabilities.** Many people do not have the access they need to their medications during commutes or during the time they spend on their job sites. Many people also require or desire special equipment and facilities in order to address a variety of health conditions or physical limitations. Telecommuting accommodates the needs of people who would prefer to be closer to their homes, where they can better access their own familiar facilities and living environment.

### ***The drawbacks of telecommuting***

Although some employees welcome the new freedom that comes with less supervision, others say they miss the camaraderie and social interaction that comes with face-to-face office work. Field-based employees typically complain of their "isolation" from a central office which 'never understands' the conditions of their work – that lack of empathy or interest represents a fundamental negativism toward office absence. Those not working in a central office may be regarded as quasi-employees, similar to contract, part-time, or temporary employees within the organization ... Overall, both physical and social distance, independent of all other considerations, attenuates organizational legitimization and managerial trust. (Perin in Kling (1996))

Video conferencing can help ease the psychological trauma that comes with spatial disengagement, allowing groups to converse and work together in an electronic version of face-to-face communication.

Some employees have highlighted the intrusion of the workplace in the home setting. The office at home is a constant reminder of work. In addition, there is the real problem of defining concrete working hours when the distraction of home life is a constant presence. This may result in the boundaries between working hours and social or home time becoming blurred, and a tendency to work longer hours (perhaps accounting for the increase in productivity noted in the previous section).





Other noted aspects are given below – these are adapted from Quinn [2004]:

- The threat to management control of worker autonomy
- Lack of face-to-face interaction with customers at the workplace
- Security issues (particularly sensitive information)
- Difficulty of scheduling team meetings
- Lack of visibility with management (and the potential for being 'overlooked' for promotion)
- Lack of support for the office worker from the 'remote' worker (the office worker is unlikely to contact the remote worker for help)
- The teleworker feels the need to be 'always available' to prove they are working
- Isolation – not just socially, but for the stimulation of ideas, peer support, technical support
- Tendency to work longer hours.

◀ Preliminary Activity for Week 13

Jump to...



Analysis, Application, and Exploration for Week 13 ▶



## Navigation

Home



Dashboard

Site pages

My courses

Capstone Project 1

Network Attacks: Detection, Analysis & Counter...

Ojt/Practicum 1

Social And Professional Issues

Participants

General

12 - Midterm Examination

13 Empowering Computers In The Workplace



Preliminary Activity for Week 13



**Lesson Proper for Week 13**



Analysis, Application, and Exploration for Week 13



Generalization for Week 13



Evaluation for Week 13





## Fair Warning

**NOTICE:** Please be reminded that it has come to the attention of the Publishing Team of eLearning Commons that learning materials published and intended for ***free use only by students and faculty members within the eLearning Commons network were UNLAWFULLY uploaded in other sites without due and proper permission.***

**PROSECUTION:** Under Philippine law (Republic Act No. 8293), copyright infringement is punishable by the following: Imprisonment of between 1 to 3 years and a fine of between 50,000 to 150,000 pesos for the first offense. Imprisonment of 3 years and 1 day to six years plus a fine of between 150,000 to 500,000 pesos for the second offense.

**COURSE OF ACTION:** Whoever has maliciously uploaded these concerned materials are hereby given an ultimatum to take it down within 24-hours. Beyond the 24-hour grace period, our Legal Department shall initiate the proceedings in coordination with the National Bureau of Investigation for IP Address tracking, account owner identification, and filing of cases for prosecution.



## Activities



Assignments



Forums



Quizzes



Resources

