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What is Computer Ethics?

**Maner's Definition** The name “computer ethics” was not commonly used until the mid-1970s when Walter Maner began to use it. He defined this field of study as one that examines “**ethical problems aggravated, transformed or created by computer technology.**” Some old ethical problems, he said, were made worse by computers, while others came into existence because of computer technology. He suggested that we should use traditional ethical theories of philosophers, such as John Stuart Mill, or the German philosopher Immanuel Kant.

## Johnson's Definition

In her book, *Computer Ethics* (1985), Deborah Johnson said that **computer ethics studies the way in which computers “pose new versions of standard moral problems and moral dilemmas, exacerbating the old problems, and forcing us to apply ordinary moral norms in uncharted realms.”**

. But, unlike Maner, she did not believe that computers create wholly new moral problems. Rather, she thought that computers gave a “new twist” to ethical questions that were already well known.

**Moor's Definition** In his influential article “What Is Computer Ethics?” (1985), James Moor provided a definition of computer ethics. He defined computer ethics as **a field concerned with “policy vacuums” and “conceptual muddles”** regarding the social and ethical use of information technology.

- **policy vacuums:** Computer Ethics is determine what we should do in such cases, that is, formulate policies to guide our actions

**- conceptual muddles:** the computer revolution will occur in two stages. “technological introduction” in which computer technology is developed and refined. The second stage “technological permeation” in which technology gets integrated into everyday human activities and into social institutions, changing the very meaning of fundamental concepts, such as “money,” “education,” “work,” and “fair elections.”

## **Bynum's Definition**

**In 1989 Terrell Ward Bynum developed another broad definition of computer ethics**

**According to his view, computer ethics identifies and analyzes the impacts of information technology on such social and human values as health, wealth, work, opportunity, freedom, democracy, knowledge, privacy, security, self-fulfillment, etc.**

**This conception of computer ethics is motivated by the belief that – eventually – information technology will profoundly affect everything that human beings hold dear.**

## **Gotterbarn's Definition**

**In the 1990s, Donald Gotterbarn became a strong advocate for a different approach to computer ethics. From his perspective, computer ethics should be viewed as a branch of professional ethics, concerned primarily with standards of good practice and codes of conduct for computing professionals:**

**There is little attention paid to the domain of professional ethics – the values that guide the day-to-day activities of computing professionals in their role as professionals. By computing professional I mean anyone involved in the design and development of computer artifacts.**

# Summary



## Maner's Definition

- i) Computer technology caused ethical problems
- ii) Use traditional ethical theories

- a) Utilitarian ethics

“Greatest good for greatest number of people”

- b) Rationalist ethics

“Objects about which mind can think must confirm to its manner of thought”

## Johnson's Definition

First pose new versions of standard moral problems and dilemmas, then force to apply ordinary moral norms in uncharted realms.

## Moor's Definition

Computer ethics is a field concerned with ***policy vacuums*** and ***conceptual muddles***

***policy vacuums***: How computer technology should be used?

***conceptual muddles***: Need coherent conceptual framework to formulate the policy for action.

#### 4. Bynum's Definition

computer ethics identifies and analyze the impacts of technology on social and human values i.e. Health, wealth, work , opportunity, freedom, democracy, knowledge, privacy and security etc.

#### 5. Gotterbam's Definition

Computer ethics in context of professional ethics are concerned primarily with standards of good practice and codes of conduct for computing professional.

# **Some Issues in Computer Ethics**

# Computers in the Workplace

As a "universal tool" that can, in principle, perform almost any task, computers obviously **pose a threat to jobs**. Although they occasionally need repair, computers don't require sleep, they don't get tired, they don't go home ill or take time off for rest and relaxation. At the same time, computers are often far more efficient than humans in performing many tasks

# Computers in the Workplace

Therefore, economic incentives الحوافز to replace humans with computerized devices are very high. Indeed, in the industrialized world many workers already have been replaced by computerized devices: bank tellers, auto workers, telephone operators, typists, graphic artists, security guards, assembly-line workers, and on and on. In addition, even professionals like medical doctors, lawyers, teachers, accountants and psychologists are finding that computers can perform many of their traditional professional duties quite effectively.

# Computers in the Workplace

The employment outlook, however, is not all bad. Consider, for example, the fact that the computer industry already has **generated a wide variety of new jobs**: hardware engineers, software engineers, systems analysts, webmasters, information technology teachers, computer sales clerks, and so on. **Thus** it appears that, in the short run, computer-generated unemployment will be an important social problem; but in the long run, information technology will create many more jobs than it eliminates.

# Computers in the Workplace

Even when a job is not eliminated by computers, it can be radically altered. For example, airline pilots still sit at the controls of commercial airplanes; but during much of a flight the pilot simply watches as a computer flies the plane. Similarly, those who prepare food in restaurants or make products in factories may still have jobs; but often they simply push buttons and watch as computerized devices actually perform the needed tasks. In this way, it is possible for computers to cause **'de-skilling' of workers**, turning them into passive observers and button pushers. Again, however, the picture is not all bad because computers also have generated new jobs which require new sophisticated skills to perform



# Summary

## Computers in the Workplace

- LOST JOBS: Economic incentives to replace humans with computerized devices are very high
- NEW JOBS: Computer industry already has generated a wide variety of new jobs
- ALTERED JOBS:
  - “de-skilling”
  - New skilled jobs