



# PROFESSIONAL ETHICS

## HS-219

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# COMPUTER ETHICS

There are two broad categories of computer ethics problems:

- ▶ Those in which the computer is used **to commit an unethical act**, such as the use of a computer to hack into a database.
- ▶ Those in which the computer is used **as an engineering tool**, but is used improperly.

## COMPUTERS AS A TOOL FOR UNETHICAL BEHAVIOUR

(I) Computers can be used to more efficiently **steal money from a bank**. A more traditional bank robbery would involve putting on a mask, handing a note to a bank teller, showing a gun, and walking away with cash. Computers have made this process easier to perform and harder to trace. The robber simply sits at a computer, invades the bank's computer system, and directs that some of the bank's assets be placed in a location accessible to him/her.

The difference between these two types of robbery is that the computer has made the crime impersonal. The criminal never comes face to face with the victim(s). Moreover, the technology required to prevent or detect this type of crime lags behind the technology employed to commit it.

(II) Computers make **privacy more difficult to protect**. Large amounts of data on individuals and corporations are centrally stored on computers where an increasing number of individuals can access it.

By privacy we mean the basic right of an individual to control access to and use of information about himself/herself. Invasions of privacy can be harmful to an individual in two ways:

1. The leaking of private information can lead to an individual being harassed or blackmailed. The harassment may also come in the form of uninvited advertisements once information on an individual's spending habits is leaked.

2. Personal information is personal property. Its unauthorized use is considered to be theft.

(III) Ethical issues arise when computers are used for **hacking**. (Sometimes the hacker is portrayed in the media as a hero.) Hacking has many forms, including:

- ▶ Gaining unauthorized access to a database
- ▶ Implanting false information in a database
- ▶ Altering existing information in a database
- ▶ Disseminating viruses over the internet

In extreme cases, hackers have accessed secret military information which obviously has troublesome or dangerous implications for national security.

**In all its forms hacking constitutes an unethical use of computers.**



(IV) **Copyright infringement** has been made much easier through the use of computers and the Internet. Books, music, movies, software, and other copyright materials are being shared left, right, and centre.

Copyright exists to protect the rights of authors, musicians, film producers, and others to profit from their creations. If creators ceased to benefit from their creations, they would be discouraged and even prevented from creating further. Hence, copyright violation is illegal and unethical.

Source:

*Engineering Ethics* by Charles Fleddermann