



## Topic 8 Consequences of Uses of Computing



### Moral Issues

Moral issues relate to a sense of right and wrong, and often vary from person to person. Some people would happily take money, or a phone dropped in the street, whilst others would make an effort to return it. People's morals are often influenced by those around them. Technological advancements often bring about new opportunities, which individuals may view differently depending on their own moral views.

### Ethical Issues

Ethical issues are about the wider society or community view of what is right and wrong rather than an individual's viewpoint. Society usually believes that personal data should be stored securely and used only for the purpose for which it was intended. Changes in technology will frequently produce new ethical questions, which require discussion and debate before society can agree on a view.

### Cultural Issues

Cultural issues relate to how moral and ethical views vary from place to place and community to community. For example, in China the number 4 is seen as incredibly unlucky and people whilst in other parts of the world this is not the case. When designing computer systems it is important to consider where and by whom the system will be used, and what the attitudes may be towards it. For example, it would not be a good idea to name a system 4 if it were to be used in China.

### Legal Issues

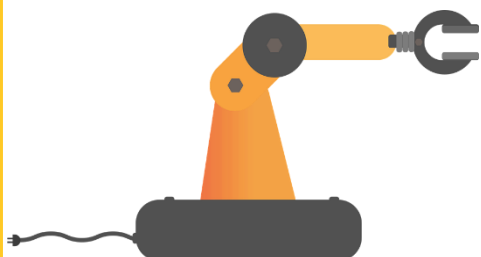
Legal issues are those related to law. The UK has several laws related specifically to computers and computer systems including:

- The Computer Misuse Act 1990
- The Data Protection Act 1998
- The Freedom of Information Act 2000
- The General Data Protection Regulation 2016



Developments in technology can make it easier for laws to be broken, for example making it easier to share copyrighted music and videos, and for individuals to evade law enforcement, for example using encrypted communications. They often also need new laws to be written to cover their use.

The growth of The Internet has made it much easier for people to communicate, share information and do business intentionally, raising a question of which country's laws should apply. For example, if someone in the UK buys a product from Germany using a website hosted in the USA and run by a company in France, which laws should apply?



### Advancements in Computer Science

Advances in digital and computer technology have dramatically changed how society communicates and operates. New technologies provide the ability to monitor behaviour and to gather and analyse personal information much faster and more easily than before. This can sometimes happen against the will of the individual and wider society.

### The Role of Computer Scientists



Computer scientists and software engineers have the power to improve the usage of computers and computer systems when designing systems. This power comes with responsibility attached. Computer scientists must consider the moral and social aspects of their work alongside their ability to produce systems which can help millions of people around the world.

### **Key Terms Around Moral, Ethical and Legal Issues and Opportunities**

- Code of Conduct - A set of rules that individuals working for an organisation follow in their day to day work and behaviour.
- Copyright - An exclusive and assignable right of legal ownership given to the creator of a piece of content (digital, physical or intellectual) for a fixed period of time.
- Data Misuse - The unauthorised or unlawful use of data.
- Personal Data - Any information related to an identifiable person.
- Unauthorised Access - The use of data, networks, applications or any computer system without permission or for disallowed purposes.