13.1 Introduction

This chapter examines the impact of computers on people. It is divided into two parts:

- Part 1 outlines the effects of computers on employment and personal privacy.
- Part 2 looks at the types of people who work in computing.

Part 1: Computers and Society

Nothing divides opinion as much as discussing the possible long-term effects of computers and the so-called 'information revolution'.

Computing is now just about the world’s largest industry and the widespread use of computers in the ‘information revolution’ is there for everyone to see. Information technology affects every person and organisation and the accelerating pace at which these changes are taking place has led many to question the role of computers in society: are these changes beneficial and, if so, to whom?

Fear of computers is natural; most people are frightened of the future and of change of any kind, preferring what they are used to. This fear is increased by the image of computers whose foundation is in scientific and military applications — a mysterious, sometimes evil world — which has been enhanced by books and films on ‘master’ computers. But computers are tools to help us; it is our choice how we use them and there is no reason why they shouldn’t be ‘servants’, complementary to our skills and needs.

Two causes for concern are worthy of closer attention. They are:

- Effects on employment.
- Protection of privacy.

13.2 Effects on Employment

Will the microchip throw millions out of work or help create wealth which in turn will provide the spending power to generate new service, leisure and education industries in the ‘post-industrial’ world?
(a) Computers Cost Jobs

Ever since machines were first introduced someone, somewhere has opposed them. People who think that automation means lost jobs are known as luddites. But computers can’t be the only cause of unemployment. There were many people out of work in the UK and elsewhere in the 1930s, before computers were invented.

Yet it seems apparent that not only can computers replace people but that they affect particular types of job and industry more than others. Hence the pattern of jobs is shifting. For example, factory shop-floor jobs are being replaced by robots and automated production lines (e.g. BL’s Longbridge plant where the Metro is made), and clerical jobs are being superseded by office automation. Such jobs are usually unskilled, dull and repetitive, but do the people who lose them have alternatives? This may be largely to do with training (or retraining) for the right skills and occupations. Some countries are better at this than others and spend significantly more time and money retraining workers in the likely skills of tomorrow rather than subsidising the skills of the old declining industries. These decisions are often political.

Computing affects different industries in different ways. More than half of British manufacturers are now using micros in their products or production processes. But not every production lends itself to the incorporation of microprocessors: whereas a car needs lots of devices to measure, monitor and control aspects of its performance, a tin of beans does not. Three industries in particular have been affected by micros in products: electrical, mechanical engineering and vehicles.

(b) Computers Create Jobs

Computers do create jobs both directly and indirectly.

Direct jobs include design, manufacture, sales and programming in the computer industry.

Indirect jobs result from the new, improved product applications of microelectronics. Although fewer people may be needed to make these products, new or improved products should also win bigger sales.

More than 50% of the workforce is now involved in ‘information occupations’ compared with the declining numbers needed in manufacturing and agriculture. It seems that computer jobs often involve skilled, and therefore better-paid people, but that the jobs are fewer in number. It should be pointed out, however, that many computer jobs (e.g. data preparation, computer manufacturing) can be as boring as any other job, but many surveys have shown that people get more job satisfaction from computer-based jobs than the ‘manual’ equivalent (e.g. word-processor operators versus copy typists).

(c) Computers Change Jobs

Q. What happens when an organisation introduces computers?

A. Typically some new people are appointed in key posts (e.g. the information services manager) and this changes the power structure of the business (upsetting