developed or planned mainly in the last century and an analysis of the qualities required of a quarter in a sustainable city.

THE QUARTER IN HISTORY

The Roman city was divided into four quarters by its two main streets, the cardo and decumanus, which crossed at right-angles. Evidence of this quartering of the city is to be seen in many cities of Roman foundation, such as Lucca, which are still important urban centres today (see Figure 6.33). Alberti refers to many ancient authorities, including Plutarch and Solon, to whom he attributes the notion of dividing the city into areas for different groups. For example, according to Alberti: 'Curtius writes that Babylon was divided into a number of separate quarters . . .' and 'Romulus separated knights and patricians from plebeians; and Numa divided the plebeians according to their respective employments' (Alberti, republished 1955, Book 4, Ch 5 and Book 4, Ch 1). Alberti also quotes Plato as proposing the division of the city into 12 parts: '. . . allotting to each its particular temples and chapels' (Alberti, republished 1955, Book 7, Ch 1).

The classical tradition which divides the city into quarters was probably based upon the observation of the natural or unplanned cities of the Ancient World. Cities which appear to develop without the conscious intervention of man are organized into clearly defined neighbourhoods or quarters. The traditional cities of the Hausa people of Nigeria, for example, are still organized in wards (Moughtin, 1985). Each ward is associated with one of the great medieval gateways and is occupied by a group which practises a common trade. Other wards outside the walls of the old cities of the Hausa are occupied by other ethnic or tribal groups. Closer to home, cities in Britain still have a jewellery quarter or lace market. In Nottingham, like other British cities, there are areas which are named, have clear boundaries and to which people belong. In Nottingham, The Lacemarket, Lenton, Basford, Forest Fields, the Park and others are quarters or neighbourhoods to which people relate either as residents or outsiders. Even to the outsider, these areas are major structuring elements by which the city is understood. Such patterns of quarters, districts or neighbourhoods are common to most if not all cities and are the basis of perceptive structuring which renders the city intelligible to its citizens (Lynch, 1960).

The city in the pre-motor car age developed naturally in the form of a cluster of quarters. The quarter as a major structuring element of the city is not so characteristic of the modern motorized city: 'The motor car, indeed, not only promotes the dissolution of the city: it virtually demands it. It demands space, and its use is facilitated by dispersal. A city designed for its uninhibited use would be spacious indeed' (Houghton-Evans, 1975). The city encircled by suburbia is now the common urban form of the developed world. Furthermore, there is widening physical separation of socio-economic groups in the modern city, a process which tends to accelerate with increasing affluence. This separation of different interest groups, though present in the pre-industrial city, was never as endemic as it would now appear to be in the present-day city. When socio-economic pressures stimulate, as they are now doing, this dispersed pattern of development, there is: '. . . the tendency

to seek simplified design structures, which is often abetted by development convenience' (Gosling and Maitland, 1984). The result of these tendencies is a coarse-grained city where: '... extensive areas of one thing are separated from extensive areas of another thing' (Lynch, 1981). The motives, however, which produce a coarse-grained city with extensive areas of single land uses, unsafe centres that die at night – such as Skelmersdale new town centre in Lancashire – and large socially homogeneous housing estates, are powerful. These powerful motives include the preference for living near similar people with similar interests, and the grouping of commercial activities which maximize the locational advantages of a dispersed network of roads. Constraints imposed on the poor by their unequal access to the housing market exacerbate the situation. The forces which are inhibiting the structuring of cities to form fine-grained quarters are real and powerful. Since this is certainly the case, why should the city designer be seeking an alternative city of the future built on an outdated idea from the distant past? More importantly, even if an alternative to the present situation is desirable, is such an alternative future for the city anything other than a utopian dream?

The movement towards sustainable development, environmental protection and the reduction of pollution engenders a new perspective for the city planning professions. The reorientation of planning and design priorities will inevitably lead to a reshaping of the city which, of necessity, will be dependent upon energy-efficient means of transport. While the car-orientated city demands space and the use of personalized vehicles is facilitated by dispersal, the efficiency of public transport supported by walking and cycling is promoted by concentration: 'Just as we have seen that the automobile and the bus pull the town in contrary directions so do they require totally different primary networks' (Houghton-Evans, 1975). The bus – in the same way as any other form of public transport – requires for its efficient and economic running a city where a large pool of prospective passengers live within easy walking distance of the routes: the car is more effective in a city which is dispersed with a widely spaced network of major roads. The sustainable city will give priority to the mixed street rather than the motorway and travelling through a centre rather than bypassing it. The thought process for the design of the sustainable city is the antithesis of that for the now defunct procedures used to facilitate the car. The new design paradigm requires a return to first principles and an examination of features of the traditional city which may, in an adapted form, be useful for greening the city. The quarter is one such component of the traditional city which deserves closer study.

THE QUARTER: DEFINITION AND SIZE

The quarter, district and neighbourhood are terms with different meanings for different authors. In some cases the terms have been used interchangeably. Jacobs classifies neighbourhoods into three broad types: 'Looking at city neighbourhoods as organs of self-government, I can see evidence that only three kinds of neighbourhoods are useful: (1) the city as a whole; (2) Street Neighbourhoods; and (3) districts of large, sub-city size, composed of one hundred