URBAN DESIGN: STREET AND SQUARE

Third Edition

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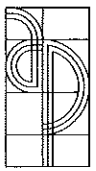


Architectural
Press

Architectural Press
An imprint of Elsevier
Linacre House, Jordan Hill, Oxford OX2 8DP
200 Wheeler Road, Burlington MA 01803

First published 1992
Reprinted 1995
Second edition 1999
Reprinted 2001
Third edition 2003
Reprinted 2004

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloguing in Publication Data
A catalogue record for this book is available from the Library of Congress

ISBN: 0 7506 57170

For information on all Architectural Press publications visit our website at www.architecturalpress.com

Typeset, printed and bound in Great Britain by Martins the Printers

STREETS

5

INTRODUCTION

Any classification of streets must start with Vitruvius and his description of the three street scenes for use as the backdrop in a theatre. Though the names and symbolism have changed, the general formal qualities still retain a powerful image for the European urbanist: 'There are three kinds of scenes, one called tragic, second, the comic, third the satyric. Their decorations are different and unlike each other in scheme. Tragic scenes are delineated with columns, pediments, statues, and other objects suited to kings; comic scenes exhibit private dwellings, with balconies and views representing rows of windows, after the manner of ordinary dwellings; satyric scenes are decorated with trees, caverns, mountains. and other rustic objects delineated in landscape style.'[1] It was Serlio who interpreted these three street types in his publication, *The Five Books of Architecture*, published between 1537-1545.[2] The scenes depicted by Serlio, using geometric perspective, are a Classical form of architecture for the tragic scene, Gothic for the comic scene and a landscape outside the city for the satyric (Figures 5.1-5.3). Anthony Vidler maintains that these three street types 'comprised the paradigmatic

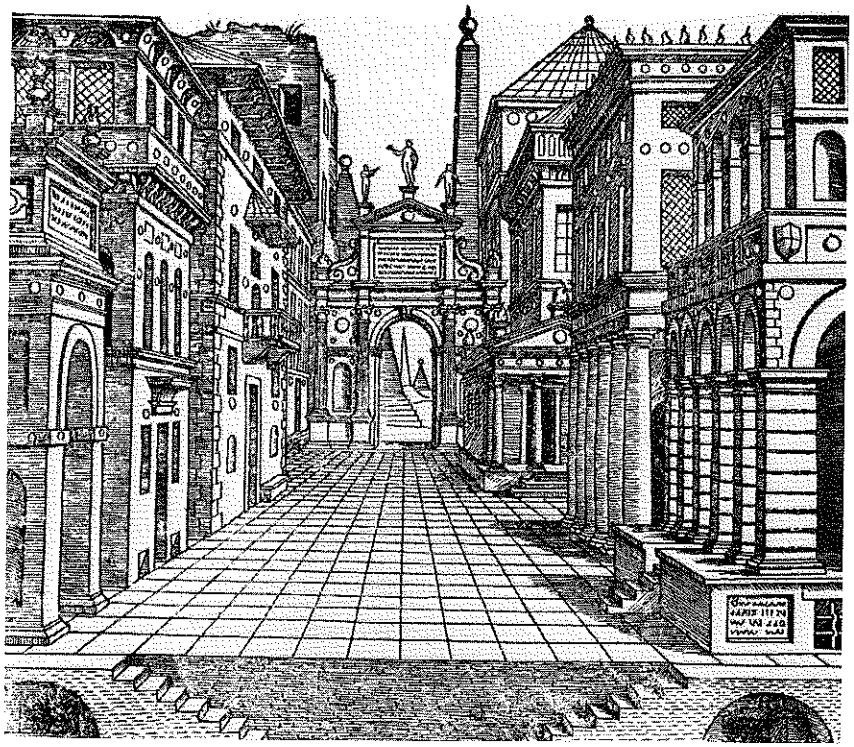


Figure 5.1 The tragic scene

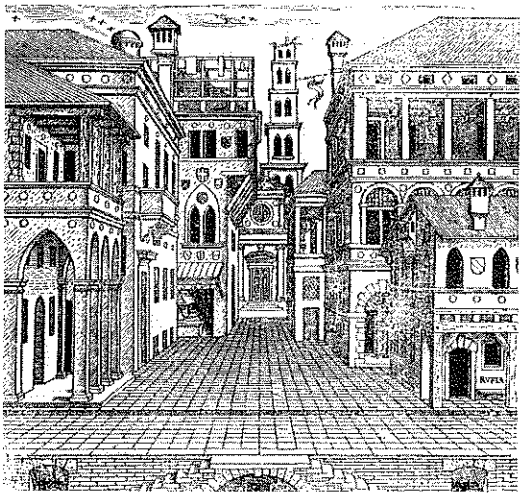


Figure 5.2 The comic scene

Figure 5.3 The satyric scene

environments of the Renaissance, the public realms within which the dramas of city and country life were to be acted out; dramas of state and public ritual in the tragic street, of boisterous merchant and popular life in the residential street of comedy, and of bucolic manners and country sport in the forest path'.[3] Even today we still think of the grandeur of the formal, straight street being associated with public exhibition and parade, the charming medieval street so admired by tourists as the pedestrianized mall of the older European city and the bucolic avenue made manifest in the vast areas of suburbia, the retreat of the many to Arcadia.

Both Alberti and Palladio distinguish two main types of streets, those within towns and those that run between towns. In speaking of streets that connect towns Alberti says: 'Highways in the country receive their greatest beauty from the country itself through which they lie, from its being rich, well cultivated, full of houses, and villages, affording delightful prospects, now of sea, now of a fine hill . . .'[4] Palladio takes up this theme suggesting that 'the ways without the city ought to be made ample, commodious, having trees on either side, by which travellers may be defended from the scorching heats of the sun, and their eyes receive some recreation from the verdure'.[5] He particularly commends the Via Portuense as having 'the utmost beauty and conveniency, which led from Rome to Ostia; because . . . it was divided into streets; between the one and the other of which there was a course of stones a foot higher than the remaining part of the way, and which served as a division: by one of these ways people went, and by the other they returned'.[6] This then, is the model for our great highways that sweep through the landscape, a subject outside the scope of this present work.

When Alberti turns to discuss streets within the town or city he again distinguishes two broad categories that follow on from the Vitruvian tragic and comic theatre scenes. Alberti recommends that streets when they enter a town should, 'if the city is noble and powerful' be 'straight and broad, which carries the air of greatness and majesty'. Though if the town is small he suggests that 'it will be better and safe to have them wind about' and, in the heart of the town, 'it will be handsomer not to have them straight, but to have them winding about several ways . . . by appearing longer they will add to the idea of the greatness of the town'.[7] Palladio's ideal for the town or city street is quite clearly the straight, regular, Classical model: 'A straight street in a city affords a most agreeable view, when it is

ample and clean; on each side of which there are magnificent fabrics'.[8] The streets are the formal, military routes - an extension of the regional roads leading to the city. Palladio concentrates on military routes, and as for the other city streets, '. . . the more they shall be like them, the more they'll be commended'.[9]

DEFINITIONS

So far in this chapter several terms such as, street, path, avenue, highway, way, route, have heen used almost interchangeably. It would be possible to extend this list to include other words such as, road, boulevard, mall and promenade, which have similar meanings. Without going into too great a discussion of definitions, for the purpose of this chapter the main distinction to be made is between road and street. Road is at once an act of riding on horseback and an ordinary line of communication between different places, used by horses, travellers on foot or vehicles. Or it is any path, way or course to some end or journey. The emphasis is on movement between places, the principle lines of communication between places - a two-dimensional ribbon, running on the surface of the landscape, carried over it by bridge or beneath hy tunnel. A street may have these attributes, but its more common meaning is a road in a town or village, comparatively wide as opposed to a lane or alley. More importantly it is a road, that is the linear surface along which movement occurs between the adjacent houses - 'it runs between two lines of houses or shops,' says a dictionary definition.[10] For the purpose of this analysis the street will be taken as an enclosed, three-dimensional space between two lines of adjacent buildings.

One particular feature of the road or the thoroughfare which is incompatible with the street is the movement of fast-moving or heavy traffic with all its engineering requirements. It was probably the elevation of the functional needs of vehicular traffic to a design dogma by avant-garde members of the Modern Movements in architecture and city planning which contributed to the neglect of the street and its architecture. Le Corbusier is one of the main offenders: 'Our streets no longer work. Streets are an obsolete notion. There ought not to be such a thing as streets; we have to create something that will replace them.' Later he said: 'No pedestrian will ever again meet a high-speed vehicle.'[11] It is possible to agree with the latter statement without accepting the former. The conception of the city as a product of urban functions dominated by transport deprives the street of its role, or meaning and such functional analyses leave the urban street without an existence or a reason for heing. When traffic moves at speed it cannot be accommodated within a street but that does not eliminate the utility of the street nor does it necessarily preclude the use of the street for vehicular traffic.

FUNCTIONS OF THE STREET

The Athens Charter, resulting from the Congres' Internationaux d'Architecture Moderne (CIAM) meeting in Athens in 1933, crystallized the theory of the Modern Movement in architecture and town planning. The ideas of the great men of the first half of the twentieth century - Le Corbusier, Gropius, Jacobus Oud and others - were revealed to the urbanist as the dogma of rationalism. In the 1950s this preoccupation with function, structure, standardization was challenged and ideas about human association and the softer social aspects of urban planning and architecture given greater emphasis. Peter and Alison Smithson were among those in the forefront of this movement usually associated with Team 10, a group within CIAM. One outcome of this change in thinking among some architect-urbanists was the rehabilitation of the street as a legitimate element of civic design. The Smithsons wrote: 'In a tight knit society inhabiting a tight knit development such as the Byelaw Streets

there is an inherent feeling of safety and social bond which has much to do with the obviousness and simple order of the form of the street: about 40 houses facing a common open space. The street is not only a means of access but also an arena for social expression.'[12] Unfortunately the analysis led to the idea of streets in the air: 'The principle of identity we propose is the basis of the Golden Lane Project - a multi-level city with residential street-in-the-air.'[13] As an idea it failed in Britain: as a concept the street-in-the-air was not within the cultural norms acceptable to the general population in this country. An example of this type of housing at Radford in Nottingham was demolished after only twenty years in use. A street in the British tradition is firmly anchored to the land and still conforms, in the mind, to one of the three generic street scenes described by Vitruvius about 2,000 years ago.

Jane Jacobs is an important critic of the urban forms resulting from the application of design principles developed by CIAM and other like-minded groups of urban theorists. She is a great apologist for the street: 'Streets and their sidewalks, the main public places of a city, are its most vital organs. Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull.'[14] Jacobs sees the breakdown of law and order in cities partly, at least, as a consequence of the rejection of the street by modern planners and its replacement by large building blocks set in a sea of amorphous, unowned space - the ideal setting for the mugger and the thief. It is an assertion supported by the writings of Newman and the research carried out in Britain by Coleman.[15] There may, indeed, be a relationship between the pattern of crime and environmental form. However, showing that there is a causal relationship between these two variables is quite another matter. Nevertheless, it seems to strike a note of common sense when Jacobs asserts: 'The first thing to understand is that public peace - the sidewalk and street peace - of cities is not kept primarily by the police, necessary as police are. It is kept primarily by an intricate, almost unconscious, network of voluntary controls and standards amongst the people themselves and enforced by the people themselves.'[16] She goes on to specify how the streets can be made self regulating: 'There must he eyes upon the street, eyes belonging to those we might call the natural proprietors of the street . . . and . . . the sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalks in sufficient numbers.'[17]

In analysing the utility of the street as an element of city design for the twenty-first century, sentimentality cannot be permitted to colour judgement. It is not possible to affirm with any degree of certainty how or to what extent the physical environment affects the way people behave. For example, in the 1940s and 1950s it was thought by the planners that through the manipulation of land-use patterns and the design of small neighbourhoods that somehow 'community' would result. The thinking in Britain immediately after the Second World War about this concept of community was a genuine desire to reproduce in new towns the cosiness of the English village or the co-operative unity of a working class street. The friendliness of the street was wrongly analysed as a product of the pub, the corner shop and the church hall. No account was taken of the deep roots of the inhabitants of the working class streets or of the close family and economic ties of the street system.[18] As Robert Gutman points out: 'The charming spaces Cullen describes came about because of the prior existence of a coherent community; they did not then, nor could they now, by themselves bring about such a community.'[19] Amos Rapoport's work seems to indicate that designers' rules of composition may not have the effect they believe.[20] While Herbert Gans asserts that 'the physical environment has much less effect than planners imagine. . . . The social environment has considerably more effect.'[21] He goes on to point out that Jacobs in her analysis of the lively city is engaged in repeating the fallacy

of physical determinism just as the planners she attacks in her book *The Death and Life of Great American Cities*. In Gans' words: 'The last assumption, which she shares with the planners whom she attacks, might be called the physical fallacy, and it leads her to ignore the social, cultural and economic factors that contribute to vitality or dullness.'[22] It is, therefore, necessary to examine the function and role of the street within the urban fabric so that the designer is better able to understand and give form to this important element of city design.

The street in addition to being a physical element in the city is also a social fact. It can be analysed in terms of who owns, uses and controls it; the purposes for which it was built and its changing social and economic function. It also has a three-dimensional physical form which, while it may not determine social structures, does inhibit certain activities and make others possible. The street provides a link between buildings, both within the street, and in the city at large. As a link it facilitates the movement of people as pedestrians or within vehicles and also the movement of goods to sustain the wider market and some particular uses within the street. It has the less tangible function in facilitating communication and interaction between people and groups - 'thus serving to bind together the social order of the *polis*, or what in current parlance would be called the local urban community. Its expressive function also includes its use as a site for casual interaction, including recreation, conversation, and entertainment, as well as its use as a site for ritual observances.'[23] The suburban street reinforces people's social aspirations: movement 'up market' to a larger house, bigger garden. A 'better' street is all important and so the new street address becomes the symbol of self-esteem. The street, however, is also a common area which serves a group not just one family: the type of neighbours are important in this quest for self-esteem. As a space serving a group it is to some extent a closed social system. It has distinct boundaries despite acting as a communal thoroughfare to other areas.

Many changes have taken place recently in the social patterns of life in large western cities. Thirty years ago, for example, many housewives would walk to the shop, they would also walk the children to school. Now the housewife's role has changed and she may be the breadwinner and head of a single parent family or a co-working family partner. More trips are now made by car to the supermarket, the school and leisure outings. Whether male or female, young or old, a greater number of social interactions occur at the destination rather than during the trip, and the telephone call to some extent replaces the chat on the doorstep. In the design of cities it would be unwise to ignore these changes which have occurred. It would also be a brave person who would predict the direction of future social change. Environmental, or green issues, the problem of the ozone layer, the increasing cost of irreplaceable fossil fuel and so on would indicate a possible change to mass transport systems and a return to a more compact urban form. This may indeed be the future, but despite brave words and good intentions there seems little unequivocal political will to allocate funding to the development of public transport in this country. Perhaps environmental conditions must deteriorate further before the general public is weaned away from the car. In this unclear future what role, if any, has the street?

For the purpose of this study it is assumed that for the next 10 or 20 years the private car will remain an important means of urban transport and that city planning must come to terms with that prospect. The rapid movement of traffic in large volumes requires large roads. Unless some limit is placed upon traffic volume and its freedom of movement the destruction of streets aud squares as places of social contact will continue, a process that will he accompanied by the degradation of local environmental quality. Some form of city structuring based upon the Buchanan model of environmental areas may be essential to limit the intrusive effect of the motor car on urban living areas. 'A convenient term is required to convey the idea of a place, or an

area, or even a street, which is free from the dangers or nuisances of motor traffic. The expression that immediately comes to mind is to say that the area has a good "environment", but this would convey to most people familiar with town planning terms a good deal more than just freedom from the adverse effects of traffic. It would for instance, certainly convey the idea of a place that was aesthetically stimulating.'[24] Detailed consideration of the primary distribution network of roads necessary to serve town and city is beyond the scope of this study, nevertheless a plea is made for such a network to take the form of the tree-lined boulevard rather than the highly engineered urban motorway favoured in the 1960s. In the environmental areas within the interstices of the major routes the needs of the pedestrian dominate, and the creation of a sense of place is paramount. In such a situation the street, the square and the public façade of buildings are the dominant design elements. As Colin Buchanan points out: 'Walking is also an integral part of many other matters, such as looking at shop windows, admiring the scene, or talking to people. In all, it does not seem to be far from the truth that the freedom with which a person can walk about and look around is a very useful guide to the civilized quality of an urban area.'[25]

In the planning of a street the physical factors that appear most to influence street use are, according to Schumacher, user density, land-use mix, pedestrian-vehicular interaction, configuration and context.[26]

It appears that most street activity occurs when it is convenient for large numbers of pedestrians to use the street in a variety of ways. Activity in streets increases when densities are high enough to inhibit the use of the motor car and to support a range of facilities such as shops and schools which are within walking distance from a sustainable catchment area. It also appears that a variety of land uses stimulating many activities is a prerequisite of a lively street. The elimination of all 'non-conforming' uses from the residential area reduces the propensity for social contact and interaction in the street. Both these propositions, that is, the linking of street activity with high density and a mix of land uses, may be true in a very general way. There is, however, a need to examine both propositions more carefully with regard to the function of the street. In Britain, for example, few families would be willing to live close to a noisy public house, an all-night disco or a business operating long hours. In the study of the street it may be necessary to adopt a notion used to analyse Islamic cities. There the city is organized along a spatial continuum ranging from private, semi-private/semi-public to public space.[27] The public streets that function as the main pedestrian and vehicular networks or 'paths' within an environmental area require a different design approach to the quiet residential streets where greater consideration should be given to the need for privacy and defensible space.

The precise form of pedestrian-vehicular interaction is conditioned by the function of the street. While total separation of vehicles and pedestrians can be harmful to the development of a lively and active street, many pedestrianized town centres in Britain and in Continental Europe are extremely successful. The success of pedestrian areas is dependent on the variety of attractions they offer so that pedestrians in large numbers have reason for remaining. It is also conditional on good access for both private and public transport. One problem for the designer of the pedestrian precinct is the integration of car parking within the surrounding urban fabric. Separation of high-speed traffic movement from pedestrian traffic is obviously necessary: this occurs in a most civilized manner in the Paris boulevard. It has wide pedestrian pavements separated from the road with trees and in some cases lanes for parked or slow-moving vehicles.

In residential neighbourhoods dominated by the motor car there is a danger that the car itself becomes the sole link between the home and the world outside. This may further isolate each home and reinforce the remoteness associated with a high level of privacy for the individual dwelling. The results of

this lifestyle are those deserted streets associated with the wealthy North-American suburb where meeting a dog on a Sunday morning stroll is a welcome event for the solitary user. Empty streets, as Jacobs points out, can lead to the public domain being donated to the thug, mugger and rapist. In turn this leads to the reaction, a plea for the privatization of the public street and its policing by the private security force: a policy leading to the city being compartmentalized into unfriendly, highly defended private estates where the normal writ of public law does not run. Institutionalizing 'no-go' areas, on the lines of Northern Ireland, is the death knell of the city.

In the design of the residential street a proper balance is required between privacy, defensible space, access for the car and safe pedestrian use of the street. As Coleman points out, in Britain, we have found the answer to this problem - the ubiquitous semi-detached house, a solution much despised by architect and planner alike.[28] For a rational solution to the planning of some residential areas we may also have to return to some of the ideas of Unwin and others in the early Garden City Movement. Family security is served well by the home on a plot enclosed on three sides by neighbouring plots with just one access point from the road for pedestrians and the family car. The street scene is completed with small front gardens, low hedges and protruding bay windows. The overlooked street becomes the 'owned' semi-public domain of the local community - a driveway with wide, tree-lined verges, the satyric scene of Serlio and still the ideal of the home-owning British population (see Figures 3.7 and 3.10). However, close to public transport corridors, it may be necessary to consider increased densities having the more urban character of the 'comic scene'.

THE FORM OF THE STREET

The configuration, shape or form of the street has not received the detailed consideration given to the design of the public square. Certainly many great streets have been designed and built, many others have been admired, described and photographed, but little work on the analysis of form has resulted. Scholars such as Sitte and Zucker have preferred to concentrate their efforts on the high points of urban structure, the nodes, where major activities occur, where civic buildings are concentrated and where the community lavishes most of its surplus wealth in the form of prestigious development and artistic creation. Although the street accounts for most of the urban public realm, in practice, particularly modern practice, the street is what remains after private planning of individual properties is considered satisfactory.

As seen in Chapter three, there are two quite distinct physical conceptions of a European city. In the first conception it appears that the streets and public squares are carved from an original block of solid material. This is the city Sitte knew and loved; his visual analysis is based on this concept. The other main conception of a city that has the form of an open parkland into which buildings have been introduced as three-dimensional objects sitting on and within the landscape.[29] This is the concept associated with developments like the Ringstrasse in Vienna or the ideas formulated by Le Corbusier and others in the Modern Movement of architecture and planning (Figure 5.4). Both main concepts exist side by side in the real world of the city and, indeed, as far as the street is concerned, both concepts are of ancient origin being documented by Serlio and Vitruvius in their descriptions of the tragic, comic and satyric scenes.

The form of the street can be analysed in terms of a number of polar qualities such as straight or curved, long or short, wide or narrow, enclosed or open, formal or informal. Street form can also be analysed in terms of scale, proportion, contrast, rhythm or connections to other streets and squares. No matter which analysis is followed the street has two main characteristics directly related to form; it is, at one and the same time, both path and place. It is such common practice to regard the street as a

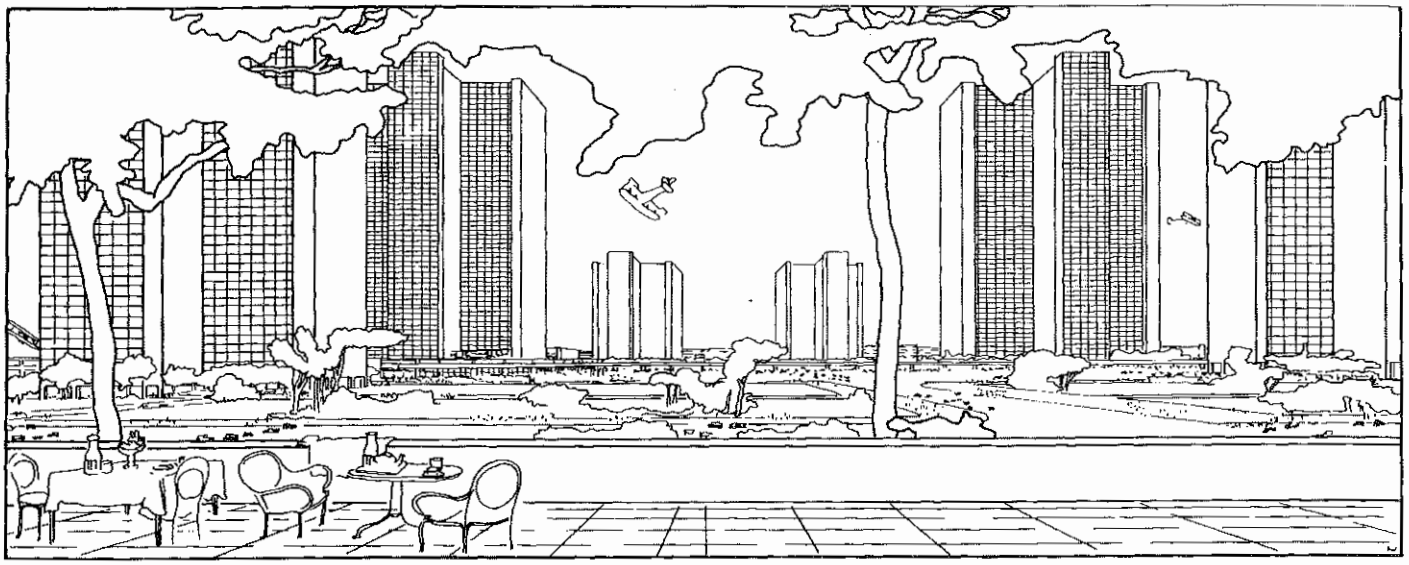


Figure 5.4 A contemporary city

route (road) for motor vehicles that its function as a place has been quite overlooked. For many generations the street has provided urban communities with public open space right outside their homes. Says Jonathon Barnett: 'A second element basic to any public open space plan is to recognize the importance of streets as the framework of public open space.'[30] The modern city street has become in some cases a place of danger for citizens or so unattractive that it forces people to stay within the privacy of their homes and move about in the relative sanctuary of the private motor car. Alexander wishes to see an end to this situation: 'Streets should be for staying in, and not just for moving through, the way they are today.' Therefore he suggests, 'make a bulge in the middle of the public path, and make the ends narrower, so that the path forms an enclosure which is a place to stay, not just a place to pass through'.[31]

Defining a street as a road for vehicles is not the same as designing it as a 'path'. The traffic route designed by the engineer to serve so many passenger car units (PCUs) per hour relegates the street to the level of a sewer, a conduit which facilitates the efficient movement of effluent. This is far removed from Norberg-Schulz's symbolic definition of a path: 'On the plane man chooses and creates paths which give his existential space a more particular structure. Man's taking possession of the environment always means a departure from the place where he dwells, and a journey along a path which leads him in a direction determined by his purpose and his image of the environment. . . . The path, therefore, represents a basic property of human existence, and it is one of the great original symbols.'[32] Nor does a street conforming to traffic engineering standards necessarily fulfil Lynch's requirements for a memorable path. Such a path has both a beginning and an end, definite places or nodes along its length - places of special use and activity; such paths can be scaled, have contrasting elements but above all else, they must present to the observer a stimulating and memorable image of connected places.[33]

A sense of place in street design is best achieved if the spatial volume defined by the frontages is perceived as the positive form, the figure seen against the general ground of the surrounding architecture. According to Gibberd: 'The street is not

building frontage but a space about which dwellings are grouped to form a series of street pictures; or alternatively the street is a space that may be expanded into wider spaces such as closes or squares.'[34] For a street to function as a place or exterior room in the city it must possess similar qualities of enclosure as the public square: 'The ideal street must form a completely enclosed unit! The more one's impressions are confined within it, the more perfect will be its tableau: one feels at ease in a space where the gaze cannot be lost in infinity.'[35] The absolute dimensions of the street must therefore be kept within reasonable proportions: 'When the street is long and wide with houses on a common frontage, it is most difficult to obtain a sense of enclosure.'[36] There have been a number of suggestions for terminating an overly long street:

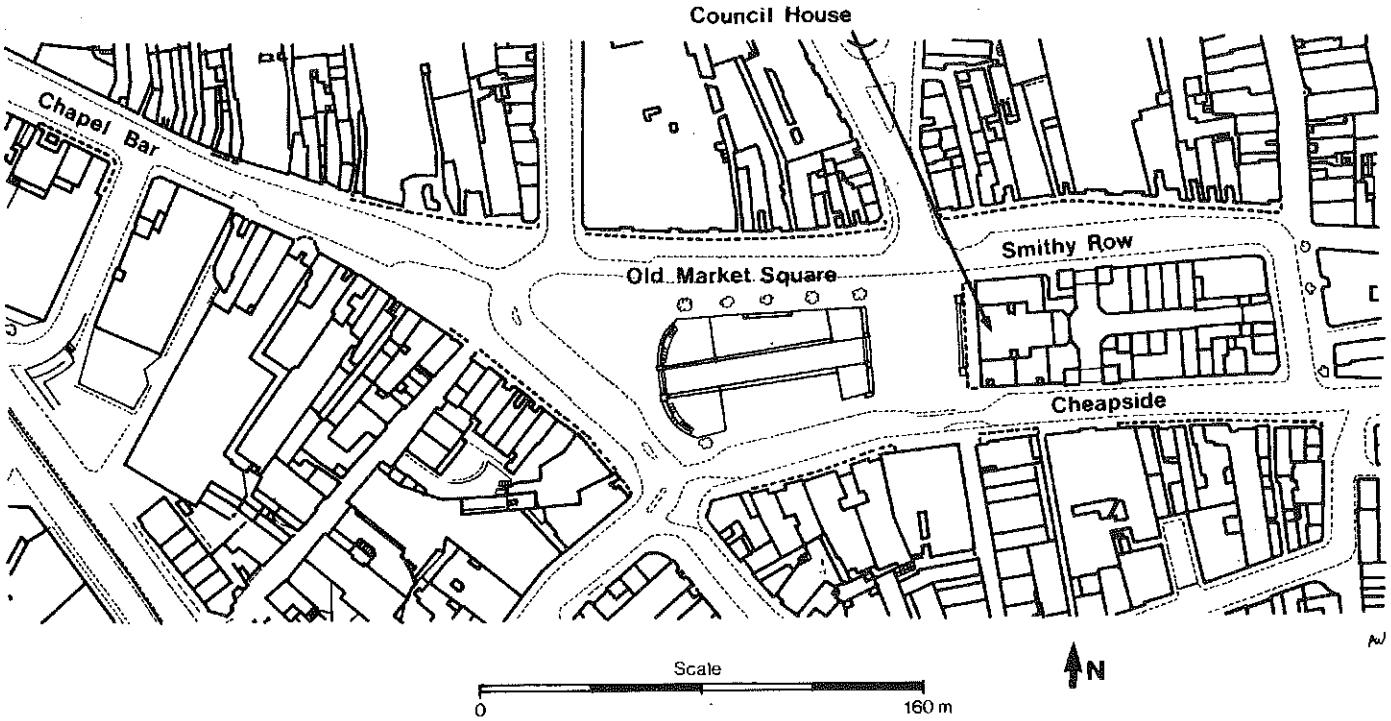
'The ancients have . . . thrown an arch over the street so as to interrupt over-long perspective effects' (Figure 5.5).[35] The Essex design guide suggests that the apparent length of the street can be reduced by offsets in the building frontage.[38] If a street or a section of a street is to possess the quality of enclosure then it must be considered to have three main elements, an entrance, the place itself and a termination or exit. Since the street is also a path, and a path is two directional, the place must terminate or close in two directions.

STREET LENGTH

Sitte recommends that the plan of a public square should not have dimensions where the length of its enclosing walls are greater than the ratio 3:1. Beyond this limit insistent, converging rooflines vanishing towards the horizon suggest movement, the dynamic urban space most suitable to the path.[39] This upper limit for the proportion of the square may indeed define the lower limit for the street.[40] The confusion between street and square is exemplified by Market Square, Nottingham. Here 'Slab Square', as it is dubbed by locals, is attenuated north-westwards and finally squeezed through Angel Row to Chapel Bar. The dynamic movement is terminated by a distant view of Pugin's St Barnabas. In reverse direction the street gradually widens to the full width of the square before the Council House. Such lack of clarity in the articulation of form may give offence to the purist and cause problems for the urban analyst but it compensates by adding charm and richness to the real world in which we live and move (Figures 5.6-5.9).

The upper limit for uninterrupted length of street is probably in the order of 1,500 m (1 mile). Beyond this distance human scale is lost. Even with vistas considerably shorter tban 1,500 m, the closure of the view causes considerable difficulty. According to Hegemann and Peets the distance to the terminal building should not be too far; they suggest that

Figure 5.5 Assisi



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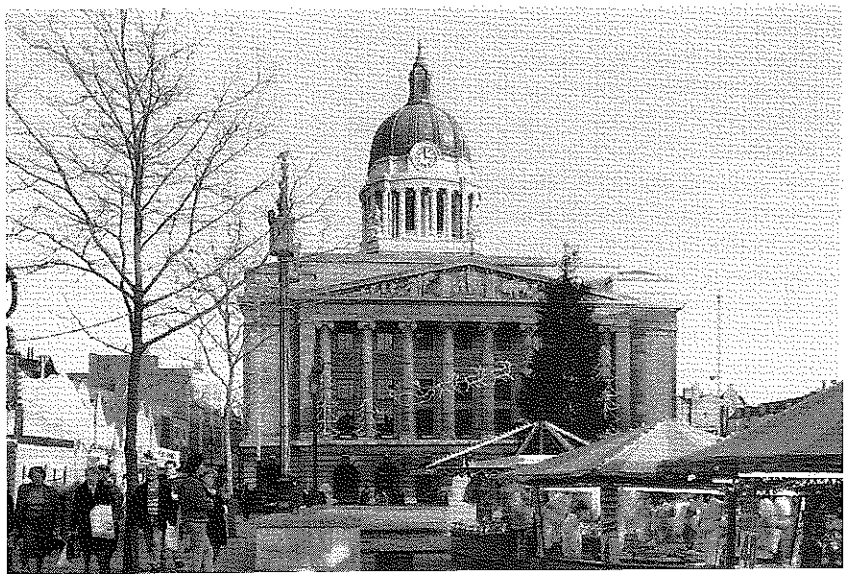

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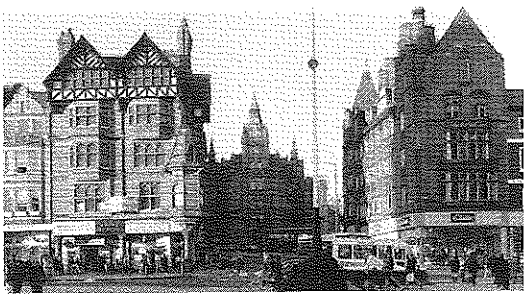

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below an angle of 18° even a prominent building will lose its dominance and begin to merge into a silhouette with the surrounding neighbourhood.[41] The condition is exacerbated when tall buildings are ranged on either side of the vista. Jean-Louis Garnier's Opera House in Paris is just such an example of loss of scale. The Opera House, an otherwise massive and imposing terminal building

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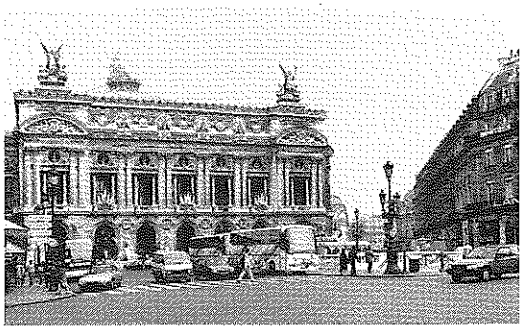

5.10

Figure 5.6 Market Square, Nottingham
Figure 5.7 The Council House, Market Square, Nottingham
Figure 5.8 Market Square, Nottingham
Figure 5.9 Market Square, Nottingham, view towards St Barnabas

loses value from the high buildings ranged along the Avenue de l'Opera (Figures 5.10–5.11). Seen along this axis the building is overpowered by the insistent perspective of the six- and seven-storey apartment blocks on either side of the street. In contrast the view along the Rue Royale leading to the Madeleine is successful, the building at the terminus of the vista gaining dominance from its position on higher ground (Figure 5.12). The Champs Elysées terminating in the Arc de Triomphe also takes advantage of the ground form to close an important vista effectively. The width of the Champs Elysées and the avenue of trees climbing the contours ensures the dominance of the triumphal arch.

The long vista is reserved for special streets, great ceremonial routes, the public pathways used on state occasions. Such grand avenues may be used to adorn a capital city; the work of Haussmann in Paris, Sixtus V in Rome or l'Enfant in Washington are such glorious celebrations of the state. The more usual case throughout long periods of urban history has been the humble street of small proportion, conforming more closely to Hegemann and Peets' strictures on scale: 'The effective placing of terminal features is an important part of street design. In medieval cities which as a rule are supposed to have "grown" without a preconceived plan, it is almost uncanny how many times the curving streets manage to secure in their axis line, over the roofs of low houses, glimpses of the highest monuments which often do not stand in the same street from which the

5.11

5.12

Figure 5.10 Opera House, Paris
Figure 5.11 Avenue de l'Opera, Paris
Figure 5.12 The Madeleine, Paris

view is enjoyed.'[42] Norberg-Schulz holds much the same viewpoint: 'In the towns of the past, oblique angles and curved lines created a "closed perspective" enlivening the prospect.'[43] Even Alberti, that strict Classical thinker, extols the virtue of the small-scale, twisting street: 'Moreover, this winding of the streets will make the passenger at every step discover a new structure, and the front door of every house will directly face the middle of the street; and whereas in larger towns even too much breadth is unhandsome and unhealthy, in a small town it will be both healthy and pleasant, to have such an open view from every house by means of the turn of the street.'[44] The supreme example of the medieval street in Britain is The Shambles at York (Figure 5.13). Here the street is narrow, the buildings three-storey hut small in scale. The sense of enclosure is heightened hy successively overhanging upper floors. The Shambles in York is at one extreme of the street continuum which ranges from this small-scale, medieval street to the gigantic scale of the Champs Elysées with its elegant esplanade separating vehicle from pedestrian.

Figure 5.13 The Shambles, York

The street is something more than a simple pathway, it is a series of connected places, somewhere for staying in and not just for moving through. In the words of Norberg-Schulz the street, 'in the past . . . was a "small universe' where the character of the district and of the town as a whole was presented in condensed form to the visitor. The street represented, so to speak, a section of life - history had shaped its details.'[45] In Lynch's terms the street is a path enlivened by a series of nodes where other paths meet it or where activities intensify to such an extent that place and rest vie for dominance with function of pathway and movement.[46] Such places or nodes should be at intervals of 200 to 300 m. As we saw, Alexander instructs us to 'make a bulge in the middle of a public path'.[47] A delightful example of the street widened along its length to form a place is to be found in Perugia where midway along the Corso Vannucci connecting the Piazza Italia and the cathedral the street widens into a subsidiary public space which at the same time remains an integral part of the street (Figures 5.14-5.17).

A number of techniques have been suggested for the design of comfortable streets. The Essex design guide recommends that the apparent length of a street can be reduced using offsets, while Hegemann and Peets commend the use of gates: 'The strong Gothic and Renaissance gates with their deep shadowed arches formed effective terminating features . . .'[48] Such an effect occurs in Assisi where an arched structure crosses the street and frames a distant view of the cathedral dome; or again in San Gimignano where the gateway terminates the town street and announces the start of the world beyond (Figure 4.47).

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The last words on street length will be left with Sitte: 'The ideal street must form a completely enclosed unit! The more one's impressions are confined within it, the more perfect will be its tableau: One feels at ease in a space where the gaze cannot be lost in infinity'.[49] Sitte illustrates his ideal street system using part of the plan of Bruges (Figure 5.18). He was of the opinion that such picturesque results developed from the application of some practical reasons such as, fitting the development to the terrain, avoiding an existing structure, squaring up the junction by curving the road both to facilitate circulation and to form well-shaped building plots. Sitte, though having a distinct personal preference for the curved street, did not rule out the use of the straight street in city planning: 'If the meandering street is more picturesque, the straight one is

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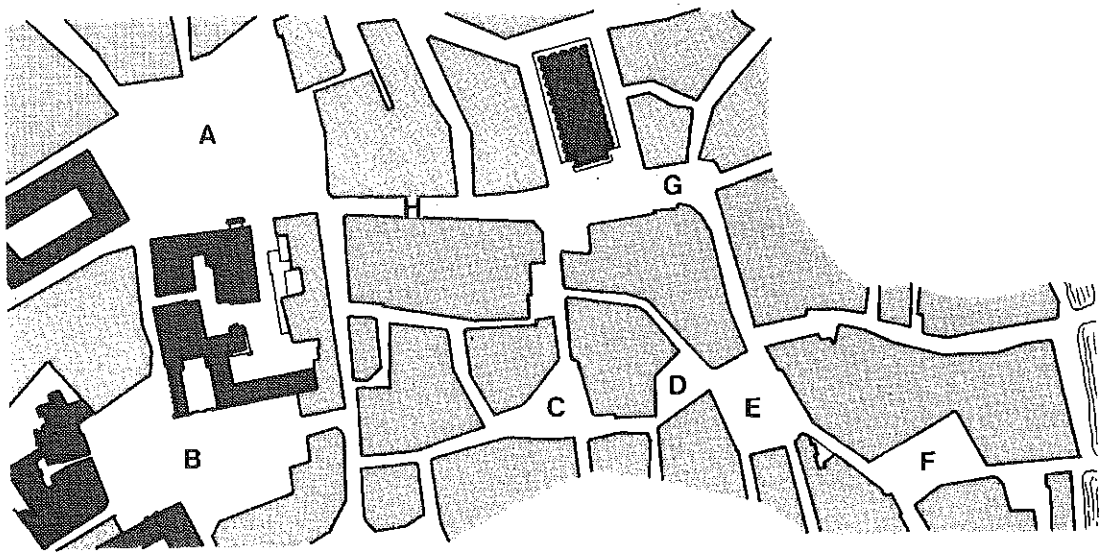
Figure 5.14 Cathedral square, Perugia
Figure 5.15 Corso Vannucci from Cathedral square, Perugia
Figure 5.16 Corso Vannucci, Perugia
Figure 5.17 Corso Vannucci, Perugia



A Grand Place
B Place du Bourg
C Place Saint-Jean
D Place des Biscayens
E Place Jean van Eyek
F Marché du Mercred
G Place de la Vieille Bourse
H Rue Flamande

Figure 5.18 Bruges

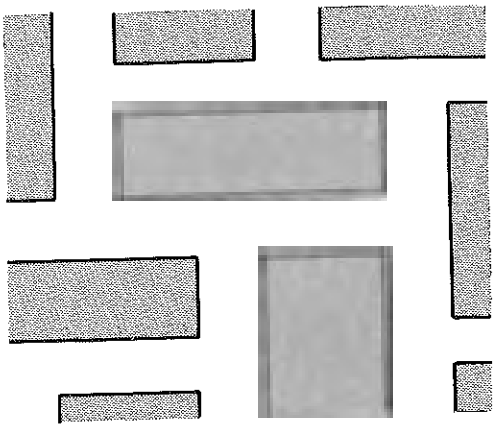


Figure 5.19 Arrangement of city streets

monumental; but we cannot subsist on monumentality alone, and it would be desirable that the builders of modern cities do not abuse the one or the other, but make use of them both as appropriate, in order to give to each district which they lay out an aspect in conformity with its purpose.'[50] The principle he wished to apply to the design of all streets was enclosure. In the straight street enclosure could be achieved through the use of the arch which he illustrated with a drawing of the Portico degli Uffizi, Florence. A less elegant and more contrived method he illustrated with a diagram for a modified rectangular layout of city blocks: here each straight short street is terminated by a street façade at right angles (Figure 5.19).

STREET PROPORTION

If proportion includes, within its definition, the idea of symmetry as used in the times of Hellenic Greece, then the term when used in street design goes beyond an understanding of the crude ratio of length to width to height: the concept is broadened to include the relationship of the parts of the street to each other and to the proportions of the total composition. It may even include some notion of

classical tripartite subdivision into introduction, development and climax.[51] Such formal melodic structuring is more important for the design of the straight street than its picturesque counterpart modelled on the medieval example. 'It, *the straight street*, offers us a more restricted field of study, its perfection being primarily dependent on a good proportion between its length and width, on the kind of edifices of which it is composed, and on its monumental termination.'[52] Many would take issue with Sitte in his dismissal of the classical straight street on the grounds of its restricted field of study, while agreeing with the remaining sentiments in the statement.

The ratio of width of street to height of enclosing buildings is critical for good street design. When, for example, a street is long and wide with two-storey houses ranged along a common frontage all sense of space enclosure is lost. Without dense planting and an avenue of trees such streets do little to lift the spirit and relieve monotony. Gibberd's recommendation for street design is '. . . to reduce the width of the road itself . . . But if the verges and front gardens are reduced and the dwellings brought reasonably close together, then it is possible to recapture that urban quality which characterizes our best town planning.'[53] These remarks of Gibberd refer to the domestic street but could equally refer to the traditional British shopping street. The wide street so favoured by the road engineer is most unsuitable for shopping. The narrow pedestrianized city street with continuous enclosing walls slightly higher than street width are most successful for their purpose as well as being an attractive place. They are still to be found, despite traffic engineers' best attentions, in cities like Nottingham as well as smaller towns such as Stamford or King's Lynn (Figures 5.20–5.22). When streets are narrow, 6–9 m (20–30 ft) and flanking buildings three or four storeys it gives 'the sense of completeness and enclosure to the pictures in the streets . . .'[54] The Essex design guide suggests that a ratio, height to width, of 1:1 is not too tight for comfort but that

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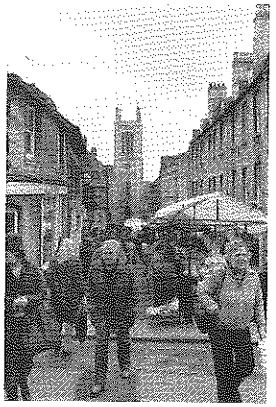
Figure 5.20 Pedestrian street, Tours
Figure 5.21 Ironmonger Street, Stamford
Figure 5.22 Broad Street, Stamford



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1:2.5 is as open as can be tolerated.[55] Narrow streets also facilitate shopping: movement from side to side for window gazing has no impediment and indeed is invited by the physical form of the development.

Aesthetic factors such as scale and proportion are by no means the only considerations in street design, other factors may of necessity be of greater significance. Oue such practical consideration conditioning street form is climate. Palladio, for example, says: 'For those of a temperate and cool air, the streets ought to be made ample and broad; considering that by their breadth the city will be much wholesomer, more commodius and more beautiful . . .' He adds however: 'The more the city therefore is in a cold place, and has subtile air, and where edifices are very high, so much the wider the streets ought to be made, that they may, in each of their parts, be visited by the sun . . . But the city being in a hot country, its streets ought to be made narrow, and the houses high, that by their shade, and by the narrowness of the streets, the heat of the site may be tempered; by which means it will be more healthy.'[56] Alberti, too, contains passages which discuss climate and its effect on built form. He recounts the sad tale of Nero's unsuccessful 'modernization' of Rome and its disastrous effects on the micro-climate of the city: 'Cornilius Tacitus writes, that Nero having widened the streets of Rome, thereby made the city hotter, and therefore less healthy; but in other places, where the streets are narrow, the air is crude and raw, and there is continual shade in summer. But further; in our winding streets there will be no house but what, in some part of the day, will enjoy some sun; nor will they ever be without gentle breezes, which whatever corner they come from, will never want a free and clean passage; and yet they will not be molested by stormy blasts, because such will be brokeu by the turning of the streets.'[57] These two long passages from Alberti and Palladio have been included to counter the ideas inherited from the 1950s and 1960s which resulted for example in the windswept plaza and sunless underpass.

Though much has been written about climate, urban form often seems to have been designed in ignorance of even the common-sense statements made by early theoreticians.[58] Such practical considerations as climate, however important, do not eliminate the need to consider scale, proportion and street composition, they simply set the parameters for their proper consideration. For example, the desert town of Ghadaia in Algeria clusters densely around hilltops penetrated by narrow, overshadowed streets kept cool in scorching heat by proportions in public spaces which are far different from those found in moderate climates (Figure 5.23).

Figure 5.23 Ghadaia, Algeria

UNITY IN STREET DESIGN

There are a number of factors which contribute to a unified street design, possibly the most important being that the form of the buildings should appear as surfaces rather than as mass. When buildings take on strong three-dimensional form the mass of the buildings dominates the scene and the space loses its importance. When the buildings ranged along a street have varied forms, styles and treatment the space loses definition. The result is development like Maid Marion Way in Nottingham[59] (Figures 2.39-2.41). Unified street design in contradistinction elevates the spatial volume to figural position against a background of two-dimensional planes, walls, pavement and sky above. Gibberd makes a similar point stating: 'The street is not building frontage but a space about which dwellings are grouped to form a series of street pictures; or alternatively the street is a space that may be expanded into wider spaces such as closes or squares.'[60] The main street in Chipping Camden is a good example of a unified street where the volume of the public street dominates the composition. The street frontages are continuous with but a few small breaks for incoming paths, roof heights vary only slightly. Although the architectural styles span two or three centuries they form a single composition constructed from the same building materials, using a few elements and incorporating similar details. Contrast there is, though variety occurs within a disciplined theme. One fine contrasting element is the market building which stands within the street, it is a piece of sculpture contrasting with the spatial volume but, being

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Figure 5.25 Chipping Campden, Gloucestershire

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Figure 5.26 Chipping Campden, Gloucestershire

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Figure 5.24 Chipping Campden, Gloucestershire
Figure 5.27 Chipping Campden, Gloucestershire

open, is also at the same time part of it (Figures 5.24–5.27).

There are cases where buildings having properties of mass, that is, those seen in three dimensions, are successfully integrated into an urban scene dominated at ground level by enclosed streets and squares; the prime example being San Gimignano. In San Gimignano the main public spaces are enclosed by three- and four-storey façades with one space leading to another in the 'fully approved' Sitte picturesque manner (Figures 4.45–4.50). For the main part the lower floors of the town consistently follow a pattern where the public space profile is punctuated dramatically by the group of medieval towers which rise to great competing heights above the general roofline adding a sharply contrasting dimension to both the internal ever-changing perspectives and to the more distant prospect.

Clearly, the use of common materials, details and architectural elements strengthen the unity in many street scenes. More important, however, is the imposition of a common roofline and the repetitive use of similar bay sizes for development. The roofline establishes the lid for the space and the greater the variation in its height the more unstable the volume. This general statement is not to be read as a rigid prescription for uniform building heights in street design; indeed, some of the most charming medieval streets are composed of façades which are quite irregular. Such irregularities, however, often vary between part of a storey to two storeys at the outside. When kept within this range of difference the unity of the street scene is maintained and monotony avoided. In the same way the repetition of similarly sized building bays, which may originally have been dictated by ancient plot subdivisions, sets up a rhythm and establishes a grain for the street that forms a disciplined framework within which variety can be contained and ordered. When the scale of such a grain is violated as in Smithy Row, Nottingham, the result is not one of contrast but the disfiguration of the street (Figure 5.28).

Figure 5.28 Smithy Row, Nottingham

The great problem with street architecture, as Hegemann and Peets point out, is 'the difficulty of combining the large amount of individuality required by the difference of taste and practical needs of the individual owners with the necessary element of harmony and even unity without which a street turns into a disagreeable hodge-podge of contradictory assertions'.[61] The informal nature of the curved street has certain in-built advantages, whereby the needs of individual property owners can be married to the larger requirements of social unity expressed, according to John Ruskin, as 'the great concerted music of the streets of a city'.[62] Techniques such as the use of a limited range of materials, colours, details and the repetition of a constant bay or plot width already mentioned for the successful design of the curved street apply with equal force to the design of the straight street. However, the straight street, by its nature, is formal in character and its successful design demands a more precise consideration and definition of parts. Alberti suggests that city streets will be 'rendered much more noble, if the doors are built all after the same model, and the houses on each side stand in an even line, and none higher than the other'.[63] The Classical ideal of the well-ordered and proportioned street is described by

Palladio: 'A straight street in a city affords a most agreeable view, when it is ample and clean; on each side of which there are magnificent fabrics, made with those ornaments, which have been mentioned in the foregoing books.'[64] Alberti and Palladio using the Classical language of architecture, present a model for the straight street; it is of necessity formal and organized in a regular manner.

Absolute similarity of the individual buildings that comprise a straight street is not necessarily essential. It is often sufficient to have one strong motif at ground level which pulls the group together. The classic way of achieving this is by the introduction of colonnades or arcades at the lower floor levels. Behind or above this unifying element individual developments occur in the upper storeys. The remains of colonnades in such places as Miletus, planned it is said by Hippodamus, or the records of ancient Rome by way of the *Forma Urbis* no doubt influenced Renaissance architects like Palladio who recommended 'that the streets were divided, that on the one and on the other part there were porticoes made, through which the citizens might, under cover, go and do their business without being molested by the sun, by the rains and snow'[65] (Figures 5.29–5.30). In Britain this idea was taken up by architects such as Nicholas Hawksmoor who in 1735–6 was planning 'an arcaded Parliament Street, 110 ft wide, as the approach to the projected Westminster Bridge for which he had also made a design'.[66] Nash's early designs for the Quadrant and indeed for the whole of Regent Street envisaged a regular frontage with continuous colonnades.[67] The glass arcade running the full length of Lord Street, Southport, serves a similar purpose as the more formal colonnade; it protects the shoppers from rain and functions as an architectural element which holds together an otherwise motley collection of buildings. The arcade in Southport elevates ordinary street architecture to the level of fine urban design and in the process creates one of the loveliest shopping streets certainly in Britain and possibly Europe (Figures 5.31–5.32).

Figure 5.29 Arcaded street, Bologna

Figure 5.30 Arcaded street, Bologna

Figure 5.31 Lord Street, Southport
Figure 5.32 Lord Street, Southport

When both sides of a street are designed by one architect working for a single client great control can be exercised by the designer over the form of the architecture and the modelling of the space. Giorgio Vasari was in this position when he built the Uffizi, Florence, for the Medici between 1560–74. The architectural unity of the short street, originally known as the Piazza degli Uffizi is a model of Classical treatment (Figures 4.34–4.37). The pavilion of the Uffizi projects out into the street along the banks of the Arno, thus, in the words of Bacon, giving the 'effect of seizing the flow of space along the river's course and pulling it into the Piazza della Signoria'.[68] The cross-section of the street approximates to the Golden Section, while the symmetrical composition of the street with three cornices and continuous projecting roof makes this 'a masterpiece of perspective in depth'.[69] The eye is led inevitably by the horizontal lines of the Uffizi falling insistently to the Piazza della Signoria and continued by the plane established by the line of sculpture from Hercules and Cacus. the copy of Michelangelo's David, on to Ammanati's Neptune fountain finally terminating in the equestrian statue of Cosimo I. In the distance is the cathedral dome while the verticality of the Vecchio tower acts as a perfect foil stabilizing the horizontal movement. Vasari in the Uffizi has given a model street design, a complete unified composition. It is a spatial sequence with an introduction, development of the idea and a concluding statement.

It was shown in Chapter four how, at Bath, John Wood the Elder developed techniques for land leasing which enabled him to control the design of individual properties so that long terraces of many units could be formed into unified compositions. The three great spaces in his composition, Queen's Square, The Circus and The Crescent are connected by short streets where the main elements on both facing elevations are related almost like reflections in a mirror. There may not always, however, be the opportunity to engage in such rigorous and disciplined street design. In these circumstances it is important not to lose sight of the main principle and accept that it is the street façades that are being designed, so placing emphasis on the complete street scene rather than individual buildings. Gaps at either end of a building façade where possible should be closed, service roads entering the street from the side should be as narrow as possible and bridged over. Architectural features that set up a strong axial line in the opposite direction to the street should be avoided unless there is a corresponding element on

the opposite side of the street to pick it up and reflect it. Such reflection of major elements in the street scene is termed 'inflection'. Where possible, both sides of the street should progress in unison rather like a complex dance routine where the detailed choreography of the group recognizes and follows the movements of the others. In this way it becomes possible to think in terms of visually literate streets governed by a recognizable grammar where inflection is important for achieving unity.

It is a pleasure to admire the informal charm of the meandering street or to be carried long in excited anticipation of picturesque views unfolding round each corner and through unexpected alleyways to left or right. After further study it is possible to distinguish some important factors that have conditioned the development of the scene as presented. Many of these factors are of a thoroughly practical nature such as the form of the land, the order of development, evolving exploitation of the local environment, changing social stratification and patterns of population distribution. Knowledge of these practical factors does not however detract from an aesthetic appreciation of present physical structure, but enhances understanding by relating form with function - using function here in the widest meaning of that term. Many of the lovely Italian hill towns are ideal subject matter for such a study and would be amply rewarding for the researcher's efforts. For present purposes only the development of two small Italian hill towns, San Giorgio Morgeto in the province of Calabria and Montepulciano will be outlined briefly to show the relationship between street form and some of the formative influences that have contributed to the present delightful streets that capture the imagination of the visitor. It is maintained here that only by a study of this nature can the designer fully appreciate the present structure and that appreciation is necessary before any valid proposals can be made for its change and development.

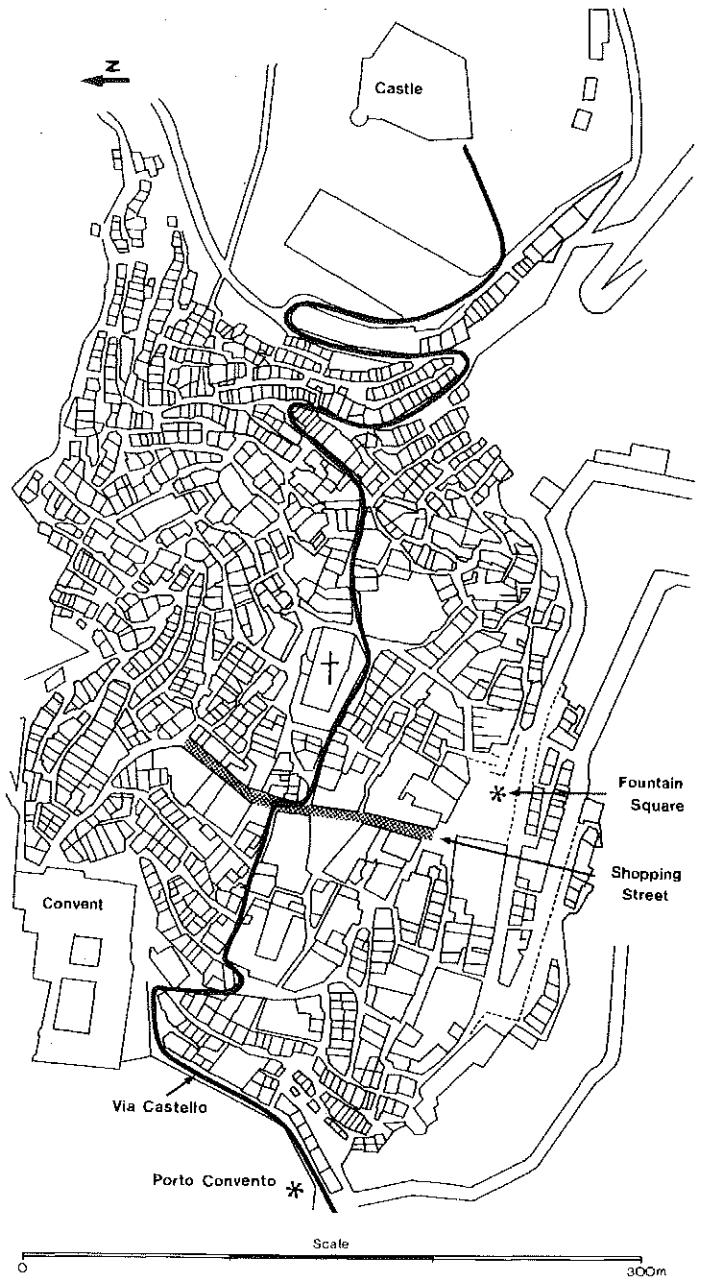

Figure 5.33 San Giorgio Morgeto

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Figure 5.34 San Giorgio Morgeto
Figure 5.35 San Giorgio Morgeto
Figure 5.36 Via Castello, San Giorgio Morgeto
Figure 5.37 Shopping street, San Giorgio Morgeto
Figure 5.38 Fountain square, San Giorgio Morgeto

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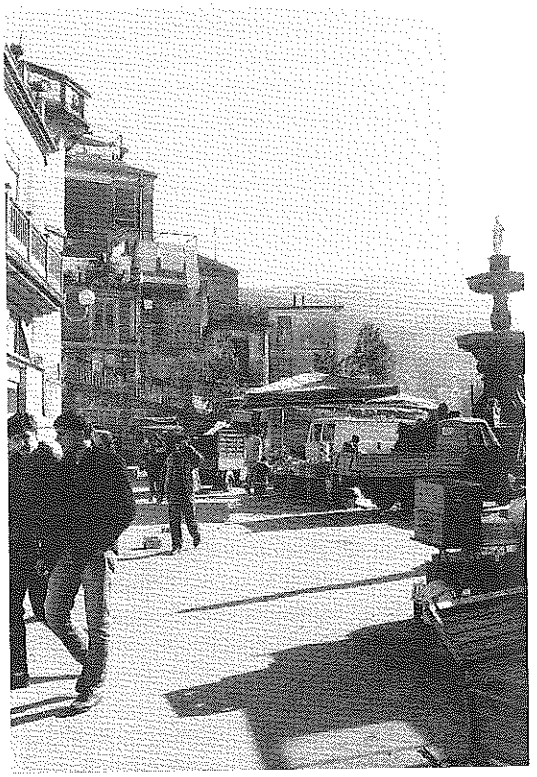

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SAN GIORGIO MORGETO

San Giorgio Morgeto is a small town sited on the brow of a hill 500 m above sea level (Figures

5.33-5.38). The town descends in layered terraces from which are magnificent views of distant surrounds. The town is characterized by its hilltop site, tiled roofs and narrow, deeply overshadowed streets. The streets ascend and descend the hillside as if incised into the rock from which they rise; they tumble from contour to contour using the easiest practical grade.[70]

The town developed in four phases over several centuries. The first phase of growth is related to the founding of the castle by the Normans in the tenth century. The castle was built at the highest point on the hill for defensive purposes and around it clustered the first settlement. The second phase of growth is related to the convent built in the fourteenth century. The convent was an important centre of philosophical and theological learning for the Dominican Order. The convent is located approximately 1 km downhill from the castle and around it grew a second twin settlement. Between the two centres there developed an important routeway, the Via Castello. This path starting at the Porto Convento, the main entrance to the town, provided a strong axis for further development. The third phase involved development around what was to become the central area dominated by the main church built in the late fourteenth century. The fourth phase of development dates from the seventeenth century. The town became an important centre for the bourgeoisie - its wealth being dependent upon the surrounding good agricultural and grazing land; the skilled artisan work in chestnut and orangewood; for the production of bergamot perfume, local spirits, and a fine pure mineral water. The new, wealthy inhabitants during the seventeenth century built small, but well-proportioned Baroque palaces of which, unfortunately, only four remain.

The present town form has been affected by the earthquakes of 1659, 1783 and 1908. Redevelopment, however, took place following the old medieval street pattern using traditional building materials and plan types. From the street pattern it is still possible to distinguish the four quarters of the town. The convent quarter, in the lower western part of the town, is warmed by the sun and offers good views of the surrounding territory. The northern quarter is a maze of alleyways, there is little exposure to the sun and in the past disease was prevalent. The area contains many derelict houses, buildings used for storage and it is generally occupied by the poorer sections of the community. The eastern quarter, adjacent to the castle, has good views, a pleasant exposure to the sun and is probably the area with the most interesting street pattern. The central quarter is characterized by small shops, two piazze, one of which has a lovely fountain, a church and is the site of the weekly market.

San Giorgio Morgeto illustrates perfectly the type of hill town with which Alberti would have been familiar at the time of writing his seminal work on architecture. It is not inconceivable that towns like this one gave him ideas about streets that 'turn about' providing protection from the extremes of climate while permitting the penetration of sun and light for all buildings. Three of San Giorgio's quarters do meet these conditions, the fourth and northwestern quarter is built in an area with a poor prospect, probably for the expanding town during its period of greatest prosperity. It is to be contrasted with the buildings of the more affluent members of society who managed to design spacious and more formal structures within the medieval street pattern.

The form of San Giorgio Morgeto lends itself to a Lynch-type analysis.[71] The town sits distinctly in the landscape with the hard edge of building mass rising clearly from the hillside. The town, divided into easily recognizable and named quarters, is held together by a web of paths. The main paths lead directly from the two portals, Porto Convento and Fountain Square to the central business spine then up to the former political centre, the castle. Along the paths at important junctions lesser nodes form around bars and other public facilities. Dominating the skyline is the castle, a distant landmark, from

Figure 5.39
Montepulciano, Via di Gracciano

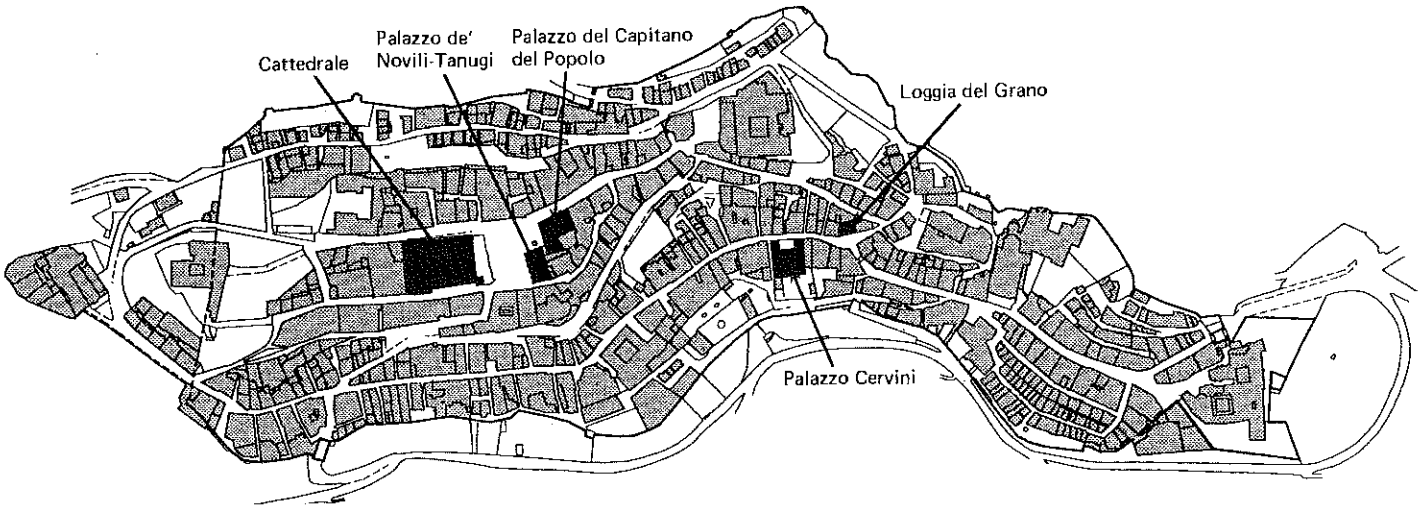
within, the main church is an important feature while from below the convent announces the town's presence. For the purpose of this chapter it is the street pattern, or the arrangement of paths to fit contours which is of greatest interest. In the case of San Giorgio Morgeto, however, these paths must be seen as part of the greater whole, the form of the town itself.

MONTEPULCIANO

Montepulciano, another of Italy's many lovely hilltop towns, still today resembles a medieval walled town (Figures 5.39–5.44). It is comprised of brick, tufa and stone-built houses sitting astride a hilltop which dominates the valleys of the Chiana and the Orcia. The street pattern follows the contours in similar fashion to San Giorgio Morgeto but here the architecture is much more imposing.

The Via di San Donato and its continuation the Via Ricci run the length of the ridge. Where the two streets meet at the Piazza Grande is the centre of the town dominated by the Palazzo Comunale. The Palazzo Comunale was begun in the second half of the fourteenth century but not completed until the middle of the fifteenth century. Its final design is by Michelozzo in the Florentine style and has a notable

Figure 5.40 Montepulciano



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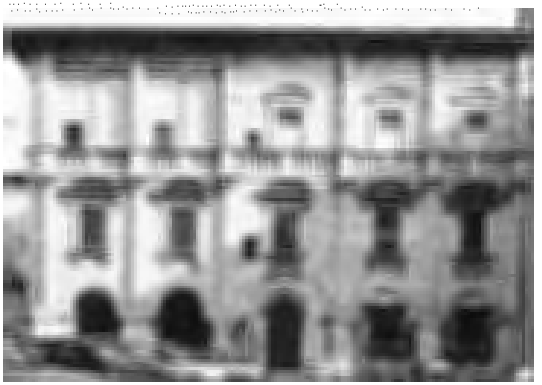

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Figure 5.41 Montepulciano
Figure 5.42 Palazzo Novilia Taruqi, Montepulciano
Figure 5.43 Via Di San Donato, Montepulciano
Figure 5.44 Piazza Grande, Montepulciano

resemblance to the Palazzo Vecchio in Florence. The other main buildings in the Piazza Grande are the Palazzo del Capitano del Popolo, one of the few remaining examples of Gothic architecture in the town; next to it is the Palazzo Tarugi designed by Sangallo; facing the town hall is the Palazzo Contucci also by Sangallo, and finally the square is completed by the unfinished wall of the Duomo.

The main square of Montepulciano epitomizes architectural development for the whole town. Montepulciano's first authenticated mention is in a parchment dated 715 AD. It seems to have been at that time an independent town with its own laws. At first self-governing, Montepulciano then became embroiled in struggles between more powerful neighbouring communes. The town being in a strategic position and because of its wealth was forced to ally alternatively with Siena and Florence. Finally it became permanently allied to Florence, and in 1511 came under the control of the Signoria dei Medici.

The long period of wars was also a time of intense rivalry betweeu the powerful noble families of Montepulciano to control the local government. One result of this rivalry saw the great families endow the town with wonderfully rich buildings for both public and private use. These buildings of Montepulciano aspire to compete with those of both Florence and Siena.

Most of these architectural monuments were built between 1300 and the 1500s, a testimony to the economic, social and political power of the families; a power based on wealth from the surrounding countryside. The buildings of Montepulciano, though great pieces of individual design, nevertheless fit into the basic medieval street scene, most are two-dimensional façades seen only obliquely as part of the greater street elevation, Among the architects working in Montepulciano were the Sangallos, elder and younger, Michelozzo, Vignola and Andrea Pozzo which gives some idea of the influence of the patrons sponsoring development in this town during the early Renaissance through to the Baroque.

Designing a building as street architecture is no easy task and in the case of Montepulciano it engaged the skills of some of the great designers of the time. Two or three examples from Montepulciano are sufficient to illustrate this point. At the T-junction of Via di Gracciano Nel Corso, Via di Voltaia Nel Corso and Via delle Erbe the narrow streets open out into a small square, the Piazza delle Erbe, to display the Logge del Grano or del Mercato (the old grauary) designed by Vignola. Here the narrow street is terminated on its axis by a fine structure which expands the space at ground level

Figure 5.45 Tempio di San Biagio, Montepulciano

using the device of an open loggia. Further on up the Via di Voltaia Nel Corso is the Palazzo Cervini designed by Guiliano da Sangallo. Sangallo, while maintaining the general roof height and the idea of the street frontage, incorporates a small courtyard into the street scene with a cleverly designed 'U'-plan for the palace.

In Montepulciano street architecture is raised to an art form. The individnal buildings, while great designs in their own right, nevertheless respect the urban context of the general townscape. In doing so, they contribute to a greater unity where the enclosed three-dimensional space of the street is the main design consideration. For variety and contrast the street is widened to form small piazze at important nodal points, the spatial composition dominated by Piazza Grande at the top of the hill. All streets circulate from this centre like the skins of an onion. In the main square of the town Sangallo completes the enclosure with controlled elevations conforming with the general profile of the town where enclosure of the public realm is of greater significance than individual display. It is only on ascending the tower of the Palazzo Comunale that the full experience of the magnificent landscape can be appreciated.

In contrast to the tight urban structure of the town architecture and outside the defensive walls can be found the Tempio di San Biagio designed by Antonio da Sangallo the elder (Figure 5.45). In complete contrast to an architecture designed to enclose public space, the Tempio sits in the landscape isolated in space, a three-dimensional sculpted mass. Its design is based on a central square with an inscribed cross, a model of design much favoured at the time. While successful in isolation, as Sangallo demonstrates, it is an unsuitable form for urban architecture in high-density development.

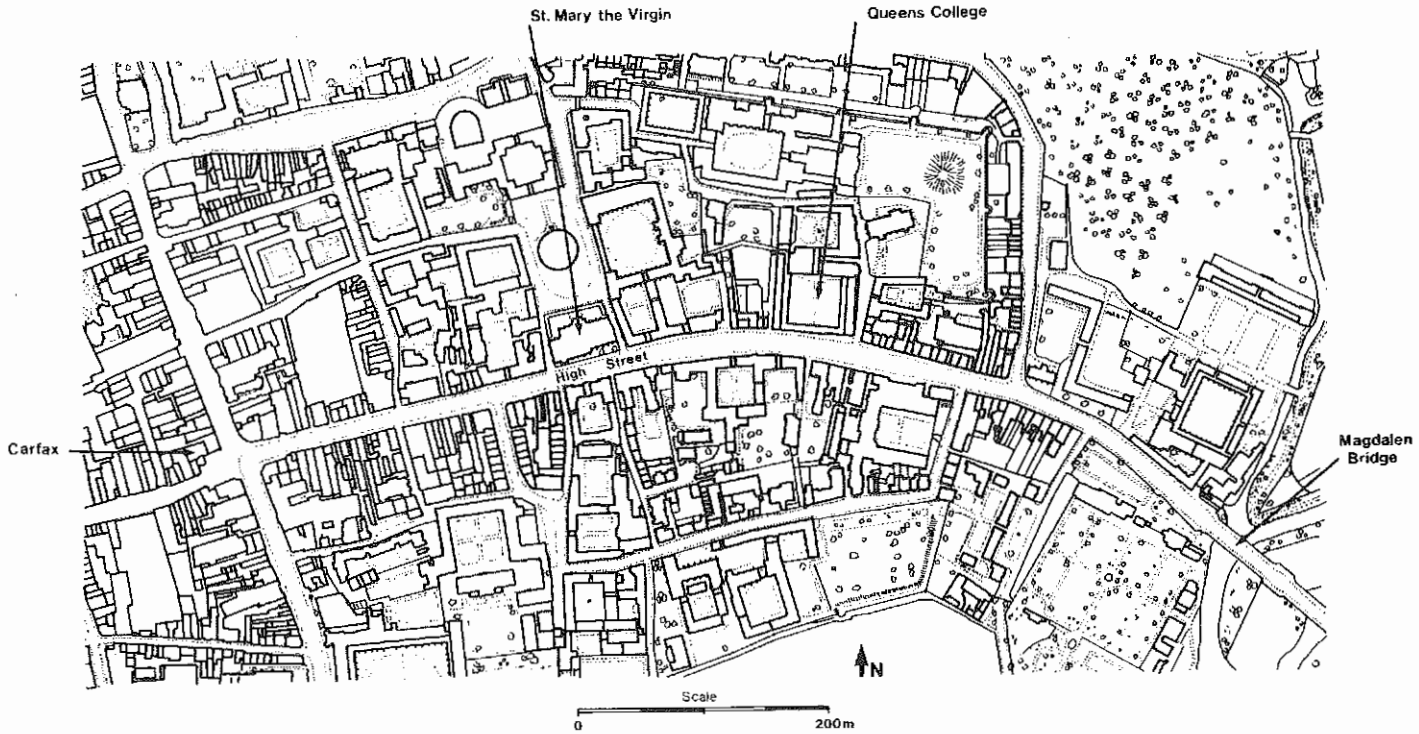

Figure 5.46 The High Street, Oxford

Figure 5.47 The High Street, Oxford (Photograph by Bridie Neville)
Figure 5.48 The High Street, Oxford
Figure 5.49 The High Street, Cupola, Queen's College, Oxford
Figure 5.50 The High Street, Oxford
Figure 5.51 The High Street, Tower at Magdalen College, Oxford

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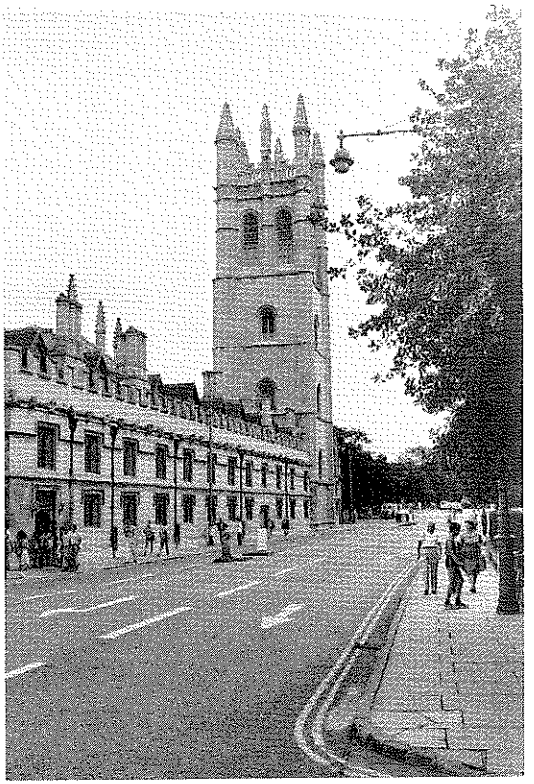

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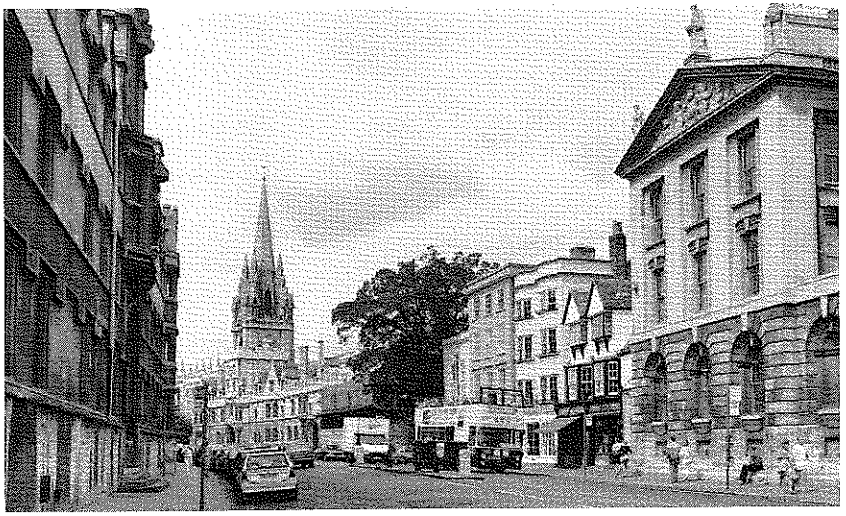

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THE HIGH STREET, OXFORD

The curved street need not necessarily be confined to the hilly site where contours dictate road gradient and alignment - Oxford High Street is a case in point

(Figures 5.46-5.51). The basic landform in Oxford does not immediately suggest itself as the reason for the fine curve of the High Street. It has even been suggested that when King Edward took possession of London and Oxford in 912 he not only built the stronghold to the west of the town but, 'that at a definite moment the king laid out and created Oxford'.[72] This may or may not be so but there appears in Oxford, within part of the old walled settlement the remains of what may originally have been a grid plan. Its principal streets, the High Street being one of them, meet each other at right angles at Carfax. This is the sort of preconceived town layout often associated with colonial settlements. From Carfax, for part of its length, the High Street is straight but from St Mary the Virgin it sweeps round to Magdalen Bridge.

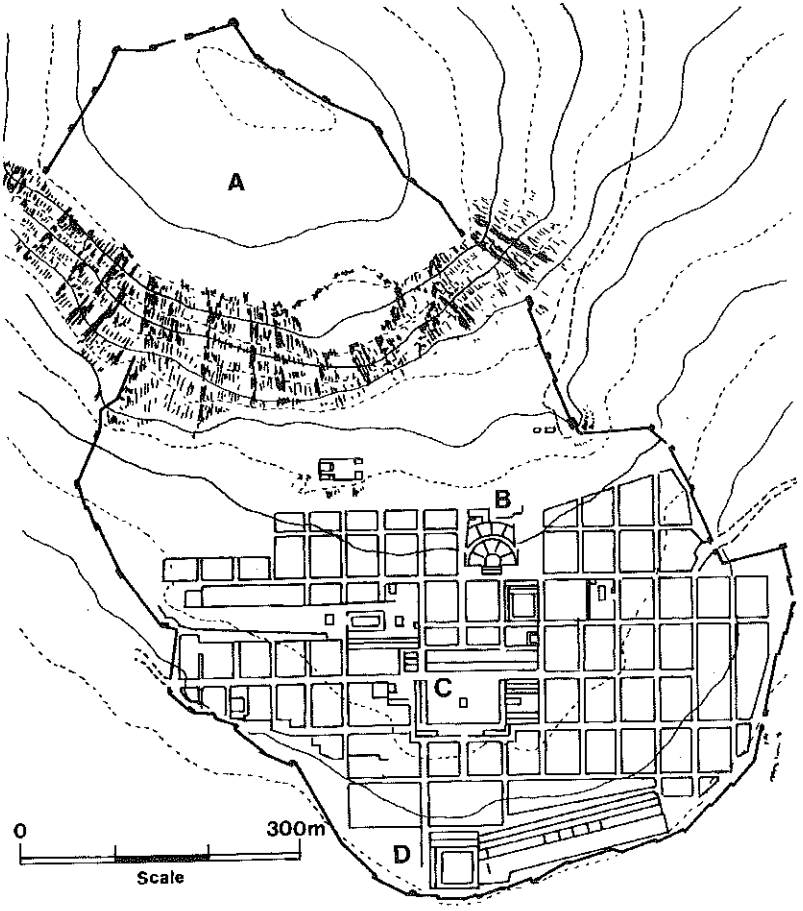
The wonderful curve of Oxford's High Street may result from the convenient connection between the termination of a planned development and an important river crossing or, more simply, the threading of a route through existing properties along an ancient right of way. No matter what the reason for its present form the result is a series of beautiful street pictures where spires and towers keep rising into view above lower buildings. Thomas Sharp goes so far as to suggest that this street 'is the greatest and most typical work of art England possesses . . .'.[73]

The visual sequence opens from Magdalen Bridge, High Street is seen curving away to the left past the pinnacled Magdalen College Tower. Moving along the High Street the sweep of the north side reveals Hawksmoor's Queen's College.[74] From Queen's College the steeple of St Mary's Church rises above All Souls College. From the footpath close to Queen's yet another view is revealed with the spire of All Saints Church visible beyond St Mary's and All Souls. Further on and across the street the fine curve of the street flattens and the street frontage produces a monumental effect. The panorama ends dramatically at Carfax with the tower of St Martin's. The progression of views in the opposite direction, starting at Carfax, is equally picturesque. The street curves to the right and at all points gives the feeling of enclosure and completion though hinting at further surprise just round the corner. The wall of the street façade appears continuous with entrances small and disguised by building mass. In the view from St Mary's looking to Queen's, the façade is completed by the tree between All Souls and Queen's. This tree which Sharp described as 'one of the most important in the world', adds an essential contrasting form to the street scene.[75] Below Queen's the same sweep of the street continues to reveal the first glimpse of Magdalen. The view then opens out to the bridge and tower signalling the end of this particular visual sequence.

Unwin warns about the temptation facing the planner in merely copying the outward form of streets such as the High Street, Oxford, and ending with, 'aimlessly wandering lines in the hope that happy accidents may result therefrom'.[76] Oxford High Street may have resulted from a series of 'happy accidents' but nevertheless produces an effect of completeness which is subject to analysis. This completeness or unity depends only marginally on the architectural quality of the individual buildings - by international standards few if any are top quality. The street, however, is outstanding. The first characteristic of the street is its completeness with a beginning and end at Carfax and Magdalen. The second important characteristic is the street's subdivision into easily identifiable and small-scale, enclosed spatial units which unfold as the observer moves along its length. A further important quality is the relationship between the buildings; the harmony of similar materials, forms and details juxtaposed with complementary elements, the towers at Carfax, All Saints, St Mary's and Magdalen. Finally, the street scene is enlivened along its length by exquisite detailing, the Baroque porch of St Mary's, Hawksmoor's cupola at Queen's and the lovely medieval gateway at Magdalen. In any part of the street there are decorative features, oriel windows, pinnacled roofs, ornamental chimneys or Magdalen's

grotesque gargoyles to catch and eye and uplift the spirit. Despite Unwin's timely warning against the use of curved streets as a panacea for avoiding monotony, there is still much for the designer to learn from this high street, not least in how to decorate the city.

Figure 5.52 Priene



A Acropolis
B Theatre
C Agora
D Gymnasium and Stadium

LANDSDOWN CRESCENT AND SOMERSET PLACE, BATH

Curves may, of course, be as formal as straight lines. John Wood the Elder and his son at Bath, as seen earlier, developed the curved terrace for extremely formal compositions. Later, during the last quarter of the eighteenth century, John Palmer built the sweeping curves of Landsdown Crescent and Somerset Place in Bath. In parts, the development was designed to fit into the contours. The design consists of four segmented blocks of four-storey houses arranged alongside a landscaped depression. Landsdown Crescent is a symmetrical composition; the central block, on the highest point of the site follows the contours and is linked by bridges to crescents on each side which reverse the curve of the main block. The land falls steeply on each side of the main block requiring the side crescents to step down the slope. Somerset Place, the last block in the composition, reverses the direction of the curve again echoing the shape of the central crescent in tbe Landsdown group. The undulating wall of the composition manages to convey the feeling of monumentality and formality in distinct contrast to the general informality of High Street, Oxford.

There are a number of practical reasons for designing curved as opposed to straight streets; in addition to the need to arrange for the road surface to follow the contours in a hilly site, it may be necessary to follow ancient rights of way, to avoid significant structures, pay respect to ownership boundaries or design a convenient link between fixed points. At times even aesthetic reasons may have suggested a curved street alignment to give a view of a distant prospect or important landmark.

PRIENE

In Landsdown Crescent, Bath, the form of the hill and its contours may have suggested the initial point of departure for the development but the contours in no way dictated the final undulating form of the group. Similarly, the straight street, tbough most appropriate for a flat site has, nevertheless, on many

occasions been employed in the most uncompromising manner on steeply sloping sites. A prime example of this form of development is Priene in the foothills of Mykale, Turkey (Figure 5.52).

Priene was a small provincial town of about 4,500 inhabitants founded in its present location in 350 BC.[77] It is probably typical of many other Hellenistic settlements of the time, but few could boast such a magnificent site. On to this steep site a gridiron layout was imposed. The east-west streets were more or less level, but the north-south connections were steep stairways. The gridiron plan is often dismissed as a dull, unimaginative, two-dimensional planning concept, but in Priene it was given full architectural treatment where the third dimension is fully exploited. The rock of the acropolis rises 300 m (985 ft) between two deep gorges. The town 210 m (690 ft) below the acropolis is arranged on four main terraces. Ou the uppermost terrace is the temple of Demeter, below it the temple of Athene Pollas, the theatre and upper gymnasium. The third terrace contains the main agora and the temple of Zeus, while on the fourth and lowest terrace is the stadium and lower gymnasium. These four great terraces are connected by steep north-south stairways. The rest of the town consists of the normal insulae between the grid; each insulae containing four plots measuring 24 m × 18 m (78 ft × 59 ft) for domestic buildings.[78]

The agora in the centre of the town covered two insulae and was surrounded on three sides by stoai; the north side remaining open. Along this side of the agora the main east-west road passed the square bordered on its north by a long stoa which closed the whole composition. The agora in Priene presents a clear architectural programme where the adjoining streets are subservient and are adapted to its form. The main street does not lead on a continuous axis through the centre of the space and the agora is not an extension of the street but a square bordered tangentially by a street. In this way the street retained its own functional integrity as a traffic route and the square remained undisturbed, a quiet meeting place.

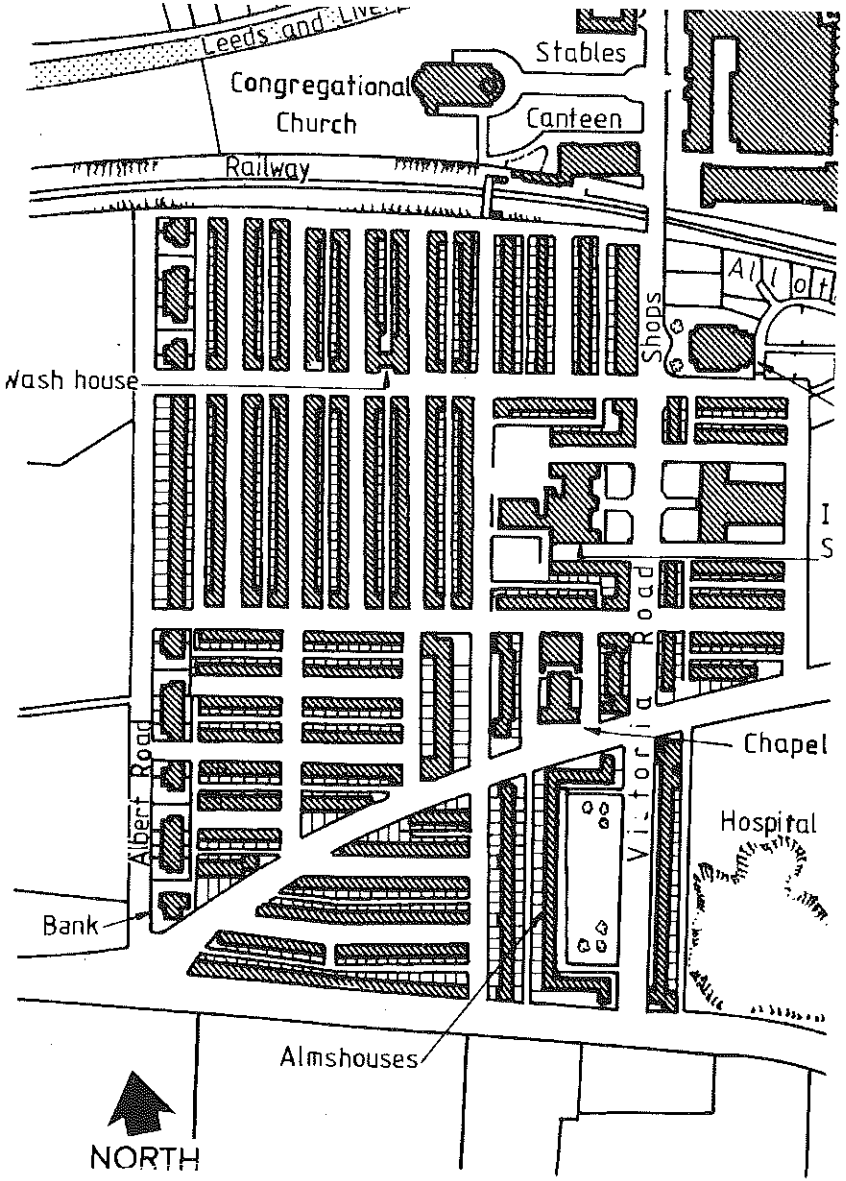


Figure 5.53 Saltaire

SALTAIRE

Saltaire, a small, planned, nineteenth-century settlement close to Bradford in Yorkshire, has many features in common with Priene on the Turkish

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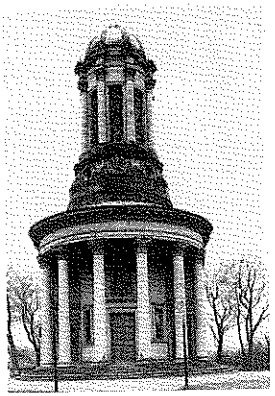

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Figure 5.54 Saltaire
Figure 5.55 Saltaire
Figure 5.56 Saltaire

coast developed 2,000 years before (Figures 5.53-5.56). Like Priene, Saltaire's population was just under 4,500 and its size, 20 ha (49 acres), is similar to the built-up area of Priene but not including the acropolis. Both Priene and Saltaire were based on a gridiron plan and both imposed this layout type on to a sloping site. In the case of Saltaire, the site has none of the landscape drama of the Mykale foothills, nevertheless to the north it is still flanked by some very pleasant countryside.

Saltaire was begun in 1851 when Titus Salt decided to move his business out of a growing and congested Bradford. Inspired by one of Disraeli's novels, *Sybil*, published in 1845, Titus Salt employed architects Lockwood and Mawson to build his new town four miles from Bradford on the River Aire between the Leeds-Liverpool canal and the main railway line from Scotland to the Midlands. The choice of site was not fortuitous, being outside Bradford it was cheaper to build and it was not subject to the borough's rates nor its restrictions on building which would have prevented the more novel aspects of the scheme. The site was excellent for the location of a manufacturing town; the factory being sited between the canal and railway line made the handling of goods cheap, while the general location gave direct connections, both with the sources of raw materials and market outlets for finished articles.

In order to determine the type and quantity of housing required for the town, Salt commissioned a sort of social survey among his workers. From this he was able to estimate the varions housing needs for different family sizes. According to Robert Dewhurst this was 'the first time that it had occurred to anyone that a workman with 10 children needed more rooms than a workman with one child'.[79] The variety in house type in the programme gave to his architects the possibility of articulating the long street elevations. Large houses were placed at the ends of terraces or at strategic points along the 60-90 m (197 ft × 295 ft) length where emphasis was required. Long street frontages stepping down the contours were judiciously broken up with pavilions of larger houses which accommodated the change in roofline in an architecturally controlled manner. Though the gridiron plan was similar to the one used for much of nineteenth-century, working-class housing, in Saltaire it did not plumb the same depths of monotony. This may be due in part to the small scale of the development but more probably because of the thought given to the architectural detailing.

The main street, Victoria Road, is the spine of the development. Along Victoria Road are arranged the public buildings. Entrance to Saltaire is through the little square enclosed on one side by the hospital and on the other three sides by the almshouses. As in Priene, the road passes down one side of the square, leaving the remaining space for a private communal garden attached to the almshouses. From the entrance square the road narrows between terrace blocks then opens out into a square enclosed by the school and the institute. From here it narrows again between terrace blocks, and crosses the railway to the works and the chapel. Here made physically manifest are the Protestant values of Salt and so many others in Victoria's reign - the key to life was hard work and prayer. The axis from factory door to chapel door is at right angles to the main movement down Victoria Road terminating the main street, a constant reminder of the Protestant work ethic.

Walking down Victoria Road is a delightful aesthetic experience. The spaces are architecturally modulated, buildings are arranged on either side of the route, in mutually reflecting projections or axially composed elevations. The whole street is an exercise in inflection, that is, the echo of feature with feature across the space, the 'minuet of street architecture' as A. Trystan Edwards would describe it.[80]

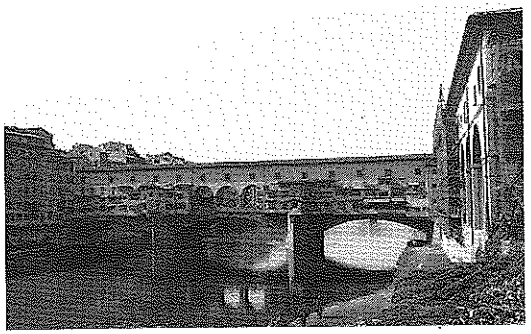
AXIAL PLANNING

The straight street is associated with axial city planning in addition to gridiron planning. Two outstanding examples of axial planning are Rome, as laid out by Sixtus V, and Paris, as planned by Haussmann for Napoleon III. Sixtus V was concerned to develop a structure of paths along which pilgrims could move freely from church to church.[81] The great processional routes established by Sixtus V set the pattern for much later architectural development and heritage which remains today. Haussmann, too, was concerned with movement, but in this case it was a concern for the rapid movement of troops to keep order in the city. The plans Haussmann prepared have also left a great heritage of city street design.[82] The Parisian boulevard is a model of city street design which has been neglected by urban designers and city planners in the past decades. Its revival is necessary if the art of city design is itself to revive.

PULTENEY BRIDGE AND GREAT PULTENEY STREET, BATH

Alberti, Palladio and Serlio, in their writings, devote a great deal of attention to bridge design.[83] For them, particularly Palladio, the bridge was an architectural problem, subject to the same kind of analysis as a building, defensive structure or town square. Partly as a response to traffic increases, the main function of the street, in recent years, has been seen as enabling the free movement of vehicles. This emphasis on movement has resulted in the neglect of the street as a place with three-dimensional properties. The street once reduced to a two-dimensional, metalled road becomes the province of the road engineer. The bridge carrying this two-dimensional ribbon of tarmacadam is also reduced to an engineering problem. There are of course many wonderful bridges designed in this way and for this purpose. For example, there is Darby's first cast-iron bridge over the River Severn or Maillart's elegant reinforced concrete bridges, such as the one at Schandbach-Bruke, Canton Berne, constructed in 1933. Clearly, bridges carrying a pavement across a river or gorge predate Darby and the Industrial Revolution. They have, however, not been the only bridge form used, particularly in towns and cities. The old London Bridge carried not only the pavement but also shops and perhaps more importantly, from an architectural viewpoint, the enclosed space of the street. The Ponte Vecchio, which crosses the Arno in Florence at its narrowest point, and the Rialto in Venice are surviving examples of the bridge designed to carry a street rather than a road across an opening (Figures 5.57-5.61).

Figure 5.57 Ponte Vecchio, Florence
Figure 5.58 Ponte Vecchio, Florence
Figure 5.59 Rialto Bridge, Venice
Figure 5.60 Rialto Bridge, Venice
Figure 5.61 Rialto Bridge, Venice



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Following on from this tradition, Robert Adam built a bridge across the Avon at Bath using the Ponte Vecchio as his architectural model. As a first step in opening up the land in Bathwick Estate to the east of the Avon, the owner Sir William Pulteney commissioned Adam to design the bridge which was built between 1769 and 1774. Much of the Adam detailing has been lost through repeated alterations, but fortunately the main enclosed street form remains. The Adam bridge is a wonderful, and in this country, unique example of urban street architecture; it is not simply a river crossing, but also a visual junction connecting two parts of eighteenth-century Bath and a fine entrance to one of the great streets of Europe (Figures 5.62-5.64).

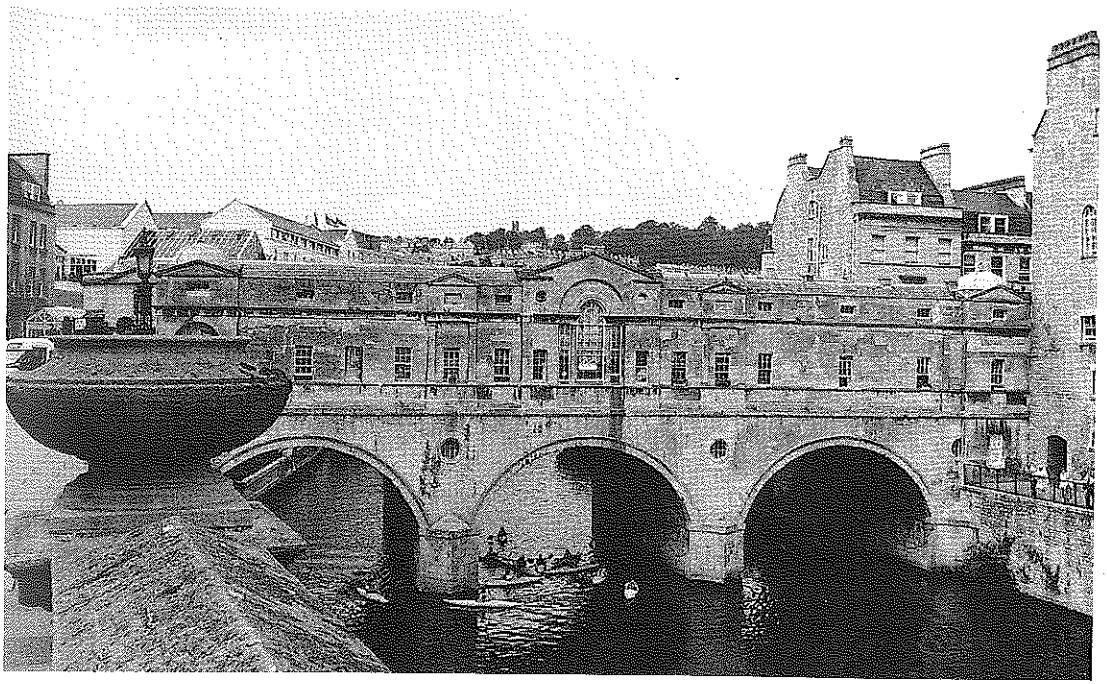

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Figure 5.62 Pulteney Bridge, Bath

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Figure 5.63 Pulteney Bridge, Bath

Figure 5.64 Pulteney Bridge, Bath

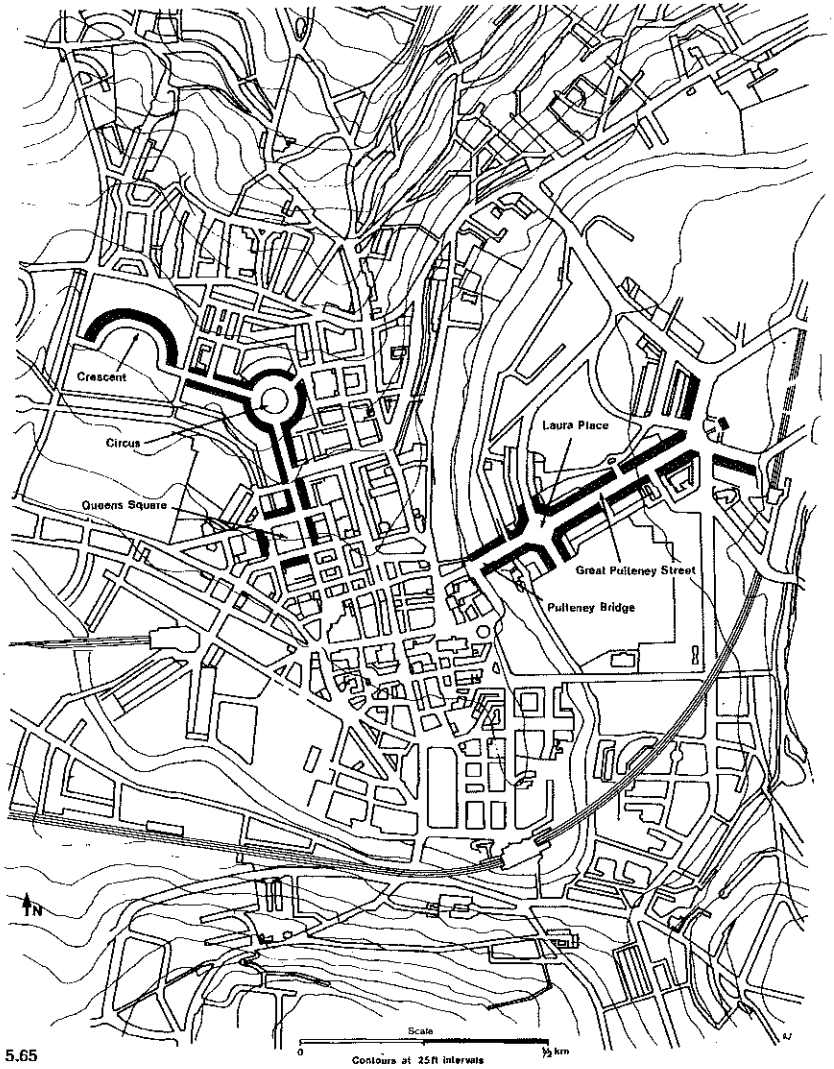

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Figure 5.65 Bath
Figure 5.66 Great Pulteney Street from Laura Place, Bath
Figure 5.67 Laura Place, Bath
Figure 5.68 Great Pulteney Street, Bath

Adam also prepared plans for the development of a new town at Bathwick. His first and most imaginative scheme for the estate 'linked the bridge by a wide road to a great circus from which five other streets led off. These in turn were crossed by streets converging on a semi-circular open space at the bridge entrance.'[84] Neither this nor the later amended version of the scheme were adopted and the final plan for Bathwick was drawn up by Thomas Baldwin (Figures 5.65-5.69). Baldwin, in his plans, incorporated Adam's wide street but omitted both the semi-circular space in front of the bridge and the circus, the focal point of the original design. Baldwin's plan for the project consists of a short street, Argyle Street, which leads to a diagonally placed square, Laura Place, with streets into it at the other three corners. Two of these streets

Figure 5.69 Sydney Hotel, Bath

lead nowhere. The continuation of Argyle Street, Great Pulteney Street, leads into Sydney Gardens which is an elongated hexagonal designed as a pleasure garden.[85] Great Pulteney Street enters the hexagonal of Sydney Gardens at the apex of the space as indeed it does in Laura Place. The project was started in 1788 but Baldwin and a number of other builders went bankrupt. When work ended only one block, Sydney Place, of the hexagon was completed. The Sydney Hotel at the head of the plan on the axis of Great Pulteney Street was completed later by Harcourt Masters following closely the ideas of Baldwin. The Sydney Hotel was drastically remodelled by Sir Reginald Blomfield and is now the Holburn and Menstrie Museum.

Great Pulteney Street, 300 m long by 30 m wide (984 ft × 98 ft) and three storeys high is an elegant and well-proportioned street even though in its architectural detailing it has little of the authority of the Woods nor the charm of Adam. The vista from the bridge, in all 600 m (656 yd) long, is effectively stopped by the mass of Sydney Hotel reinforced as it is by dense planting. Along its length the variety of spaces - the small scale of the bridge, the short Argyle Street, the widened space of Laura Place, the elongated Great Pulteney Street stopped by the hotel but connected to the park beyond - are a model of architectural control which distinguishes this area of Bath as a great work of urban design. It contrasts greatly with the early composition of the two Woods but in its own way is equally important as a generic model for development.

REGENT STREET, LONDON

John Nash, together with a firm of developers, Leverton and Chawner, was instructed to make plans for Marylebone Park and also for a new street to facilitate communication between north and south London in that part of the city (Figures 5.70–5.75).

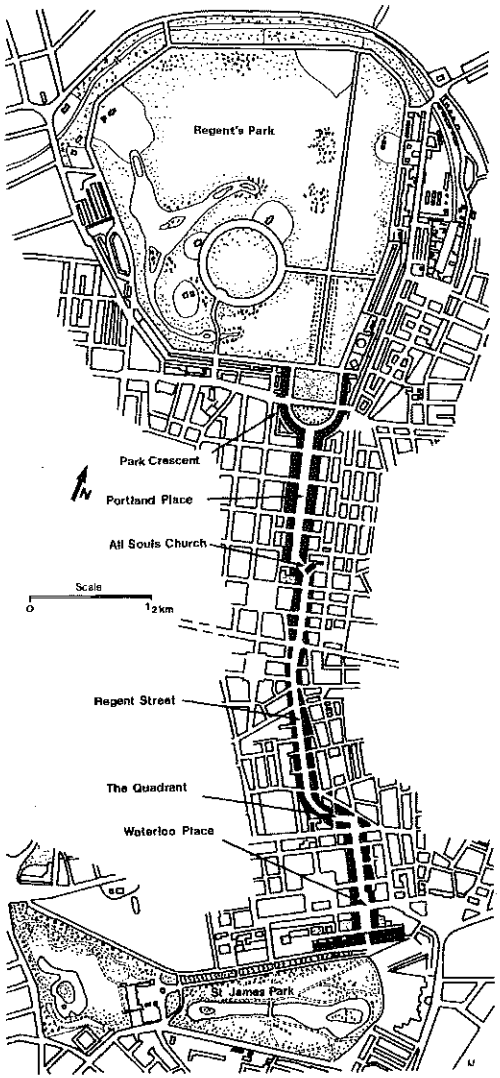

Figure 5.70 Regent Street, London

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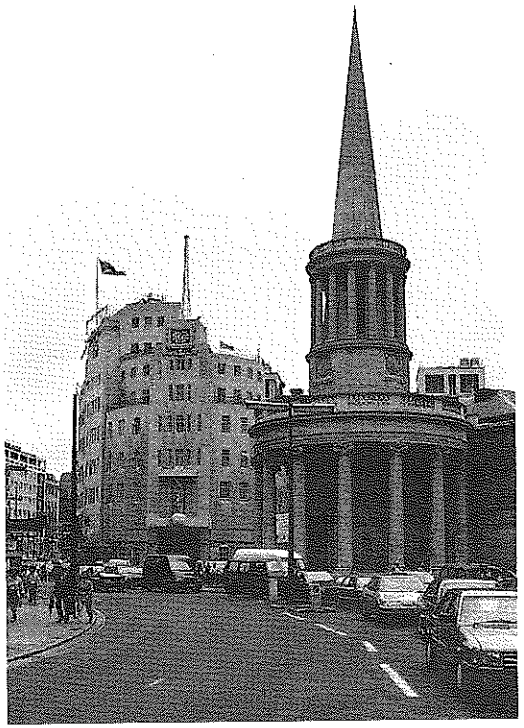
Figure 5.71 Park Crescent, London
Figure 5.72 The Quadrant, Regent Street, London
Figure 5.73 All Souls' Church, London
Figure 5.74 Lower Regent Street, London
Figure 5.75 The York Column, London



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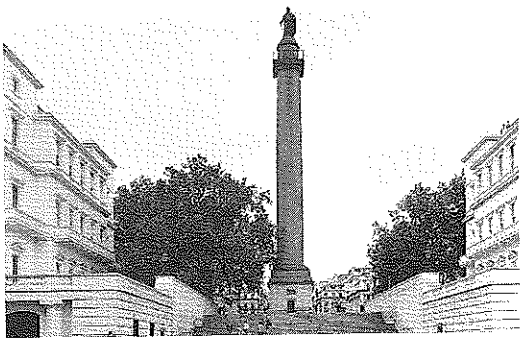

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After dissecting the problem Nash identified the line for the new street which to him seemed inevitable. He observed that at a certain time the morphology and character of the town changed abruptly. He

proposed that this clear edge in development should form the route of the new street, to provide 'a boundary and complete separation between the Streets and Squares occupied by the Nobility and Gentry, and the narrow Streets and meaner Homes occupied by mechanics and the trading part of the community'. Nash explained later that his purpose 'was that the new street should cross the eastern entrance to all the streets occupied by the higher classes and to leave out to the east all the bad streets, and as a sailor would express himself, to hug all the avenues that went to good streets'.[86] This may not sit comfortably with the more social ideas of early twentieth century planning but it proved a perfectly good strategy for realizing improved land values from a property speculation.

Portland Place by the Adam brothers and the finest street in London at the time was the northern-most starting point for the new street. The street, Nash continued southwards crossing Oxford Street through a circus. The line of the new street was to continue southwards passing Golden Square entering on the north-west side of a proposed new square containing a free-standing public building. The street left the square in the south-east corner then further south it turned another corner at Piccadilly Circus. From here there was a straight vista to the palace of Carlton House.[87]

Nash planned the street from Oxford Circus to Pall Mall to be lined on both sides with a continuous covered colonnade. This was a far more formal and imaginative design for a street than any other built in Britain. The length, however, of the new street was cleverly articulated at important junctions or where a change of direction became necessary. At these critical positions a circus or square was introduced so that no length of street was uninterrupted for more than 600 m (656 yd).

Once his report and plan were approved in principle, Nash was asked to reconsider the new street in greater detail. He prepared two additional plans. The one that was finally adopted for the development introduced, instead of the square, a portion of curving street 'resembling in that respect the High Street at Oxford'.[88]

The development from Regent's Park to St James's Park then along the Mall to Buckingham Palace is one of the masterpieces of European urban design. Park Square and Park Crescent function as a powerful connection between Regent's Park and Portland Place. The semicircular sweep of the Ionic colonnaded crescent directs the movement to Portland Place and heralds a magnificent opening to the street sequence. At the end of Portland Place Nash was obliged, for practical reasons, to change the direction of the street. In the hands of a lesser designer this could have resulted in an awkward kink. Nash resolved the problem with masterly precision; All Souls' Church with its adroitly placed, circular spired vestibule acts as a terminal feature at the awkward junction neatly turning the corner. The church and its spire have been criticized for the lack of architectural articulation, nevertheless, the siting of the circular drum shows a fine appreciation of urban form.

At the crossing with Oxford Street, Nash utilized the circus shown in the earlier plan. The circus not only dignified an important junction, but also facilitated another directional change. Bacon remarking on the 'sinuosity of Regent Street' comments on 'the superb handling of the changes in direction of the street by cylinders and flat domes of the bordering buildings'.[89] The major change in direction was achieved using The Quadrant, which took Oxford's High Street as the model. The architectural treatment of Regent Street and the High Street however had very little in common. Regent Street, unlike its model in Oxford, was a formal composition with covered, colonnaded walkways down its whole length and its uniform architectural treatment was in complete contrast to the picturesque and largely medieval street scenes in Oxford. From The Quadrant the street turned sharply through 90° and down the axis to Carlton House, first passing through a circus at Piccadilly and then a new square at Waterloo Place.

Since its completion by Nash, the street has undergone many changes. Carlton House was demolished when King George IV built Buckingham Palace to replace it in the late 1820s. The axis along Lower Regent Street was stopped by the York Column and an imposing flight of steps to the park. Nash built Carlton Terrace at the edge of the park, extending the new route to Buckingham Palace. The first major change to the street itself was in 1848 when the arcades of The Quadrant were removed. The major changes, however, occurred in the early decades of the last century when many leases fell due. The changes wrought on the street were architectural in nature involving a change in scale to suit the new shopping needs. Nash's stucco buildings, or those built with his approval, were replaced by larger and, on the whole, more ponderous buildings. Despite these changes and the despoiling of Piccadilly Circus, the route from Regent's Park to Buckingham Palace retains, in the main, its original line and urban form. It illustrates that good urban design is not solely dependent upon the quality of the surrounding architecture, though if an opportunity ever arises for the rebuilding of part of this street it would be well to reconsider a return to its original scale and character.

CONCLUSION

There are two main generic forms for the European city street. In tbe first, streets appear to be carved out of an original block of solid material. In this conception, the spatial volume of the street defined by the frontages is perceived as the positive form, or the figure seen against the general background of the surrounding architecture. The other concept lays stress on the buildings as three-dimensional objects, in this case the city is a parkland in which buildings stand as isolated sculptural forms. Space including streets flows without shape around buildings and other landscape features. This last concept in its purer manifestations such as Frank Lloyd Wright's Broadacre requires for its implementation large areas of low-density development, decentralization of functions, complete and unrestricted freedom of movement for the car.[90] In effect, it is the very antithesis of place formation with its notion of centrality. Both main concepts of the city and its streets exist side by side in the real world. They may, indeed, represent the poles of a continuum rather than a simple dichotomy. Indeed in the High Street, Oxford, classified as an enclosed form, much of its interest is achieved from the contrasting three-dimensional forms of its towers and spires.

The chief quality of a street is due mainly to the handling of volume, but the mood or character of the street is created by its architecture. The main types of street scenes were captured by Serlio with his drawings of the tragic, comic and satyric backdrops for theatre productions. The tragic scene is the formal classic interpretation of the street typified by the monumentality of the Parisian boulevard. Here in Britain this is not the most common interpretation of street architecture; it is the exception rather than the rule. Development in Edinburgh and Bath comes close to this generic street form, particularly in the case of Great Pulteney Street. As a rule, monumentality in street design fits most comfortably with the straight street. The sinuous development of Regent's Street by Nash, however, particularly The Quadrant with its continuous porticos, falls firmly within the monumental Classical tradition which Serlio would define as tragic.

The comic scene of Serlio fits most appropriately within the British, particularly English, tradition. The slow, meandering medieval street of small-scale architecture, preponderance of whimsical detail and warm, weathered material is the picturesque delight of the British small town. High Street, Oxford, though not residential, retains a domestic scale. Even Classical buildings, such as Queen's, conform with the overall uniformity of the scene.

The satyric street scene is another common feature of the British town. The Englishman's ideal

home, his miniature castle surrounded by garden, is the driving force, the motive power for suburbia. This return to the country and escape from the horrors of city life was given credence and aesthetic form by Ebenezer Howard and his architects Parker and Unwin in their Garden City Movement. Low-density housing, the landscaped street and resulting garden suburb represents an attainable ideal environment for a vast majority of British people. It is also an urban form which, by its nature, is highiy participatory in a property-owning democracy. There is, of course, a price to pay for this freedom for all to build a personalized dream house. Those who cannot afford the mortgage down payment or monthly repayments cannot participate in the building of this brave new suburbia; they become the underclass, the permanently disenfranchised. Sustaining this expansive and expanding suburban dreamland presupposes free movement of individualized transport. With constant political turbulence in the Middle East and the knowledge that fossil fuels have a limited lifespan, the development of another form of motor power for individual travel will be needed to sustain suburbia. Assuming that another form of private vehicle will be developed it seems clear that unrestrained vehicular movement on a massive scale is incompatible with cities and their streets as we know them today.

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