



175 opposite Warsaw, *Krakowskie Przedmieście*, ca. 1770. Bellotto records the architectural events on this prosperous suburban street leading to the edge of the Old Town—the palaces of the nobility, the large church of St. Anne on the right, the column in honor of King Sigismund in the Castle Square—and he also shows the life within it: traveling entertainers and beggars, aristocrats, soldiers, priests and foreigners, luxurious coaches and lumbering wagons.

## 4 · THE STREET

### INTRODUCTION

The history of the street has yet to be written, either as urban form or as institution. It should, of course, be both. For on the one hand, the street clearly belongs to the history of architecture and urban design in the strict sense of physical fact. The street is an entity made up of a roadway, usually a pedestrian way, and flanking buildings. How each one of these is articulated, how they interact, in what ways the design of the street walls is controlled and guided—these are questions of form pure and simple. There is the matter of sidewalks; of street furniture; of paving; of trees and greenery—each with its own, as yet very incompletely known, story.

Categories that remain within the esthetic realm include the hoary distinction between curved and straight streets, which so preoccupied the post-Sitte planning debate in modern Europe.<sup>1</sup> Also partly in terms of form, one can specify *types* of streets, as one might distinguish building types. We have, to name a few: colonnaded avenues, boulevards, alleys, covered streets, the *Ringstrasse*, the ceremonial or processional axis, the riverside walk, and so forth.

But the street as an institution is an equally critical subject. Beyond its architectural identity, every street has an economic function and social significance. The purposes of the street traditionally have been traffic, the exchange of goods, and social exchange and communication. All three are inseparably related to the form of the street—the material ways in which these activities are housed and helped along. There are intricate levels of social engagement encouraged and hosted by the street structure. The street, in Joseph Rykwert's phrase, is human movement institutionalized<sup>2</sup>—and human intercourse institutionalized. In this way, therefore, the history of the street is about both container and content. If the correspondence of the two cannot be perfectly synchronic, it is because the frame of the street is more permanent than the uses made of it.

We are of course concerned with the *urban* street—with roads when they are *in* a settlement, defined by buildings. The connection between roads in the country and streets in town is nevertheless an intimate one. To cite two instances:

(1) At some point in the history of human settlement, and in all parts of the world, natural paths of passage became highways, and these linked up with towns. The *Via Lata* of ancient Rome was nothing more than the urban stretch of the *Via Flaminia*, the consular highway that traversed the peninsula from north to south.



212 This is the logic of the Hellenistic/Roman colonnaded avenue that formed the spine of cities like Palmyra, Antioch and Djemila, but also of the “high street” of medieval towns, indeed of so-called linear towns in general from prehistoric Khirokitia in Cyprus to Soria y Mata’s *Ciudad Lineal* and Miliutin’s Magnitogorsk.

(2) In the process of urbanization, country patterns of paths, lanes, and trails leave their impress on the urban street network. Synoecism absorbs the lines of communication of the constituent villages; urban developments are bounded by the roads that once divided agricultural and pastoral land.<sup>3</sup>

## HISTORICAL NOTES

The beginnings of a street history have to be conditional. Pre-urban villages had buildings, but their paths were not always streets. Let me insist on two, by no means obvious, facts.

There was a time before streets, even in the proto-urban environment of Western Asia. Take Çatal Hüyük in Asia Minor (7th–6th millennium BC): it was really one intricately assembled complex without streets. All pedestrian movement was made on the roofs of buildings, and social interaction might have taken place in the courtyards.

A little later at Hacilar, also in Asia Minor, narrow lanes appear for pedestrians. Perhaps the fact that the town was now fortified made it possible to have open areas among housing groups. The principle of the prevalence of house groups over public spaces persisted in the pre-industrial world. It applied to Eskimo igloos and other American Indian settlements, the compounds of African villages, and traditional villages in the Middle East and Asia.

176 The street is an invention. At present it may be possible to locate the first conscious street in history at Khirokitia, dating from the 6th millennium BC. This spine of communication, running uphill from the riverbank and down on the opposite side of the hill, was built of limestone and raised considerably above ground level, with stone ramps leading down at regular intervals among the houses huddled on either side. The primacy of Khirokitia may be challenged in future scholarship. But that the institution of the street developed somewhere, wholesale or in part, is not to be doubted. It is surely wrong to take the street for granted.

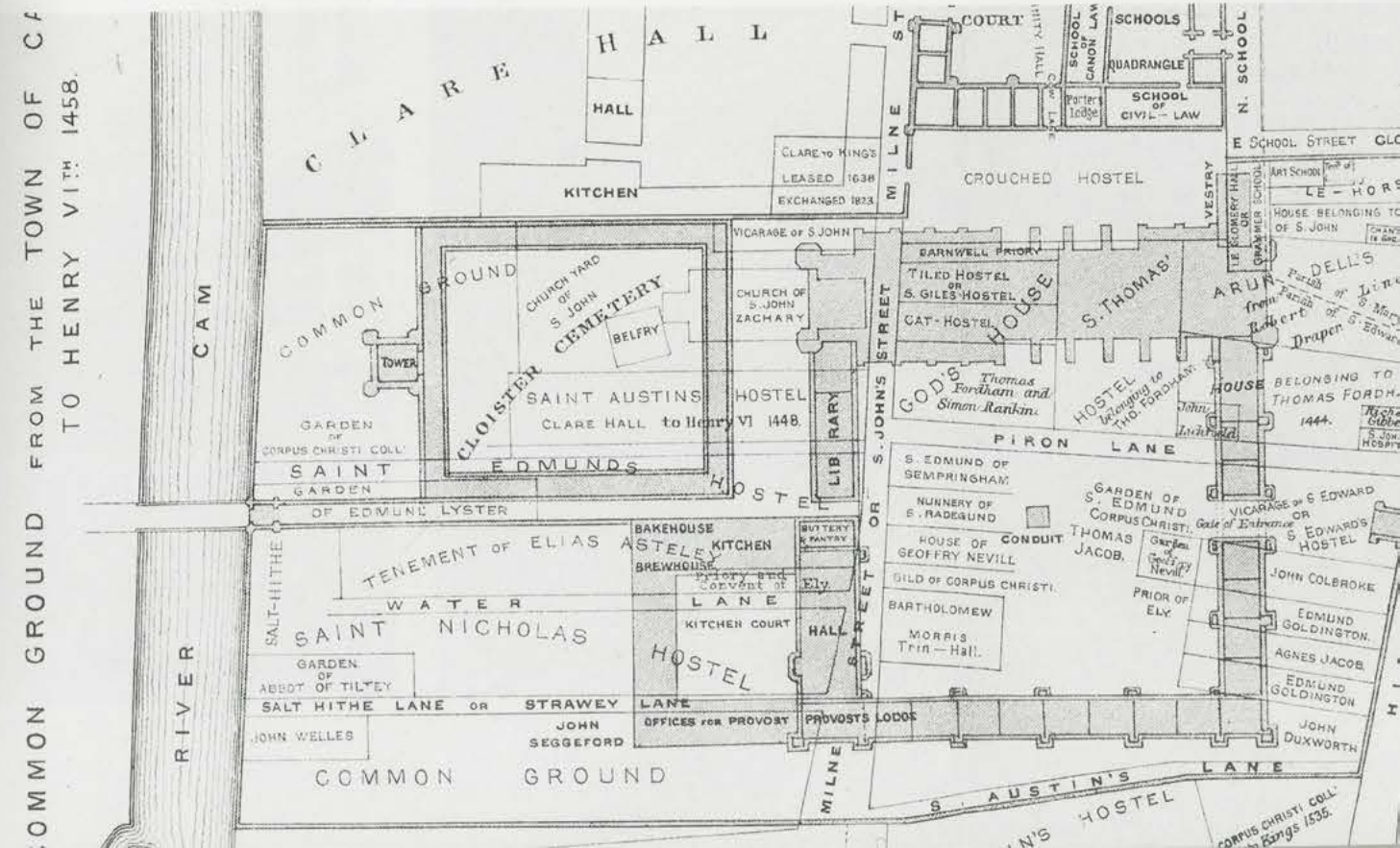
We can cite small pieces of early evidence from a number of locations in modern Turkey. In Beycesultan (about 1900–1750 BC), remains were unearthed of a graveled, that is, paved, street. Paving is important. Our very word “street” derives from the Latin *sternere*, which means “to pave.” The implication of a delimited surface, an artificially marked off open space, already recognized in Khirokitia, becomes central to the early development of the street and the conception of street hierarchies.

Indeed here at Beycesultan, unlike at Hacilar where all courtyards and lanes were of the same character, there is a *differentiation of streets*. The street separating the two mounds is a major artery, the streets within residential areas are local ones. Similarly at the considerably earlier Mohenjo Daro, the Harappan city of the Indus Valley, the broad thoroughfares that formed the loose grid were distinguished from the alleys, parallel or at right angles to them, on which the houses fronted. These streets were unpaved, yet they were equipped with brick drains and brick manholes. At the Minoan hill-town of Gournia in Crete, an upper ring-road hugged the summit where the palace was situated, while a second ring-road ran along the east quarter of the lower town on the plain; cross streets, sometimes cut into by steps, linked these two prime arteries.



176 Khirokitia (Cyprus), the raised limestone-paved street of the Neolithic settlement, lined with the remains of circular huts.

177 Street blockage in 15th-century Cambridge (England): King’s College, founded by Henry VI, occupies a site crossed by several existing lanes. This plan shows the original proposal for the buildings (shaded), of which only the famous chapel, on the north side of the main court, was built in this form. (From Willis and Clark)



At the *karum* of Kültepe (about 2000–1900 BC) we have a very early instance of two crossing “main streets”; the north-south one is wider, and has *sidewalks* or pavements for pedestrians on both sides, a possible first for this feature of street design.

A number of themes remain relevant throughout the history of the street, whatever the period. One of these has to do with a variety of private challenges to the public control of the street space and the corresponding public effort to preserve the integrity of the street channel, and keep it free of encroachments.

The key reality here is that the street remains the stage of a constant struggle between private and public interests. And the moral is that when public control falters, private abuse becomes endemic. The public good requires that the street space be kept open, accessible to all, and equipped for its functions. By explicitly defining an outdoor space for general use, the community makes a commitment to this principle. The private urge is to appropriate this space for one’s own purposes. This is done in one of two ways: through encroachments, and through blockage or privatization. The great antiquity of both practices is a matter of record. Henri Frankfort, the premier student of ancient Mesopotamia, tells us that there

Tradition regarded it very inauspicious to usurp public space for private use. An omen text reads: “If a house blocks the main street in its building, the owner of the house will die; if a house overshadows [overhangs] or obstructs the side of the main street, the heart of the dweller in that house will not be glad.”<sup>4</sup>

And a saying of the Prophet Muhammad, “La dharar wa la dharir,” was sometimes interpreted to mean “No infringement, whether profitable or not.”<sup>5</sup>

Encroachments are incremental over time. In this instance, abutters consider the street as unoccupied groundspace into which they might extend their built premises.



I will have more to say on the subject further along. In the second instance, the street space is eliminated outright by building over it; or else control over street movement is established for factional gain. An example of the latter strategy is the creation of jurisdictional pockets in medieval cities by powerful clans. I have commented on this phenomenon before.<sup>6</sup> The struggle of medieval communes like Florence or Siena to unstop their balkanized thoroughfares, I pointed out, symbolized the need of a government to be in full control of its network of public spaces.

Blockage can also be occasioned by institutions unable, or unwilling, to fit within a given pattern of urban streets. In medieval England, for example, the creation of monastic and ecclesiastical precincts caused the truncating or complete closing off of streets and lanes. The same holds for the college precincts of Oxford and  
177 Cambridge.<sup>7</sup>

Demapping streets for the sake of overlarge buildings has been negotiated between private interests and city authorities at least since the Renaissance. The Strozzi struck a deal of this sort with the Florentine state in the late 15th century to create a sufficiently ample plot for their family palazzo: the foursquare structure stretched over an existing small piazza and an alley, which were suppressed, while  
278– another street was shifted. In modern urban renewal projects where vast areas of the  
280 old city are cleared, demapping is a common planning procedure. In San Francisco in the late 1960s, the private developer who built the Transamerica tower, frustrated by the area's small parcels, assembled two blocks on either side of Merchant Street and successfully petitioned the city to close the street, arguing that its function as a "service alley" was no longer urgent. Public response was hostile, and "street vacation," to use the legal phrase, has since been made much more difficult in order, in the city's words, "to protect against the accumulation of overly large parcels of property under single ownership on which massive buildings could be constructed."

## PRIVATE STREETS

The process of creating legitimate, which is to say independently owned, private streets is obviously one way to be exclusive without resorting to physical force or seeking adjustments within an extant streetscape. In the broadest sense, a private street is one for which public authorities assume no responsibility. This is because the open space serves only the property owners directly involved, or is exclusively intended for such humble, private uses as the temporary storage of refuse or the parking of vehicles. The classic locus is the back alley or the English mews. When these service corridors are gentrified and turned into residential strips, they usually enter the public domain.

But this ad hoc, typically low-life privacy of alleys and cul-de-sacs should be distinguished from the self-conscious creation of private streets for the privileged few. The aim here is exclusive: to live without city interference in a setting that allows for a concentrated display of superior taste. This aim is fundamentally anti-street. Those who choose to live in such secluded oases within the urban structure are willing to forego the public benefits of street life, not least, from their point of view, the mixed admiring crowds of public streets, for the sake of avoiding accompanying nuisances.

178 The exemplary Strada Nuova (now Via Garibaldi) of Genoa was a State initiative built to serve a private clientele. It was the Doge who created this street by decree in 1550 for the merchant aristocracy, and high members of the republic's adminis-

178 Genoa (Italy), Strada Nuova, a mid-16th-century private street of palaces. The original paving was to be of brick, with flagstones at the sides.



179 Private London: gates on the Bedford Estate, at the Taverton Street entrance to Gordon Square, photographed with a gatekeeper shortly before their demolition by the London County Council in November 1893.

tration supervised its execution. Situated on the hillside between the castle and the town, the Strada Nuova was intended as a civic monument. The straight street with a uniform width of 30 palms (25 feet/7.5 m.), and the palaces, together made up an ideal urban fragment in the new Renaissance style. The purchasers of the building sites were obligated to put up palaces of predetermined size holding to a straight line. The main entrances had to face each other across the street space. The street was inaccessible to vehicles, being blocked at one end by a garden and at the other by stairs.

Obstructions to traffic in the form of gates and bars were introduced to London's West End estates in the 18th century. The goal was to prevent the privately-owned streets lined with elegant Georgian townhouses from being used as cross-town thoroughfares, especially by traffic originating in the less reputable districts to the north. One of the first of these gates, built in the 1750s, served to bar undesirables from the Bedford estate. Residents who paid a deposit for a "silver ticket" were granted access; servants could pass through the gate only "in their attendance on the master, lady, or children of the family." Later, gates generally opened for all upper-class vehicles from 7 a.m. to 11 p.m., but remained closed to omnibuses, empty cabs, and all forms of commercial through traffic.<sup>8</sup> The century-long proliferation of these barriers created havoc for cross-town travelers and blocked traffic generated by the new railway terminals at Euston, St. Pancras and King's Cross. Despite a groundswell of public criticism, the gates were not outlawed until the 1890s, when two Acts of Parliament succeeded in removing the last fifty-five barriers.

The private streets of St. Louis, Missouri, conform to the precedents established by English residential estate planning. These "places," as they were called, were





born in part because of the lack of municipal zoning and other legally binding protections of private property. First in line was Lucas Place from 1851; the last, Beverly Place and Parkview from 1905. Most of these private streets conformed to the city's grid plan, but since the public space was owned by the occupants, the street's design and use could be controlled through detailed deed restrictions, ensuring that the places were free of the depredations of heavy commercial traffic and "the encroachment of street cars, switch tracks and objectionable buildings."<sup>9</sup> The contemporary version of St. Louis's places can be seen across America in exclusive residential enclaves with names like "Blackhawk" and "Whispering Woods," where security kiosks and electronically activated gates bar public access to roadways that wind through manicured suburban landscapes.

## THE STREET AS PUBLIC SPACE

These private creations are exceptional. The only legitimacy of the street is as public space. Without it, there is no city. Practical needs—access to adjacent property, passage of through traffic—come to mind first because they are obvious. But the fundamental reality of streets, as with all public space, is political. If the street was an invention, it set out to designate a public domain that would take precedence over individual rights, including the right to build what one wants where one wants and the right to treat the open space as one's front yard. The street, furthermore, structures community. It puts on display the workings of the city, and supplies a backdrop for its common rituals. Because this is so, the private buildings that enclose the street channel are perforce endowed with a public presence.

This political and communal aspect of streets is best attested to by popular street celebrations which after the Renaissance, in the era of princes, were gradually banished or interiorized. Two examples should suffice.

In Coventry, streets were processional settings all through the year. During Midsummer and St. Peter's nights (24 and 29 June), bonfires blazed on the streets

180 Rome: Pius VI in procession on the Via Papale, during the ceremony of the possesso, approaches the end of his journey, the stairs and ramp leading to S. Maria in Aracoeli and the Campidoglio. All the other buildings shown in this painting of 1775 were destroyed a little over a century later, when the Victor Emanuel Monument was erected.



181 Washington, D.C.: Lyndon B. Johnson's motorcade drives down Pennsylvania Avenue from the Capitol toward the White House in 1965.

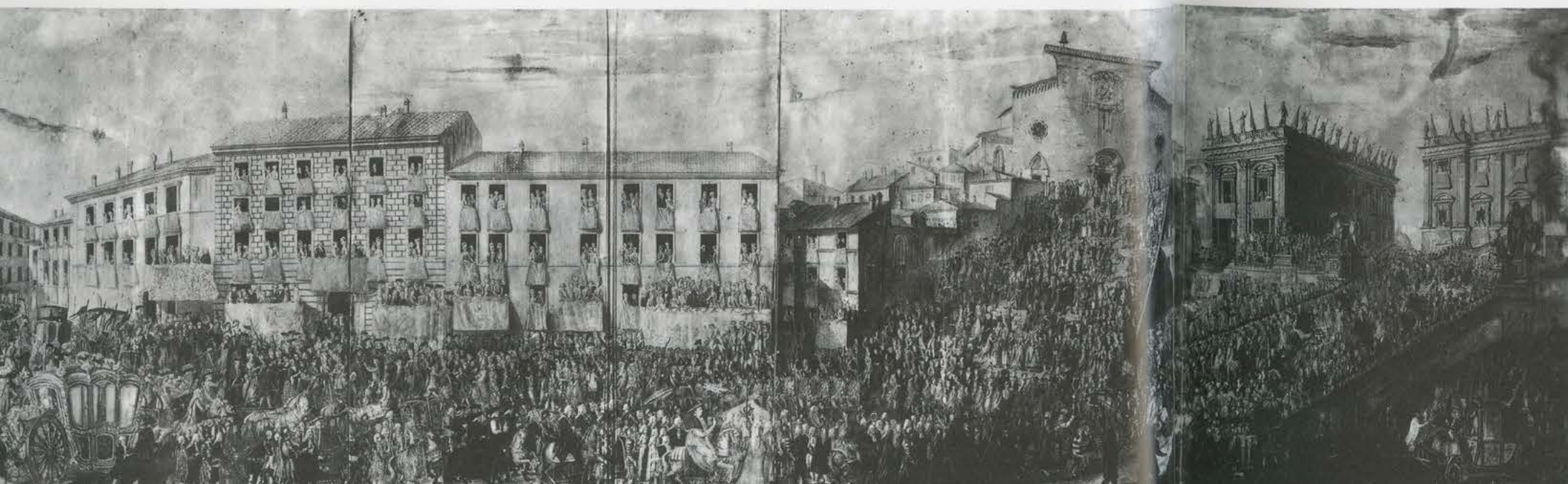
and informal gatherings took place. "These occasions," the historian Pythian-Adams notes, "were widely acknowledged celebrations of neighbourliness." Other rites involved the carrying through the streets of the Corpus Christi host or the Midsummer fire. Such activities "periodically added a mystical dimension to [the] utilitarian valuation of the immediate topographical context. While doing so, they underlined further the physical inescapability of communal involvement." Then, between 1450 and 1550, almost all of these popular ceremonies went indoors. The only open-air ceremony to survive was Rogationtide. Rites associated with May Day, Hock Tuesday or Midsummer were banished from the streets.<sup>10</sup>

In Renaissance Rome, Richard Ingersoll has shown, progressive physical changes along the main processional route of the Middle Ages called the Via Papale, a scraggly path stretching from the Vatican to the Lateran, made manifest the very real power adjustments between the Church, the noble houses and the commune. From the Castel S. Angelo on the river marking the start of the independent papal quarter of the Borgo, to the commune's center on the Campidoglio at the other end, the route provided staged opportunities during the Middle Ages for the assertion of the power of the people against the claims of the bishop of Rome. Politically the most significant occasion was the *possesso*, when a newly elected pope traversed the city heading for the official papal residence at the Lateran. Along the way he was ritually harassed, knocked out of the saddle, and otherwise subjected to the crude will of the Roman people. He in turn pacified the mob at five points along the route with the traditional throwing of coins. By the time of Leo X (1513–21), the *possesso* had been transformed into a demonstration of the pope's right to be in the city, with the orderly, disciplined participation of all classes of society, so that the ceremony came to resemble a magnificent entry of the lord, the Classical *adventus*.<sup>11</sup>

## THE THEATER OF POWER

An American civil ritual made its debut in January 1805 when Thomas Jefferson, after a brief oath-taking ceremony at the construction site of the U.S. Capitol, rode with a few congressmen and well-wishers down the muddy morass of Washington's Pennsylvania Avenue. Such was the modest birth of the secular procession that consecrates each new American presidency. The inaugural parade binds the poles of national and federal power, traversing the mile-long stretch between the White House and the Capitol. From Jefferson's austere addition of four rows of Lombardy poplars to the ostentation of thirty-nine wooden "Grand Arches" constructed for Garfield's triumphal ride in 1881, the changing physical form of "the Avenue" has reflected political mood. It is a stage for exhibitions of public power as well. Here women's suffragists demanded the vote in 1913; 15,000 war veterans sought benefit payments and were rewarded with tear gas in 1932; eleven mule-drawn wagons launched Martin Luther King's 1966 protest march against poverty.

It is precisely at moments of political transformation that the street renews its currency as a medium for ceremonial assertions of power. In modern times this has been particularly true of societies forged through revolution. Here the secular procession is deliberately cultivated as a mass affirmation of changed social roles and values. British sociologist Christel Lane has identified two phases in the development of these public observances. The initial period of enthusiastic participation tends to be short-lived. It is followed by a decline in spontaneity characterized by wooden re-enactments of a fully articulated body of rituals.<sup>12</sup> Good examples of the process are to be found in the revolutionary culture of late 18th-century France and early 20th-century Russia.







The idea of harnessing the vitality of street theater to the goal of revolutionary re-education was Robespierre's. "Man is nature's greatest phenomenon," he proclaimed in 1794, "and the most magnificent of all spectacles is that of a large popular festival." For the new republican holidays sumptuously mounted mass processions were organized that wound their way through Paris to sites charged with political meaning, such as the Champ de Mars. Neoclassical pomp was provided by triumphal arches, secular altars, and other set-pieces designed by Jacques-Louis David, who staged these productions with the authority of "a virtual Minister of the Arts."<sup>13</sup> The popularity of these collective celebrations declined sharply after the fall of the Jacobin regime as the effects of State control came to outweigh participatory zeal. Under Napoleon Bonaparte the parades were reduced to military displays with citizens there merely as spectators.

182-185 "Stations" on the processional sequence through Paris devised by Jacques-Louis David for 10 August 1793: the fountain of Regeneration in the Place de la Bastille, from which deputies drank on behalf of all citizens; a colossal figure of the French People, next to the Invalides; burning the emblems of royalty in front of a figure of Liberty, Place de la Revolution (de la Concorde); and a re-enactment of the oath of Federation at the Champ de Mars.

Initial Soviet experiments with ritual procession fused elements of contradictory Russian precedents – the pre-revolutionary traditions of carnival-like coronation jubilees and of protest demonstrations. For May Day 1918, red flags, banners, and posters adorned Nevsky Prospekt in Petrograd (St. Petersburg). Much of the temporary street decor was radical in style as well as political content, thanks to a highly placed patron of the avant-garde, A. V. Lunacharsky, who served as Commissar of Public Education. Later parades acquired more of a carnival atmosphere as costumed buffoons and comic floats ridiculed Communism's enemies—among them the bourgeoisie, black market speculators, priests, and drunkards.

Under Stalin political manifestations were standardized and drained of revolutionary *élan*. In 1930 a Central Staff for the Conducting of Holidays was founded in Moscow. Amateur and avant-garde initiative was abolished; the new protocol downplayed the individual's celebratory movement through the streets of the city, emphasizing instead the critical moment when the participant filed past the Party viewing stand. The change was reflected in the shift toward "a more miserly disposal of decorative emphases" after 1933, with monumental portraits of Marx, Engels, Lenin, and Stalin reserved for central squares.<sup>14</sup>

In established totalitarian states, the temporary nature of processional street decoration clashes with the pursuit of immutable rule, carnival playfulness with the need for sober conformity. Mass observances of political fealty are designed to strike a military chord, and power is reified permanently in monumental architecture. The transformation of Moscow's Gorky Street/Tverskaya into "the celebratory highway of the capital" in 1937-39 is one response to this program; Hitler's grandiose plan for Berlin's great north-south axis, with a remodeled Unter den Linden as a cross-axial boulevard, is another.<sup>15</sup> As in the Soviet case, Nazi Germany placed public ritual under the jurisdiction of Party institutions, in this case the *Hauptkulturamt* and the *Volkskulturwerk*.<sup>16</sup> Light, the color red, the flag, and the swastika were invested with symbolic significance: how they could be combined to create a highly regimented ceremonial streetscape was tested on Unter den Linden in 1939, before bombing raids made street lighting a pre-war memory.



186 Berlin, experimental lighting in Unter den Linden, 1939.



## CULTURE AND CLASS

In the normal, everyday state of the street, the relative balance between the abutter's freedom of action and the identity of the public domain, independent of any regulating influence of laws, is ultimately a cultural matter. It depends on the traditional needs and attitudes of society, which of course change over time.

The private element, in the tug-of-war between the public and private nature of streets, is represented by houses and shops. At certain times in history this private element is paramount. This is so in Mesopotamia, in ancient Greece, in the cities of Islam. The common denominator here is a prevalence of inturned courtyard residences. These do not contribute much to the street except to act as boundary wall. They do, of course, have doors, through which people enter into and exit from the street channel and negotiate with passing vendors; and they have high windows in which plants bloom and heads appear. When the houses are combined with ground-floor shops, the dual function of the street is perfectly expressed in the nature of the street walls: they are at once the streetfront and the "back" of the houses.

How much beyond this concession to the commercial value of the street the abutting houses choose to go in communicating with the public space will depend, practically, on the demands of the housing structure. A main factor in this respect is the degree to which houses are dependent on the street's light and air. This in turn is a function of density. To the extent that urban lots are fully built up, their ability to enclose an open courtyard space will be limited. In ancient Rome, in contrast to the

187 inturned single-family *domus*, apartment houses like the ones of Ostia opened up their façades with big windows and balconies, in order to get light into the individual units and extend their constricted space.

But these practical considerations are only one side of the story. The determining factor is culture. Some societies are demonstratively outgoing, others are not. In Islam, the seclusion of women from the public eye, and the sanctity of family

188 privacy, are sufficient grounds to seal the lower ranges of the façades or obstruct the view of the passerby. Even so the function of the street as theater for housebound women and children is essential. A balcony or a window is a viewing stand, and so the Islamic house perforates the upper range but, by means of finely detailed lattice-work, screens the occupant who uses these openings to look out.

Class comes into it also. The *hôtels*, or townhouses, of the upper classes in Paris

288 intentionally withdrew from the street to the back of a courtyard, and so did the mansions of the rich in London. A 1771 pamphlet on London, probably by the architect James Stuart, noted that, to men of rank and fortune, "a gateway with a spacious court within is both stately and commodious; but the front to the street should still present something that intimates a relation to the society in which you live; a dead wall of twenty or thirty feet [6-9 m.] high, run up in the face of your neighbours, can only inspire horror and dislike."<sup>17</sup>

In dense, multi-story street walls, status was established through height. The concept of the *piano nobile*, the floor above street level which could provide privacy and a degree of relief from the pressures of street activity, was alike familiar to

305, ancient Roman *insulae*, Renaissance palazzi, and the Parisian housing block of the 19th century. In the Western medieval house, with the place of business at ground

78 level in touch with passing traffic, the residential component was relegated to the upper stories.

189 For the Chinese of all classes, dependence of the house on the public space of the street was never important. The design of the residential street was affected

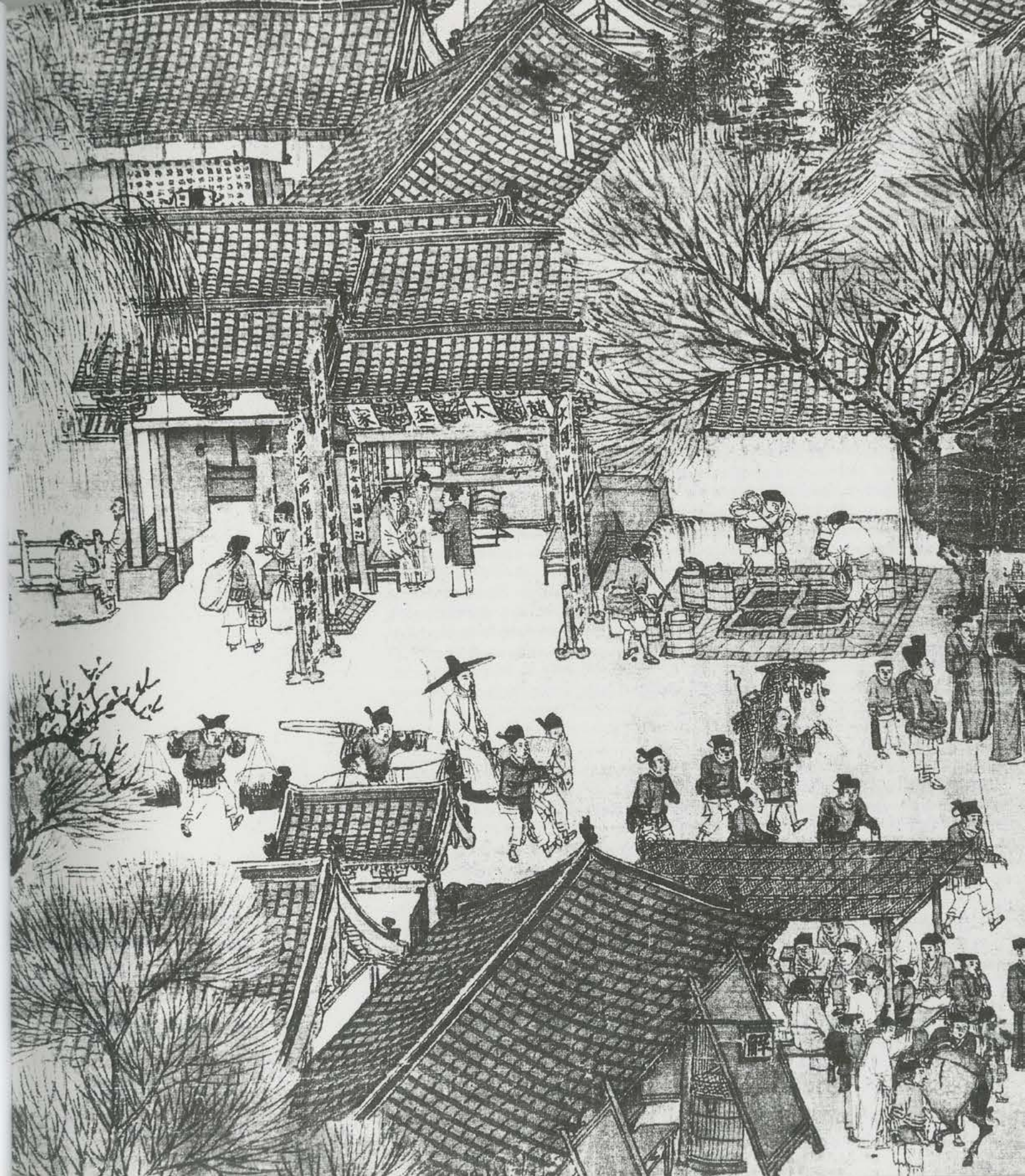


187 Reconstruction of insulae at Ostia, near Rome, with shops and cookhouse on the ground floor and the best apartments on the floor above.



188 An inward-turned Islamic street in Isfahan (Iran).

189 opposite A scene in Pien-ching (modern K'ai-feng), capital of the northern Sung; from *Life along the River on the Eve of the Ch'ing Ming Festival*, by Chang Tse-Huan, 12th century. The houses are set back from the bustle of the street, screened by shops and by their own blank walls. A courtyard can be glimpsed top left. the shop in front advertises itself by scrolls sticking out into the street space; to the right is a public well.





accordingly. The traditional Chinese house was structured on the principle of courtyards one behind the other. What defined the street might well be nothing more than the outer courtyard walls. Upper-class mansions usually had one large gate on the street, flanked by two low buildings occupied by servants and tradesmen and workmen. In the case of the smaller house of artisan and shopkeeper, the work premises were up front, the house proper behind. The common street scene in later imperial China, when the strict segregation of markets was eased and the tightly sealed residential wards were opened up toward the street space, featured uninterrupted strings of booths and shops concealing the low houses behind. Tall poles, often decorated with cloth streamers, held up the signs for the shops.<sup>18</sup>

## THE REGULATED STREET

As a rule, however, the spatial standards of the public domain are established neither through benign laissez-fairism nor through cultural force of habit. The common course is a process dictated by law and constantly negotiated. Public control is exercised in the name of safety and circulation, but also in order to give esthetic distinction and unity to the streetscape. Haussmann's Paris is the tail end of a long story, whose beginning goes back much further than the celebrated building codes of city states in medieval Tuscany.<sup>19</sup>

The climax of esthetic street regulation is the pride of Baroque urban design. Prescriptive façade design gave the new districts of 17th-century Dresden and Berlin a visual uniformity that belied the private and speculative nature of development.<sup>20</sup> A century later German cities were still drafting regulations mandating the minimum height of new construction in order to acquire a "big city" look. Düsseldorf ordinances of 1835 and 1855 required all houses to have at least two stories. Ulm imposed its two-story rule in 1866. Such restrictions minimized the view of bare flanks of tall buildings standing out above low buildings.<sup>21</sup> Often accompanying these minimum height regulations were others for minimum façade widths. The Ringstrasse in Cologne, planned by Joseph Stübben in 1880, is a late example.<sup>22</sup>

At their most basic, building codes and street ordinances seek to guard against fires and other disasters, to ensure public health and safety, and to improve the flow of traffic.

### Public safety

Throughout history, decrees against wood construction are as frequent as major urban fires. Roman laws opposed wooden balconies. The Neronian measures for a modern, fire-resistant city after the disastrous fire in AD 64 included a proscription against timber beams, and the prescription of porticoes in front of houses and apartment blocks "from the flat roofs of which," Suetonius explained, "fires could be fought." For the most part, such decrees prove ineffectual—or are diluted from the start because of organized opposition.<sup>22</sup>

The success of anti-fire legislation after the Great Fire of London in 1666 is exceptional. After blithely ignoring repeated injunctions against timber construction, the City that was so spectacularly burned to the ground was one of lath and plaster houses, their timbers coated with pitch. The laws now set down that the rebuilding was to be in brick and stone, and every aspect of house construction was spelled out in detail. Furthermore, four house types were specified, each related to a particular street width. Two-story houses were only allowed on "by-lanes," four-story houses limited to the "high and principal streets." The unruly ways of London were finally stemmed (see below, p. 247).



190 Possible hazards of a medieval street: projecting shop counters and shutters, stairs leading down to cellars, posts, temporary ladders, jettied structures, and hanging signs.

But the most vexing and persistent abuses of street space came in the guise of ad hoc building protrusions that impeded transit and endangered pedestrians. In the Middle Ages, these included the counters that projected from shops and the awnings that protected these counters from the weather, external stairs, and various means of expanding one's property without actually encroaching on the street, such as bridges between buildings, balconies, and cantilevered upper stories or jetties.

A covered landing at the top of the exterior staircase was probably the origin of the North European oriel, which is essentially a projecting window recess or covered balcony. The feature was especially popular with the late Gothic houses of Switzerland and Austria, where lavishly decorated oriels sometimes ran through all the stories like a tower, or extended across the full width of one story. Linz on the Danube has a number of surviving examples. In Germany, the oriel window and external pulpit, sometimes serving as private chapel, were relics of the upper gallery that surrounded the South German farmhouse. The bay window was first cousin to the oriel. It provided more light and a wider field of vision. Bay windows often carried up through several stories were characteristic of the English middle-class urban house at the end of the 16th century. They lost their popularity in the next century as the trend toward classical façades spread through the building industry, but were revived in the Regency period, and remain a symbol of domesticity to this day.

There were laws in many cities about all of these projections. In Florence, jetties or *sporti* were tolerated in lesser streets, more strictly controlled on main streets. In Faenza, early 15th-century statutes established a system of jetty zoning for the whole town. The system specified on which streets they could go, and how wide or high they could be.<sup>23</sup> In Nuremberg, strict building ordinances set limits to ornamentation, ensured an undeviating building line for the rows of houses, and determined the number of oriel windows that would be permitted.

The English parallel should be evoked. Encroachments on the "high street" were strictly controlled, and one can show in places like Winchester that house frontages moved little if at all from the 11th to the 20th century. On side streets, control was more lax. In those extending from the city wall to the High Street, we can see the walls closing in more and more as they approach the commercially attractive intersection, where incentives were greatest for encroachments on the public space.<sup>24</sup>

In the remaking of London after the Fire of 1666, John Evelyn pleaded "that no Bay windows and uncemely jettings, nor even Balconies (unless made of iron) be for the future permitted."<sup>25</sup> A century later, the clean, flat street wall was being legislated for. An act of 1771 singles out streets in the county of Middlesex which are ill-paved, "and the passage through the same greatly obstructed by posts, projections, and other nuisances, and annoyed by spouts, signs, and gutters." The act prescribes "that all houses and buildings hereafter to be built or new fronted shall, for the effectual and absolute prevention of all manner of projections, annoyances, and inconveniences thereby, rise perpendicularly from the foundation." Any offending new house would be pulled down and removed.<sup>26</sup>

Signs deserve a special mention. Painted emblems identifying shops, either attached to or jutting out from the façades, were a common street fixture. The 1771 "James Stuart" pamphlet on London colorfully, and contemptuously, describes them as "monuments of national taste" and ridicules those who regretted their pulling down: "the cat and the fiddle, goose and gridiron, and the like, being regarded as the greatest efforts of inventive genius; and Cheapside often compared





to the Medicean gallery, for its choice collection of paintings; blue boars, green dragons, and kings heads."<sup>27</sup> Another nuisance was the bow-windows of shops that more aggressively encroached upon the footways.

The Paving Act of 1762 had already prohibited the use of hanging signs in Westminster. Though this ordinance was ignored by inns, the shops did shift to the use of fascias above their windows. By the 19th century, protruding or swinging street signs were being actively condemned. An act of 1834 concerning the South London district of Bermondsey makes liable to removal all "signs, sign-irons, sign-posts, barbers' poles, dyers' poles, stalls, blocks, bulks, showboards, butchers' hooks, spouts, water-pipes."<sup>28</sup>

By the end of the century, with the signs gone, the new menace was street advertising. G. L. Gomme, in his book on Victorian London of 1898, bemoans the street litter of his time: "the sky-signs, without one single element of artistic construction, lime-light and electric-light letterings, posters covering hoardings sometimes for considerable distances . . ."<sup>29</sup> In the United States, the land of  
194 privatism, "the billboard nuisance" was if anything more acute. Many billboards rested on the ground, and the spaces behind them were used as dumping ground.

*The evolution of a street: Cheapside, London, 1638-1831*

191 above Before the Fire of 1666, Cheapside was a grand late medieval commercial street, with timber-framed houses on an irregular building line and all the features later legislation was to condemn: jettied upper stories, water spouts shooting rain off the roof onto the passerby below, and projecting shop counters, awnings, and signs. (The shops themselves are concealed here in honor of a royal procession.) Note the market cross in the middle.

192 opposite, above Post-Fire, ca. 1750: houses of fireproof brick or stone—four-storied, since Cheapside was a "high or



principal street"—form a continuous line, enhanced by balconies above the shops, and their roofs are drained through lead downpipes. Wren's new St. Mary-le-Bow stands at the far right. By this time the 17th-century shops had been transformed with glazed, often bowed, frontages, and hanging signs, at first banned, had reappeared. The roadway is paved, the sidewalk sheltered by posts.

193 right A closer view of the junction of Cheapside, Poultry, and Bucklersbury in 1831 reveals further changes: the shops no longer project, and they have fascias bearing names rather than an image. Underfoot, pedestrians have a raised sidewalk with a kerb.







194 Billboards in Atlanta (Georgia), photographed by Walker Evans in 1936. With the automobile age, outdoor advertising became larger and more aggressive, as it now had only seconds to arrest the speeding traveler's attention.

They obstructed light, sunshine and air. But these considerations were secondary to the concern with the unwholesome nature of the messages advertising liquor, tobacco and lurid-sounding plays with titles like "Why Girls Go Wrong" or "A Rose of the Tenderloin." The cardinal issue, as always, was that struggle between the public and private uses of the street. As a prominent New York lawyer put it in 1910, "The landscape in the country and the open spaces in the city do not belong to the man who chooses to pay a few dollars for them."<sup>30</sup>

#### Public health

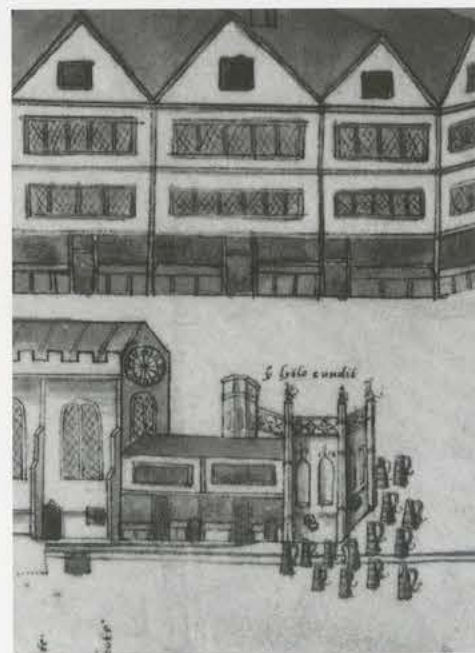
Ordinances related to public health were usually spurred on by the outbreak of epidemics. An early instance is the ban against outbuildings (*gaisi* in Neapolitan) included in the urban regulations of 1553 in Naples, a ban which was prompted by the serious plagues of 1529 and 1530. Until the 19th century, the law set housing standards only in so far as the public realm, and not the health of the inhabitants within the houses, was affected. In terms of the street space itself, the main concerns were congestion and exposed sewage.

Drains for the siphoning off of surface wastewater and sewers for its disposal were not unfamiliar in the pre-industrial world. Dora Crouch has documented the subject in detail for ancient Greece.<sup>31</sup> To take an early example from another cultural sphere, Etruscan Marzabotto had streets that (in the words of Ward-Perkins)

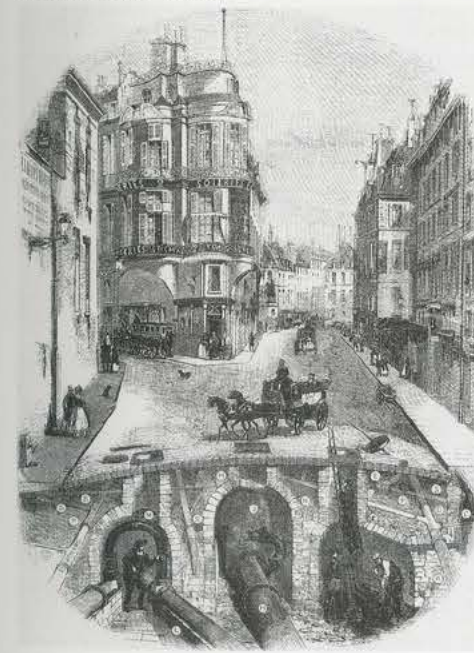
incorporated a very carefully planned and executed system of drainage, with a uniform flow from north to south and from east to west. Along the broader streets there were two drains, and one along each of the secondary streets, and at frequent intervals smaller drains led into them from the individual houses.<sup>32</sup>

In the Middle Ages, from the 13th century onward, these matters gained attention anew. Several late medieval towns in England—London, Leicester, Hull, etc.—had public latrines. In addition, fresh water brought by pipe or open conduit was to be found in London, Exeter and Bristol by the 14th century.<sup>33</sup>

195 Cheapside conduit, London, 1585. Large leather water-jugs stand around the public fountain.



196, 197 Paris streets old and new. Above, with the traditional central gutter, uneven surface, and overhanging houses—though by then these had drainpipes (from A.L. Joanne, *Paris illustré*, 1863). Below, with a neat pavement of granite blocks over a labyrinth of pipes for sewers, water, street hydrants, and gas; note the public pump at the far left (from E. Texier, *Tableau de Paris*, 1853). Virtually the only feature the two scenes have in common is the wall-mounted gas lamp.



By and large, however, drainage in the pre-industrial city was a simple affair: cities made do with a depression in the middle of the street. Projecting roofs or long spouts poured rainwater into this central gutter. Evelyn deplores this arrangement. He writes that

for the universal benefit (especially of those, who are not born to ride in coaches) that intolerable nuisance of spouts and gutters might be strictly reformed, and the waters so conveyed by close and perpendicular pipes (where they cannot be avoided) or to drop only from above the Modillions, as from Italian roofs<sup>34</sup>

—presumably sufficiently clear of the houses to leave a sheltered passage for pedestrians.

For pre-Haussmann Paris, Sir Francis Head describes the streets with their "rude ill-constructed pavement of round stones for carriages, horses, and foot-passengers" and down the center "a dirty gutter, which, in heavy rain, looked like a little trout stream."<sup>35</sup> The few underground sewers into which the gutters might drain were leaky and clogged easily. Wastewater found its way into rivers, moats and canals. Excrement was dumped into these same places, or hauled away in carts. In Germany, Hamburg was the first to install a sewer system with flush toilets in houses, taking advantage of a major fire in 1842. Other German cities slowly followed suit, substituting sewers for cartage. Hobrecht designed the system for Berlin, deviating wastewater to agricultural land outside the city.<sup>36</sup>

The model was England, which was far in advance of the Continent on street-incorporated services. England introduced and popularized storm drains, sewers and piped water some time around 1800. Then Paris took the lead. The hygienist Parent-Duchâtelet studied sewer systems in great detail in his *Essai sur les cloaques ou égouts de Paris* (1824), and the prefect Rambuteau set about to apply some of the findings shortly thereafter. The provision of pipes under the roadway to carry off rainwater and waste was not enough: a stream of water had to be continually available to flush away street debris. So a system of mains was installed which carried water from the River Seine to a network of hydrants which flowed on demand to clean the cobblestone streets. This went along with the proliferation of sidewalks, and the installation of roof gutters and drainpipes to collect rain water and channel it directly to the curb. We have it on the testimony of Rambuteau that in 1832 there were 39 kilometers (24 mi.) of water mains and 217 hydrants, while by 1850 there were 358 kilometers (218 mi.) of mains and 1,837 hydrants.<sup>37</sup>

Congestion was perceived in terms of street width and the overall height of flanking buildings. Narrow, canyon-like streets kept sunlight from reaching ground level. The general remedies were to set height limits, and to widen streets correspondingly. The first were hard to enforce; the second had prohibitive costs when attempted in the older quarters. In the newly built areas of town, the demand for wide streets became habitual after the 17th century. This had as much to do with the increasing use of coaches as it did with health matters. But by the late 19th century the perception that narrow, crowded streets encouraged the incubation and spread of disease, especially cholera, was firmly established. The connection is transparent in the fact that legislated street widths in England were promulgated in national Public Health Acts, like the ones of 1848, 1858 and 1866, which led to the ubiquitous suburban "bye-law street" as the substitute for the outlawed back-to-back housing.<sup>38</sup> This new street type consisted of long stretches of terraces cut through by infrequent cross-streets. At the back ran correspondingly long, narrow alleys between walled-in yards intended for toilets and the removal of ashes and rubbish. This arrangement of back alleys aped the mews system of affluent rows





developed in the previous two centuries for the stowing of private coaches. The width of the bye-law street was set at as much as 40 feet (12 m.), far in excess of practical need and disproportionate to the modest height of the two-story houses; yet there were no proper front gardens and no trees.<sup>39</sup>

In Germany, in the mid-19th century, the cult of the wide street was dominant. The *Fluchtliniengesetz* (Law of Building Lines) of 1875 was designed to encourage broad thoroughfares; it allowed municipalities to lay out streets up to 26 meters (85.3 ft.) wide without compensating property owners along their line. But this ostensible concern for light and air stopped at the building line. Behind it came the private space of the deep blocks, where developers filled every inch of the property with huge buildings; here many of the inhabitants had no benefit whatever of the light and air of the ample streets, as they breathed through narrow courtyards and less.

The situation was made worse by regulations regarding the height of abutting buildings. Codes normally set building height in proportion to street width. This meant that the wide streets of Germany condoned uniformly tall buildings—indeed encouraged them. Wide streets were more expensive to construct, and since this cost was assessed to the owners of adjacent property, it had to be recovered by building as dense and tall as you could get away with.

After 1880 Germany became disillusioned with the cult of the wide street. By the end of the century narrow streets were being recommended for residential areas. “Bigness yielded to intimacy, the imposition of schematic forms to the apotheosis of irregularity and individuality.”<sup>40</sup> Wide streets were now seen as unhealthy because they fostered wind and dust.

198 Whitehall Road, Small Heath, Birmingham, a typical late Victorian wide bye-law street. Between the front doors of the houses, a round-headed opening gives access to yards behind. This photograph was taken during the war, in 1941, when the terraces had suffered damage.

## Traffic

The correlation of street width to traffic created hierarchies of another sort. The amount of anticipated traffic is the most straightforward objective in deciding street widths. There are major traffic arteries and quieter, residential eddies. At the bottom of the hierarchy stand the alleys providing access to the rear of properties. But the logic of circulation has not always guided city-making. Residential streets of status could elect a grand scale incommensurate with their modest traffic flow. And paths of main commercial activity were often near-impassable bottlenecks, willingly tolerated on the premise that crowds in tight quarters were the key to contagious shopping. Street-widening in the heavily congested city center of the early automobile years was not always welcomed by the store owners who were considered its primary beneficiaries. “The appearance of business *being done* is good,” an American merchant wrote in 1915, “and wide streets, unless well occupied, give an opposite impression.”<sup>41</sup> The consensus of the time was that main traffic streets offered the best opportunities for shops provided they were not wider than about 50 to 70 feet (15–20 m.).

In the origin of linear towns, the traffic artery *is* the street, which widens for the market and runs into the highroad at the other end. Streets parallel to the “high street” come about as the town’s size increases; cross lanes are kept to a minimum. But even in more balanced urban configurations, the concept of the “main street” is pretty standard.

So, often, is the distinction between parallel streets in one direction and cross streets in another. In Scottish towns like St. Andrews, this distinction had linguistic affirmation in the Middle Ages. The wide east-west streets were called “vicus” in Latin and “gait” in Scots, as in Northgait, Mercatgait, etc. The narrow north-south lanes were called “venella” in Latin and “wynd” in Scots, as in Fisherwynd.<sup>42</sup>

A slightly different categorization pertains in the *bastides* or planted towns of southwest France and Wales, the colonial towns of eastern Germany, and many other medieval towns of older origin. The major traffic streets, with the greatest width, are there of course—these are called *Verkehrstrassen* in Germany, or *carrières* in French. They commonly connected the points of entry into the walled town. Residential streets, built without provision for shops and trade activities, carried traffic along adjoining household plots. The third category, the narrowest, are called in German *Wirtschaftsstrassen*, or occupational streets. City officials of medieval Florence used a slightly different method to categorize the three classes of streets they recognized: there were *viae publicae*, the major thoroughfares; *viae vicinales*, neighborhood streets, often blind alleys; and *viae privatae*, or private streets. The city gradually purchased the latter, opening and widening them as needed.

The common perception of the congested medieval city where land is at a premium is probably more appropriate for the post-medieval period. Medieval streets in the West were not especially narrow. Bristol had several streets that were a full 50 feet (15 m.) wide, and many more of 35 feet (10 m.). Stratford-on-Avon, at its founding by the Bishop of Worcester, was laid out with new streets 50 feet wide and the main market street was made 90 feet (27 m.) across.<sup>43</sup> Even in 10/11th-century Novgorod, some streets were 16 to 24 feet (4.9–7.3 m.) wide. At the same time, we have to stress the presence of extensive areas of yards, gardens and orchards behind the houses, which contributed to an air of openness. Ampleness had its dangers. Encroachments were more tempting. The main market street at places like Stratford-on-Avon, Chipping Campden, and Ludlow sprouted a permanent row of shops down the middle.



Pl.25 The case of Islam is, as always, unique. The main distinction that holds in Islamic cities is between through-streets and residential cul-de-sacs. The through-street is a public right-of-way, traditionally wide enough for two packed camels to pass. The cul-de-sac is the private property of people living around it.<sup>44</sup> In general, the street pattern in these cities is not designed to enhance mobility and exchange. Freedom of movement through the urban form was not in itself valued. On the contrary, the insularity of neighborhoods was a self-conscious system of collective privacy, as the courtyard house was of family privacy. And even in the streets that were meant to carry traffic, the very limited width was “a built-in system of traffic control.”<sup>45</sup>

In the modern period, street widths based on functional categories began to be codified. In Paris just after the Revolution, e.g., the following functional categories were established: “short routes”, 6 meters (20 ft.) wide; “intermediate routes”, 10 meters (33 ft.) wide; “inner arteries”, 12 meters (39 ft.) wide; “big thoroughfares leading from one end of Paris to the other,” 14 meters (46 ft.) wide.<sup>46</sup>

This is still at a time when sidewalks were non-existent, and mass transportation had not reached the modern city. Those two phenomena would make widths of this sort unworkable. By the time the boulevard as a generic street type was adopted, the 199, main roadway might still be 12 meters wide, but, separated from it by rows of trees, 227 there were now two *contre-allées* each 6–8 meters (20–26 ft.) wide. In the older streets a more reasonable width had to be forged by widening the original channel—at first just one side of it, for the sake of expediency and cost, and by Haussmann’s time, in 269 extravagant *événements* that not only demolished both banks of the channel but a considerably broader swath of buildings as well (see below, pp. 266ff.).

199 *The Avenue des Champs-Élysées is the archetypal Parisian boulevard-type street, laid out under the prefect Rambuteau from 1828 on the contre-allée system: the central roadway is flanked by gravel strips, in which trees are planted; beyond them are the asphalted contre-allées, and then sidewalks.*

*The street occupies the line of a 17th-century planted avenue leading through parkland from the Tuileries Palace. Rambuteau began its urbanization and provided gas lighting, but there were few houses until after 1840. The Place de l’Étoile around the Arc de Triomphe (from which this view was taken) was built up in 1858 by Hittorf.*



## SIDEWALKS AND PAVING

Two perennial concerns with respect to the flow of traffic were the quality of the street surface and the separation of vehicles from pedestrians.

The sidewalk, the commonsensical response to the second concern, remained exceptional until relatively recent times. The ancient world, Rome at any rate, was certainly aware of raised pedestrian strips along the edge of streets. Etruscan Marzabotto had a grid of broad, paved streets, as much as 50 feet (15 m.) wide (the secondary streets averaged 16 feet/4.9 m.), equally divided between the carriageway and a pair of raised pavements. The Roman word for sidewalk was *semita*, and references to this feature go back to the 3rd century B.C.<sup>47</sup>

In the post-Roman period, as part of the general deterioration of streetscapes, sidewalks went out of use almost entirely, until their re-emergence in the modern period. Here the primary credit is given to England. The earliest reference to the provision of sidewalks, or at least raised footpaths, seems to be in Evelyn’s post-Fire plan of London, where he proposes to use left-over bricks “found amongst the rubbish” for “the elevations destined for the foot causeys before the fronts of houses,” or—if you were prepared to spend more—“Purbeck [a hard British limestone] and flat stones.”<sup>48</sup> Indeed, sidewalks were provided on most reconstructed streets.

In times when there were no sidewalks, distinctions were commonly made between the carriageway and the pedestrian strips. The “Stuart” pamphlet on London says that for the “ease of horses” the midway was “paved with huge shapeless rocks, and the footpath with sharp pebbles for the benefit of the feet.”<sup>49</sup> In Turkish Sofia, the streets were unpaved, except on the sides where there was a pebble pavement for pedestrians.<sup>50</sup>

Beginning in the late 18th century a series of improvements in street design were introduced and popularized in England. These included macadam (crushed rock) paving, storm drains and sewers, piped water, house numbering—and sidewalks. Rambuteau’s regime in Paris adopted some of these improvements in the 1830s and ’40s, including sidewalks, but here unlike England the form was associated with rows of trees. The sidewalk often provided a site with improved drainage and protection from soil compaction and injury for street trees which until then had had to struggle for survival at the edge of the roadway. In 1822 only 267 meters (876 ft.) of sidewalks existed in all of Paris; by 1848 the total had risen to 260 kilometers (161 miles).<sup>51</sup> Haussmann claimed in his memoirs that “they were nearly unknown before 1845,”<sup>52</sup> but this is not quite accurate. Since the mid-18th century there were private initiatives to construct foot pavements (*trottoirs*) for some exclusive streets like the Rue de l’Odéon (1781), but these consisted of uneven and unconnected limestone slabs. Nonetheless by 1835 Mrs. Trollope felt inclined to “bless with an humble and grateful spirit the dear little pavement which . . . borders most of the principal streets of Paris now.” They were narrower than the “enormous esplanades on each side” of Regent and Oxford Streets, but she was confident that “in a few years . . . it will be almost as easy to walk in Paris as in London.”<sup>53</sup> Furthermore, in the early boulevards, a walkway (*chaussée*) was provided in the middle, flanked by ditches which were later filled in and replaced by wooden barriers and then, in 1811, by round border stones.<sup>54</sup> But Haussmann was technically correct in that it was only with a law of 1845 that the installation of proper sidewalks was made mandatory, the cost being split 50–50 between the city and abutters.<sup>55</sup>

The history of street paving is also fitful. Khirakitia’s main street was paved. So were all streets in Priene of the 4th century B.C. Main thoroughfares in Roman cities





200 Pompeii (Italy), a Roman paved street, with sidewalks and stepping stones.



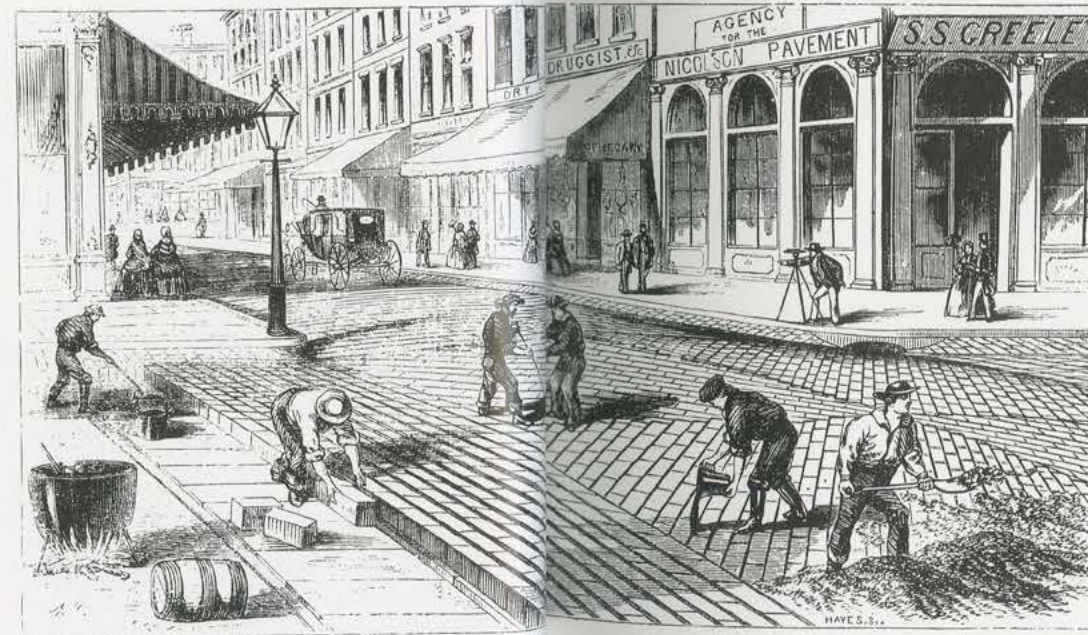
201 Log-paved streets were found throughout the Slavic world; this reconstruction shows an example at Meissen, in eastern Germany, ca. 11th century. (After Herrmann)

200 were paved with large stone blocks, and the polygonal tufa paving of the highways, familiar from the hyperbolic evocations of Piranesi, was also carried through into urban stretches like the Sacra Via that crossed the Roman Forum. Preoccupation with giving the earthen roadway a hard surface returns in the later Middle Ages. In 1286, four citizens of Lincoln, in England, were commissioned to “arrange for the paving of the high road running through the said town, taking care that the better sort who have tenements on or abutting upon the said road contribute thereto in proportion to their tenements.” Nottingham’s municipal pavior was appointed in 1501; he was supposed to “make and mend all the defaults in all places of the said town in the pavements.”<sup>56</sup>

The tradition of compelling property owners to bear the cost of street paving is persistent. An odd case of financing street paving is contained in the 1533 urban improvement law in Naples: an unprecedented tax levied for the purpose on monasteries, who were the largest landowners in the city.

In Paris, the story dates back to an order of Philip Augustus in 1184. Having seen from the palace windows the horse-drawn wagons stir up the mud on the streets, and smelled the fetid smell that that produced, he called in the city leaders and the provost, and “gave the order to pave the main streets with big stones.”<sup>57</sup> “Paveurs” begin to appear in documents of the 14th century.

The Westminster Paving Act of 1762 took any remaining responsibility for paving streets away from individuals and assigned it to commissioners empowered to tax abutters for the cost. A consequence of expecting individuals to do the job had been that the pedestrian walk directly in front of the houses was much smoother than the roadway, which was paved with round pebbles. An observer in 1726 noted that “the pavement is so bad and rough that when you drive in a coach you are most cruelly shaken, whereas if you go on foot you have a nice smooth path paved with wide flat



202 Chicago (Illinois): laying a Nicolson pavement, 1859. Pine blocks dipped in tar are fixed to a plank base, then covered with pitch and gravel. The technique was invented locally in 1857.

stones, and elevated above the road.” This pedestrian path was separated from the roadway by timber posts which defended the pedestrian from wayward carriages. The Act now specified that good Purbeck stone replace the pebbles in the better streets, and that stone curbs and raised sidewalks be universal. It also replaced the drainage kennel in the middle of the street with curbside gutters.<sup>58</sup> These provisions eliminated the need for timber posts, although the new gas lamps with their fixed bases also formed an effective line of bollards.

Stone-paved streets in England existed in pre-Conquest times, as excavations in Church Street, Oxford, have shown. Thereafter, the common Oxford paving material was gravel. In Winchester, it was “a spread of small flints over chalk.”<sup>59</sup> Rubbish accumulated very fast over this cover, and rains caused havoc. Cobblestone pavements proved long-lived despite the fact that they were uncomfortable to walk on—“Pavements fang’d with murderous stones,” as Coleridge called them<sup>60</sup>—and exceedingly difficult to clean. Macadam, named after its Scottish inventor, became widespread with the arrival in the 1860s of the steam roller and the mechanical stone crusher. This type of roadway used crushed stone on a surface graded for proper drainage. Granite blocks were the ideal heavy-duty stone, durable and easy to maintain, but they were also more expensive.

Brick found favor intermittently. In medieval Siena, the Campo and the main axes of the *terzi* or separate town districts were brick-paved. The Strada Nuova in Genoa was to be paved with bricks in the center and smooth flagstones on the sides. Brick pavements had been used in Holland since the 13th century. But the modern popularity of this surfacing material came in the late 19th century with the perfection of vitrified brick and the use of concrete for foundation.

Wood has also a venerable history as a paving material. The log pavement goes back to the Bronze Age. In Old Russia, when most streets were narrow, crooked and unpaved, the few cases of pavement “consisted of round, unhewn poles inserted into side logs,” according to Gutkind.<sup>61</sup> In Novgorod log-paved streets may well go back to the 10th–11th century. At the end of the 17th century, a traveler speaks of the “bumpy pavement of tree trunks” in reference to the streets of Moscow.<sup>62</sup> In Gutkind’s words, the system consisted of a pavement surface

of thin poles, about 4 to 8 inches [10–20 cm.] in diameter, laid along the longitudinal axis of the street and covered transversely by split half-logs of 16 to 20 inches [40–50 cm.] in diameter notched on their convex side to fit onto the longitudinal poles. The flat upper side of the transverse logs formed the road surface, providing a good base for the runners of sledges that were probably used in winter and summer alike.<sup>63</sup>

Sledges, because excavations have failed to reveal traces of wheels or wheeled vehicles. These wooden streets were renewed repeatedly, with the old pavement forming the foundation for the new. So far in Novgorod twenty-eight street levels have been discovered. One reason for the rising level was that the yards flanking the streets, separated from them by stake fences, were piled with dung to be used as manure and with other waste products, and in time found themselves at a higher level. Sir Leonard Woolley describes the obverse case in ancient Ur. Since refuse was dumped into the public space outside the front door and trodden under foot, the street level rose steadily, and the occupants kept up by raising the threshold and by adding inner steps as required to reach the original floor.<sup>64</sup>

Wood was also widely used in America since Colonial times. Besides log or “corduroy” roads, plank paving became commonplace from the 1850s, and just before the Civil War an improvement called the Nicolson pavement came into use.





This consisted of treated square wood blocks, coated with tar against decay and nailed to a plank base. The Upper Midwest preferred round cedar blocks grouted with gravel and tar.

Paving was protected as much as possible; late medieval municipalities in England regularly prescribed against carters with over-heavy loads or with iron-shod cart wheels. The kinds of paving were directly relevant to street cleaning. Beyond flushing drains and open gutters, the street surface had to be cleaned periodically. Many cities had regulations about this quite early in their history. Often abutters had the responsibility of cleaning the front of their property, up to the middle of the street. In Germany, Düsseldorf was famous for the cleanliness of its streets. The task was presented as an aspect of good citizenship. "The streets," New York City's civil engineer Edward Very wrote as late as 1912, "are but the hallways of the great municipal house, and municipal householders should find pleasure in keeping them [clean] as does the competent housewife."<sup>65</sup>

But by the later 19th century, in Europe ahead of America, private companies hired by the city began to do the job, or the cities themselves undertook the service. Municipal cleaning was confined to main streets; alleys did not receive this service, and often incorporated suburbs too had to fend for themselves.<sup>66</sup>

<sup>203</sup> The great turning point in street paving came with the perfection of asphalt. Made of two basic components—bitumen and an aggregate like sand or stone dust—it was flexible enough to withstand shocks, impervious to water, and able to expand in warm weather. From about 1885 on it became the all-purpose, modern street cover in both Europe and the United States. Its smooth surface would prove a happy match to automobile tires.<sup>67</sup> Philip Gilbert Hamilton wrote in 1900: "True lovers of Paris . . . tell me that the mere sensation of the Parisian asphalt under the feet is an excitement itself."<sup>68</sup>

<sup>203</sup> Street-cleaning trucks on the smooth, waterproof asphalt of Pennsylvania Avenue in Washington, D.C., 1905. The Capitol is in the background.

## THE DESIGN OF STREETS

To suggest that practical matters like safety, health and traffic were the only consideration in the long history of regulating the streetscape would be tantamount to mechanizing that history. Municipal authorities at all times were as likely to be preoccupied with seemliness (that is, visual appeal and decorum)—often explicitly so. In Viterbo, for example, mid-13th-century statutes prohibited the construction of external stairs because they "prejudiced the appearance of the street."<sup>69</sup>

The esthetic urge expressed itself most purely in ornamental additions to the street space, among them fountains, monuments of various sorts, and the marking of crossroads by special architectural features like the Roman tetrapylon or special trees like the banyan or pipal tree, representing the heaven-tree of Indian mythology, which stood at the crossroads of Indian towns laid out on the basis of mandalas. In China, in towns where the street pattern was structured about a cross formed by two main streets connecting the four gates, there was a drum tower at the intersection. The tradition of erecting special gateways to commemorate important events or virtuous deeds starts in the T'ang dynasty. The gates, of timber or stone, might be inscribed with the name of the street, and also sometimes a poetical allusion of evocative inscription.<sup>70</sup>

The process of laying out streets left monuments of its own. Roman street corners were often marked with *cippi* (stone street markers), as in Ostia. This Roman practice survived and can be documented in several North Italian cities since at least the 13th century. In Sabbioneta in the 16th century, stumps of cutstone marked all corners to designate the city blocks for the construction of houses. Another example is Mantua. The phrase "*piantare . . . i capi di strada*" (setting out the street-ends) is used by a late source about the final laying out of Guastalla in 1564.<sup>71</sup>

In periods of self-conscious urbanism, the integrity and beauty of street design was in the hands of special officials. In the Hellenistic kingdoms the care and embellishment of streets were entrusted to a body of controllers: a law defining the duties of the office survives. In post-antique Rome the office of the *Maestri delle Strada* dates back at least as far as the 13th century. A statute of 1363 charged the *Maestri* with "the clearing and repair and oversight of buildings, streets and roads," and during the next century their authority to demolish obstructions of any sort was made explicit. This came to include the expropriation and demolition of buildings for the public good. The *Maestri* were also responsible for paving streets, and seeing that they were kept clean.

In Florence, elected officials called the *Ufficiali della Torre* were charged, since 1349, with keeping streets clear, ordering demolitions when necessary, and enforcing design criteria. In 1389, e.g., when Via Calzaiuoli was renovated between Piazza della Signoria and Orsanmichele, the new façades were required to have the same standardized arch forms at their base. Standardization gained in popularity in 15th-century Florence as the increase in the demand for buildings began to favor specialized workers producing standard details (like cornices or mullions) that would be ready for assembly.<sup>72</sup>

In late medieval Tuscany, streets came to be seen, for the first time since Classical antiquity, as the basic unit of urbanism. Properly formed, streets reflected honorably on the city and facilitated its work. The primary requirement of a beautiful street was regularity—a smooth paved surface, a consistent slope, and linear clarity.

Straightness was a virtue. Officials were instructed to build streets that were *pl. "pulchrae, amplae et rectae"*—beautiful, wide, and straight. Via Larga (now



Cavour), built in the early 14th century to facilitate the transportation of grain to the market at Orsanmichele, was to run from the gate in the old wall to one in the new circuit along a course measured "ad cordam et recta linea" (i.e. a straight line measured by a cord).

In older streets, straightness was achieved piecemeal. Corners of important houses or monuments served as markers or survey points. Meantime new construction was required by the *podestà* or chief magistrate to conform to the building line of adjacent properties and to present a straight façade to the street (the first regulation on this dates from 1258). Abuses were forcibly corrected. A law of 1294 singled out a whole area as defective, and prescribed that all the houses for a certain street length be cut back and the street "be straightened and the deformity eliminated."<sup>73</sup> Materials were also regulated in Florence; stone and brick were required up to a certain height, as much as 16 *braccia* (9.3 m./36 ft.), from the street level.

Full uniformity in street frontage was a main preoccupation of urbanism in the Grand Manner. I discussed the ramifications of this earlier in these volumes.<sup>74</sup> There we saw that the beginnings came much before the Baroque. One device that ensured patches of uniformity was the result of speculative row housing, known in Italy since the 13th century and in England not much later.

## THE BUILDING LINE

This concern for a decorous street entailed a long-term program of defining the street space within firm, continuous street walls and, to the extent possible, controlling the overall design of these walls.

At the crux of the matter is the relation of the street line to the building line. When the two are congruent, the structure of the public space is unequivocal. As abutting buildings arbitrarily push back from the street line or protrude beyond it, an ambivalent spatial zone is created along the street channel which blurs this structure.

In purely architectural terms, the ideal expression of a building as a three-dimensional artifact presumes the coordinated treatment of the four elevations. But in the making of streets the identity of each building must submit to the overall structure beyond its limits. Generally speaking, the dignity of a free-standing object is accorded to public monuments, while the ordinary fabric takes form out of more or less contiguous buildings, as if the streets were carved out of what was once solid mass.

In cultures where there is a strong sense of the homestead as an individual, detached unit, there will be a corresponding indifference to the formation of enclosed street spaces, that is, of streets as well defined volumes of exterior space and corridors of movement.

Take Russia. In the early 18th century, the standard urban unit was still the individual homestead of rural derivation. The houses of boyars and wealthy merchants were situated in a courtyard off the street, while picket or wattle fences and outhouses and gardens interrupted by whitewashed huts lined the roads.<sup>75</sup> It was Peter the Great who in 1714 ordered his noblemen, under threat of punishment by the rod, to erect their mansions in his new capital city of St. Petersburg "like the buildings of other European states . . . on the line . . . and not in the middle of the courts."<sup>76</sup> There were similar attempts earlier on to ensure a continuous building line. In Philadelphia, laid out in 1683, William Penn pleaded that "the houses built be in a line, or upon a line, as much as may be," and the regulations for Williamsburg,

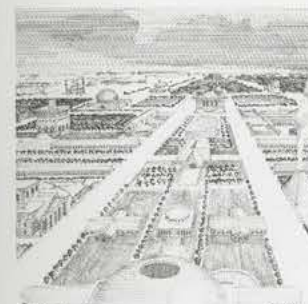


Building lines:

204, 205 In Russia, before and after Peter the Great, early 18th century

206 In Penn's Philadelphia, after 1683

207 In Williamsburg (Virginia), late 17th/early 18th century



208 In the Herculean Addition, Ferrara (Italy), ca. 1490

209 Continuous façades in the Grand Manner

210 In Ledoux's Chaux, late 18th century

211 In Garnier's Cité Industrielle, 1904

in Virginia, specified that on the main avenue, Duke of Gloucester Street, the houses would "come within six foot of the street, and not nearer," that they would "front alike," and the lot be enclosed "with a wall, pails, or post and rails."

The Renaissance struggled with this conflict between the continuity of the street wall and the integrity of the single building mass. It conceived of the street, in its ideal state, as the orderly array of heterogeneous buildings, each preserving and expressing its own three-dimensional mass while assisting in the volumetric definition of coherent public space.

At the Herculean Addition of Ferrara, created around 1500, the streets are a compromise between the shadow-filled, tunnel-like effect of continuous walls and the visual distinction of individual buildings and blocks. The designer, Biagio Rossetti, kept the perspective strong, but eschewed bilaterally symmetrical palace fronts. At the same time he broke up the vertical planes of brick with green spaces and through-views into courtyards and gardens, so that the streets were patched with light, and the pedestrian had a feeling for crossings and the integrity of the blocks. The special highlighting of block corners with pilasters of white marble aided in this perception of a corridor defined by individually articulated units.

This solicitude for the single building block, exceptional even in the Renaissance, faded away entirely in the Baroque period, in favor of a continuous and uniform street wall. The trend indicates a move away from an interest in the design of the solid to an interest in the design of the void. The street perspective composed of heterogeneous buildings, and even styles, graduated to a perspective of unified building types and styles. Laws commonly required the walling off of unbuilt lots, in order to maintain the visual coherence of the public spaces.

But the conflict did not disappear. The primacy of the single building returned, first, with the monument-fixation of Neoclassical planners. This reversal was anticipated by Fischer von Erlach and Piranesi, and fully celebrated in the work of Ledoux. In such Neoclassical schemes as Ledoux's Chaux, the town disintegrates into a series of isolated buildings, in an arrangement reminiscent of Modernist predilections in this century when the city would be seen as open land into which buildings are introduced as objects. In between Ledoux and the Modernists, we can single out one more application of this open form. In Vienna's Ringstrasse and the blocks beyond, empty space flows around monumental structures—this against the contemporary boulevards of Haussmann's Paris which adhered instead to the Baroque precedent of uniformly bounded street volumes.

In most urban theories of the Modern Movement, the dissipation of the street walls is a given. In Garden City practice, the building line is definitely separated from the street line, setting the precedent for later Modernist dogma. In Soria y Mata's *Ciudad Lineal* of the 1880s, the streets were laid out on the old grid system, but the houses were placed in isolation from each other. This is true as well of the influential *Cité Industrielle* designs by Tony Garnier, displayed in Paris in 1904. As Rob Krier puts it, "Their proposals dissolved the traditional urban form and created in its place a villa landscape."<sup>77</sup>



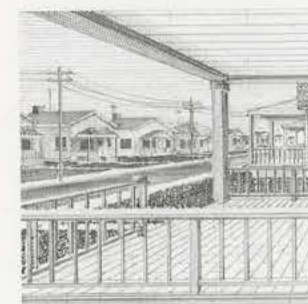
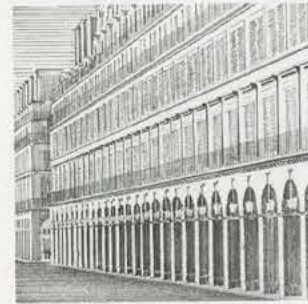
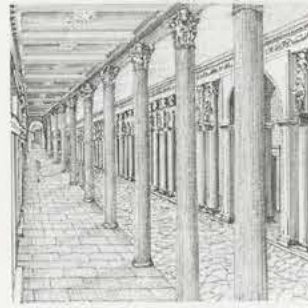
## PORTICOES AND PORCHES

Even allowing for the strictest correspondence of the building line with the edge of the public space, the street wall cannot definitively separate the public from the private realm. As shopping activity spills out into the street and restaurants and cafés take up the sidewalks, so the public space infiltrates courtyards where there are workshops we need to do business with or garage space for our motorcars. Street design has worked out a variety of conventions to negotiate this transitional zone.

One recurrent device in the West is the ground-story arcade, often sheltering shops. Roman Ostia had arcades, and Axel Boethius long ago demonstrated the Mediterranean continuity of that formula in the Middle Ages and later.<sup>78</sup> The beginnings go back to Republican times. Nero's *nova urbs* made porticoes obligatory, as has been mentioned. The word used in Suetonius and Tacitus, *porticus*, which can simply be rendered as "covered colonnade" or "porch," here probably refers to vaulted arcades.<sup>79</sup>

Street arcades were aggrandized in the Empire's colonial settlements to an extent impossible in Rome itself, given the narrow, alley-like quality of most of the city's arteries. The long, twinned rows of scarred columns preserved at Ephesus, Timgad, and Palmyra suggest the splendor rather than the function of these urban corridors.<sup>212</sup> Monumental colonnades, surmounted by a continuous entablature and a roof spanning from road curb to building frontage, provided the armature for covered passageways that lined primary thoroughfares. Colonnades often distinguished the major axis of town grids in Rome's territories.<sup>80</sup>

This architectural treatment was not unique to the eastern provinces. The fashion of arcaded streets had spread across the Empire by the end of the 1st century AD, with modest porticoes prevailing in the west and the more elaborate colonnades in the east. Absolute consistency of these street borders was more the exception than the rule. It was found in showcase settlements like Timgad, or acquired through extravagant reconstruction programs, as in Palmyra.<sup>81</sup> More common was an



213–216 opposite Porticoes and porches: in Roman North Africa; in Paris's Rue de Rivoli (Percier and Fontaine, begun 1800); in Bern (Switzerland); and in middle America.

217 below Arcade types in Bologna (Italy); print by Antonio Basoli, 1832 (note that the figures are far too small in proportion). We are standing in the Strada Maggiore (the urban stretch of the ancient Roman Via Aemilia), under the earliest surviving arcade. The Casa Isolani was built in the 13th century as a flat-fronted house opening directly off the street; its owners soon enlarged it by adding a jettied upper story, supported on oak posts pushing out into the roadway. Opposite is the palazzo built for the composer Rossini in 1824–27 by F. Santini.



212 left Palmyra (Syria), the grand colonnade, looking toward the monumental arch, late 2nd–early 3rd century AD. Most of the columns on the left side of the street have fallen, but the right side is virtually complete. Behind the porticoes were individual shops.

intermittent screen of supporting piers and columns, sometimes carrying balconies or other superstructures. What mattered was not uniformity, as William MacDonald points out, but the rhythmic continuity that invested these backdrops for public business with a suggestion of "the existence of an ordered world against which the chaotic untidiness of life might be measured."<sup>82</sup>

The currency of these open ground stories suffered in the troubled times after the collapse of the Roman Empire, and closed façades came to prevail. But porticoes did not disappear altogether: they survived in some degenerate form until the full re-emergence of the open street with its rows of shops in the later Middle Ages. If porticoes developed a bad reputation in the Renaissance and became targets of urban renewal, it was because shop and house owners were prone to clutter them with refuse and night vice thrived in their dark recesses. In the late 15th century Ferrante of Aragon, King of Naples, counseled Pope Sixtus IV to follow his example by tearing down porticoes and widening the streets.<sup>83</sup> But rehabilitated and made an integral part of total street elevations, the portico stayed in use—the standard convention for street uniformity and continuity in Baroque Turin, in Padua, Bern and Bologna, and in the great arcaded streets of the 19th century like Paris's Rue de Rivoli and the Quadrant in London by John Nash (1813). The *Laws of the Indies* prescribed arcades for the plaza and the four principal streets emanating therefrom, pronouncing them "of considerable convenience to the merchants who generally gather there." Indeed, street vendors still trade in the arcade of the Governor's Palace in the main square of Santa Fe, New Mexico.

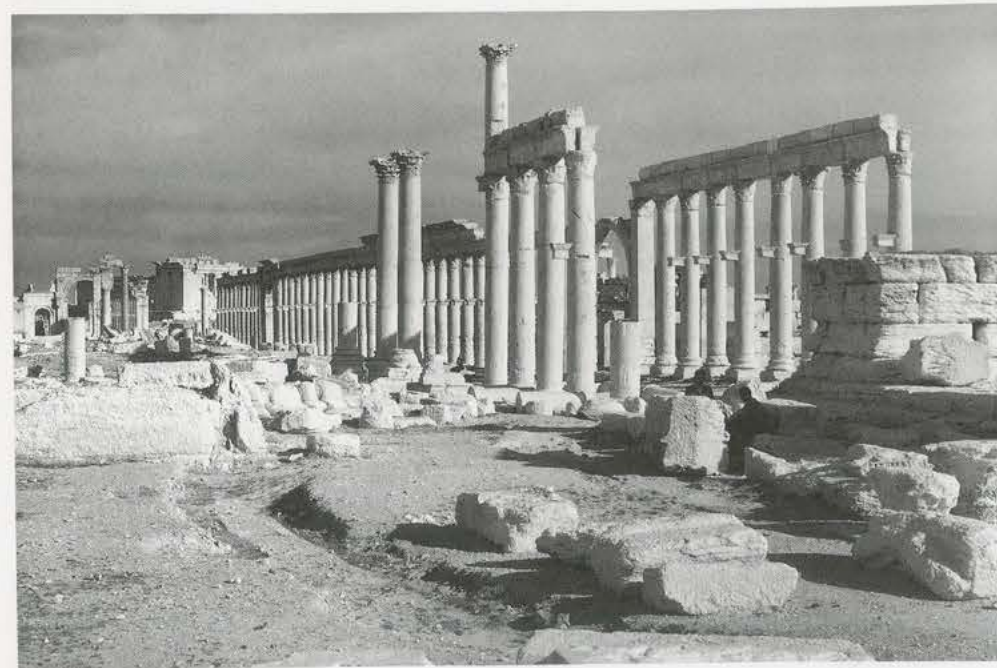
Alberti, looking back, advocates the portico for its environmental and social values. He cites Diodorus to the effect that porticoes were made for the convenience of servants, but he says they are not the only beneficiaries: porticoes are "rather for the common use of the citizens" (*De re aedificatoria*, v.2). Further he writes:

I would have the portico be not only a convenient covering for men, but for beasts also to shelter from sun or rain. Just before the vestibule nothing can be nobler than a handsome portico, where the youth, waiting till their old gentlemen return from transacting business with the prince, may employ themselves in all manner of exercise, leaping, tennis, throwing of stones, or wrestling. [v.8]

At Bern, the arcades in front of all the houses along main streets were prescribed by building codes, from the 13th to the 19th centuries. The codes allowed the façades to change in style in accordance with the popular taste of the day, so long as the proportions stayed the same. These arcades remained the property of the municipality. The covered way was independent of the street level, and was reached by stairways, while cellars were directly accessible from the street.

Bologna's porticoes are celebrated. Alberti's fondness for porticoes may well have come from his days in Bologna. The city's streets have an aggregate of 21 miles (34 km.) of porticoes, continuous along private residences and the grand loggias of public buildings. The tradition is long. It starts in the early medieval period with rather improvised wooden porticoes; in time construction was regularized with brick and occasionally stone piers or columns, and the porticoes more soundly integrated with their buildings, the arches becoming load-bearing elements for the upper stories.

These porticoes were both part of the private dwelling to which they were attached and, in so far as they incorporated the sidewalk pavement, clearly for the use of all. Property owners as early as the 13th century were obliged to provide for the upkeep of their segment of pavement and to guarantee its public accessibility. A 1249 statute decreed that "all the porticoes of the city and the suburbs would be





maintained to a height of . . . 2.66 m. [8 ft. 8½ in.] from the ground so that anyone could ride on horse beneath them, and no one could excavate; if the prescribed height was exceeded, a fine would be imposed.”<sup>84</sup>

In Florence the portico was more selectively used. Its presence was a sign of privilege. The Florentine loggia in late medieval and Renaissance palaces served as the site of family ceremonies like marriages and funerals, and the signing of important documents. In 1470 there were still 17 of these aristocratic loggias in existence, among them that of the Rucellai, which is described by a member of the family as being “per honore della nostra famiglia, per aoperarla per le letitie e per le tristitie” (for the honor of our family, to use on joyful and sad occasions). The loggias were eventually walled up, and interior courtyards of Renaissance palazzi absorbed their functions. At the Palazzo Medici-Riccardi the walling up is evident; it was done in 1517, and the heavy windows that replaced the open arches are attributed to Michelangelo. This concealment of the house at street level has been interpreted as a symbol of the dissolution of the extended family of the Middle Ages, every unit of which now looked only after its own.<sup>85</sup>

A modern equivalent to this open area of family display is the American wooden front porch. Its origin is rural, but by the end of the 19th century it was at home in urban residential neighborhoods and suburbs alike. The front porch came to be viewed as a symbol of an authentically American way of life. As late as 1952 a popular magazine could rhapsodize: “The front porch is an American institution of high civic and moral value. It is a sign that the people who sit on it are ready and willing to share the community life of their block with their neighbors.”<sup>86</sup> By then, the automobile had extended the family’s social circle, television had interiorized family leisure, and in new suburban developments recreation had already shifted to the privacy-minded backyard.

## SOME STREET TYPES

Classical antiquity recognized a wide variety of street types, as we can judge from the terms used. Latin sources mention the *via* and the smaller *vicus*, the *clivus* or steep rise, the *semita* or zigzag path (the same word was used for sidewalk), the *fundula* or cul-de-sac, *scalae* (a *clivus* with steps), and *platea* or avenue. *Angiportus* meant a narrow passage, often curved, between rows of houses.<sup>87</sup>

These are primarily physical distinctions having to do with width and relation to urban topography. The intention in what follows is rather to focus on some persistent themes of the urban streetscape and their regional variations. The list is not exhaustive, nor is the discussion of each theme complete. I want merely to indicate what it is possible to do in a book of streets, and to underline the difficulty of settling on a system of types for a public place that embraces both conventions of form and a range of uses, the two as much at odds with as they are responsive to one another.

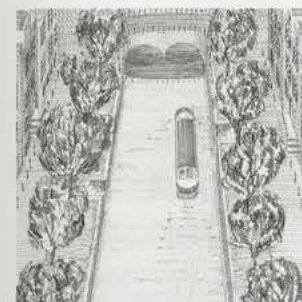
### WATERWAYS

The subject here is rivers and canals as streets. These could be analyzed, at the very least, on the basis of four design criteria: the watercourse itself and its management (embankments, piers and the like); the walkways on one or two sides; the nature of the flanking buildings, especially in relation to the width of the waterway; the bridges that constitute the crosswalks. The classic exemplars of the West are Venice,

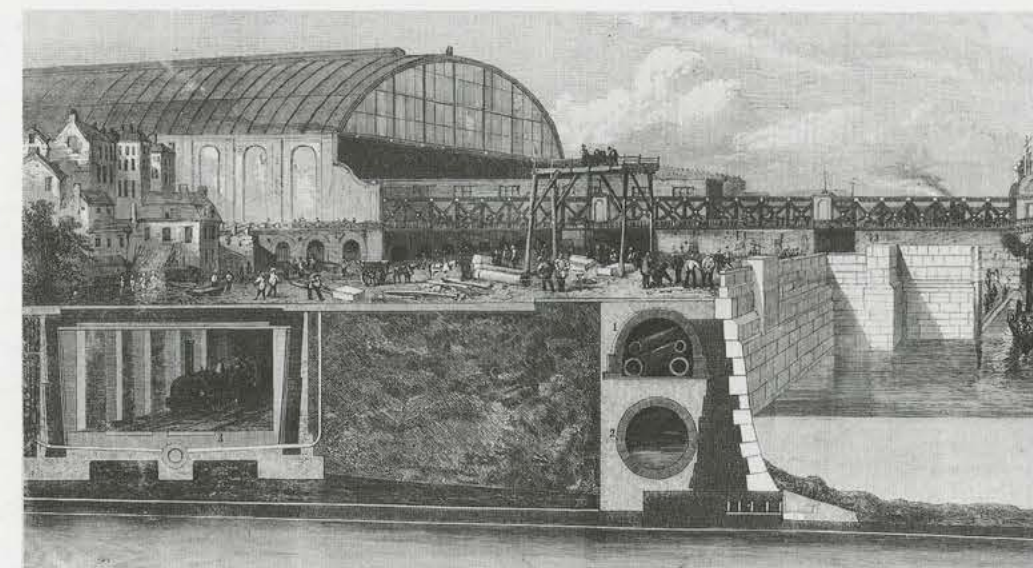


218 An urbanized front porch in Oakland (California), photographed with its owners, the Rix family, in 1855.

223 right London’s Victoria Embankment, under construction near its eastern end at Blackfriars Station in 1867. Behind an outer facing of granite blocks lie a tunnel for gas and water mains (1) and the great sewer (2), then earth fill, and finally the tunnel of the underground railway (3).



219–222 opposite Waterway-streets: flanking a canal in Amsterdam; the Victoria Embankment in London; interlocking systems of canals and roadways in Suzhou (China); and the 17th-century Chahar Bagh in Isfahan (Iran).



and Dutch cities, whose canal streets are surely one of the most distinctive, and gracious, inventions of urban design.

In the case of Venice, there is a fully efficient dual circulation: boats on the canals, pedestrians on flanking walkways and cross-bridges. The constituent elements of the main canal streets of Amsterdam and other principal Dutch towns are the quays for loading and unloading, the tree-lined roadways behind these for pedestrian and carriage traffic, and the banks of houses, each different from its neighbors and yet related to them in the making of the street wall through height, materials and design details. This is the familiar scene of Dutch canals flanked by rows of buildings. The width of the waterway is critical to the success of such a street. If it is too wide to be crossed by a simple bridge, the buildings on one side become isolated and the urban effect is lost. And if the buildings stretch on beyond a certain length, the result is tedious ribbon development. So highlights on the skyline—the tower of a church, a windmill, the mass of the town hall—become critical for the success of this urban picture.

The Renaissance was much taken with the idea of the canal town.<sup>88</sup> Filarete’s Sforzinda was to have every other street be a canal for easy cargo transport, and much of the open space was assigned to water. Leonardo, like Filarete, was preoccupied with water streets: a canal grid is a feature of his project of the 1490s for Milan.

Lining the urban stretch of river banks with trees is coeval with the similar landscaping of ramparts. When Louis XIV captured Tournai (1667), he had the quays and the city walls planted with trees. The projects for the beautification of cities in Napoleon’s empire, Rome for example, invariably included riverwalks lined with rows of uniform trees. But it was when these esthetic pleasures came to be viewed as the finishing touch of basic engineering works related to the prevention of floods and modern sewerage systems that the riverwalk assumed the monumental form of the Paris *quais* and the Lungotevere in Rome. This was a 19th-century phenomenon.

London’s Victoria Embankment from Westminster to Blackfriars, begun in 1864, typifies these riverine improvements. The main structure consists of spare granite walls, impressive in themselves, with little architectural ornament. Behind the walls



are tunnels for gas and water mains and a main intercepting sewer, and finally the tunnel of the District Railway. Furthermore, the embankment supported a new street up to 100 feet (30 m.) wide that was meant to relieve east-west traffic congestion in the metropolis. It came with handsome cast-iron lamps in the form of entwined dolphins, rows of trees, and "Cleopatra's Needle," a gift of Egypt's Mehmet Ali set up in 1877. All this replaced "The offensive mud-banks and the mean and unsightly buildings which disfigured the shores of the river."<sup>89</sup>

In Rome, the Lungotevere ("along the Tiber") system was spurred on by the disastrous flood of December 1870; the whole monumental complex of embankments, conduits, tree-lined boulevards, and a series of new bridges was not complete until the early years of this century. The width of the boulevard on each side, the Lungotevere proper, was set at 14 meters (46 ft.) and then enlarged to 20 (66 ft.), of which 6 (18 ft.) were to be taken up by continuous porticoes on the city side. A small segment of this treatment can be seen on either side of Ponte Sisto, but the idea was soon abandoned. Both here and in London, land values dramatically appreciated along the embankments and redevelopment flourished on a grand scale.

Away from Europe, the region that most favored waterways is China. At Ningpo, at the confluence of the Yu-yao and Feng-hua rivers, the network of canals reached almost every section of town. Shanghai is another classic water town, where the maze of canals gave direct access to nearly every house and place of business—especially before the city was walled in the 16th century. The frequency of Chinese cities laid out with a water-course structure was due to the fact that, before the railroads, water transport was the most efficient way of transporting bulk materials like salt and grain. The shipment of tax grain to the capital was essential for maintaining unified state power. This and the complementary need for irrigation urged the building of main-line canals as a priority, certainly by the time of the Sung dynasty in the 10th century, and this in turn influenced the planning of cities.<sup>90</sup>

## THE STREET

*More than a mere traffic channel ensconced within the city's solid mesh, the street is a complex civic institution, culture-specific and capable of dazzling formal variation and calculated nuance. Islam cultivated the recondite twists and intimate scale of the neighborhood cul-de-sac. Venice and its Dutch counterparts elaborated footpath and waterway as interdependent systems of communication. Of Italian and French parentage, the Grand Manner vocabulary of broad avenues and arrow-straight vistas gained international currency as the sine qua non of elegant urbanity.*

*Used as public thoroughfare and residential meeting ground, linear market and vehicular track, streets demand delicate compromises between contradictory functions—a balancing act complicated by the advent of the automobile, and subsequently rejected by Modernist planners insistent on the separation of functions. Most recently a new generation of designers have attempted to rescue the street from the extremes of segregation by recalling earlier forms, while weighing the scales in favor of pedestrians.*

Pl. 25 Shushtar (Iran) displays the traditional Islamic pattern of residential cul-de-sacs and rare sinuous through-streets, bordered by the walls of courtyard-centered houses. Juxtaposed to this delicate net are wide straight streets and traffic roundabouts typical of the Haussmannizing activities of Reza Shah in the 1930s.







#### Types and designs

Pl. 26 opposite In Venice, canals are the roadways, quays and bridges the sidewalks and crossings. This is the Grand Canal at the old, wooden, Rialto Bridge. By 1494, when Carpaccio depicted the scene, walkways supported on wooden pilings (visible in the distance beyond the bridge) were being replaced by stone-and-brick quays. A hanging inn-sign on the left invites passing trade, as in a conventional street on dry land.

Pl. 27 right, above Florence was famous for its "beautiful, wide, and straight" paved streets, whose design had been regulated since the 14th century. The Via de' Servi, seen here, leads directly from the Duomo to the Piazza of the Santissima Annunziata; its effect was made more theatrical at the beginning of the 17th century, not long before this view was painted, by the erection of a colonnade in front of the church and an equestrian statue of the Medici Grand Duke. Along the street itself, the basic unit is the large palazzo, sheltering more than one family and class below broad projecting eaves.

Pl. 28 right, below A street in Haarlem, recorded by Gerrit Berckheyde in 1680. In contrast to Florence, the Dutch town displays the single-household residences once characteristic throughout the North Sea area, their individuality emphasized by a variety of steep gables, with a few level cornices in the new classical style. Projecting signs advertise the wares of the ground-floor shops. (Further booths cluster around the Groote Kerk in the distance.) The roadway is carefully paved with two colors of stone; the sidewalks are of brick, used for paving in Holland since the 13th century.







Pl. 29 Elevating the pedestrian: the "high street" of the Alexandra Road housing estate in London, designed by Neave Brown for Camden Council (1968–79), is a raised pedestrian concourse above a linear car park, stretching for 1,000 feet between an existing street and railway line. The set-back dwellings frame not gardens but lightwells to the parking below: this is terraced housing reinterpreted for the age of the automobile. Probably the last and most ambitious of the large comprehensive redevelopments of the inner city originating in the mid-1950s, it was praised as a low-rise, high-density enclave in opposition to the pattern of apartment towers set in open space.

Pl. 30 The return of the street: an impression by Carl Laubin of the center of Poundbury, the new town near Dorchester (England), as planned in 1991 by Léon Krier for the Prince of Wales. In reaction against the Modernist separation of traffic and of functions, the scheme envisages a return to a mix of houses and shops, and aims to reduce car traffic and encourage walking and cycling. The traditionalist form of the buildings, itself a reaction against the uniformity, large scale, and "inhuman" feel of much post-war development, has aroused intense controversy.



Suzhou in southern Jiangsu province, although it lies inland, is called the Venice of China.<sup>91</sup> The canals there had some 300 bridges crossing them, eventually built mostly of stone. The bridges had high arches and broad pavements. The city gates were "twinning," to accommodate both road and waterborne traffic. Indeed a double system of water and road transportation prevailed throughout, the street system paralleling the canals. Each property was serviced from both street and canal. The main entrance to the house was from the street; the canal gave access to the rear or service entrance.

One final variant of the waterway, from another cultural sphere, is the type found in Safavid Iran and Mughal India. Here the canal runs down the center of a tree-lined avenue. In Isfahan the garden-avenue known as the Chahar Bagh ran through the palace grounds for nearly a mile to the Zayandeh River, across the Allahavardi Khan Bridge, and then up rising ground to a vast royal estate called the Hazar Jerib (Thousand Acres). The avenue was 60 yards (55 m.) wide and lined with palatial suites and kiosks. Eight rows of plane trees and poplars were spaced across its width. Besides the canal down the center, there were tanks of various sizes and shapes, and many fountains.

The Chandni Chowk in Shahjahanabad, the Emperor Shah Jahan's new city at Delhi (1639ff.), was a more public promenade. It extended from the Red Fort westward in a straight line until the walls, was lined with trees, and carried a deep, marble-lined canal down the center. The model was clearly Isfahan's Chahar Bagh. But the intention was urban. Fancy shops of uniform design under long arcades lined the sides, selling sweets and jewels and waterpipes; and scattered among them were coffeehouses—a fashion that was learned from Safavid Isfahan. The shops were small one-room units, behind which were corresponding small warehouses where goods were stored, and above the warehouses, living quarters for the shopkeeper's family. Here, and in the main south avenue of Faiz Bazar, ran segments of the impressive Nahr-i Bihisht (Canal of Paradise) that collected water from the Yamuna River at a point 75 miles (120 km.) upstream and entered the city at the Kabul Gate. The paradisiac symbolism of running water in Islamic thought is clearly pertinent in this context.

The marble-lined canals of both Chandni Chowk and Faiz Bazar were filled in by the British after 1860, the shade trees were cut down, and the streets repaved from curb to curb. The Chahar Bagh at Isfahan was also regularized and is now a public thoroughfare. The terminal phase of all waterways—from the California beach-front town of Venice to Bangkok—involves their being filled up and turned into regular streets for the sake of the mighty automobile.

## THE BRIDGE-STREET

The medieval practice of lining bridges with houses and shops began as an ad hoc development. By 1400 the taste for regularizing these, by building bridges as streets designed and executed in a single phase, had emerged. Florence, always precocious, rebuilt the Ponte Vecchio in the 1340s. It was a completely controlled environment. The roadbed was 9.8 meters (32 ft.) wide and 101.5 meters (333 ft.) long; it was flanked by 48 shops and opened out at its center into a piazza overlooking the river.

The redesign of the Rialto in Venice dates from the 16th century. This bridge across the Grand Canal was intended for pedestrians only. As built in 1588–92 by Antonio da Ponte, after a competition that drew illustrious names like Palladio, Sansovino and Vignola, it was flanked by rows of shops opened up in the middle by two arches affording views of the waterway.





On London Bridge, abutting buildings grew haphazardly since its redoing in stone in 1176. Only by the early 18th century were regular three-story structures introduced. Curiously, transverse buildings divided the street space of the bridge into sections which could be entered through gateways.

Medieval Paris had several bridges linking the Ile de la Cité to the banks of the river: the Petit Pont, on the Notre-Dame side, going south to the left bank; and the Grand Pont and Pont Notre-Dame, going north. The bridges were paved, at least from about 1200 on, and had towered gates at both ends, toward the island and on the mainland. Life on them is illustrated in an early 14th-century manuscript of the *Life of St. Denis*.<sup>92</sup>

The outfitting of the new stone Pont Notre-Dame with terraced houses in 1508–12, attributed to Fra Giocondo, was the first ensemble planning that Paris had known. The roadway was flanked on each side by thirty-four identical arcaded houses, gable-roofed with narrow brick- and stone-trimmed street fronts, and timber-framed backs. This hybrid construction technique was superficially elegant, quick and economical, and avoided overloading the structure. A triumphal arch closed the bridge off at one end and two small towers framed it at the other. The absolute regularity of the composition attracted the admiration of contemporaries and was protected by city council regulations forbidding alterations by tenants.<sup>93</sup> One reason that a designed street could be created so effectively here was that Parisian bridges were traditionally a property of the king, so he could do with them as he pleased. But even the previous Pont Notre-Dame had buildings on it, including 60 uniform houses built in 1421.<sup>94</sup> So did the Petit Pont, rebuilt in stone by Louis VII in the 12th century, with mills and rows of houses along the roadway parted in the middle to give a clear view of the river. The Grand Pont had 68 goldsmiths' shops and workshops on one side and 72 money-changing stalls on the other in the 14th century—hence it became known as the Pont au Change.

In the context of all this, it is not surprising that the Pont Neuf of Henri IV (begun by Henri III), which joined the left and right banks across the tip of the Ile de la Cité, was hailed as the bridge without houses, confined to traffic, promenading, and to

224 *The Ponte Vecchio, Florence, was rebuilt in its present form in the 1340s, with an open central belvedere. Early tenants of its shops were tanners (who used the river water below), pursemakers, and butchers. In the 1550s Vasari used it as the base for an elevated corridor linking the Palazzo Vecchio and Uffizi on the north bank (right) to the Pitti Palace on the south. In 1593 Grand Duke Ferdinando I expelled the smelly butchers in favor of goldsmiths and jewelers, trades still there today.*



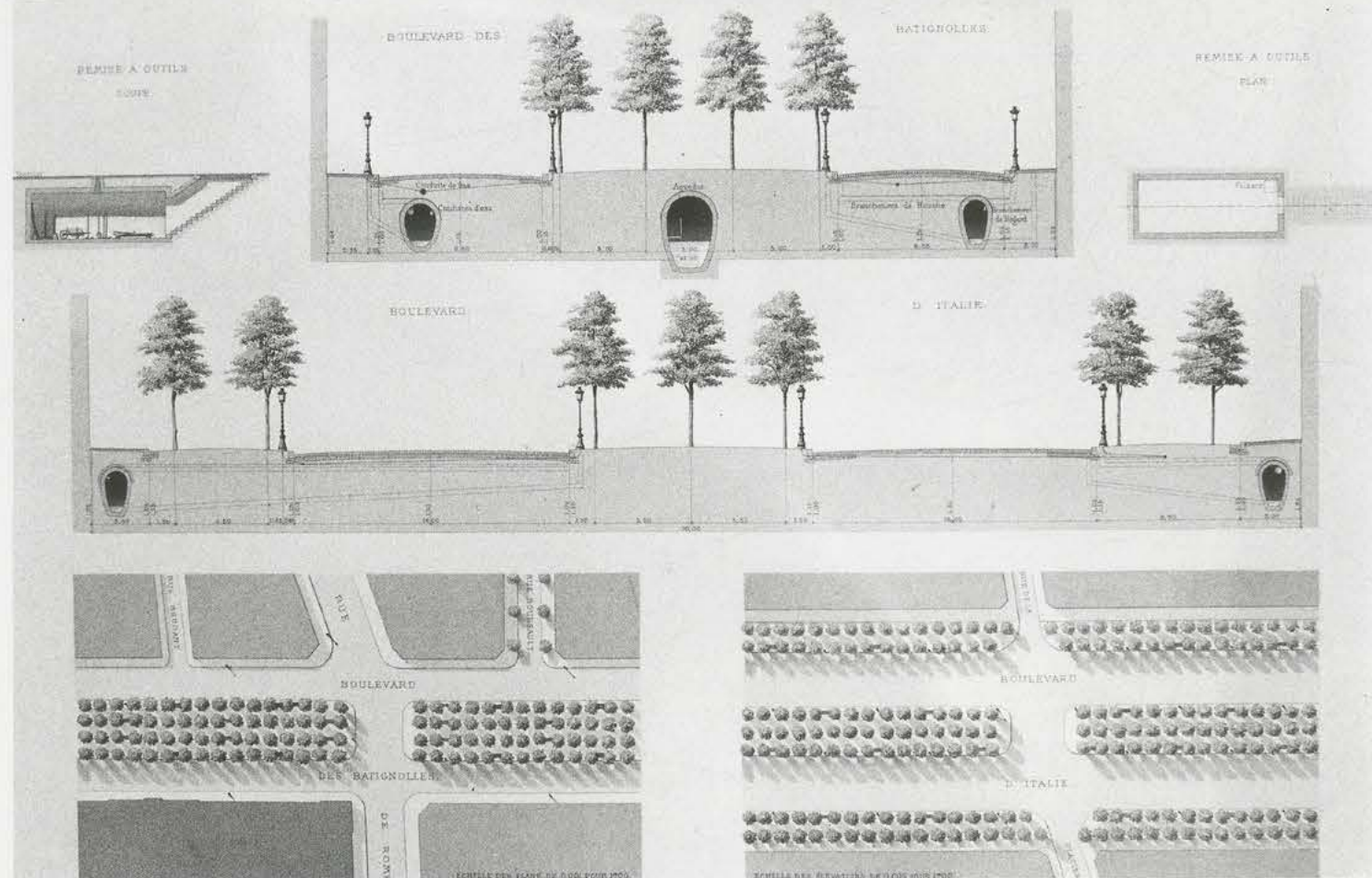
225 opposite, below *The Grand Pont in Paris, depicted in the Life of St. Denis, 1317. Note the fortified tower, the paved surface, and, to the left of the knight on horseback, a goldsmith in his shop.*

226 right Paris, detail of a map of 1653 showing the bridges linking the Ile de la Cité to the banks. Leading to the left bank (right), from top to bottom they are the Pont de l'Hôtel-Dieu, Petit Pont, and Pont St.-Michel; to the right bank, the Pont Notre-Dame and the Pont au Change (the former Grand Pont; cf. Ill. 225). All these are lined with houses, those on the Pont Notre-Dame dating from 1508–12. At the bottom is the Pont Neuf (1578–1607), a broad and elegant novelty without houses, punctuated by a statue of Henri IV.

The convention of this map, depicting only major buildings, brings out the division of the Ile de la Cité between the religious district around Notre-Dame, to the east (top), and the sovereign district of the royal palace—later the Palais de Justice—further west. Near the palace, at the western tip of the island, is the Place Dauphine, begun by Henri IV in 1608; its arcades were to serve as a merchants' exchange, to relieve pressure on the Pont au Change.







227 A plate from Adolphe Alphand's *Les Promenades de Paris* (1867-73), showing the Boulevard des Batignolles and Boulevard d'Italie in section and aerial view. The streets are gas-lit. Underground there is provision for gas and water mains, drains, and sewers.

boatmen.<sup>95</sup> It was the longest bridge of Paris until fairly recently (270 m./886 ft.), with generous sidewalks augmented by semicircular platforms over the piers, and an incomparable view. It has been called "un belvedere pour le peuple." In addition to the famous statue of Henri IV by Giambologna and Pietro Tacca (cf. Florence, Ill. 104), the bridge had a pumphouse called La Samaritaine which lifted the Seine water to feed the fountains of the Louvre and some other palaces.

With the growth of coach traffic, constricted bridge-streets became obsolete. The houses on the medieval bridges of Paris were demolished just before the Revolution. John Evelyn a century earlier had advocated the same treatment for London Bridge, and proposed to replace its houses with an ornamented "foot way elevated on each side . . . Or if they will needs have shops, let them be built of solid stone, made narrow and very low, like to those upon the Rialto at Venice; but it were far better without them."<sup>96</sup>

## THE BOULEVARD

<sup>18</sup> The extra-urban origins and subsequent history of the French boulevard and avenue, and their American interpretation, have been reviewed fully in *The City Shaped*.<sup>97</sup> In Paris during the 19th century, as we saw, the tree-lined avenue was brought up to date with those new features first popularized in Great Britain: macadam paving, storm drains and sewers, sidewalks, etc. These improvements <sup>199</sup> were used to rebuild the Avenue des Champs-Élysées and the Grands Boulevards

in the 1830s under Rambuteau. It was Rambuteau who also created tree-lined esplanades along the banks of the Seine, to which the city's booksellers gravitated, deserting the arcades of the Odéon and the Palais-Royal. Together with the Rue Rambuteau, cut through the old blocks in the center of Paris, these esplanades served as the model for Haussmann's *grands travaux*.

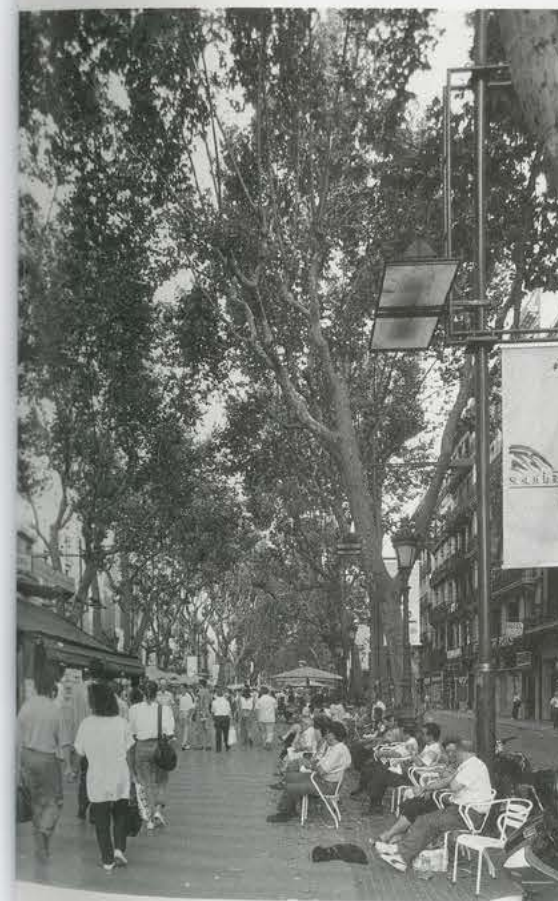
Under Adolphe Alphand, Haussmann's chief landscape architect, classic solutions of planting were developed for the new urban boulevards depending on their width and use. A graphic convention for street sections became common, showing the relation of the trees to the pedestrian and vehicular zones, and to underground service systems and streetcar tracks. Alphand produced an influential catalogue of these urban landscape solutions, *Les Promenades de Paris*, a beautiful book with engraved illustrations representing both urban parks and boulevards. The city ran nurseries to have fully grown trees available at all times. There were some 80,000 street trees in Paris in the 1870s, twice as many as in 1852, Haussmann boasted in his memoirs.

On streets less than 15 meters (49 ft.) wide, or streets of any width with sidewalks less than 3 meters (10 ft.) wide, Paris planted no trees. In the wider streets, the best-known arrangement was the *contre-allée* system; here there was a wide asphalt or paved footway (the *contre-allée*) separated from the roadway by a wide gravel strip in which trees were planted. Two examples are the Champs-Élysées and the Avenue de Wagram. The Boulevard d'Italie had three rows down the middle and two each down the sides. The Boulevard des Batignolles banked four magnificent rows in a formal green median taking up much of the roadway, and no trees on the sides.

A strictly Spanish rendition of the urban boulevard is the *paseo*, meaning promenade, also called *alameda*, from the Spanish word *alamo* which refers to certain kinds of poplar and elm trees. The walk and the shade—these are the invariables; the actual design varies considerably from city to city. The two great series of *paseos* in Madrid and Barcelona are distinctive both in their physical makeup and in their pattern of insertion within the urban fabric. In Madrid several connecting stretches  $2\frac{1}{2}$  miles ( $3\frac{1}{2}$  km.) long, called collectively the Paseo del Prado, link the old town with the newer residential quarters. The section called Paseo de Recoletos represents the type at its most elaborate. Traffic lanes for tramways and commercial vehicles are at the edges; between them are promenades along one of which runs a strip of gardens, and an ample roadway. The Ramblas of Barcelona are also the backbone of the city. The main stretch, from the Plaza de Cataluña to the harbor and the Columbus monument, has a broad walkway in the middle lined with plane trees and bracketed by proper street spaces on the outside with sidewalks and shops.

In the United States, George Kessler became a strong advocate of this Hispanic promenade, and proposed to install specimens in Kansas City and Cincinnati. Kansas City's Paseo was the downtown segment of the extensive park and boulevard system designed by Kessler in the early 1890s. A seedy nine-block run was converted to a landscaped promenade adorned with fountains, a pergola in three flights, an architectural terrace, a sunken garden, a small lake, and stretches of lawn—something between a *paseo* and a park. As late as 1933 Webster Avenue in Boston was widened and redesigned as a *paseo* called Prado (now Paul Revere Mall), on the model of the Prado of Havana. The two irregular sides were isolated from the abutting buildings by continuous high brick walls equipped with attached seats; a pavement of brick with patterns of bluestone provided a festive surface to walk on; and the rows of linden trees led the eye to historic churches at either end.<sup>98</sup>

228 Sitting and strolling in the median strip of the Ramblas in Barcelona.







## COVERED STREETS

The standard image is of 19th-century arcades: glass-roofed, exclusively pedestrian, adorned with bilaterally symmetrical interior façades. J. F. Geist, in his definitive survey of this type, cites all witting and unwitting precedents.<sup>99</sup> The covered linear bazaars of Islamic towns are an obvious instance.

In the standard *souq* or bazaar there is no residential component. At night it is eerily empty. The most familiar type consists of a series of covered streets topped by vaults or domes, dimly lit from high small windows, or lit artificially; the crossing is raised higher than the rest of the bays and is sometimes opened to the sky. This linear strip is seen as connecting tissue, between mosques and city gates, or mosques and public paths. At Herat the bazaar took up the four axial streets that led from the main city gates to the center. There the arms of the cross met at a domed structure which was called the *chahar-su*, the “four directions.” In cities like Isfahan the bazaar is a cool, dim, seemingly endless sequence of vaulted spaces, with tremendous directional force, yet plenty of encouragement to linger. The tunnel effect, scored by shafts of sunlight from clerestory and roof, is softened in the lower zones by the merchandise displayed—an effervescence of color, texture, and smell.

The arcade was a private speculative venture, usually cut through large blocks by the acquisition of “soft,” inexpensive property deprived of street access. Its roof was, whenever possible, raised above those surrounding it and given a glass vault that pulled natural light into the interior. This insinuation of paths into built-up blocks was already a Parisian tradition when the arcades started at the time of the Revolution. (Many of these mid-block pedestrian shortcuts can still be seen in the Faubourg St.-Antoine, the Faubourg St.-Denis and Charonne.<sup>100</sup>) That tradition was then combined with the new technology of metal-and-glass roofing.

229 above left *In the bazaar at Kerman (Iran).*

230 above *In the Galleria Umberto I, Naples (Italy), 1887–91.*

There are now some 280 19th-century arcades in the world.<sup>101</sup> Famous ones are the Burlington Arcade, London; the vast *gallerias* in Milan and Naples; and the equally vast Galeries St.-Hubert in Brussels. The first in Paris was the Passage Feydeau, which opened in 1791 (and was demolished in 1824). It was prefigured, though, by the wooden galleries of the Palais Royal which in 1786, just before the Revolution, were fitted with shops and gaming parlors as a profit-making enterprise. Then came the Passage du Caire in 1799, and a year later the Passage des Panoramas.

The arcades in Paris have been explained as a consequence of the development of outlying districts: they were built through the big older blocks as shortcuts to the center. Loyer thinks the arcade is the forerunner of the department store, as well as the modern enclosed shopping mall.<sup>102</sup> The popularity of the *passages* can also be seen as a sign of the sad state of the normal Parisian streets. In Vienna, where shopping streets were pleasant and clean, the arcade did not establish itself.<sup>103</sup> There was only one, within the Austro-Hungarian National Bank building, now known as the Ferstel Passage (1856–60). And indeed in Paris, once Haussmann’s boulevards provided the proper open-air ambience for the middle classes, the *passages* went into decline.

## THE ADVENT OF THE MODERNIST STREET

In October 1910, the Royal Institute of British Architects sponsored a major conference in London on city planning. At least three schools of thought were represented among the many prominent names in attendance, schools which summarize de facto the range of modern attitudes about street design. Technocrats led by German planners like Joseph Stübben and the city architect of Paris, Eugène Hénard, stressed the technicalities of modern urban traffic and the engineering of street construction, while they stayed within the esthetic formulas of the Grand Manner. Chicago’s Daniel Burnham brought along spectacular exhibits of City Beautiful designs, the latest interpretation of the Grand Manner which sought to recast familiar urban prospects in terms of the newborn American skyscraper. The British contingent, led by Raymond Unwin, emphasized garden cities, and arranged trips to Hampstead Garden Suburb and Letchworth, both inaugurated a few years earlier.

### UNWIN AND LE CORBUSIER

Unwin proved the great conciliator. His *Town Planning in Practice*, which appeared the year before the conference, is the authoritative testament of modern urban design as distilled from the long history of Western city-making. His conception of the street was modern, but not Modernist. Neither the skyscraper nor the motorcar is seized on as a portent of a revolution in street function. And throughout Unwin insists that street design is an art. The technical demands of the civil engineer are, for Unwin, simply the foundation for good street design. Beauty, he tells us, is an urban “amenity” that needs to be addressed as decisively as the 19th-century “bye-law street” dealt with urban sanitation. This is the assignment for the 20th-century planner: to “infuse the spirit of the artist into our work.”

This said, Unwin takes a positivist approach, and sets out to reconcile the apparent contradictions between the informal and formal schools of urban design.





231 Hampstead Garden Suburb, London: Linnell Drive, 1923.

While validating both schools of thought, Unwin considers it normal that a designer would favor one approach over the other. His preference, his treatise makes clear, is for the cozy picturesque effects of the Germanic neo-medievalists inspired by the writings of Camillo Sitte. But what is essential is not the streetscape's style, but that it conform to the overarching qualities required to produce "satisfactory street pictures," namely visual variety and spatial closure. The design of a succession of urban tableaux which are revealed as a viewer moves along the street is, by Unwin's reckoning, the basis of the planner's art.

*Town Planning in Practice* establishes the observable and the empirical—specifically the mechanics of spatial perception and the requirements of traffic and sanitation—as the driving forces behind the design of streets. It represents a masterful summing up of the rich variety of urban form assembled through the eclectic experiments of the 19th century. Unwin's charter is to refine the palette of street types available to the "artist" (as he repeatedly calls the urban designer).

The premiated plan for Letchworth Garden City (1904) submitted by Unwin and his partner, Barry Parker, explored the possibility of a marriage between formal and informal planning, but with clumsy results. At Hampstead Garden Suburb, under the counsel of Sir Edwin Lutyens (who was appointed consulting architect in 1906), the formal elements proposed by Unwin—stately squares, radial streets, straight avenues and rond points—retain their integrity and become an organizing framework for the weave of roads that constitutes the residential fabric. This play of formal streets—"of such a size as adequately to introduce a sense of scale and of the due proportioning and relation of the parts"—against a finer infill becomes the standard device with which Unwin establishes a legible spatial hierarchy. The suburban scale and tone of residential lanes is reinforced by their narrowness (the Hampstead Garden Suburb Act of 1906 exempted them from bye-law legislation); and by Unwin's signature breakthrough, the independence of the building line from the street line.

232 Le Corbusier's withering scorn for such painstakingly knit compositions is legendary. His project of "A Contemporary City for Three Million People," presented at the 1922 Paris Salon d'Automne in a vast diorama, is the polar opposite of Unwin's ideal town. According to the designer himself, the display shocked its audience into "a sort of stupor." The closed vistas so cherished by Unwin are blown

wide open; in fact, all traditional formulas of streets are indiscriminately rejected, chief among them the *rue-corridor*, "streets in narrow trenches walled in by seven-storied buildings set perpendicular on the pavement and enclosing unhealthy courtyards, airless and sunless wells. . . ." Instead, Le Corbusier proposes "great blocks . . . of flats opening up on every side to air and light, and looking, not on the puny trees of our boulevards today, but upon greensward, sports grounds, and abundant plantations of trees."<sup>104</sup> The blocks will be lifted up on *pilotis* (stilts), and linked by a gridded network of elevated highways and ground-level service roads. The modern street is "a new type of organism, a sort of stretched-out workshop. . . . The various stories of this stretched-out workshop will each have their own particular functions."<sup>105</sup> The four functions aligned about the axis of the street—housing, work, recreation and traffic—must now be strictly separated. This will not allow for the enclosure of space in the conventional manner of city-making. The street, in a sense, will be separated from the buildings.

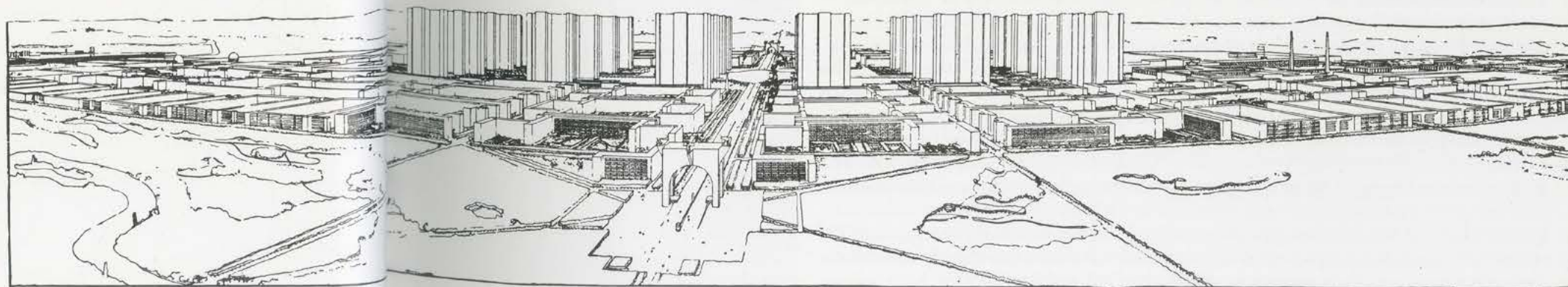
Nowadays, when so much of what he said has become commonplace, we tend to forget what an absolutely revelatory proposal Le Corbusier's was. It came at a time when automobiles, by our standards, crawled through towns: in Germany, for example, the maximum legal speed in built-up areas was set until 1923 at 15 kilometers per hour (9 m.p.h.).<sup>106</sup> For Le Corbusier the traditional city's hindrance of fast traffic was an obscenity. "A city made for speed is made for success,"<sup>107</sup> he claimed, and it took automotive velocities to bring his street pictures (to use Unwin's term) to life. To follow Corbusier as he moves through his creation is to witness an epiphany:

Suppose we are entering the city by way of the Great Park. Our fast car takes the special elevated motor track between the majestic skyscrapers . . . to our left and right on the outskirts of each particular area are the municipal and administrative buildings; and enclosing the space are the museums and university buildings. Then suddenly we find ourselves at the feet of the first skyscrapers. But here we have, not the meagre shaft of sunlight which so faintly illumines the dismal streets of New York, but an immensity of space. . . .

Our car has left the elevated track and has dropped its speed of sixty miles an hour [97 k.p.h.] to run gently through the residential quarters. The "set-backs" permit vast architectural perspectives. . . . And sky everywhere . . . Their outlines softened by distance, the sky-scrapers raise their geometrical façades all of glass . . . an overwhelming sensation. Immense but radiant prisms.

As twilight falls the glass sky-scrapers seem to flame.<sup>108</sup>

232 "A Contemporary City for Three Million People," by Le Corbusier: drawing of the diorama exhibited in 1922. In the center is the *cité* (the business district), with office towers surrounded by lower commercial and entertainment buildings. Clustering around it on a diamond plan are apartment blocks on the angled linear redent principle; at the corners are further apartment blocks enclosing courtyards. The city is bisected by elevated highways for fast traffic 40 meters (130 ft.) wide; other main roads cut across the grid. Between them, the ground is reserved for pedestrians.





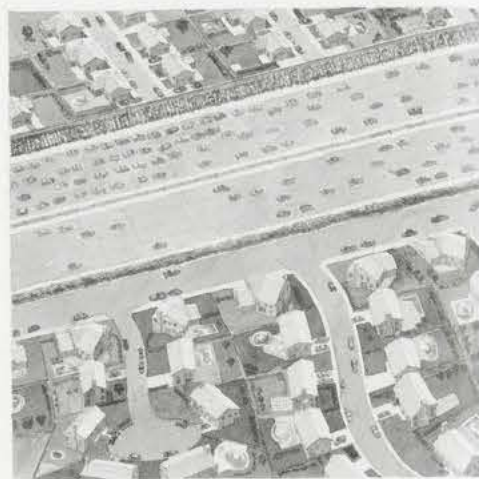
There was something irrevocable about Corbusier's lightning presentation of the future of the street. A British planning expert far outside the Modernist camp, S. D. Adshead, was moved to conclude in 1930 that "though M. Le Corbusier's city is never likely to be built, we are convinced that the 'Pack Donkey' methods of the medieval builders, even when led by Camillo Sitte, the prophet of historicist planning, will have to give way to the measured motor tracks of Le Corbusier, if populations of millions instead of populations of thousands are to be accommodated in the city of to-morrow which certainly are a misfit in the city of today."<sup>109</sup>

233 Adshead had of course no way of knowing that these apparently inimical essays of urbanism I have been contrasting—one an appreciative omnium of the long history of European street design; the other a calculatedly shocking rejection of this legacy—would nevertheless be in the end the two constituents of much of our recent streetscape. Improbable as a fusion of these antithetical points of view may have seemed at the time, it is exactly that marriage of Unwin and Le Corbusier, in the guise of picturesque suburban streets and multi-lane superhighways, that characterizes the most rapidly expanding settlement pattern in late 20th-century United States: the "sub-suburbs" that make up the farthest city edge, and the privately-driven new towns program.

## PRECEDENTS TECHNOLOGICAL AND SOCIAL

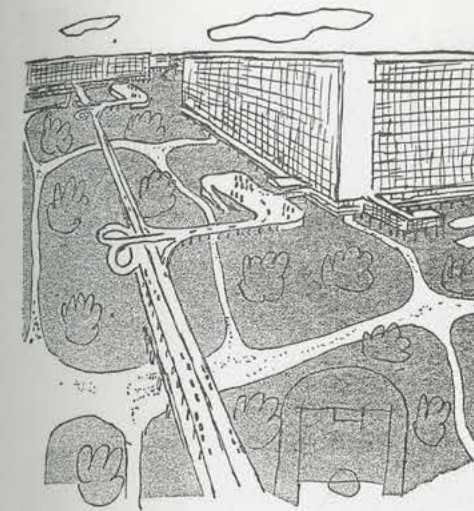
197, 233 In fairness, Le Corbusier's radical proposals for a new streetless urbanity were not products of parthenogenesis. Seen historically, they summed up and transcended a variety of reformist ideals that were already in circulation. The multi-level arrangement of city services and traffic paths had found earlier expression in the installation of underground gas, electric, water, and sewage lines hidden beneath Haussmann's wide, hygienic boulevards and the Embankment in London, as well as in the elaborate underground passages of, say, New York's Grand Central Railroad and the London Underground.

234 But more than just the culmination of a series of technological precedents, Le Corbusier's dissection of the street is also a final step in a longstanding and widespread reformist agenda to eliminate the street as a social environment. For many champions of social reform, Victorian London's poverty, overcrowding, and defective sanitation became fused into a monolithic indictment of the spatially confined neighborhood street. As early as 1838 the Select Committee considering plans for the improvement of the metropolis voiced their condemnation of "districts in London through which no great thoroughfares passed" fostering disease and "a state of moral degradation deeply to be deplored." The committee recommendation supported the liberal use of demolition in such districts not only to facilitate the circulation of air through these warrens, but to force traffic of a more "respectable inhabitancy" through laborers' quarters. The social habits of this population, "being entirely secluded from the observation and influence of better educated neighbors," would surely improve through emulation and enforcement of the social norms of the better classes.<sup>110</sup> The role of narrow, airless, or deteriorating streets as a primary culprit for social and physical ills was reaffirmed in the 1890 Housing of the Working Classes Act.<sup>111</sup> In America as well, social reformers like Jacob Riis and philanthropist Alfred T. White mounted a concerted attack on the use of the street as a social space by the lower classes. They spoke of breaking the "street habit" as a critical aspect of rehabilitating the poor, and proposed the enclosed central courts of model tenements as alternatives to the animated sidewalks and front stoops where children played and their parents gossiped, laughed and fought.<sup>112</sup>



233 An American sub-suburb: curving streets on the bank of a superhighway.

234 below Mullen's Alley, New York City, ca. 1888–89, photographed by Jacob A. Riis as part of his survey of slum housing conditions.



235 A sketch by Le Corbusier from La Maison des Hommes, 1942 captioned: "100 per cent of the ground is given over to pedestrians. Cars roll along their motor roads sixteen feet [5 m.] above the ground. The impossible has become possible: separation of the pedestrian from the automobile has been accomplished."

236 below Paris, Rue Mallet-Stevens, by Rob Mallet-Stevens, built 1926–27.

Le Corbusier's "Contemporary City" of 1922 proposes a similar redistribution of social life within the immense "courtyards" of *immeubles-villas* (villa-blocks, i.e., apartment buildings composed of two-story maisonettes). Residences in these "closed cellular developments" back onto a verdant interior park studded with athletic facilities and tree-lined promenades. These proletarian housing blocks, framed by a grid of streets devoted solely to vehicles, are complemented by upper-class luxury residences configured as a continuous linear block which he names *à redent* or "indented unit" housing. The *Ville Radieuse* (Radiant City) design of 1930, a second iteration of this ideal city scheme, expunges all architectural references to class distinctions and advances the *à redent* arrangement as a universal urban housing formula. It is with this fateful construct of a settlement pattern devoid of streets that Le Corbusier, through his position at the helm of the Congrès Internationaux d'Architecture Moderne (CIAM), branded into Modernist urban design the mandate for a streetless city. In article 16 of its Athens Charter of 1933 the organization declares:

the house will never again be fused to the street by a sidewalk. It will rise in its own surroundings, in which it will enjoy sunshine, clear air, and silence. Traffic will be separated by means of a network of foot-paths for the slow-moving pedestrian and a network of fast roads for automobiles. Together these networks will fulfill their function, coming close to housing only as occasion demands.<sup>113</sup>

## COMPROMISING MODERNISM: EARLY EXPERIMENTS

With the publication of *La Ville Radieuse* in 1933, Le Corbusier could presume to speak for all of Modernism in stating: "Streets are an obsolete notion. There ought not to be such things as streets; we have to create something that will replace them."<sup>114</sup> Such pronouncements were ultimately successful in portraying Modernism as a united front in pursuit of a common set of goals.

In fact, a review of the formative years of Modernist urbanism reveals quite a different story. The 1920s saw the emergence of a number of designers who were committed to the new architectural idioms, but who saw the possibility of compromise at the urban scale. The effect of Modernism, as far as they were concerned, would register only by the insertion of exemplary accents into the old cities. This is the strategy that had announced the arrival of the Renaissance to tangled cities of the Middle Ages. Others, inspired by the dazzling speed of modern city traffic, proposed an expressionistic street scenography based on horizontal movement. Let me take a moment to review a few of the experiments in Modernist street design that were struck from the record by Modernism's biographers.

The Rue Mallet-Stevens in Paris, commissioned by the banker Daniel Dreyfus in 1925, is one attempt at an insinuating Modernist urbanism. Its architect, Rob Mallet-Stevens, held that "Streets bordered by houses, public buildings, and especially monuments . . . must become the educators of the population."<sup>115</sup> Along the one-block length of his street the monuments are a sequence of single houses which reject the representational language of historic styles for a new architectural idiom of non-frontal composition. What Mallet-Stevens achieves here is to put the Modernist villa—canonically presented as a pavilion standing in the open space of exposition grounds or on a secluded suburban site—on an urban street. For that reason, and because this street remained unique, it was dismissed by Modernism's apologist Sigfried Giedion as an inconsequential set-piece, the product of an intellect preoccupied with the trivia of fashion.



In Germany, architects of the Gläserne Kette (Glass Chain) group—whose members included Hans and Wassily Luckhardt, Erich Mendelsohn, and Hans Poelzig—explored an alternate vision of the Modernist streetscape. “Modern man,” Mendelsohn claimed, “amidst the excited flurry of his fast-moving life, can find equilibrium only in the tension-free horizontal.”<sup>116</sup> In fact, the spatial perception of Berlin’s streets had changed in a tangible way after 1923, when the city speed limit jumped to 35 kilometers per hour (22 m.p.h). Mendelsohn’s oracular call found expression in projects like his celebrated Universum complex of 1927, and in the Luckhardt brothers’ 1929 Alexanderplatz scheme for a streamlined circular traffic hub banded in slick ribbon windows, where the vertical ordering traditions of traditional façades are abandoned for the sense of movement suggested by streets walled by slippery horizontal glazing.

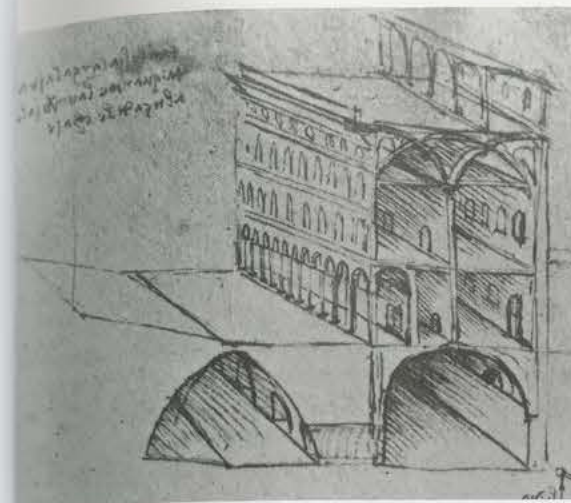
But recognition as the most prolific investigator of Modernist streetscapes should go to another urbanist of Germany’s Weimar period, Ernst May. May had apprenticed with Unwin, and after working on Hampstead Garden Suburb continued a long relationship with his master by post. In 1925 he found himself at the head of Frankfurt’s housing authority with a broad range of powers for zoning, planning, and design development. His team of architects and planners acquired land outside the city to build a series of twenty garden-suburb satellite communities. The conceptual model is Unwin’s; but credit for the imagery and variety of non-traditional “street-pictures” in the early *Siedlungen* goes to May. The communities built in 1926–29 are laboratory experiments that bend, break, and serrate the street wall to invent new, often asymmetrical compositions. In Römerstadt a straight street is sent through a series of jogged displacements to create a Modernist version of Unwin’s enclosed street volumes. Elsewhere in the development, a continuous curving façade is juxtaposed with the staccato rhythm established across the street by the blank ends of housing rows separated by allotment gardens; at an intersection the elements of the composition are switched to the opposite sides of the street. The Niederrad estate’s saw-toothed street is perhaps the boldest of May’s experiments, and its contrast with the conventional block across the way spells out both the promise and the inherent problems in his path toward a Modernist streetscape. Despite the volumetric fireworks, May’s street is deadened by its wall of inward-turning residences oriented toward back gardens rather than the sidewalk—as



237 Berlin, project for rebuilding the Alexanderplatz, by Hans and Wassily Luckhardt and Alfons Anker. This busy central area was the subject in 1929 of a new Fluchtlinienplan to provide for a bigger traffic intersection, wider streets, and extensive subway works. The land was compulsorily purchased; a massing model was drawn up by Berlin’s planner, Martin Wagner. Building height was doubled, to compensate for lost space and to increase the value of the plots for resale to private developers. This scheme won the ensuing competition, but the job went to the runner-up, Peter Behrens.

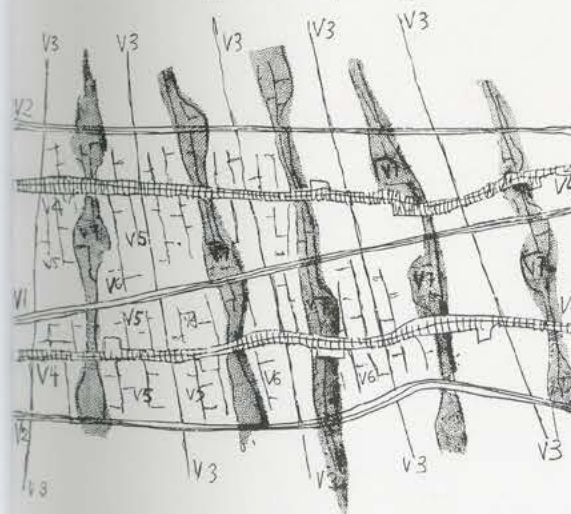


238 left Frankfurt-am-Main (Germany), Bruchfeldtrasse, with the outer edge of Ernst May’s Niederrad housing estate of 1925 on the left.



239 Leonardo da Vinci, scheme for a multilevel circulation system for Milan, ca. 1490. The roadway, left, drains into a subterranean canal. Also subterranean, to the right, is a service street. The arcade level above is reserved for people of gentle birth.

240 below Le Corbusier’s vision of a region “irrigated” by the “7 Vs,” ca. 1947. V 1 is a regional through-road; V 2, a major urban road; V 3 a road for motor traffic only, without sidewalks; V 4, the traditional “main street” of shops and daily life, often following a pre-existing organic road; V 5, a minor street branching off toward housing; V 6, either a path leading to the house door or the “interior street” of an apartment block; V 7, circulation through linear parks containing schools, sports grounds, etc.



much Modernist anti-street sentiment as the legacy of his exposure to Unwin’s Garden City ideals. May abandoned his flirtation with Modernist street design in 1929, the year Frankfurt hosted the second CIAM conference. At Westhausen, a satellite suburb begun that year, a simple grid of *Zeilenbau* (line construction) housing supersedes the complex spatial inventions of May’s earlier experiments. Streets are disengaged from housing frontages and serve only as access lanes; a parallel set of greenswards now constitutes a separate pedestrian environment.

## ELEVATING THE PEDESTRIAN

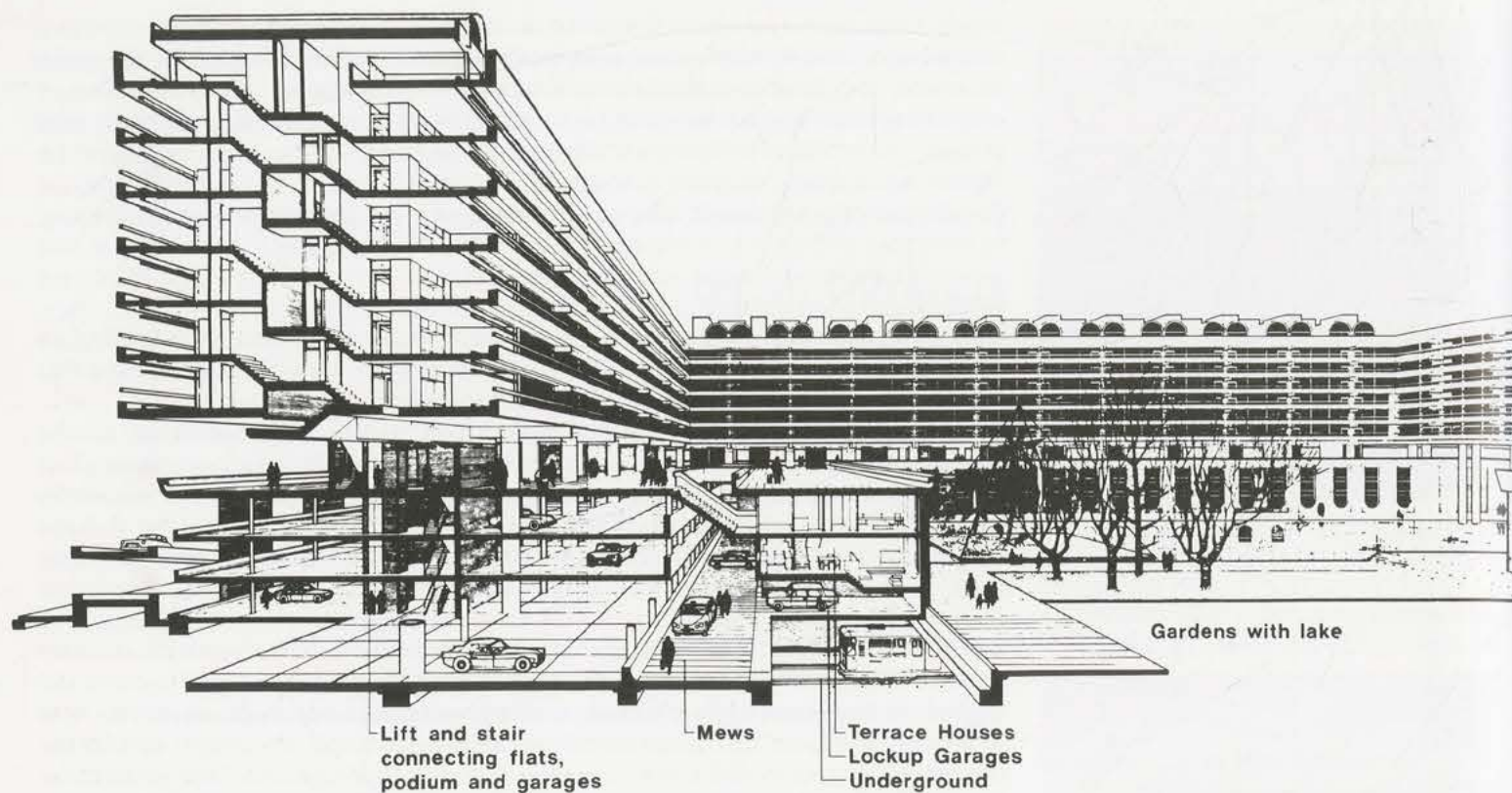
The Modernist vision of a streetless urbanity ultimately foundered on CIAM’s inability to deliver on its promise of a separate system of pedestrian movement that would supplement high-speed traffic networks.

Again, these ideas had gone through a long period of germination. In the Renaissance, elevated passageways were built as a secret means of communication between princely buildings. The Corridoio Vasariano in Florence was created in the 1550s for Cosimo de’ Medici, first Grand Duke of Tuscany, to link the Palazzo Vecchio and the Palazzo Pitti. Beginning at the Palazzo Vecchio, it forms the upper level of an arcade along the river at the end of the Uffizi block, crosses the Ponte Vecchio, goes across the façade of S. Felicita and through a number of houses, and so reaches the Pitti which was itself linked to the Belvedere fortress. Leonardo’s project of around 1490 for Milan is another eminent precedent. His proposed reconstruction of the city is served by a grid of porticoed pedestrian streets over a service level of alleys and waterways. Social stratification is designed into the system as well: the street level was reserved for *gentiluomini*, while the *poveraglia* was consigned to the depths below.

Prototypes of the vertically segregated paths for people and vehicles that Le Corbusier described crop up in turn-of-the-century projects as well: in France, Eugène Hénard’s multi-level “Street of the Future” (1910), and in America, Edgar Chambless’s linear “Roadtown” of the same year come to mind. Rotterdam’s Spangen housing estate of 1919, with its stacked townhouses served by an aerial street system of wide corridor-balconies, is striking in its prescience of the design notions which would gain currency with the rise of International Modernism.

All of these examples fall short of the CIAM criterion of complete segregation of pedestrian and traffic routes, however, because their walkways and streets, although vertically segregated, run as parallel systems. What was called for in Modernist theory was a continuous network of paths and streets that, rather than duplicating each other at different levels, diverged entirely to create two distinct realms: one for people and one for cars. Le Corbusier’s endeavors toward these ends became more specific but less successfully realized as time wore on. His 1947 *unité d’habitation* (large residential unit) at Marseilles, invoked by Françoise Choay as “the summation and symbol of all the [Corbusian] theories of town planning and dwellings,”<sup>117</sup> was widely celebrated for the provision of communal space in the form of interior streets. Two of these accommodated urban services (post office, food and clothing stores, pharmacy, hairdresser, laundry, even an eighteen-room hotel), others provided access to apartments. These two types of the *rue intérieure* were categorized as V 5 and V 6 in a seven-part street hierarchy Le Corbusier invented at this time. The universally applicable “7 Vs,” as he called them, ranged from high-speed regional roads (V 1) to pedestrian paths routed through a park-like urban setting (V 7). But despite his vehement proselytizing the system was nowhere fully adopted; and in subsequent commissions it lost much of its credibility as the





vaunted “interior streets” came to look like what architects of a less theoretical inclination call “double-loaded corridors.”

The assignment of correcting the “*rue intérieure* mistake” was taken on in the Fifties by members of a circle of British architects who called themselves Team X (Ten). Alison and Peter Smithson’s unbuilt Golden Lane housing project for London (1952) featured wide, open-sided decks that “would be places, not corridors or balconies: thoroughfares where there are shops, post boxes, telephone kiosks. . . . The refuse chute takes the place of the village pump.”<sup>118</sup> Although the Smithsons were never able to realize this concept in large-scale built work, others did. The massive Park Hill and Hyde Park housing estates (1957) by Sheffield city architects Ivor Smith and Jack Lynn have streets-in-the-air threaded through blocks at every third level, as do the serpentine slabs by founding Team X members Georges Candilis and Shadrack Woods at Toulouse-Le Mirail (1962). The use of low-rise roof platforms as an elevated pedestrian precinct is probably best illustrated in

241 London, Barbican development, by Chamberlin, Powell and Bon, designed 1959, built with modifications through the 1960s and ’70s: section through terrace block, podium, and underground railroad.

Pl.29 Another version is presented by the Alexandra Road estate, also in London.

North America’s street substitutes came about through commercial rather than state initiative, taking the form of networks of subsurface passages, like those of Houston, Toronto, and Montreal, and skyway systems—“elevated pedestrian circulation systems” in the jargon of planners. Like suburban shopping malls, these examples of the continued privatization of public space work against the street as the primary place for social interaction. They try to replicate its experience in a controlled environment which drains its energies but cannot quite match its vitality.

American skyways have been criticized for promoting class and ethnic segregation: Minneapolis’s system is particularly controversial in this regard.<sup>119</sup> The system is private: it closes down after business hours. Owners of the buildings to be connected negotiate the financing and design of each new section—the city gets involved only when a bridge directly abuts a public building. The walkways are primarily used to connect offices, hotels, and department stores along a corridor dotted with fancy boutiques. It is a program that caters to the well-heeled, and can be seen as inhibiting its use by the poor. Since these pedestrian routes are not genuinely public, they can hardly be considered a true alternative to the street network.

The bankruptcy of these revisionist interpretations of Modernism’s doctrine of an urban street substitute could no longer be ignored by the late 1970s. By turning whole blocks into isolated citadels, these schemes render the street corridor little more than a glorified service alley. Most damning of all is the ingratitude of the obdurate pedestrian, the supposed beneficiary of aerial passageways and rooftop plazas, who from London to Toulouse can be seen shunning these carefully engineered environments and seeking the ground level when given the opportunity.

## THE RETURN OF THE STREET

If, in the biography of the modern street, the Twenties and Thirties are the decades that condemned it to death, the Sixties and Seventies will be remembered as the decades of its attempted resurrection. For Western Europe the motivating force was a younger generation’s anger at being cheated of their built patrimony, first by the insane vindictiveness of the war, and then by the equally vindictive zeal of a heavy-handed Modernist reconstruction intent on suppressing the comfort and familiarity of the traditional streetscape (see below, pp. 261–64). In America the revival of the street was announced by the concurrence of the public outcry against the urban freeway program and the passage of the Historic Preservation Act of 1966, which allowed “landmark” status to be conferred not just on single structures but on entire streets of buildings. Perhaps most important were the convulsions of public protest on both continents that brought crowds of people out-of-doors to occupy city streets and plazas, investing these once again with political life and civic purpose.

The point that had to be reached officially in order to address the muzzling of the automobile was the general admission that the benefits of a society of car owners were countered by the adverse impact of this mobility on the environment and the quality of life. A document for this awakening was England’s Buchanan Report of 1963, *Traffic in Towns*. The report recognized the motor vehicle as a beneficial invention, and predicted an astronomical rise in its numbers. But accommodating these numbers in already strained settings would frustrate door-to-door accessibility and damage the urban environment—danger to pedestrians, anxiety, noise, air pollution, and visual intrusion were likely outcomes. The solution? Create areas within towns and cities where considerations of the pedestrian environment took precedence over the movement and parking of automobiles.

Europe came to embrace this idea whole-heartedly. Here I am talking about the segregation of vehicles and pedestrians at ground level—not the vertical separation espoused in various forms by the designers of the functionalist street, be they CIAM Modernists, Team X revisionists, or traffic engineers. In the immediate post-war years city planners had experimented with the transformation of certain business streets into pedestrian thoroughfares; these projects proved successful and were duplicated across Europe. In Germany alone there were 63 pedestrianized



areas by 1966, 182 by 1972, 370 by 1977. One of the most extensive of these systems is in Nuremberg, where the pedestrian streets are supplemented by a dense network of shopping arcades and public parks. Another well-known and  
 242 successful example is the Strøget in Copenhagen, where five existing streets running from the Town Hall to the city's central square have been linked and kept free of motorized traffic.

These car-free shopping streets in the old urban cores inspired the design of new  
 243 streets that had the same qualities. Two of the best known are Rotterdam's Lijnbaan (1951-53) by J. H. van den Broek and J. B. Bakema, and Queensway (1956-59) in Stevenage New Town. Both were deemed immediate successes by planners. Lijnbaan combines a row of lowrise shops backed by highrise housing slabs. Queensway invokes the memory of a mixed-use street with one or two floors of housing running above many of the storefronts. Today both are tawdry and depressing places, with gray the predominant feel, if not the actual color. The construction is partly to blame. On these "high streets" resurrected in a minimalist mock-Miesian idiom, even materials like masonry end up looking like cheap panel construction. Where the old town center has the variety that comes of use and the patina that comes of being there a long, long time, here the diversity is programmed in, and the life of a generation or two reads as neglect.

The suburban shopping mall (see pp. 185-86) takes much of the credit for launching, and nearly sinking, the campaign to pedestrianize shopping streets in the United States. By the 1960s the middle-class flight to the suburbs virtually guaranteed that suburban shopping centers would be the successors to "Main Street." Downtown business leaders and city officials fought the flood of shopping malls with elaborate pedestrian street schemes, and the malling of Main Street began in earnest. The earliest examples come from Kalamazoo, Michigan (which called itself "Mall City, U.S.A."); Miami Beach, with Lincoln Road Mall (1962); and Pomona, California (1962). In these and dozens of other towns, asphalt was replaced by concrete or tile pavements punctuated by shade trees and planter boxes, fountains, benches, and kiosks. It is an artificial and sanitized design vocabulary, part regional shopping center, part Disneyland. These pedestrian malls were usually launched with much fanfare, but without a coherent long-range program of urban improvement—one reason for the financial failure of many of them. By the 1980s the fad had lost steam. Eugene, Oregon, tentatively reopened a single block of its mall to traffic in 1987 and saw an increase in business reinvestment and fewer shop vacancies there. Other cities, such as Oak Park, Illinois, dispensed with their pedestrian mall and have become models that are likely to be emulated elsewhere.

In the end, the more important aspect of standing up for the pedestrian may come not from shopping districts, but from the design of residential neighborhoods. The lead on this front is Dutch, specifically in the form of a new prototype for the residential street called the *woonerf*, literally "living yard." The name was coined in 1963 by Professor Niek De Boer of the Technical University of Twente to describe a street in which the primary function would not be driving and parking, but walking and playing. By the mid-1970s, after trials in a number of Dutch towns, the *woonerf* was adopted nationally and given its own distinctive traffic signage. The request to reconfigure a street comes from its residents, and the city must then conform to it. Pedestrian use is encouraged through design elements such as a clearly marked threshold distinguishing the *woonerf* from the network of thoroughfares, intentional ambiguity of paving materials to disrupt the perception of the roadway as a linear traffic channel, speed bumps to slow cars, and the insertion of planting and staggered parking to block continuous sight lines. The concept spread to Germany



242 Copenhagen, the pedestrianized Strøget. In the background is the tower of the Holmens-Kirke.



243 opposite Rotterdam, the Lijnbaan area, by Van den Broek and Bakema, 1951-53. At the heart is a pedestrian street lined with low shops; behind are housing slabs. Cars are relegated to high-speed through routes (bottom; cf. Ill. 266) and to parking lots behind the shops.





244 A Viennese Wohnstrasse. The roadway is constricted by a widened, planted sidewalk area; pedestrians have priority.

244 and Austria as the “livable street” or *Wohnstrasse*, and by the mid-1970s variants had sprung up as far away as Berkeley, California.

Perhaps the most ambitious attempt to loosen the automobile’s stranglehold on the city street is being made by the architecture and planning team of Andres Duany and Elizabeth Plater-Zyberk. At Seaside, Florida, their initial plunge into citybuilding, streets range in character from formal to informal, volumes are carefully defined, vistas closed.<sup>120</sup> Like Unwin’s, theirs is a streetscape shared with traffic but designed around pedestrian needs and pleasures. And like their British predecessor, whose intimately scaled residential streets at Hampstead Garden Suburb required an Act of Parliament to circumvent legislated standards, Duany and Plater-Zyberk have discovered that the traditional streetscape they are attempting to revive is in most places illegal.

“Car traffic has become the central, unavoidable experience of the public realm,” according to the planning team, because the automobile’s claim on the city has been frozen into legislation across the United States. Municipal ordinances emphasize above all else provisions for high-speed traffic and an abundant number of parking spots. Such ordinances are, in the words of Duany and Plater-Zyberk, “virtual recipes for urban disintegration.”<sup>121</sup>

The team’s weapon of choice against further encroachment of the automobile on pedestrian territory is a regulatory tool: the Traditional Neighborhood Development ordinance, or T.N.D. It is a genetic code for urbanity, consolidating the vernacular wisdom of towns like Charleston and New Orleans with exacting new standards and dimensions for streets. The street-animating rowhouse is revived by the T.N.D. as a standard housing type. Walking is encouraged by locating shops within strolling distance from homes. Sidewalks are a minimum of 12 feet (3.7 m.) wide where there are shops, and street trees are mandatory. The new formula has found favor with developers gambling that a generation born and raised in the

suburbs will pay for the privilege of walking rather than driving. T.N.D. communities are rising at Kentlands, near Washington, D.C., Nance Canyon in California, and Wellington, Florida. And Duany’s collaboration with Léon Krier in England under the patronage of Prince Charles promises to make Poundbury, their urban extension plan for the city of Dorchester, a foreign showcase for the T.N.D.

These are, admittedly, rarefied experiments. They cannot, nor do they pretend to, address the erosion of the urban environment wherever parking lots and elevated expressways have proliferated at the expense of a streetscape that afforded pleasure and refuge. There the task of taming the automobile is compounded by both the scale of the problem and the lack of a mandate. For despite our fascination with the charm of pedestrian shopping streets and refurbished historical districts, most of us still conform to Sir Colin Buchanan’s pessimistic assessment that “people are prepared to trade off their environment in return for motorized accessibility.” The fundamental loss we must address is the loss of street culture.

In the past, the street was the place where social classes and social uses mixed. It was the stage of solemn ceremony and improvised spectacle, of people-watching, of commerce and recreation. In its changing architecture, its slow shifts and adjustments, in its sometimes wholesale reincarnation, the street was also our communal register—the safeguard of those continuities of culture and place that made us as street users vastly and substantively older than our age and infinitely wiser than our natural gifts. This street of the past was an untidy place, physically and morally, but it was also both school and stage of urbanity, which in the end means nothing less than the belief that people, as Gerald Allen put it, “can live together in proximity and interdependence.”

In all this the container mattered, of course, but it was not what mattered most. If street design took certain turns, it is because that is how we wanted to live. “A street is a street,” wrote Maurice Culot and Léon Krier, “and one lives there in a certain way not because architects have imagined streets in certain ways.”<sup>122</sup>

That is why I cannot see the point in reviving the container without a solemn commitment to reinvest it with true urban vigor, with urbanity. As long as we would rather keep our own counsel, avoid social tension by escaping, *schedule* encounters with our friends, and happily travel alone in climate-controlled and music-injected glossy metal boxes, the resurrected street will be a place we like to visit every so often but not inhabit—a fun place, a museum. But it will also stand as the burial place of our hopes to exorcise poverty and prejudice by confronting them daily; the burial place of our chances to learn from one another, child from bagwoman and street vendor from jock; the burial place of unrehearsed excitement, of the cumulative knowledge of human ways, and the residual benefits of a public life.