

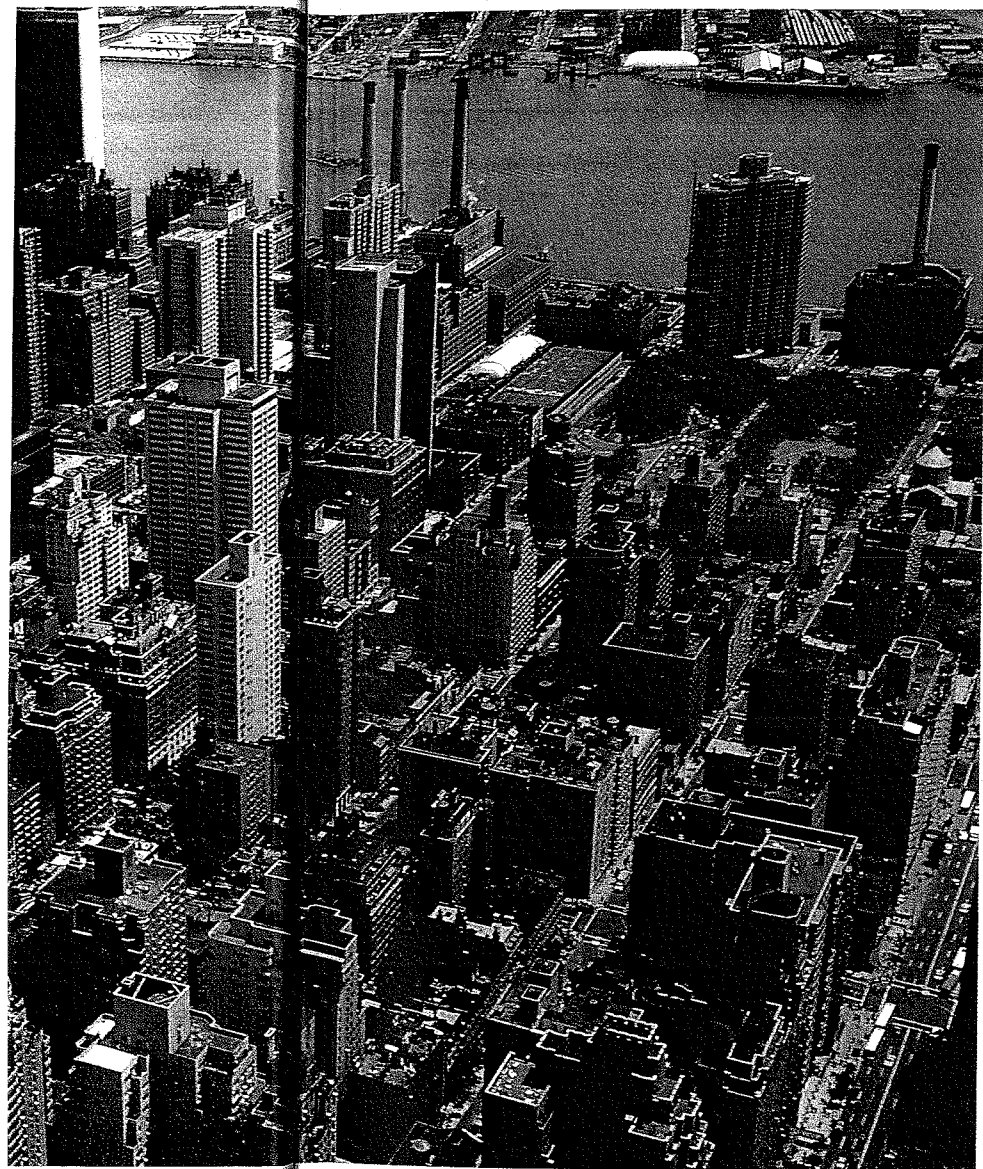
THE CULTURE OF BUILDING

HOWARD DAVIS

New York Oxford

Oxford University Press

1999



Oxford University Press

Oxford New York
Athens Auckland Bangkok Bogotá Buenos Aires Calcutta
Cape Town Chennai Dar es Salaam Delhi Florence Hong Kong Istanbul
Karachi Kuala Lumpur Madrid Melbourne Mexico City Mumbai
Nairobi Paris São Paulo Singapore Taipei Tokyo Toronto Warsaw

and associated companies in
Berlin Ibadan

Copyright © 1999 by Oxford University Press, Inc.

Published by Oxford University Press, Inc.
198 Madison Avenue, New York, New York 10016

Oxford is a registered trademark of Oxford University Press

All rights reserved. No part of this publication may be reproduced,
stored in a retrieval system, or transmitted, in any form or by any means,
electronic, mechanical, photocopying, recording, or otherwise,
without the prior permission of Oxford University Press.

Publication of this book was supported by a grant from the
Graham Foundation for Advanced Studies in the Fine Arts.

Library of Congress Cataloging-in-Publication Data
Davis, Howard, 1948–
The culture of building / by Howard Davis.
p. cm.
Includes bibliographical references and index.
ISBN 0-19-511294-6
1. Building. 2. Corporate culture.
3. Architecture and society. I. Title.
TH153.D374 1999
720—dc21 98-19051

9 8 7 6 5 4 3 2
Printed in Hong Kong
on acid-free paper

In: The Culture of Building, Davis, Howard

NOTICE
This material may be
protected by copyright
law (Title 17, U.S. Code)

SHARED ARCHITECTURAL KNOWLEDGE

6

Tradition and Innovation in Building Form

One of the key qualities of a building culture is that the people in it share architectural knowledge. An important part of this knowledge consists of rules about building form itself. These rules are expressed as types or patterns—commonly understood configurations of building arrangement or construction that characterize the buildings of the culture.

Within a healthy building culture, the rules that govern the form of the built world form a dynamic system that can change gradually over time, as need warrants, and that reflect differences from place to place. Such subtle difference occurs most effectively when the rules themselves are known and understood and when the players in the building culture have the ability to change the rules as needed. This is not to say that building types are changing continuously or rapidly; one of the most obvious characteristics of much traditional architecture is its relative stability over time and its repetitive nature in a particular place. However, as we will see later, that stability is tempered by the ability to change when necessary.

The rules concerning form have three attributes that allow for the maximum appropriateness of buildings to ways of life, the reinforcement of the culture's picture of itself, and the maximum "fit" between form and the culture/place in which it exists:

- The availability and sharing of the rules across society, and the capacity for cross-fertilization of the rules.
- The ability for the culture to change the rules when necessary, thereby promoting innovation across the culture.
- The appropriateness of the rules themselves, which is made possible in part by the first two attributes.

Availability and Sharing of Rules: Cross-Fertilization

The great variety of places and cultures in the world has generated and sustained a corresponding variety of kinds of buildings and construction techniques. One of the things that sustains the precision and appropriateness of the individual type, and the consequent variety among many types, is the interaction between different cultures and the sharing of knowledge and rules. This interaction traditionally came about through the movement of craftsmen from one place to another. When it is happening fully, this cross-fertilization results in great richness of buildings and enables individual building traditions to benefit fully from the ideas and cultures around them.

The variation of building type with geography is a central idea of vernacular architecture. Types, which are commonly understood and shared building configurations, move from place to place, and buildings often demonstrate how a type that had been brought from somewhere else has been modified to particular new conditions. We need only look at the transport of a German house type to Virginia,¹ or the movement of Ukrainian building practices to North Dakota,² or the interactions between the Mamluk and Ottoman empires in Islamic architecture.³ In all cases a conservatism brings the type along, then a transformation allows a version of the type to exist in the new place. Global cultures have only accelerated the geographic diffusion of building types. Anthony King was one of the first to point this out, in his work on the bungalow,⁴ and we can also see it in the Japanese penchant for American tract houses and the geographically aspecific character of such buildings as airports, hotels, and office buildings. In these last cases, geographic variation has been suppressed or has disappeared altogether.⁵

The links among building types are human links. People maintain and change building types over time and transmit them from one place to another. These links may be observed along a single street in London, or across the ocean, in the case of large-scale migrations, like those of the English craftsmen who built in particular places in New England. They brought what they knew to the New World and adapted that knowledge to new conditions.

In medieval times, master masons sometimes traveled specifically to get ideas and facilitate the sharing of information. John Harvey writes:

William Humbertville, master mason in 1369–79 for the building of the library of Merton College, Oxford, journeyed to Sherborne, Salisbury, Winchester and London, “with the purpose of view[ing] the library of the Preaching Friars,” to get ideas; Pedro Balaguer, architect of the famous belfry or Miguelete of Valencia, was sent as far afield as



Figure 6.1.
Hawksmoor's Christ
Church, Spitalfields,
London

Lerida and Narbonne—some 400 miles each way—to examine towers in 1414; in 1450 Roger Growdon was instructed to view the steeples of Callington in Cornwall, Buckland, Tavistock, and Ashburton, and to use the best of them as a pattern for the tower of Totnes parish church. . . . The long term process involved amounted to a steady downward percolation of design, beginning with royal palaces and chapels, cathedrals and greater monasteries, and passing through lesser churches, priories and manorhouses, to end in small houses and chapels in areas remote from the source of each wave of inspiration.⁶

Hawksmoor and His Craftsmen

The diffusion of techniques in a particular place is seen in early-eighteenth-century London. Christ Church Spitalfields was designed by Nicholas Hawksmoor as one of the fifty new churches commissioned to replace churches lost in the London fire of 1666. Next to this church, in Fournier Street, is the church minister's house, a building also designed by Hawksmoor. These buildings are different, but they have some similar features, including the cornice.

The carpenter for both the house and the church was Samuel Worrall. The mason for the house was Thomas Dunn, and he was also the mason for the church. The plasterer for both buildings was Isaac Mansfield, and the painter for both was James Preedy.⁷

Samuel Worrall was also the carpenter for several other houses in Fournier Street, and in fact he was the developer for some of them, as was the practice for London's craftsmen—particularly carpenters and bricklayers—at that time. It is likely that some of the other craftsmen mentioned were also working on those smaller houses. So this one carpenter, Samuel Worrall, worked on the church, the large house, and smaller ones that he himself built on speculation. The architect worked on both the church and the large house, and some of the other craftsmen worked on a range of buildings as well.

Many other builders in Spitalfields worked on both major and minor buildings. Thomas Ellis did joiner's work at the French Church in Fournier Street, built a house on the street, and rebuilt a house elsewhere. Thomas Denning was the carpenter for a tabernacle at St. Mary's Spital Square and bid unsuccessfully for the work at Christ Church. William Tayler built almshouses for the Weavers' Company, the Three Tun Tavern, and speculative houses. William Seagar was the carpenter for the Seven Stars public house, built seven houses in Folgate Street, and also bid unsuccessfully for the work at Christ Church.⁸

The building culture of early-eighteenth-century London was one that encompassed a good deal of movement of craftsmen, and interrelationships between craftsmen, from building to building. There was practically no steady employment—the expectation of steady employment only came about a century later, with the advent of general contracting on a large scale,

Figure 6.2.
Fournier Street,
Spitalfields, with
Hawksmoor's Christ
Church, Spitalfields at
end and the minister's
house just to the
left of the church

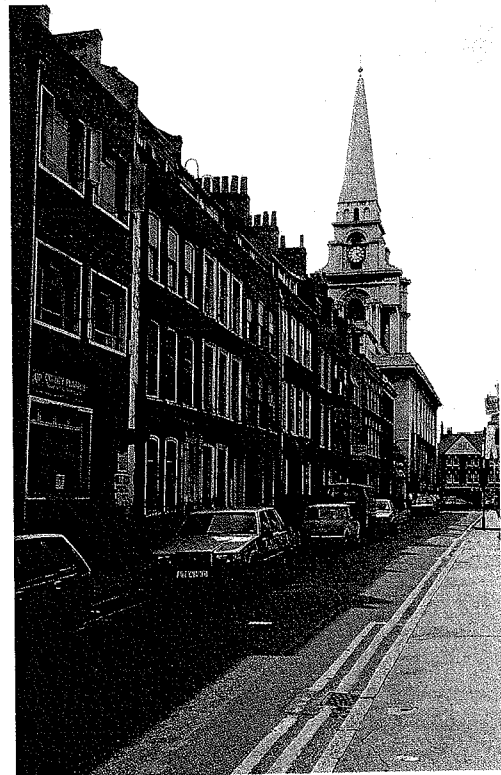




Figure 6.3.
Door of house in Spitalfields

and the subsequent rise of labor unions; and depending on their trade, craftsmen could expect to work on a relatively large number of buildings in a particular year. The work of a particular craftsman would appear in many different places and would not necessarily be restricted to buildings of a particular size or type. The nature of this building culture led to a good deal of continuity in building form and detail.

*Variation over Function and Economic Class:
Houses and Mosques of Cairo and Tunis*

One example of how a *single building type* may change over function and economic class in a particular place is the traditional courtyard building in the cities of the Middle East. Such buildings, which predated classical civilization, were fundamental to urban domestic architecture during the civilizations of Greece and Rome, were maintained in modified form through the various Islamic dynasties, and still survive all around the edge of the Mediterranean.

Consider Bayt Suhaymi, a courtyard house built for well-to-do merchants in Cairo in the seventeenth or eighteenth century. It has an asymmetrical plan, on an irregular site, but is organized around a courtyard that displays considerably more symmetry than the house as a whole. Off this courtyard is a main reception room, the *qa'a*, which is three stories tall, finely crafted, and symmetrical. The courtyard has two adjacent outdoor rooms that are typical of such houses: one, the *taktaboosh*, lies between the courtyard and the garden, and the other is a porch on the floor above the courtyard.

Figure 6.4.
Plans of
houses in
Fustat, Cairo

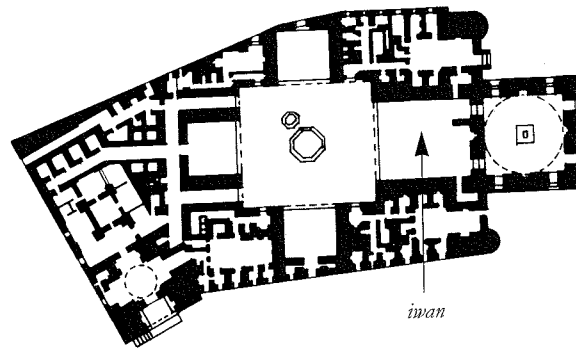
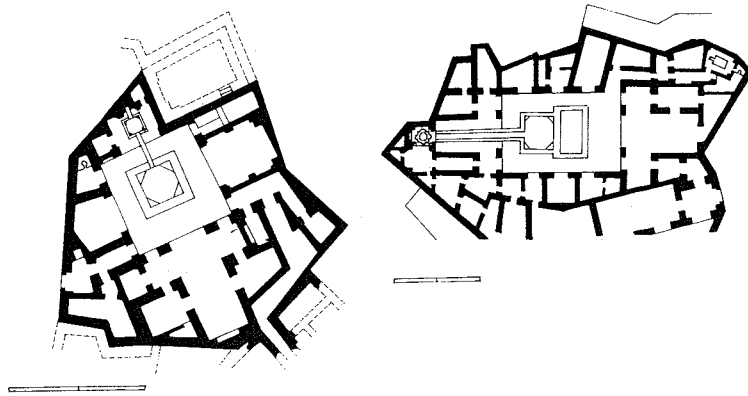


Figure 6.5.
Mosque of Sultan Hassan, Cairo

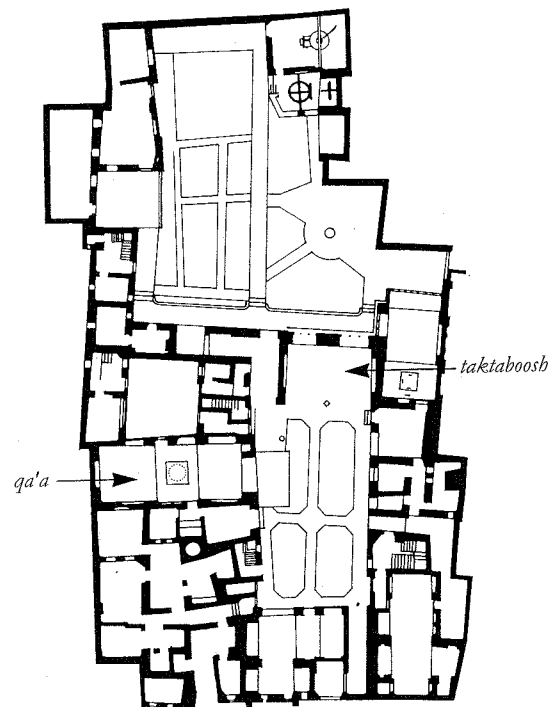


Figure 6.6.
Bayt Suhaymi, Cairo

Formally, this house is in between simple vernacular houses—shown in plans of ancient Fustat—and more elaborate religious buildings like the mosque of Sultan Hassan, which have similar features. The other buildings, too, are organized around bilaterally symmetrical courtyards. Their main rooms are on the axis of the courtyard. The *iwān* of the mosque—the covered porch at the sides of the courtyard—corresponds to the *taktaboosh* of the large house. There are many typological correspondences, both in plan and construction, between the buildings that are vernacular, the ones that are “architectural,” and the ones that stand somewhere in the middle.

We can be more systematic by looking at the plans of twenty-eight houses of the sixteenth and seventeenth centuries in Tunis (figs. 6.9 and 6.10).⁹ The plans are at the same scale, and their different sizes might be some indication of the wealth of their owners. Certain attributes are present in most of them: a main courtyard with an entrance that allows it to be well hidden from the street, and rooms that communicate directly with the courtyard.

Other attributes show systematic variation through the range of plans. In smaller houses, the courtyard is not necessarily a rectangle, but its sides may be parallel to the sides of the property (whose sides are not necessarily parallel to each other). As houses get larger, the courtyard is more likely to be rectangular. In the largest houses, the courtyard is always rectangular (and often square). Arcades tend not to be present in the smallest houses, but they are *always* present in the largest houses and are sometimes present, to different degrees, for houses of moderate size. Virtually all of the houses have at least one room whose door is directly on one axis of the courtyard, but

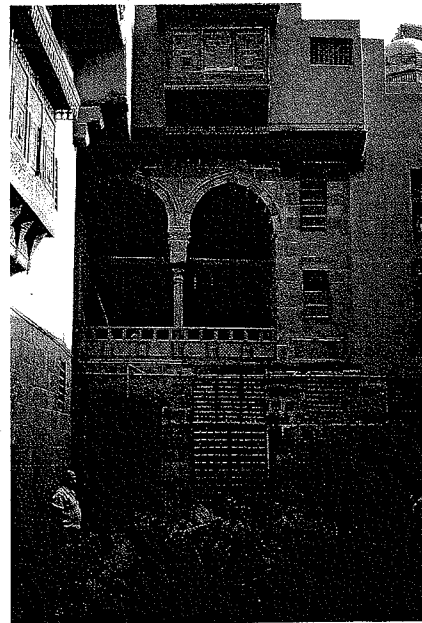
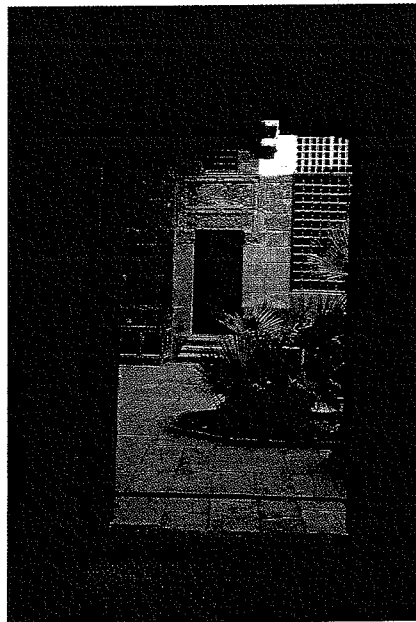


Figure 6.7 (left). Bayt Suhaymi, view to courtyard.

Figure 6.8 (right). Bayt Suhaymi, courtyard

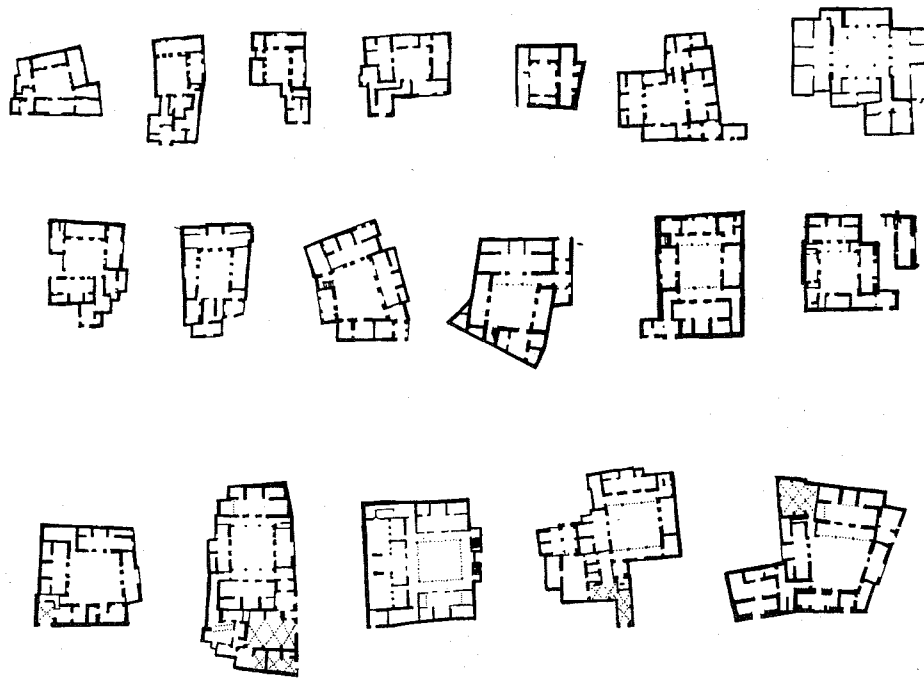


Figure 6.9. Plans of smaller Tunis houses

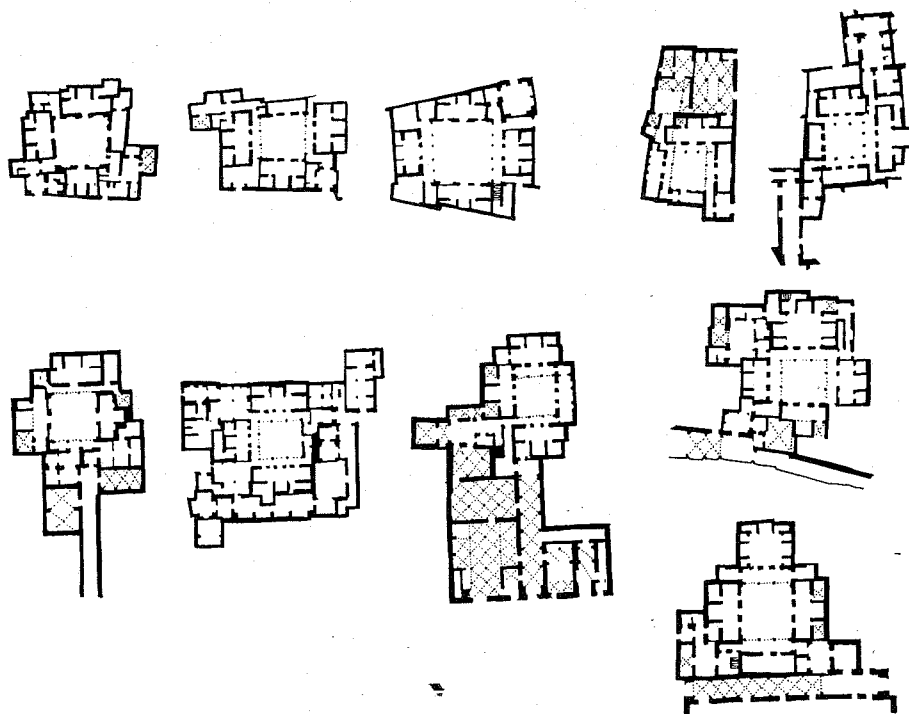


Figure 6.10. Plans of larger Tunis houses



Figure 6.11.
Courtyard of Dar
Othman, a large
house in Tunis



Figure 6.12.
Fountain in courtyard
of Dar Othman

larger houses tend to have more such rooms. In the same way that all houses reinforce the symmetry of the courtyard by putting such rooms on their axes, the largest houses reinforce the symmetry of *these* rooms by putting smaller rooms on *their* axes.

As houses get larger, their basic symmetries are intensified through a recursive process that reinforces the symmetries of smaller and smaller parts of the house. This intensification includes more elaborate ornament related to the courtyard, and to rooms that reinforce the principal symmetries, as the houses get larger.

Certain ideas about form—in this case arising from the fundamental importance of the courtyard itself—pervade the building culture as a whole, making houses of different classes into variations of each other, through the mechanisms of human habit, social aspiration, and craft knowledge.

*The Hybrid Wood-and-Stone Buildings of Northern Greece
and the Southern Balkans*

Another example shows the diffusion of type over a wider geographic area. Between the Black Sea and the Aegean, a particular house type, using a hybrid construction system of masonry and timber, was widely built until the middle of the nineteenth century. The houses had one or two floors with outer walls of masonry, and a top floor of wood; in many cases the wood superstructure extended down to the ground, inside the masonry walls. The lower part of the house, which was more easily heated than the upper, wooden part, was used for winter living, while the upper part, which could be opened to catch the breeze, was used during the summer.

The upper part, which contained the most important room for visitors, was often built with great virtuosity, rotated with respect to the masonry part below, to catch the breeze or a view. The complex framing was handled in an everyday and straightforward way by the craftsmen who built them—members of groups that moved from town to town.¹⁰ The most spectacular examples of these buildings stand in the monasteries of Mount Athos, in northern Greece, where large versions, often with courtyards, are built on constrained and rather inaccessible sites.

These buildings came about partly because of their location in the world and partly because of the movement of craftsmen from place to place. To the north of the Black Sea lie Ukraine and Russia, with their great forests and ancient timber-building cultures, where one can find buildings built very similarly to the upper parts of these hybrids. Around the Aegean are masonry building traditions, including Byzantine tower-houses, examples of which can still be seen in the southern Peloponnese. There, wood, which is rare and expensive, is used minimally, in some places hardly at all.

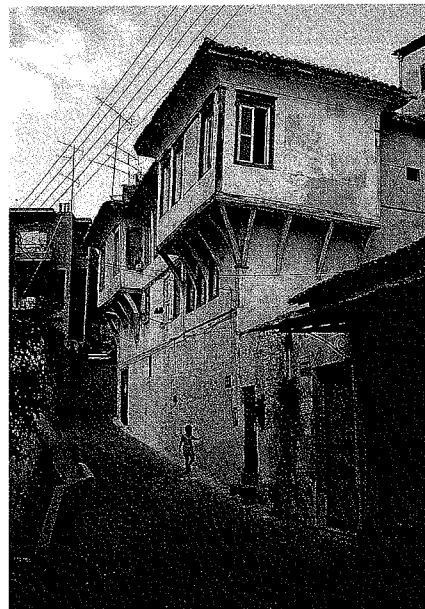


Figure 6.13.
Hybrid wood and masonry
house in Kavalla, Greece

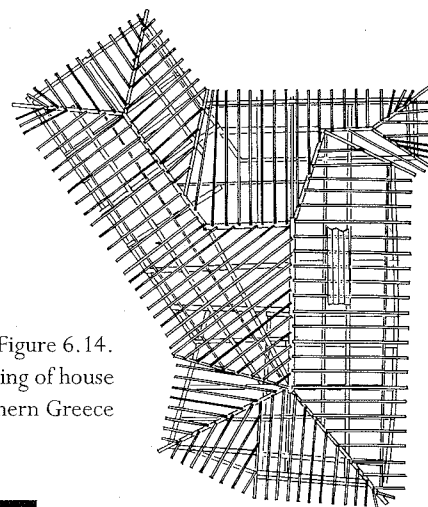


Figure 6.14.
Roof framing of house
in northern Greece

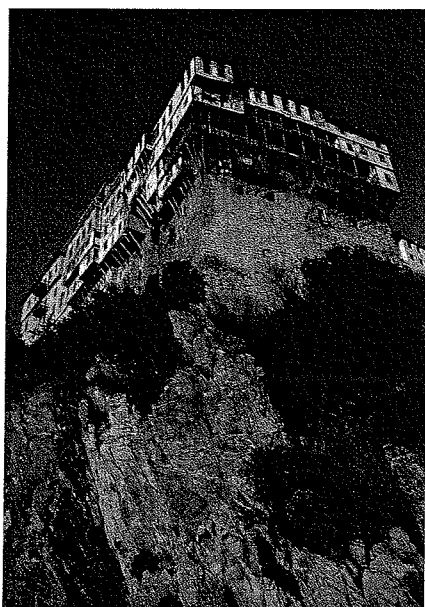


Figure 6.15.
Hybrid wood and masonry
building in monastery at
Mt. Athos, northern Greece

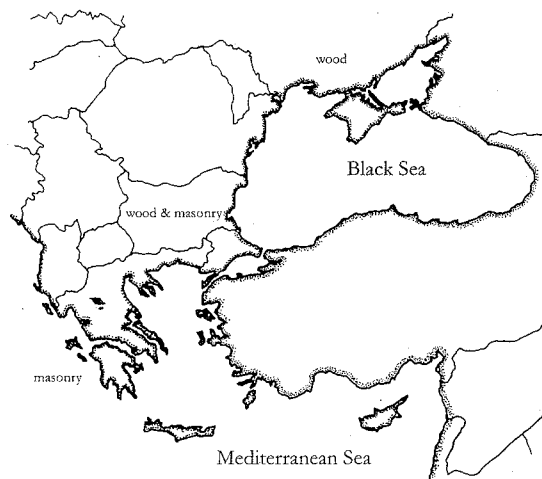


Figure 6.16.
Southeastern Europe: the
meeting of two great
building traditions

The wooden building tradition exists as far south as it can and stops at the point where economics and climate make the use of wood impractical. The masonry building tradition exists as far north as it can. The overlapping area combines the two traditions. In general, *type persists from place to place, to the extent that it can, and changes from place to place to the extent that it must.*

Palladio and the Farmhouses of the Veneto

To extend the point to the interaction between architects and vernacular building traditions, we turn to the Italian Renaissance, in which the typological continuum crossed professional lines, so that architects learned from the vernacular, and the vernacular was in turn influenced by what architects did.

The villas of Palladio combine preexisting vernacular forms with new Renaissance ideas. In the second of his *Four Books of Architecture*, Palladio wrote about both the location of villas and their “compartment or disposition”¹¹—the need to place buildings near good water; the importance of not placing buildings in confined valleys; and the importance of avoiding places with too much reflected sunlight. He writes about the functional importance of porticoes “joined to the master’s habitation, that he may be able to go every place under cover, that neither the rains, nor the scorching sun of the summer, may be a nuisance to him, when he goes to look after his affairs; which will also be of great use to lay wood in under cover, and an infinite number of things belonging to a villa, that would otherwise be spoiled by the rains and the sun.” In one instance, he wrote that local custom should be followed: “The places for breeding animals, as hogs, sheep, pigeons, fowls and such like, are to be disposed according to their quality and nature: and in this the custom of different countries ought to be observed.”

Other Renaissance theorists also appreciated the vernacular. Serlio’s treatise included a volume on domestic architecture,¹² and this book—volume 6—begins with plates illustrating very humble buildings indeed. It has been suggested that these buildings were connected typologically to larger buildings¹³ and that this volume influenced Palladio.¹⁴

Palladio’s villas draw on the traditional farms of the Veneto, the countryside inland from Venice (the *terraferma*, to Venetians). The agricultural system of the Veneto was based on large estates that included clusters of farm buildings with residences for the landowner and workers, as well as the working buildings of the farm.

These farms had developed over hundreds of years. Traditionally, on smaller farms, all functions were under one roof. On larger farms, the central buildings were connected and included living quarters for the owner as well as for supervisors, servants, and employed workers; a hayloft; a granary; sheds for animals and implements; a cool place for storing wine; and a threshing floor.¹⁵ They often included a portico to give shade from the hot sun. These buildings were often rectangular, but one had to go outside, under the portico, to get from one room to the other. This arrangement was maintained into relatively recent times. A late-nineteenth-century traveler’s account of a farm in the Veneto comments, “You are then taken up narrow staircases and into the granary. The countless windows are opened . . . letting in warm light through curtains of wistaria and of ivy. . . . From the granaries

you descend to the *barchesse*: these are immense arcades where all the farm machines, sacks, seats &c., are housed and guarded by a herd of Maremma sheep-dogs. Here, too, are innumerable beehives looking out upon parterres of lavender.”¹⁶

Typical Palladian villas and typical farmhouses of the Veneto share some formal and functional characteristics: the barchessi, dovecotes, granaries, and wine cellars; the enclosed court in front of the house; the use of covered walkways to connect various areas; and views from the loggia at *piano nobile* level.

At the same time, they differ in the presence of symmetries and classical motifs. The loggias and outbuildings of farmhouses are likely to be asymmetrical, while those of the villas are symmetrical. The facades of Palladian villas are composed with Renaissance versions of the classical orders, while those of earlier farmhouses may not be. Palladio used these techniques to reinforce the status of the Venetian moneyed families on the *terraferma* as the supremacy of the city of Venice in world trade began to decline.¹⁷

In Renaissance Italy, the close relationship between the vernacular and buildings designed by architects is not restricted to the Veneto. A different

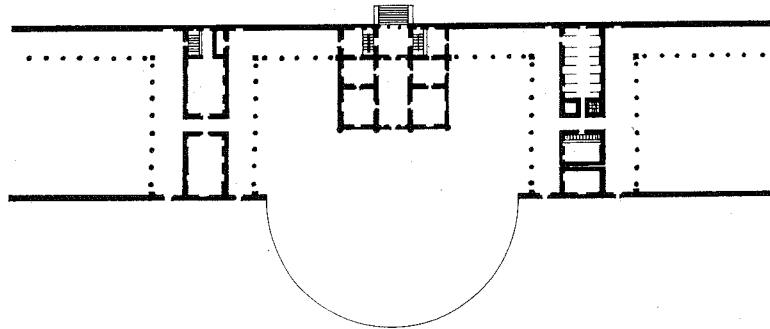


Figure 6.17. Plan of villa by Palladio at Angarano

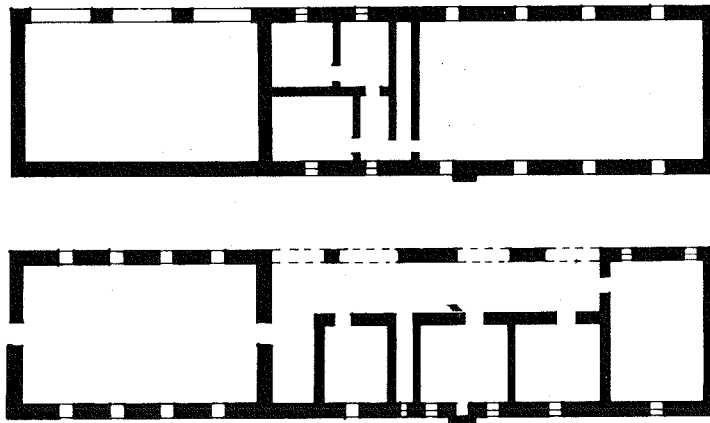


Figure 6.18. Plan of farmhouse in the Veneto

Figure 6.19.
Villa Barbaro at
Maser, Palladio

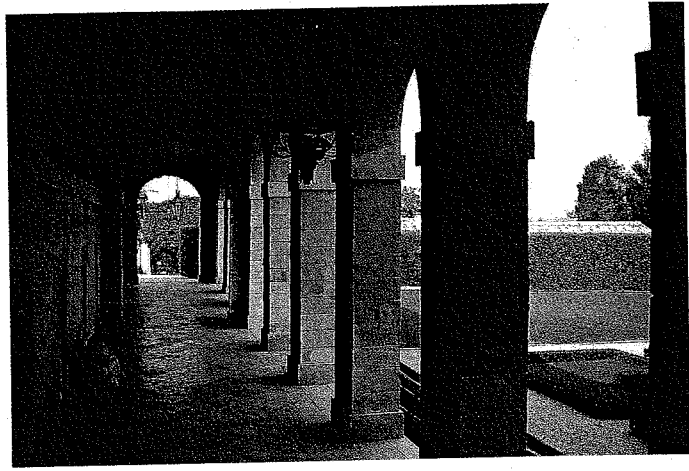


Figure 6.20.
Farmhouse in
the Veneto, 1981



rural building type, consisting of a rectangular hipped-roof block with a dovecote at its center, projecting above the main roof, and a tripartite plan, was typical of Tuscany and nearby areas. During the sixteenth century, Vignola invented an architectural type that was based on these vernacular elements (and used it for the two pavilions at the Villa Lante, among other places). It became common for landowners' houses during the seventeenth century, then reverted to vernacular usage, including as dwellings for farmworkers. The interaction was strong enough to "[illustrate] the difficulty of distinguishing between monumental and vernacular traditions in the countryside. . . . Because of the fluid interaction between the houses of owners and those of workers, neither can be understood without reference to the other."¹⁸

Henry Hobson Richardson and American Small-Town Architecture

The movement of ideas from architects to the vernacular is seen in the work of H. H. Richardson, who practiced in the decades after the Civil War. A formal inventor and a precursor of Sullivan and Wright, and often seen as the first genuinely "American" architect, he is famous for the use of continuous

surfaces and plastic forms.¹⁹ Buildings such as Trinity Church in Boston and the Crane Library in Quincy, Massachusetts, are powerful and still-admired exemplars of Richardson's mature handling of form and composition and of his role in the development of an architecture that began to depart from the surface styles that characterized the earlier nineteenth century.

Many American cities and towns, particularly those in which a lot of construction took place in the last third of the nineteenth century, have a solid building style, sometimes called "Richardsonian Romanesque," manifested in tens of thousands of buildings. It is characterized by stone walls that are thick or that appear to be thick; arched windows, in groups, separated by rounded stone mullions; arched door openings; rough-cut stone at the building base, at arches, and at other points of focus, such as belt courses. Most of these buildings are not as inventive as those done by Richardson himself, but they are visually pleasing and represent solid additions to urban streets. Even though the deeper architectural and spatial intentions of Richardson did not make it to these smaller towns, the material and stylistic ideas did.



Figure 6.21.
Richardsonian buildings in Yankton,
South Dakota



Figure 6.22.
Distribution of granite quarry areas in the prairie
states around 1890.

As the building height and density of downtowns increased in the prosperous decades after the Civil War, wooden structures were replaced with brick and stone. Architectural styles that made use of these solid materials were appropriate for marking a town's "coming of age." The materials were available: there were granite quarries in Colorado, South Dakota, Minnesota, Wisconsin, Missouri, and Texas, and limestone and sandstone quarries in most midwestern and Plains states. Large cities could afford to import stone from afar, while smaller places generally continued using local material. The railroad and improved communications systems allowed people and architectural styles to travel more freely from one place to another. The development of an architectural press, including new regional journals in such cities as Chicago, Minneapolis, and Kansas City, also helped this process along.²⁰

Hundreds of small-town architects used Richardson's buildings as precedents. This was sometimes done with simple repetition of elements and sometimes with a greater understanding of underlying design principles. Some of these architects had been apprentices in Richardson's office and then established their own practices in other towns. They began to get commissions from even smaller towns; John Hudson points out that "by the turn of the century, Richardsonian courthouses and building blocks were found in more than 150 prairie cities, ranging from north-central Minnesota to southern Texas."²¹ Ideas spread down to the smallest town in which civic leaders aspired to respectability, announced with a solid Richardsonian architecture. In the last decades of the century, Richardsonian buildings constituted an everyday vernacular that had made its way from Richardson's office to be copied, repeated, and transformed throughout the country.

The influence of Richardson even traveled outside North America: in Australia, for example, nationalistic fervor and the search for an Australian identity at the end of the nineteenth century led some to look away from England and toward a country that had broken its British connections. Richardsonian buildings, including ordinary brick warehouses, began to appear in Sydney and Melbourne—fully half a world away from Richardson's office in Massachusetts.²²

Antoni Gaudi, Le Corbusier, and Carlo Scarpa

Finally, even the work of twentieth-century architects, typically considered the most original, demonstrates how the vernacular moved "upward," into the realm of "architecture."

The work of the Catalan architect Antoni Gaudi is rightfully considered the product of a fertile creative imagination. His buildings are unusual and often fantastic: curved forms predominate, simple engineering techniques are employed to emulate natural forms, and richly colored tile is used extensively.

Yet his innovations also depended on the fact that he was deeply embedded in Catalonian building traditions. His father was a coppersmith. He was affected by the landscape around him, the "red earth, the shadowed furrows of its plowed fields, the vines and olive trees with their sculptural, contorted trunks,"²³ and also by the rapidly industrializing—and increasingly politically

assertive—society of Catalonia. The use of colored tiles had been introduced by the Arabs and was common in the eastern and southern parts of Spain. Stonemasonry and bricklaying had long traditions in the area, and Gaudi could design with models rather than precisely detailed drawings because he could depend on the skills of masons and bricklayers. The thin-tile vaulting that Gaudi used, which easily allows for the creation of complex curves, was (and still is) an accepted technique in Catalonia.

Le Corbusier was also influenced by the vernacular. The journal he wrote on his first trip to the Mediterranean makes it clear that he was looking at vernacular building with the same eye for form with which he looked at the great monuments. The formal essence of each was revealed equally, in a democracy of forms in which the courtyard of a tiny house could have as much meaning to him as a column of the Parthenon. Describing a house in a Bulgarian village, he writes:

Each house has its main room: a very large window, wider than it is tall and checkered with windowpanes, opens out on the trees and flowers of the garden, and because of the unique location of this town, the bold and brutal profile of the mountain and a yellow stream are framed in the geometry of the fenestration. These rooms are so small that the window takes up the entire wall, and a balcony is always hung, overlooking the avalanche of houses; this balcony is of fine woodwork, and the contours of the pillars and of the glaze brings to mind the exquisite niches of Islamic interiors. In this charming small space, the men squat on sofas and quietly smoke. They look like a Persian painting in a Moorish setting.²⁴

Le Corbusier looked at vernacular buildings in terms of their most basic, irreducible elements: thick masonry walls punctured by small windows; roughly finished surfaces; cubic building forms; high contrast between light



Figure 6.23. Casa Mila, by Antoni Gaudi



Figure 6.24. House from La Chaux de Fonds, Le Corbusier's birthplace, now in outdoor museum at Ballenberg, Switzerland

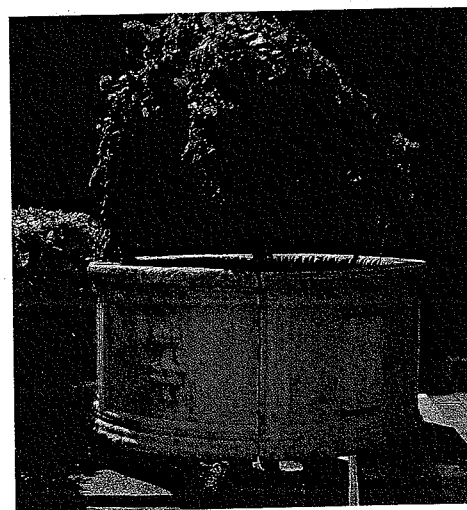


Figure 6.25.
Detail at Querini Stampalia
Museum, Venice,
designed by Carlo Scarpa

and shade. His own buildings were characterized by a high degree of inventiveness, but many also have a primitive aspect, including simple forms, rough surfaces, and direct juxtapositions of shapes and materials. These aspects of Le Corbusier's architecture were inspired and given justification by the vernacular architecture he saw on his trips to the eastern Mediterranean and North Africa.²⁵

Carlo Scarpa, the twentieth-century northern Italian architect, depended on the use of traditional building techniques of Venice within architectural compositions that rejected traditional order. While much modern architecture made a point of rejecting traditional techniques, Scarpa used them as the medium for his designs. In his project for the renovation of the Castello Vecchio in Verona, Scarpa worked on-site, developing details as the work progressed and consulting closely with craftspeople who were trained in the ancient Venetian ways of building.²⁶ Scarpa's strength was in detailing and using materials and in the clear articulation of different materials at joints.

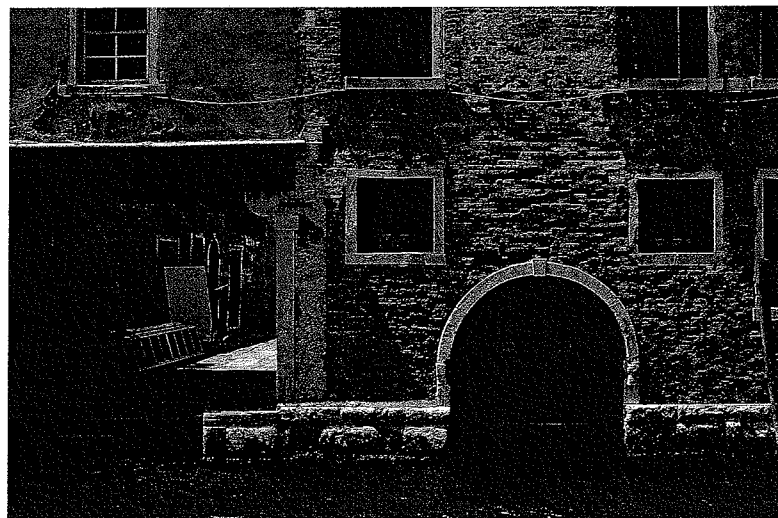


Figure 6.26. Building materials in Venice

Such articulation is typical of much traditional Venetian building, and Scarpa's details were both inventions and transformations of these traditional approaches to materials.

No strong boundary exists between the vernacular and the nonvernacular—all buildings are part of a continuous web in which such distinctions have little meaning. In traditional society, there was a continuity of building types—vernacular and nonvernacular alike—among the different situations within a culture and across geography. This web of building was maintained by a network of people who dealt with each other in the building culture, sharing knowledge and information, and who were in a position to put forward innovations when they were required.

Today's building cultures are not characterized by the kind of diffusion described in many examples in this chapter. As we will see, although much information is made available by modern media, the ability to easily apply and change this information is constrained by the organization of modern practice.

Ability for Building Types to Change When Necessary

In a healthy building culture, the people and institutions who are responsible for making buildings need to have the means to make and test changes as they are needed, without a great deal of hindrance. In much traditional building, this kind of change happened smoothly, if slowly. Before the medieval period, for example, many rural houses in England as well as in vast areas of northwestern Europe were single-roomed buildings that housed both people and animals. Over the centuries, this type became more differentiated. At some point a two-unit plan was introduced, with people in one unit and animals in the other. This plan remained linear, even when the

animals were moved out, into a byre of their own, and the people remained in a two-room dwelling: the ancestor of what we now know as the hall-and-parlor plan.

The plan had variants that were characteristic of different regions. In some places the entrance was at one end of the building; in others it was in between the hall and parlor. In some places the service rooms were separated from the main rooms by a cross-passage; in others the cross-passage did not exist at all.

Early versions of these houses were open to the roof, with no second floor—the height was necessary because there were open hearths on the floor. There is evidence that at some point when the fire was still in an open hearth, partial smoke walls were used and that, high up, smoke baffles in the position of the roof trusses, and originally the width of one structural bay, collected the smoke, sent it out the roof, and perhaps even formed a crude draft for the fire. Eventually this arrangement was transformed into the closed fireplace and chimney, as we know them today. As the medieval period progressed, it became fashionable for houses to get bigger and for the hall to be a large open room, high and open to the ceiling. This configuration persisted even as the rooms on either end of the hall might be ceiled over, with rooms above.²⁷

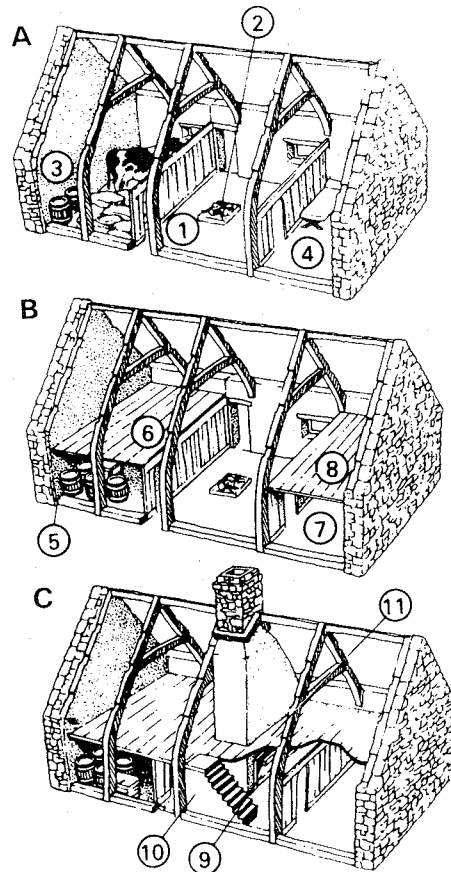


Figure 6.27.
The gradual transformation
of an open-hall house

The technological innovation of the fireplace and chimney allowed for a big change in the plan and organization of the house: once the open roof structure was no longer necessary for smoke, the second floor could be completely spanned for living space. This change was gradual. At first, a second floor would have been inserted into a hall that was built many years before. Eventually, second floors were built with the initial building, and the medieval open hall disappeared. Houses started to have full second floors, comprising a linear chain of two or three rooms, and this closer packing of rooms supported increasing building density in towns and cities.

In New York City during the nineteenth century, a different transformation, connected to the evolution of the English urban house but many generations away, led to the emergence of the tenement. At the start of the century, the party-wall row house, often on a 25-foot-wide lot, was the typical dwelling unit for many families. Like the related "terraced house" in England, it consisted of three or four stacked floors, each consisting of a major and minor zone: the major zone contained the rooms in a line, and the minor zone contained the stair and hall. For the middle and upper classes, such buildings held extended families, plus servants and perhaps other workers, such as apprentices.

Industrialization and the breakdown of the apprentice system forced changes in this basic unit, as many independent workers began to crowd the city. The single-family row house gradually evolved into the apartment house and then the tenement. First, individual rooms in single-family houses were rented to strangers and other families. Then, gradually, versions of the row house were built that had one or two independent apartments or flats on

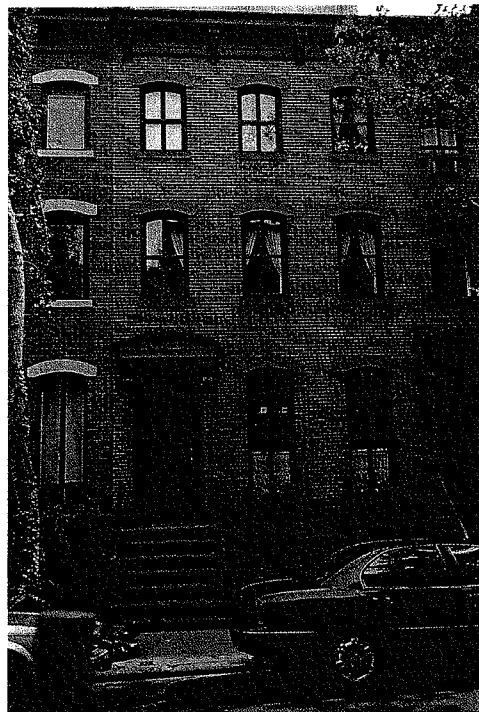


Figure 6.28.
Row house, New York City



Figure 6.29. Apartment house, New York City

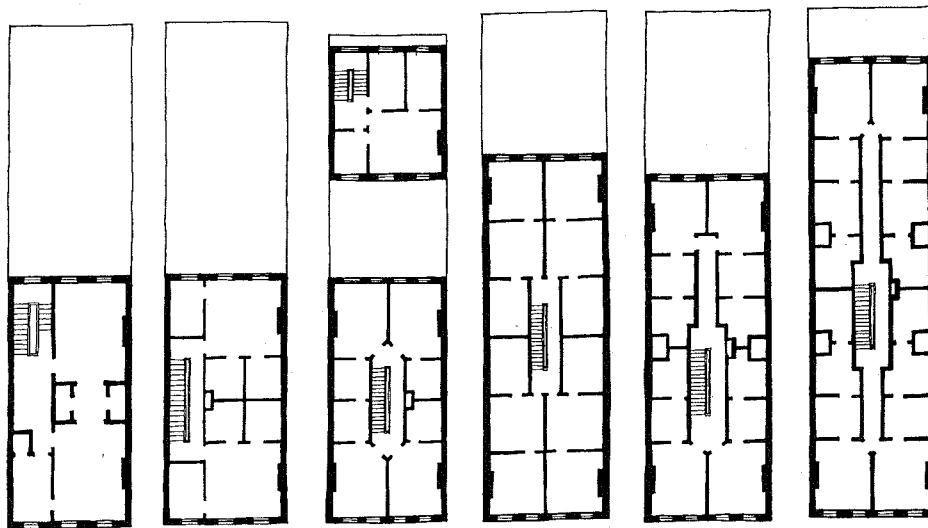


Figure 6.30. The transformation of the row house into the apartment house and tenement, New York City

each floor. In some cases the plan brought two units together, in a 50-foot-wide building with four apartments. Gradually, the row house evolved into the typical tenement and apartment-house plan, which served the needs of immigrants and workers.²⁸

In each of these cases, the building culture allowed these transformations to take place. Social need and building technology changed hand in hand because building craftsmen were readily able to make the relatively minor changes that gradually added up to a major typological transformation.

However, building cultures do not necessarily allow for needed innovations. Although the initial emergence of the tenement, which served real needs, happened relatively smoothly because the market easily provided for these needs, improvement of the type was enormously difficult. The miserable conditions caused by lack of light and air eventually forced the adoption of new laws to regulate tenement design, but these legal changes took years of social and bureaucratic effort in what had become a climate of rampant speculation.²⁹

Today, rigid zoning rules may prevent useful innovation. In many American communities, zoning does not permit such things as small accessory apartments, home offices, and other small businesses, such as child-care centers or mom-and-pop grocery stores. These needs come out of the changing nature of the population and work. However, it has proven almost impossible for such changes to be introduced within zoning laws that require a strict separation of uses—an example of how typological innovation that may have been natural in another time is prevented by the institutional structure of the contemporary building culture.³⁰

The persistence and diffusion of type, and the innovation of type, are two sides of the same coin. In a healthy building culture, *tradition* and *innovation* are not contradictory but complementary concepts. In both cases, building type is allowed to take on the most appropriate form. When change is not called for, then people's conservative habits simply allow existing building types to persist. When change is called for by new social or physical conditions, the culture does not prevent people's ingenuity to make change happen.

A smooth evolution of building type may be facilitated by a fine-grained network of players in the culture. Each player is able to apply individual discretion within a framework of overall cultural understandings. The emergence of Gothic architecture can be traced to a sequence of individual innovations by master masons dealing directly with buildings under construction, innovations that eventually contributed to a coherent style;³¹ many variations of the English terraced house plan were executed by many different builders during the nineteenth century;³² the development of typical designs for concert halls was the result of trial and error over many generations of building, where the designers of such buildings were intimately aware of the successes and failure of buildings that had been built before and of what new problems needed to be solved. In all cases, incisive judgment could be applied to the problem at hand.

Within the diversity of today's building cultures, the necessary delicate balance between tradition and innovation is not easy to find. There is a good deal of innovation in service of the financial bottom line, in realms as dis-

parate as the production of power tools, engineered wood products, and sheet materials; speeded-up methods of project delivery; and the use of computers in architectural offices and in complex construction operations. Innovations in the service of profit happen smoothly, and business firms that cannot innovate in these ways lose their viability.

Some degree of innovation is also visible in architectural practice, and in buildings themselves. There are changes in office design, responding to new forms of business organization; innovations in hospital design, responding to new ideas about healing; innovations in city planning, responding to calls for towns of human scale, in which the pedestrian is not overwhelmed by the automobile. But these innovations are much more hard-won. Today, noneconomic innovations are not so easy or smooth. They tend to require the participation of several institutions—not just a single company that introduces a new product and has the resources to push it through with respect to building codes and testing laboratories. The complexity and formality of institutions in the contemporary building culture may prevent the tentative and gradual introduction of innovations that was a hallmark of traditional building practice.³³

Appropriateness of the Rules Themselves

When the rules that are known and shared about buildings—the patterns and types, knowledge of craft techniques and commonly used building materials—are appropriate, there is a good fit between buildings and their context. As we have seen, such a fit does not happen automatically but is supported by the free movement of ideas and by the lack of inappropriate restraint against making good rules work. When rules are appropriate, they lead to everyday buildings that enhance culture and place and evoke strong positive feelings and deep affection toward them.

The characteristic of vernacular architecture that has been most thoroughly described is the close fit between buildings and human life—so close that it may become almost impossible to talk about one without reference to the other. Buildings and the way they are used are not “instrumental” to life, but they define it in a profound sense—and may evoke deep emotions as a result. Clare Cooper Marcus writes, “Home is not only a literal place but also a place of deep contentment in the innermost temple of the soul.”³⁴ Consider the simple Berber house, in which the division of space and the placement of every object help reveal basic understandings of men and women, day and night, nature and culture;³⁵ or the large English country house, which reinforced a complex social order;³⁶ or the American small town, with its familiar and well-loved shops and houses and schools; and even to some extent the Levittown house, which became gradually personalized and modified over the years. In all of these cases, the building or village and its particular typological configuration are essential and strongly felt.

The ability of architectural works to evoke real affection is not limited to very old or faraway buildings. But to a large extent, the prevalent building types of modern building cultures fail to connect people to their past, to their place, and to each other in a genuine way. They do not result in buildings that deeply touch us.



Figure 6.31. An American shopping mall, 1998

Certainly our buildings are *familiar*. We have a certain set of expectations about a shopping mall: we will be able to park our car when we get there; the mall will contain a few well-known department stores, many more smaller shops that are part of well-known chains, a few locally owned stores, a “food court,” and perhaps a movie theater, and plenty of daylight, along with temperature-controlled air. When we enter one of these places, even one that we have not been in before, it is familiar and we know how to behave in it.

This familiarity, however, is not the same as deep feeling. Consider a very common building type that has emerged in the last ten or fifteen years: the convenience store attached to a gas station. It emerged out of well-understood trends: faster American lifestyles, drivers’ decreasing desire to stop for a full meal, the changing economy of the gas station business. It can be considered a positive example of innovation.³⁷ To many people who are on the road every day, these places are useful, familiar, and expected. If they disappeared suddenly, we would miss them. But we would not remember them wistfully; we would not see “a part of our past” disappear as we do when our childhood home is torn down for a new development. Most people’s relationship to these places is functional rather than emotional.

This is true for many building types in modern society. Things work; society is not so chaotic that we can’t make our way on a day-to-day basis. We move efficiently from home to office to shopping mall, stopping occasionally to fill our tank and buy a cold drink. However, our relationship to most of the buildings we use is not an emotional one. These building types have a curiously abstract relationship to people’s inner lives. The idea of the building as an artifact that has affective possibilities is absent.

It is even questionable how well the functional aspects really work. From one point of view, a fast-food restaurant meets our needs perfectly: fast food, located just where you need it; cheap, predictable, clean, well lit; a place

Figure 6.32.
A convenience
store/gas
station, 1998



Figure 6.33. Rue du Jour, Paris, about 1925: architecture in the context of the building culture as a whole. Eugene Atget. *Rue du Jour*, c. 1925. Albumen print, 8 5/8 x 6 13/15". The Museum of Modern Art, New York. Abbott-Levy Collection. Partial gift of Shirley C. Burden. Photograph © 1998 The Museum of Modern Art, New York.

to sit, a place for kids to play. One cannot really argue with this list of needs, but it is also highly abstract and *explicit*. The needs are defined in very precise ways, and design solutions are developed partly as the result of actual human responses to proposed configurations, lighting, and color—and the profitability that comes from such responses. One mall executive said, “We totally redid the floors. We put in skylights, changed the facades of all the tenant spaces, and retented many spaces. The increase in sales has been considerable.”³⁸

When the whole building becomes purely an expression of abstract need and vehicle toward profit, and very little is left that connects people to a familiar past, there may be a large gap between the deep feeling buildings can arouse and the way they satisfy real or perceived abstract needs. The absence of deep feeling toward buildings is connected to the fact that decisions about the design of buildings happen in abstract ways: there is no strongly held image or goal to which decisions can be referred, so decision making itself loses an emotional center.

There are three issues with respect to the appropriateness of building types: first, the satisfaction of definable functional need; second, the satisfaction of undefinable but equally real functional need (the kind that historical continuity traditionally helped to ensure); and third, the familiarity of the building itself, whether or not it meets functional needs in various ways. Modern building types tend to satisfy needs that can be expressed in explicit and quantifiable ways but not needs that are more emotionally felt, that affect people in their hearts and memories.

The Importance of Shared Knowledge in the Building Culture

The continuities between “architecture” and “building,” and between buildings of different types, in different places, built by different people, are *necessary for the existence and success of all the buildings in a building culture*.

The story that is usually told centers around how ordinary building is not as good as it can be because it has no great architecture to draw on. It is the story of architects innovating, and of others copying their innovations. Indeed, much “ordinary building” depends on what is happening elsewhere in the culture, including what architects are doing.

But the story that is told less often goes in the other direction: great architecture depends on all the other building happening around it. The power and beauty of great works of architecture comes about partly because of the vast amount of experimentation that is done in the building culture as a whole; because of the techniques and materials that are made available by the building culture; because of the community of craftspeople who are available, competing with each other, and trying to make beautiful things.

The usual interpretation of the idea that great buildings emerge “within a tradition” is that it is happening within a tradition of architecture, where architecture is defined as narrowly as Pevsner defined it. *The point here is different. Great buildings emerge within a tradition of building, which often includes architecture.* Great buildings do not happen in an intellectual or material vacuum, and

architecture cannot be removed from the great volume of ordinary building that happens around it—and architects who aspire to great architecture cannot remain aloof from that building.

It is perhaps most accurate to say that the success of *any* building within a building culture depends on all the other buildings in the culture.

If the culture is functioning well, if knowledge is being shared and can be continuously improved, any building can be influenced by buildings and techniques in all different places within the culture, present and past. Most important, the ability of that building to evoke deep feeling ultimately depends on the health of the building culture as a whole.