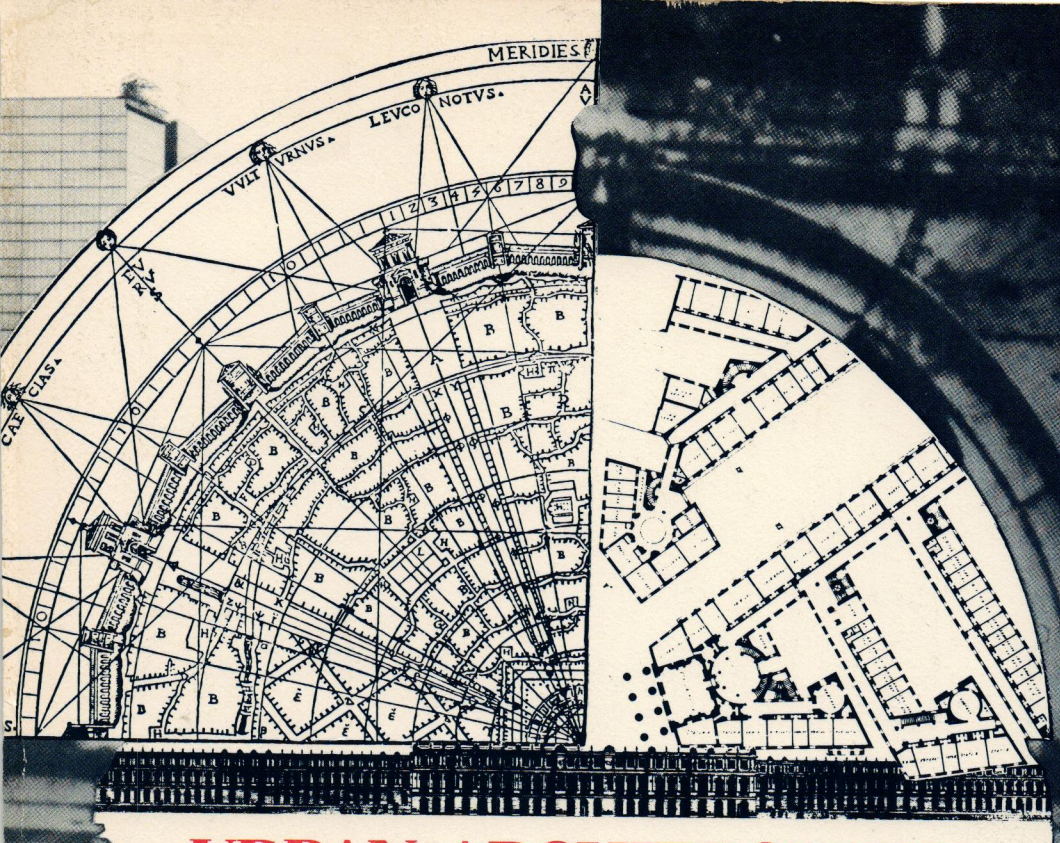
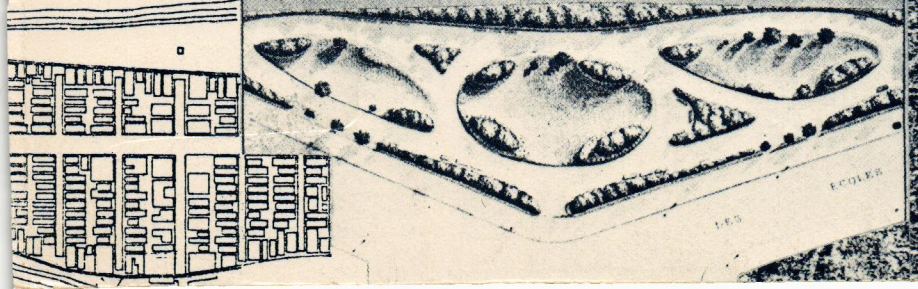
The Harvard Architecture Review

Volume 2 Spring 1981

URBAN ARCHITECTURE





Introduction
Urban Architecture

Architecture in Context
Brent C Brolin

The Lessons of Rome
Jon Michael Schwarting

The Harlem River Houses
James Sanders and Roy Strickland

Savannah's City Plan as Resource
Stanford Anderson

Streetgrids and Urban Variety
Paul Groth

The Context of the Modern City
David Handlin

Lowell: From Building to Architecture
Randolph Langenbach

Space, the American Mediator
Peter Smithson

The Asymmetrical Spine
William L Rawn, III

Symposium
"Urban Architecture: The Park Square Sketch Problem"

Project Documentation
International House, Westlake Projects, Notes on Buildings and their Parts
Ronaldo Giurgola, Architect

The Atheneum, Manchester Civic Center, Comments – Richard Meier

Book Review
Urban Space by Rob Krier

The Harvard Architecture Review

NEW YORK
20 AUG '87

Volume 2 Spring 1981

Urban Architecture

The Harvard Architecture Review is a publication of students of the Graduate School of Design, Harvard University, published by The MIT Press.

Editorial Board

Couper Gardiner, Editor

Jeffrey Berg, Associate Editor
Daniel Bernstein, Associate Editor
Stan Clauson, Associate Editor
David Drews, Associate Editor
Nathan Hoyt, Associate Editor
Reed Rubey, Associate Editor
Roy Strickland, Associate Editor
Ellen Watts, Associate Editor

Kerry Gardiner, Photo Editor

Design

Couper Gardiner, Designer
Nathan Hoyt, Design Consultant
M B Flanders, Design Consultant
James Smith, Production Assistant
Carl Stensel, Production Assistant

Thanks also to those who helped develop this Review.

George Cole
Tom Farrell
Jonathan Foster
Richard Rosen
Patricia Sapinsley
Deborah Shapiro
Susan Sills

The Harvard Architecture Review, Inc.

Board of Directors

Jeffrey Horowitz, president
Michael C Lauber, treasurer
Barbara Jean Gilbert, secretary
Couper Gardiner
Urs Gauchat
Eduard Sekler

Legal Counsel

Kent Davy, Harvard Advocates for the Arts

Administrative Liaison

Billie Bott

Special thanks to Gerald McCue, Dean, Harvard Graduate School of Design, for his continuing interest and encouragement.

Thanks to Chris Hale, Frances Loeb Library, for his generous assistance in research efforts.

The editors encourage the response of our readers to the material presented herein, for publication in subsequent issues.

Send editorial correspondence to: Editors, The Harvard Architecture Review, George Gund Hall, 48 Quincy Street, Cambridge, MA 02138

Send orders and business correspondence to: Journals Department, The MIT Press, 28 Carleton Street, Cambridge, MA 02142

In the United Kingdom, Continental Europe, the Middle East and Africa, send orders to: The MIT Press, Ltd., 126 Buckingham Place Road, London SW1W 9SD England

The Harvard Architecture Review is published by The MIT Press, Cambridge and London, for The Harvard Architecture Review, Inc.

Copyright © 1981 by the Harvard Architecture Review, Inc., and The Massachusetts Institute of Technology
All rights reserved
Printed in the United States of America

ISSN 0194-3650
ISBN 262-15069-7

The code at the bottom of the first page of each article in this journal indicates the copyright owners' consent that copies of the article may be made for personal or internal use, or for personal or internal use of specific clients. This consent is given, however, on the condition that the copier pay the stated per-copy fee through the Copyright Clearance Center, Inc., P.O. Box 765, Schenectady, NY 12301, for copying beyond that permitted by Sections 107 and 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale.

Edition: 3,000

Typeface: Bodoni

Paper: 80 il. S.D. Warren LOE, supplied by Lindenmeyr Paper Company
Cover stock: 12 pt. Carolina coated
Printing and binding: Rae Publishing Company

Paper: 80 il. S.D. Warren LOE, supplied by Lindenmeyr Paper Company

Contents

Volume 2, Spring 1981

4 **Introduction**
Urban Architecture

10 Architecture in Context:
Fitting New Buildings With Old
Brent C Brolin

22 The Lessons of Rome
Jon Michael Schwarting

48 The Harlem River Houses
James Sanders and Roy Strickland

60 The Plan of Savannah and Changes of Occupancy During Its Early Years:
City Plan as Resource
Stanford Anderson

68 Streetgrids as Frameworks for Urban Variety
Paul Groth

76 The Context of the Modern City
David Handlin

90 From Building to Architecture:
The Emergence of Victorian Lowell
Randolph Langenbach

106 Space is the American Mediator, or the Blocks of Ithaca: A Speculation
Peter Smithson

116 The Asymmetrical Spine:
A Generator for Design
William L Rawn, III

128 **Symposium**
"Urban Architecture: The Park Square Sketch Problem," sponsored by the *Review* November 1978

Project Documentation

162 International House, Philadelphia, Pennsylvania; Westlake Projects, Seattle, Washington; Notes on Buildings and their Parts –
Romaldo Giurgola, Architect

176 The Atheneum, New Harmony, Indiana; Manchester Civic Center, Manchester, New Hampshire;
Comments – Richard Meier, Architect

188 **Book Review**
Urban Space (*Stadtraum*) by Rob Krier

Urban Architecture

Introduction

The city at once attracts and repels architects. Here their grandest ambitions evolve as a challenge to the designs of succeeding generations, and here indeed rise their grandest projects. Here architects confront the aggregate of the city's expressive power; but here they also face the mass of social, political, economic, and technological requirements that make great urban architecture so difficult to achieve today.

If the city accommodates and encourages architects' creativity, it resists their modern era impulses toward clarity and reform. Functional and visual poverty persist in part because the city grows from forces beyond architectural control. The graceless environment that these often conflicting forces engender seems to persist despite architects' considered attempts at their resolution, running the gamut from design review boards to proposals for entirely new, ideal urban forms (whose conceptual purity often leads us to question the validity of the less comprehensive approaches).

Many promising social visions have emerged for cities, but the awareness that cities also focus our society's ills forces those architects who choose to work in cities to accept the responsibility for many non-aesthetic aspects of urban work as well as the more glorified, aesthetic ones. Threats to the environment and unacceptable environmental conditions brought on by urbanization served to initiate standards of light, air, and plumbing as architectural design criteria. The potentially dangerous impact of high population densities on human behavior and the individual human psyche similarly led architects into the social sciences debates of the fifties and sixties. The contemporary need for architects to apply their organizational and image-making skills in the context of such political and economic urban puzzles as overlapping governmental jurisdictions – between cities and surrounding metropolitan areas over the allocation of tax revenues, or between cities and the federal government over incentives for private development and mass transit – seems to require that architects also serve a bureaucratic function. Architects may be uniquely trained to make tangible the intentions of a society, but, as practitioners, they are forced to confront those areas which, although they were traditionally near the limit of the architect's purview, are now inextricably related.

Architects have been charged traditionally with

ordering the physical environment. So, until recently, such monumental organizational tasks as the generative design of an entire city were conceivably architectural problems bearing architectural solutions. Now architects have both retreated from their past confidence in this area of urban design and advanced in others. Architects have claimed areas whose problematic complexity requires the abilities of the same multitude of disciplines as city-scale work but whose resolution does not threaten the city's fundamental form or character.

"Urban Architecture" has been chosen as the theme of this volume of *The Harvard Architecture Review* because of the renewed and widespread concern with cities not only from architects, but also from historians, preservationists, and the public. The very diversity of recent developments in cities suggests the validity of the general concern. It is in the city that architects accept the challenges of incremental change, that preservationists discover and protect the riches of a culture, and that an increasingly sophisticated public reacquaints itself with the pleasures of urban life. Specific changes in attitude have contributed to this new examination into the character of urban design.

- Mass transit and city living are now accepted as intelligent responses to the interest in energy conservation.
- New academic and professional programs in urban conservation and preservation have appeared in schools of architecture and planning, accompanying the decline of the Modernist principle of wiping the city clean.
- The spontaneous, popular, back-to-the-cities movement has inspired architects to create inviting and enjoyable urban environments once again.
- Cities which were discussed as irreparably decayed and unlivable just a short time ago have emerged as great resources and are now perceived as the locus of architectural quality and history.

By isolating issues relevant to city building, the *Review* expects to contribute to the current exploration of the city. As constituent elements of an exploratory document rather than a polemical tract, the articles in this *Review* reflect a diversity of architectural and critical approaches to urban matters. The contributing critics, historians, and architects express both divergent solutions to similar concerns and, paradoxically, similar conclusions developed from divergent perspectives. It is a variety that underscores the richness of the contemporary discussion of architecture and urbanism and that suggests that ours is a remarkable period, when individual perception and insight may contribute to the complex urban landscape without submitting to the strictures of any single architectural style or critical method.

Although the articles in the *Review* do not speak with a single voice, they do, overall, reflect a shift among theorists, practitioners, and historians away from the more "universal" views of urbanism that have prevailed since the 1920s. Architects have rejected a reductivist – and elusive – vision of towers in parks, "machines for living," and ribbons of highways that, combined, were to replace the varied forms of urban livelihood with a homogeneous "international style" of living. Today most architects recognize the necessity of repairing the damage of decades of antagonism toward the existing form of the city, and we, the editors, wish to indicate the directions in which this repair is proceeding.

Throughout the *Review*, the authors look to the existing city for its lessons: the city, time tested – though also time worn – is readily accessible. In so doing they free themselves not only from the largely self-imposed obligation to generate a new life for the city, but also from the consequence of that necessarily statistically based activity: the design of the city primarily as an abstraction.

Lessons in urban architecture, the authors demonstrate, lie all around us. From Renaissance Rome to nineteenth-century Chicago skyscrapers; from the spaciously gridded towns of the American Midwest to the thickly molded masonry that frames the streets of upper Manhattan; remarkable opportunities are available to the architect to develop an urban architecture of both order and diversity, responsive to variables of the city's street configuration, building density and character, open space, and community and private life.

We should study, interpret, and put to use the multiple variations, the sometimes nearly imperceptible differences in urban form and architecture, from city to city, block to block, and building to building that can make our work one of deepening focus. For small-scale instances, consider

the ornamental and territorial relationships of a house's front door with its garden, or the special quality and meaning of a well-framed view from a city window. Within a larger context, look at the complex bonds between the city's public infrastructure and the myriad personal additions of landscape and architecture made by the city's individual residents and builders.

This issue of the *Review* is not a call for replication or revivalism. Rather this *Review* describes the roles architecture plays in sustaining city life and calls for the architectural provision of what contributes to that life: order and individualist spirit; unalterable beauty and change, for instance, which are essential but intangible; and objective or spatial constructions like commercial buildings and streets. As the synthesis and transformation of these essentials of city life, architecture is evolving while remaining rooted to demonstrated, viable, urban traditions. This is the legacy of architects like Richardson, Furness, Olmsted, and Sullivan, whose work engaged their host cities' traditions while remaining strong and personally expressive.

With several decades of Modernism behind us, we are seeing that it is time to return to the city with fresh eyes, to moderate our tendencies toward clarity and reform, our preoccupation with the notion that the times are particularly desperate and chaotic. Our lives – and the lives of the cities in which we live – are becoming all the better for our renewed appreciation of the abundance of urban architectural opportunities and because we have equipped ourselves to confront the similar abundance of urban challenges.

Approaches to Urban Architecture Reconsidered

Architects throughout the world are finding new impetus to search for appropriate urban architectural precedents, for forms, processes and ideas from architectural history, theory, and practice, that rise above the generating context of a specific program and locale to inform designers regarding concerns that continue to be essential in the time and place at hand. These precedents range in scale from that of a single building to that of an entire city. They range in time, too, from contemporary innovations to those solutions to architectural problems that endure despite technological advance.

Together, these forms, processes, and ideas are seen to have a renewed potential for endowing today's urban architecture with a legitimacy absent from the architecture of the recent past. The basis for this legitimacy may lie in the strengths of two contrasting approaches: one that is analytic in nature and another that is synthetic. The first involves applying the rigors of Modern architecture to the complex functional and aesthetic relationships of typically dense urban developments. Urban architectural problems exhibit a complexity which invariably requires the architect to resolve each complex problem into a number of simpler, more approachable ones. This simplification process identifies functional groupings within a given situation that need architectural support, and it results in, for instance, concepts of "public space," "private space," "circulation space," and "utility space."

Another approach, recently revived, involves drawing on a store of architectural designs which are classified according to plan or volumetric gestalts. The eighteenth and nineteenth centuries employed notions of building-use type that approximate this method. However, the current appeal of this typological approach is that it recognizes as viable formal precedent that architecture which may or may not be related by use or accepted form to a contemporary architectural situation, but which at least allows for the possibility of the contemporary activity. And, as the very process of classification by gestalt necessitates the uncovering of a design's inner and essential character, this method also constitutes a legitimate approach to functional problems.

A method that combines functional "zoning" and the idea of "types" should be attempted as well. The positive qualities of such an integrated method, based on the strengths of two formerly orthodox approaches, could both resolve chaotic situations and assure appropriate meaning for what results. While the former method could enable architects to cope with the obligations of an involved program, the latter suggests the possibility of unifying architectural organizations which possess inherent character. The former also provides a model for a

design process that copies as well with architectural chaos in cities as the latter copes with the emptiness of content and spirit that often accompanies such chaos. Certainly the presence in today's cities of these urban architectural demons – chaos and emptiness – argues for such a comprehensive, yet humane, design approach.

The Articles

For the purposes of this introduction, it is useful to consider the articles as being divided into three overlapping approaches within the search for particularly suitable precedents as described above: one approach that emphasizes historical continuities; one derived from sources outside of architecture as conceived in its traditional sense; and one growing from an appreciation and analysis of urban space.

Several of the contributors view the city as a continuously evolving composition, as a place where architects use the rich experience of their ancestors as the basis of their designs. Theirs is, broadly defined, an historical approach.

Jon Michael Schwarting discusses Rome as the multiple layering of architecture, urban space, and landscape in response to historical, political, and religious influences – as a repository of urban planning ideals which are accommodated to specific contexts. In each case with which Schwarting deals, whether it be the object-like quality of the Campidoglio or the city-texture-generating character of Campo Marzo, we are able to extract the fundamental organizing principle, to perceive a vision of the place which transcends the particular building or space that exists there in fact. Schwarting's article depicts the city as a dialogue between the order of ideal architectural visions and the struggle among the many other generators of city form.

Engaging tradition and design at the level of the individual building, Brent Brolin argues for the use of existing neighborhood forms, scales, and characteristic ornament in new architecture. He advocates a revived approach to creativity: "De-emphasize the cruder variety – originality through novelty – and stress refinement within the aesthetic confines of the visual context, whether that is modern or traditional."

Roy Strickland and James Sanders discuss the success of the Harlem River Houses, the nation's first federally subsidized public housing, in terms of its synthesis of historic New York housing-reform ideals and the traditions of New York tenement and street life. A combination of Depression-era pragmatism and Modernist idealism, the project is an inviting balance between precedent and innovation.

Each of these three articles lends insight into the making of urban architecture that is successful in expression and resolution of the tension between the architect's urge for creativity, his appreciation for history, and the complex demands of his building's urban site.

There are many non-architectural aspects of city life – past *and* present – that nonetheless influence urban architecture. Several of the authors emphasize them. Politics is an important determinant of city form that Schwarting, Strickland, and Sanders discuss, but it is one that falls, traditionally speaking, outside of architecture. Economics and physical city planning are others. Coming to terms with these vital concerns of city dwellers must be a primary task for any urban architect.

Stanford Anderson and his students at MIT are studying Savannah, Georgia, and the interdependent relationship of the physical city and its inhabitants. The city plan is seen as a functional framework for the inhabitants' current use as well as their future development. The plan accommodates various patterns of use, yet it is neither an organization devoid of life and character, easily reshaped by the residents, nor is it socially deterministic. Anderson carefully explains this "possibilist" characteristic of the Savannah plan and in so doing develops a basis for conjecture about American cities in general.

Advocating that architects take advantage of existing block and lot characteristics, Paul Groth presents important information about the city grid as an element of urban geography. The use of grids has moved in and out of favor throughout architectural history. But instead of stressing the use of the grid

as a formal system, Groth exposes the grid's significant role in creating urban character: the subtle differentiations within grids, even the meaning of street names helping to order the complexity of the gridded cities of the United States. Reacquainting architects with the proper use of the grid, Groth suggests an urban architecture that embodies the street, its hierarchies of public and private space, and the varying building forms which give the gridded city its spatial quality.

David Handlin stresses the positive qualities of city change as a response to both technological achievement and socio-economic developments. He points, for example, to George E Hooker, an early twentieth-century Chicago planner and social reformer. Seeing the advent of an improved city life in the integration of technology and the city's physical structure, Hooker practiced a design approach based on both pragmatic and social concerns. But his role in the development and criticism of the 1909 Chicago Plan suggests his interest in aesthetic matters as well. Handlin not only adds to our appreciation of Chicago's prominence in architecture's evolution as a multifaceted discipline, but he also aids our understanding of the many forces that shape and strengthen the modern city.

The notion that architecture often embodies the spirit of the age which produced it is well accepted. Thus the use of architecture as a cultural artifact is promising territory for architectural inquiry. Randolph Langenbach interprets the social history of Lowell, Massachusetts, in these terms, examining its industrial, "new town" architecture as well as the civic architecture of later years, when Lowell had developed both community spirit and industrial competition.

The *Review's* articles also express the notion that urban space is a vital element of urban form. Schwarting, for example, considers Rome a city whose dominant features are open spaces – *piazze*, *cortili*, and streets – in a setting of dense building. By contrast, Peter Smithson, in the first published article related to his work on American space, has looked at American cities and finds their dominant pattern to be one of isolated buildings and intervening open space. In America, Smithson maintains, open space assumes the functions of those physical elements of the traditional European city that act as spatial mediators. Smithson develops the thesis that "interval" or "distancing" is the language of American urbanism: in American cities, there are streets, to be sure, but mostly there is space.

Recognizing that the architecture of streets is essential to urban architecture, William Rawn investigates the architecture of "asymmetrical spines" – generically, forms of various sizes of street-like spaces that act as armatures for construction and activity. He cites clear examples of both successful and unsuccessful urban spines and then studies the effects of their characteristic elements. Together, the examples and analysis provide a model for such a morphological inquiry.

The discussion of urban space continues in the presentation of several urban projects by Richard Meier and Romaldo Giurgola which the editors feel exemplify particularly positive efforts.

Richard Meier explores urban architecture of both street space and open space. His Atheneum for New Harmony, Indiana, rises as a distinct object in the flat, Midwestern landscape – like its neighbors. But in Manchester, New Hampshire, his downtown urban renewal scheme explores a morphological type in which the relationship of building and exterior space is reversed: here the building wall is a generator of street space. Different contexts suggest different architectural forms. Meier writes that in both projects his particular blend of Modernism *does* respond to the context, if not in the site-specific way Brolin would prefer, then in a broader sense that includes the historical and metaphysical contexts in which a project may be seen to exist. Meier, as a more orthodox contextualist, would "make the building in such a way that it recognizes and responds to its surroundings and invites a reciprocal involvement."

The results of Meier's efforts may be compared to two projects by Romaldo Giurgola that also *recognize*, *respond to*, and *involve* the surrounding city fabric by integrating public and private space. In his commentary, Giurgola provides conceptual support for these positive site relationships that he has designed. He describes architectural "itineraries" and "parts" which "represent the present, that which is tangible, directly perceivable

and real in a metaphysical sense." Giurgola engages contemporary architectural concerns in the Philadelphia International House and the Westlake projects in Seattle, but in going further and including realms beyond the physical, he also appears to seek enduring architectural approaches.

A Renaissance sensibility integrates both the contemporary and the timeless in Giurgola's projects. While his work is especially close to Rome with its courts, *piazze*, cascading stairs, and high walls, the simplified means of expression he uses throughout the Seattle projects ties the work to the present. Giurgola's Seattle projects thus attempt a comprehensive solution; in this sense they are one architect's response to many of the concerns expressed in this volume of the *Review*, a specific blend of appropriate urban forms, processes, and ideas: notions of urban space, contextual accommodation, and – with Seattle's monorail coursing through the center of his site – the adaptation of late twentieth-century technology to an historic city fabric.

In addition, David Drews discusses Rob Krier's recent book, *Urban Space*, as a critique of American city planning.

Thus far, the *Review* has been able to share the benefits of its editorial discussions not only within Harvard's Graduate School of Design – through staff roles – but also within the New England region through two public events. For the second such event, the editors brought together twenty-five student volunteers and eight practicing architects and critics. This group cooperated in a variety of relationships, in first preparing documentary material for a potentially valuable but currently decayed area of downtown Boston, in developing architectural proposals for this area, and finally in presenting them in a public forum.

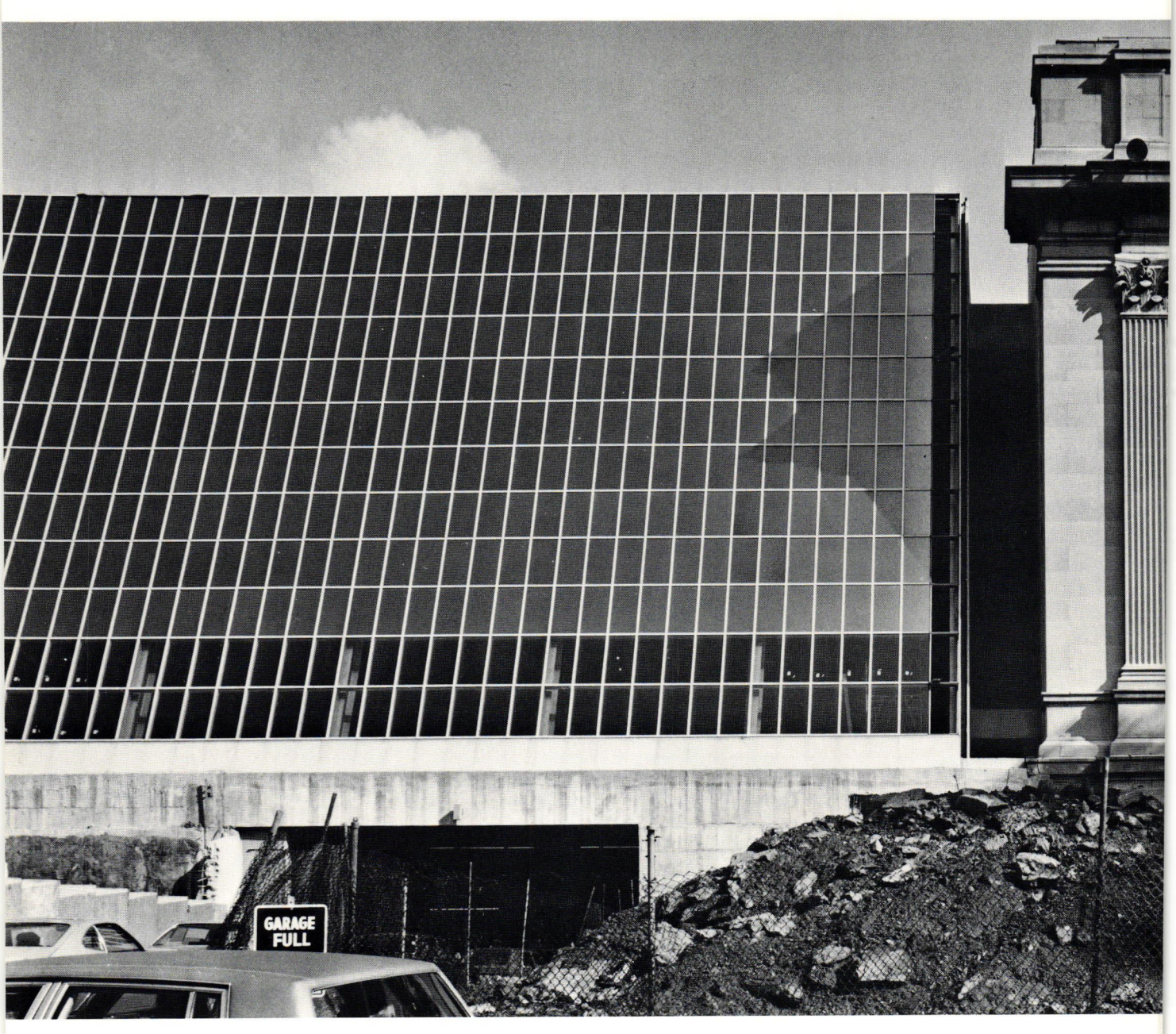
The significant results of this "Symposium" are presented in this *Review*. The text has been carefully excerpted and edited in order to preserve intended meaning, and the criticism has been reordered so as to appear with the project descriptions.

Many persons have been generous in their encouragement and participation in this project and have been patient in the long period since this *Review's* conception. We are deeply grateful to these friends, and we hope that the synergism of our associated efforts benefits them in their turn – as it has benefited us already.

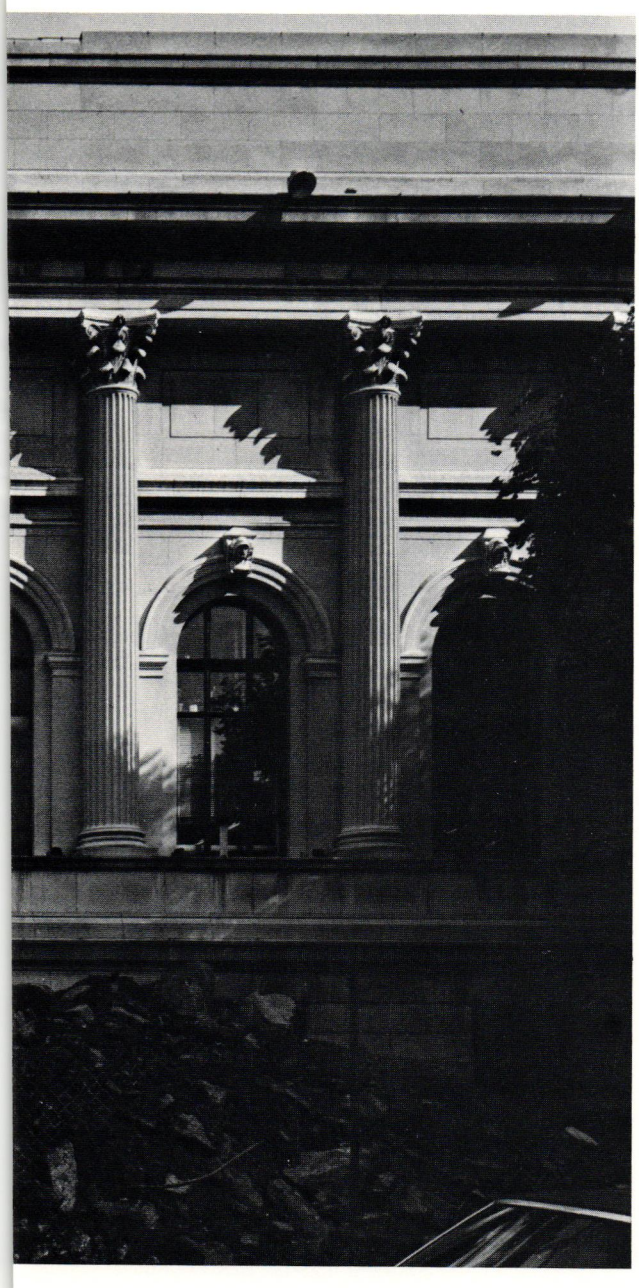
Architecture in Context

Fitting New Buildings With Old

Brent C Brolin



1 (right) South Wing of the Metropolitan Museum of Art, New York. McKim, Mead, and White, 1906. (left) Addition to house the Michael C. Rockefeller Collection of Primitive Art. Kevin Roche, John Dinkeloo Associates, 1978



Contrast: The Modern Way

Nearly seventy years ago the leaders of the Modern Movement advocated a cataclysmic break with tradition. For the first time, a new architectural style was proposed which intentionally bore no traces of the past. As a result, the new architecture automatically and invariably *stood out from* its man-made surroundings rather than relating to them sympathetically. *Contrast* became the only acceptable relationship between new architecture and old (Figure 1).

It has often been said that technical innovations and the unique needs of our times were responsible for these new architectural forms, but the support for this point of view is frail. The Franciscan Monastery in Washington, D.C., is traditional in form but modern in materials – decorated, reinforced concrete cast in place (Figure 2). On the other hand, many "modern looking" buildings were built of traditional stucco (Figure 3). As for new functions requiring new forms, the skyscraper is one of the few unique twentieth-century building forms, yet, as we know from the Woolworth Building, it can be "gothic" as efficiently as it can be modern.

Some Advantages of Contrast

This does not mean that all architectural contrasts are bad. Churches, civic buildings, corporate headquarters and other monuments have special significance and rightly stand apart from their surroundings.

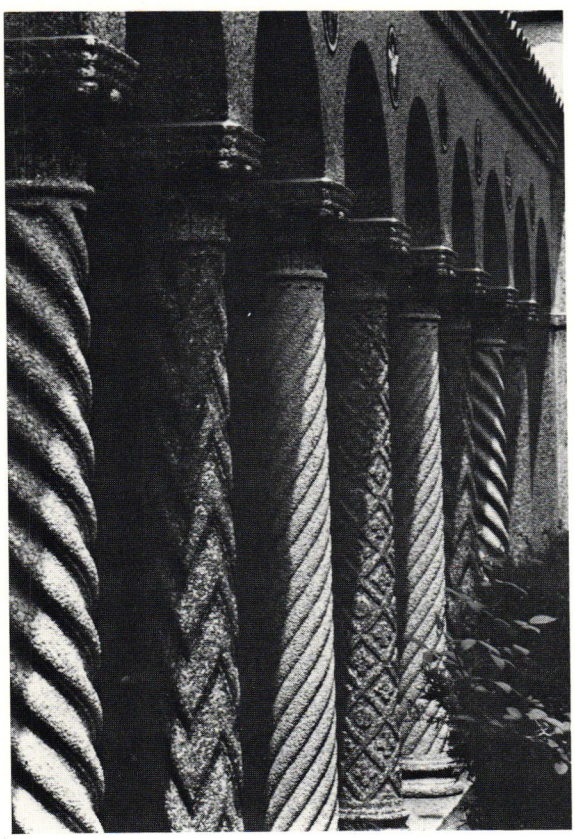
The shock effect of such contrasts can also be refreshing in other than monumental buildings. However, as the number of contrasts increases, their effectiveness decreases. Too many contrasts mean visual chaos, and that is the present state of many streets which, before modern architecture, had a consistent visual character.

Contrasting new and old has a special appeal to some designers: it advertises. People know the building was architect-designed. If a building fits into its surroundings quietly, without calling attention to itself, who will know it was designed by a "creative" architect?

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010010-12 $3.00/0. © 1981 by Brent C. Brolin

2 Detail of cloister, Memorial Church and Monastery of the Holy Sepulcher, Washington, D.C. Aristides Leonori, ca. 1925. Built with modern reinforced concrete construction techniques

3 Addition to the Banacerraf house, Princeton, New Jersey. Michael Graves, 1969. Built with traditional stud wall construction



2

3

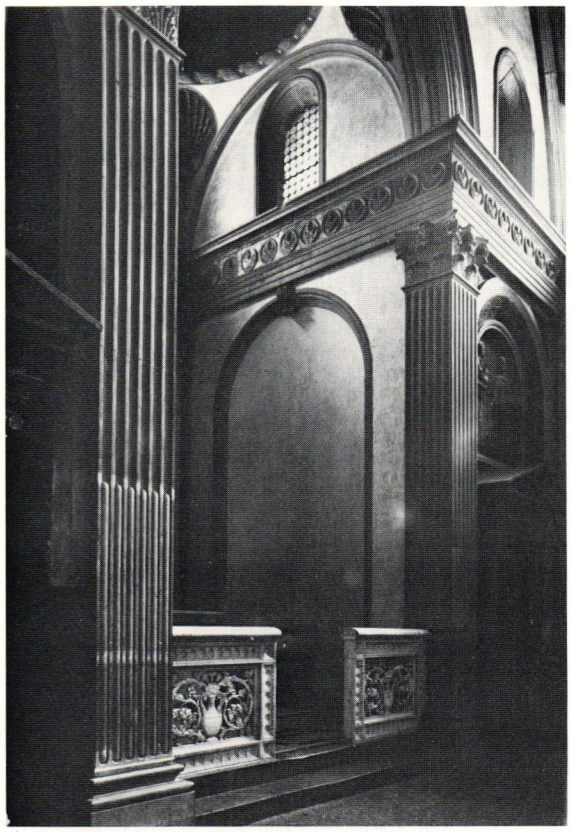
Contrast also avoids the often difficult design dilemma of how to fit a new building into an existing context. This was a simple question of aesthetic judgment before Modernism instilled the fear of history. Now it takes on frightening psychological dimensions; architects suffer horrible feelings of guilt if they have real sympathy for non-modern contexts. To be required to relate their new building to an existing context can cause considerable anxiety. And it often results in a flat refusal to do anything: "Then find another architect!" is the standard response. This is an unfortunate state of affairs for one of the service professions.

I have found that visual continuity is almost always an important part of the places which I feel are beautiful – whether it is the center of a modern city or an old European town. Visual continuity *does not mean* stylistic homogeneity. It means the "sense of place" which evolves when each new building is sensitively related to its surroundings.

We in the United States are perhaps less attuned to this problem because we are used to seeing cityscapes which are visual jumbles. Post-war affluence has created many of the same problems in Europe. Streets in which Gothic, Renaissance and Art Deco buildings once stood together harmoniously have been destroyed by hostile modern buildings, inserted without regard for the dignity of their neighbors or the character of the place.

Earlier Attitudes towards Fitting New with Old

Most people under the age of sixty know nothing but the philosophy of architectural contrast. Therefore, it is not surprising that many assume that architects always worked this way. Not so. The *programmatic* disregard for context is a contemporary aberration growing out of Modernism's anti-historical doctrine of "the spirit of our times." This declares that our age is unique and that our architecture must reflect this. Any formal interpretation of "our" times is, of course, a very personal matter, and architects do not subject the choice of these characterizing forms to a straw vote. The majority of Americans have chosen to live in suburbs, and certainly have a different perception of "our" times and what architectural forms should define them than the Modernists. Yet while Modernists referred to the times as "our," the



4

5

4 Old Sacristy, the Church of San Lorenzo, Florence. Filippo Brunelleschi, 1421–28
5 New Sacristy, the Church of San Lorenzo, Florence. Michelangelo, 1521–34

decision as to which forms were to characterize them was always "theirs" – the architectural elite's.

The doctrine of the spirit of our times, still widely held by professionals, is based on an erroneous assumption that, because today's society differs in important ways from that of the pre-industrial world, we must necessarily abandon all emotional and cultural ties to the preceding three thousand years of cultural development. This is a little like asking children, once they have achieved legal age, to ignore any emotional or intellectual attachments they might still have to their parents.

Before "our" times, designers seem to have gone out of their way in the opposite direction, to make harmonious additions to the streetscape. To be sure, this did not always happen, but it happened often enough that it seems to have been an accepted way of designing. I offer two historical examples which fit sympathetically into their surroundings. The first is by Michelangelo; the second by anonymous architects and builders whose work spans several centuries.

Old and New Sacristies
The Church of San Lorenzo, Florence

"He wanted to execute the work in imitation of the old sacristy made by Filippo Brunelleschi. . . ."[1] Georgio Vasari was referring to the New Sacristy in the Florentine Church of San Lorenzo, designed by Michelangelo a century after Brunelleschi's Sacristy had been completed (Figures 4, 5). Michelangelo solved the problem of linking new and old with a singularly rich mixture. Unquestioning respect for the old is immediately apparent, but so too is the fierce originality of the new.

Michelangelo used the same contrast between light stucco walls and darker pilasters, entablatures and archivolts. This connection is so powerful that it allows us to accept the remarkably different architectural forms which he then introduces; for the initial impression of direct correspondence between old and new is deceptive. In fact, only the lower pilasters are repeated in a near-original form.

The rope molding of the dome over Brunelleschi's

[1] Giorgio Vasari, *Lives of the Artists*, translated and edited by George Bull (Baltimore: Penguin Books, 1968), p. 366

6

7

altar and the enriched torus moldings of the main arch and entablature have been drastically simplified in the New Sacristy. The shell ornament in the altar pendentives has been reduced to plain circular moldings and the low relief sculpture is omitted entirely, focusing attention on the tomb figures. The traditional architectural forms of Brunelleschi's niches and doorways are replaced with unique creations which astonished Michelangelo's contemporaries.

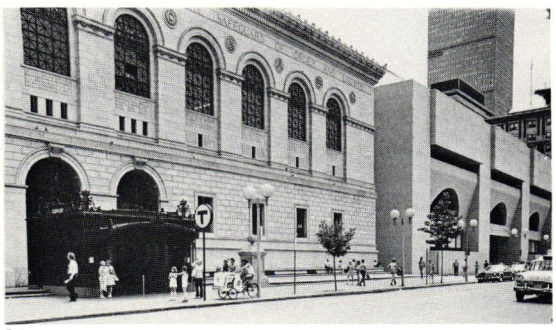
This is a brilliant "imitation" of the *feeling* of the Old Sacristy. Yet it is carried through with such inventive virtuosity that it becomes the exceptional architectural experience, a work simultaneously rich in tradition and newness.

Dutch Street, Haarlem

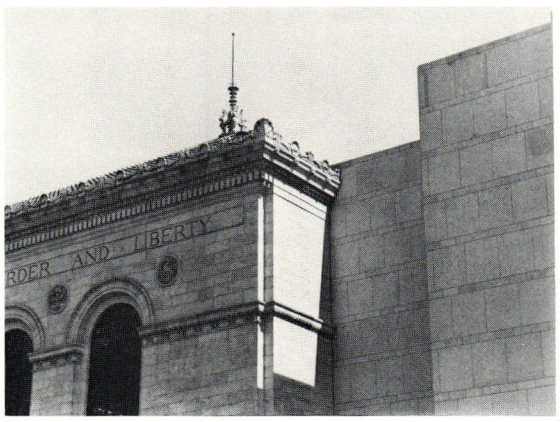
Streets such as this one are visually unified yet still offer surprising variety (Figure 6). Gothic, Renaissance, Baroque, nineteenth- and twentieth-century styles stand graciously side by side with considerable differences in cornice heights, roof silhouettes, window shapes, and details. There are six different kinds of windows in this photograph, and such variety is the rule rather than the exception. Visual continuity obviously does not depend on stylistic conformity. Modernists have already said that we need not copy, but what they did not tell us was that fitting in does not necessarily depend on such presently accepted guidelines as mimicking facade proportions or maintaining the cornice height, silhouette, etc. This is apparent when a sympathetically proportioned modern facade is inserted in a similar Dutch street (Figure 7).

It is clear that the small-scale detail resolves many of the larger-scale differences on this street. The most important element is the ubiquitous white trim outlining windows and highlighting cornices, dormers, brackets and other details. Its overall richness allows the street to absorb substantial variations that would otherwise be disruptive, including changes in style, color, materials, and building heights.

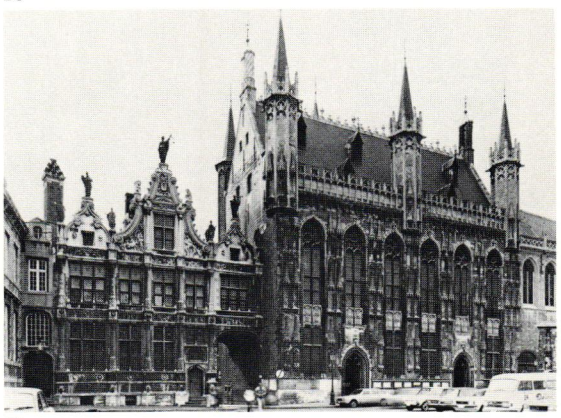
Early Dutch Modernists recognized the healing power of this trim, and many potentially awkward buildings of that period owe their limited success at



9



10



11

8

6 Street, Delft. Buildings from several periods (dates unknown)
7 Modern building, Zwolle, Holland (ca. 1960s)
8 Vroom & Dreesman Department Store, Haarlem. Jan Juijt, 1937
9 Boston Public Library. McKim, Mead, and White, 1887. Addition. Philip Johnson, 1971
10 Detail of Boston Public Library
11 (right) Town Hall, Bruges. 1376–1420; restored 1853 and 1959–62 (left) Old Recorder's House. 1535–37

fitting in to the continuing of this tradition (Figure 8).

Recent Efforts at Fitting In

Although Modernism drastically inhibited the traditional concern for visual continuity, there have been important efforts by laypeople and some professionals to keep it alive in recent years. It is not entirely inaccurate to suggest that the historical preservation movement began as a defensive reaction to ill-fitting modern intrusions into neighborhoods which the public prized for their visual coherence. Local planning boards and community groups have taken strong initiatives to arrest these destructive intrusions by establishing visual criteria to guide the design of new buildings. But lists are not the answer. Some buildings follow these rules precisely and still fail to fit; others may disregard cardinal directives and yet remain sympathetic.

Addition to the Boston Public Library

This addition shows that success is not guaranteed, even by satisfying most of the important criteria (Figure 9). The addition uses the same stone as the original library, maintains its cornice height and horizontal divisions, and emulates the arch motif of the older building. Yet with all this effort, there is still a sense of discontinuity because the new building lacks appropriate detail. This becomes apparent when we look at the facade treatments.

The addition uses the same limestone as the original; however, the difference in the way it is used overwhelms any connection that might have been made through texture and color. The original building is alternately smooth and rusticated. Add to this its different moldings and string courses and we have a rich visual texture. The addition has a uniformly flat surface throughout, relieved only by the faint pattern of joints; it has a completely different *visual* character in spite of its obvious similarities.

The way the two buildings meet the sky is the most dramatic evidence that rule-following which ignores details is little help in making a close fit (Figure 10). From a distance the two roof lines are similar. However, the roof slopes are such that, while they are visible from a distance, they disappear entirely when seen from across the street and we are left with only the upper edges of the facades. McKim, Mead, and White understood the visual problem and enlivened the potentially boring edge with ornament. The Johnson addition, with its preference for Modernist simplicity, leaves us with an awkward bluntness.

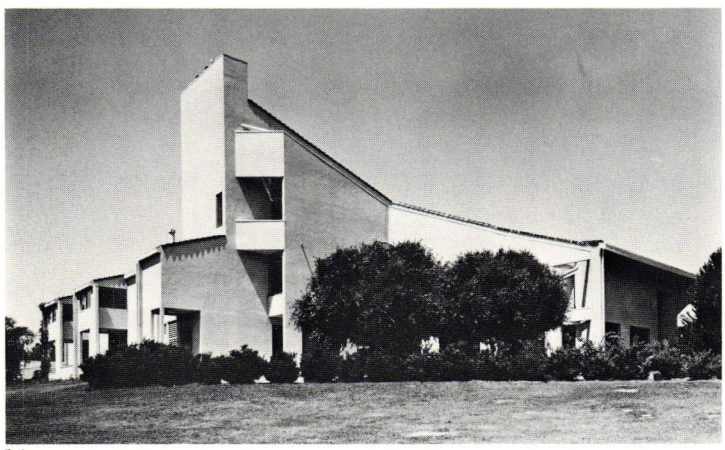
Town Hall and the Old Recorder's House Bruges, Belgium

The Town Hall and adjoining Recorder's House offer a striking example of how architectural styles with fundamentally contradictory characteristics can still be sympathetic (Figure 11). In this case, a small Renaissance building is reconciled with a Gothic neighbor over twice its height. The vertical emphasis of each building is the key to their sympathetic relationship. One expects verticality in a Gothic building, but it is more surprising in the Recorder's House because classically inspired buildings are usually serene and horizontal. In this case, the verticality literally overlays an otherwise typical northern Renaissance facade.

Both buildings have a high proportion of window to wall, restricting their decoration to the relatively narrow areas between the openings. The Town Hall has pairs of small sculpture platforms with conical spires stacked one over the other. The windows are narrow and the second floor spandrel is recessed; this, and the continuous frame around both first- and second-story windows, makes them look like one vertical unit. The turrets, elongated dormers, and cresting reinforce this and feather the building's silhouette into the sky.

The Recorder's House is composed of characteristically Classical forms. It is horizontally layered, each floor marked with a different architectural order and emphasized by appropriate, horizontal entablatures. The window frames are contained within the floors, unlike those of the Town Hall. The columns, however, with their plinths and entablatures, jut out from the facade, making a continuous vertical line from ground to cornice that overrides the horizontal organization. The engaged columns create the same vertical feeling as the continuous window frames of the Town Hall. The facade is topped by three exuberant scroll

12 East Building, National Gallery of Art, Washington, D.C. I M Pei, 1978
13 Prete House, Woodbridge, Connecticut. Peter Millard, 1973
14 Faculty Club, University of California, Santa Barbara. Moore and Turnbull, 1968
15 Santa Barbara County Courthouse. William Mooser, 1929


14

15

pediments which again emphasize the vertical and, with crockets and crowning statues, dissolves the hard edge of the building as it meets the sky.

This sophisticated manipulation of ornament allows an appropriately detailed Flemish Renaissance building to seem more vertical than horizontal, resolving a basic antagonism between the two styles.

Ornament

One problem we now have in fitting new with old is that everyone, from architects to preservationists, plays down the importance of ornament in establishing this relationship. People admit that retaining ornament on traditional buildings plays an important part in maintaining the character of a place, but for some mysterious reason the infallibility of this logic does not extend to new construction in the same location. The reason is, of course, far from mysterious. The residue of Modernist morality chides our consciences, telling us that recognizable, historically based ornament is not "honest" or "of our times."

Lingering Modernist taboos against eclecticism and, more importantly, against traditional ways of using either old or new ornament, continue to prevent us from moving ahead and solving the problem of fitting new with old. They do not permit us to adapt freely and inventively from history or, with a few notable exceptions among contemporary architects, to create

[2] An idea has taken root among architects that there is a qualitative difference between "ornament" and "decoration." I will side with Webster and use these terms interchangeably:

decoration, n. 3. that which decorates or adorns; an ornament.

ornament, n. 1. anything serving to adorn; decoration; embellishment.

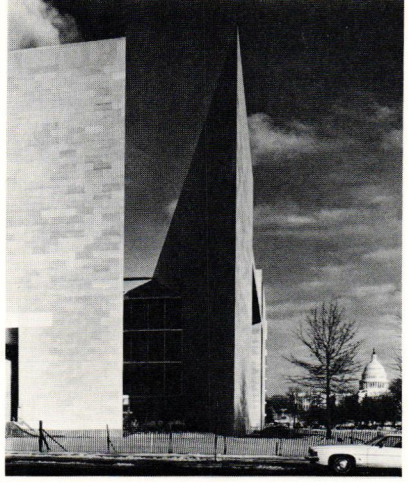
—Webster's New Twentieth Century Dictionary, Unabridged, 2nd Edition

[3] I am presently writing a book which will consist, in large part, of names, addresses and pertinent information about manufacturers and craftspeople in the U.S. who can produce exterior architectural ornament to architects' specifications. Its working title is *A Handbook of Architectural Ornament*; it will be published by Van Nostrand Reinhold.

[4] Charles Moore, Gerald Allen, Donlyn Lyndon, *The Place of Houses* (New York: Holt, Rinehart and Winston, 1974), pp. 28–29

[5] Moore, Allen, Lyndon, pp. 19–20

13



12

ornament in any other way than by repeating a simple geometric element until it becomes a pattern.

Some Arguments against Ornament

The Modern Movement is supposed to have died some years ago, but its ghost still directs our attitude toward ornament – the mention of which tightens stomach muscles and raises defenses. Among the more frequent arguments against decoration are that architects no longer know how to create it or use it, and that there are no longer any craftsmen who can make it.

The response to this is simple: relearn the skills. It is not beyond our abilities. When new construction methods were introduced at the beginning of the Modern Movement, architects adapted; they learned to design with them and the trades learned to use them to build what architects designed. There is no practical reason why the same flexibility cannot be displayed toward relearning the uses of ornament.

The problem is actually only half as complicated as it sounds. While designers will have to learn how to create and to use ornament again, the craftsmen to produce it are already here. I have visited Saldarini & Pucci, a firm which designs and manufactures historical and contemporary architectural ornament, and can vouch that the skills to make traditional or new ornament are alive and well just south of Astor Place, in New York City. Hundreds of other factories (and craftspeople) exist which can produce all types of architectural ornament.[3] There are undoubtedly also closet ornamentalists among architects who are only waiting for the chance to free their natural urge to embellish and who, once given the approval of their peers, will create new ways to enjoy this ancient architectural delight.

Another common argument against ornament is that it is too expensive. The public may be surprised to learn that, although ornament is no longer itemized in the contract price, it is seldom missing from modern buildings. Modernists only banished *traditional* ornament. Their opposition to frivolous decoration never extended to the miles of functionless decorative mullions that have been applied to office towers since the 1950s by great "less-is-more-ers" like Mies van der Rohe; dramatic cantilevers which could just as well have been supported by columns; breathtakingly long spans where intermediate supports could have been inserted; large glass areas where masonry or other cheaper materials could have been used; refined, jewelry-like details like butt-joined beveled glass and stainless steel, exotic materials (the Seagram Building is clad in bronze!), etc.

It is ironic that some of the pristine simplicity of a brazenly Modern building like the National Gallery's East Building comes from handcrafted details (cabinet makers were used to make some of the concrete forms) (Figure 12), while the Prete House, by Peter Millard, uses *mass-produced* decoration (Figure 13). (Millard says that this neo-"Georgian" house was more expensive to build than Modern-style houses he designed for the same area.)

Recent Uses of History

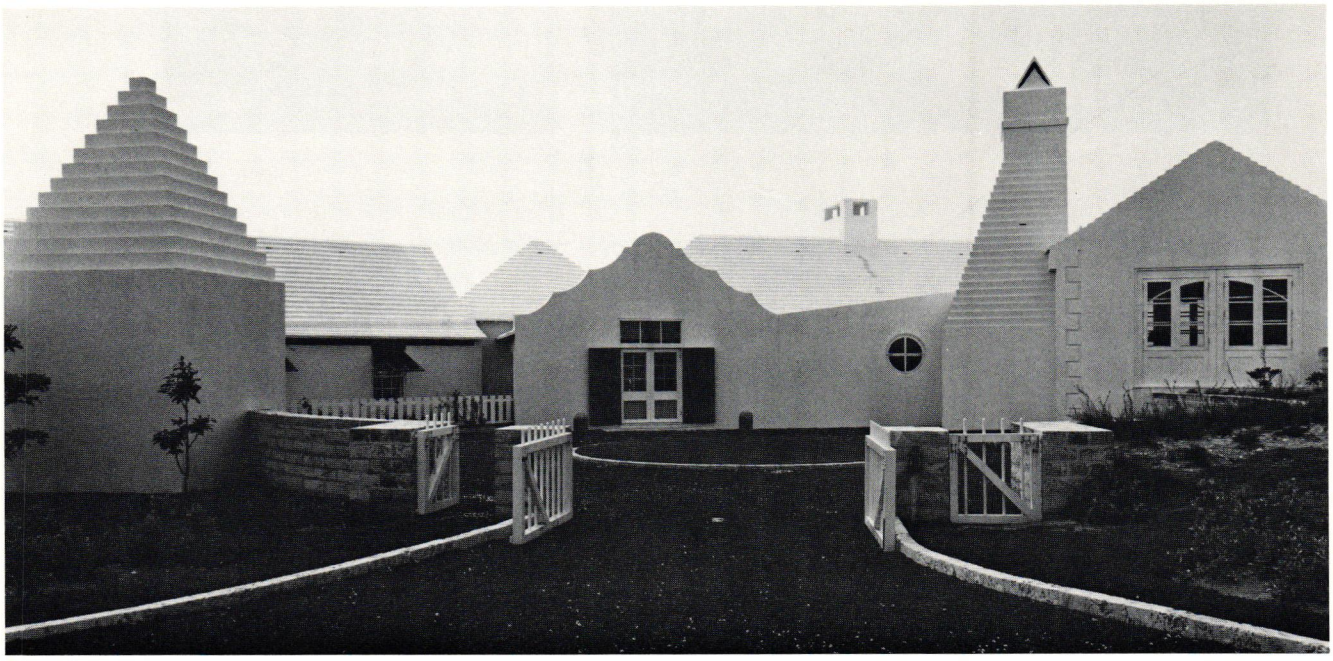
Some architects have begun to use pieces of history once again. Although this may sound like good news for the neighborhood, historical allusions seem to be helpful in fitting new with old only when they refer to the immediate context or, in certain cases, to a regional style.

Faculty Club,
University of California at Santa Barbara

The Faculty Club at UCSB is an interesting building, a sort of self-contained Italian hilltown, but one does not sense the mission-variety California style which it supposedly recalls.[4] That is the style of the Santa Barbara County Courthouse and of many other buildings in the downtown area which were rebuilt after the earthquake of 1925 and which borrowed freely from the regional style. The rebuilding was an enormously successful experiment in creating a unified townscape, as Charles Moore himself has pointed out.

The comparison between the Faculty Club and the Courthouse presents an interesting problem regarding the relationship of a new building to its regional context (Figures 14, 15). In *The Place of Houses*, Moore and his co-author, Don Lyndon, say that the visual coherence of a town like Santa Barbara is not created: "just by 'style,' by white walls, tile roofs, and black wrought-iron grilles. It is fundamentally created by a characteristic relationship between people and enclosure."[5]

While it is best to have both, I would say that



16

17

16 Brant House, Bermuda. Venturi and Rauch, 1978
17 Detail of Brant House, sea side

"style" is by far the more important of the two. Abstracting the relationship between people and architecture in this way – emphasizing generalities rather than specifics – is distinctly reminiscent of the Modernist viewpoint. The authors go on to describe how, in Santa Barbara, this general relationship is created by open-roofed courtyards and the changing light and shade which one experiences when walking from open to arcaded spaces.

The Faculty Club follows this line of reasoning in that it has the "bones" of the local style (in its courtyards and covered walkways), but not its clothing (the ornamental details). There are no arches, no orange tiles peeking over the eaves, no column capitals, no wrought-iron railings. The relationship between these two buildings and the regional style to which they are both supposed to allude proves, to my eye, that it is the details, and not the "bones," that create the real flavor of the "places" about which Moore and Lyndon speak. The Faculty Club is a neutral building; its flavor is not specific like that of the Courthouse; it would be at home in any number of "places." The Courthouse has definite links to the region's past which simple generic attributes like enclosed courtyards and covered passageways cannot evoke by themselves. On the other hand, while the "clothing" may create a truer sense of place, it alone, without an understanding of the "bones," is also unsatisfactory.

The Brant House, Bermuda

This seems like any one of a number of other large Bermudian houses, but only at first glance (Figure 16). Its ornamental entrance pediment recalls grander days when the "great house" was really great. Its additive massing makes it look as if it had been built over many years rather than all at once. Then one begins to notice its peculiarities.

Only one part of the house has quoins at the corners. On closer look, they are not even real quoins, but a visual shorthand recalling the original. A high, round window lets light into this space. It is a common device, but this particular window is surprisingly large given the relatively small space it serves. The seaside arcade does not line up with the doors and windows behind it; other island homes of comparable size make sure that their arcades and fenestration conform in an orderly manner. The verandah above this arcade has two-dimensional cutout columns with cartoon-like entasis; one cannot take them too seriously because they seem to have been pasted on (Figure 17).

There are many strange things about this house that the attentive eye will notice. But all of its oddities are intentional. The joke is that everything is a bit wrong, but, as a whole, the house still looks as if it belongs there. It is firmly anchored in local traditions and yet makes a decidedly unique, contemporary statement.

Ego and the "Personal Architectural Statement"

Architects who want to blend their work sympathetically into an existing context often find it difficult to do so, not because they lack the craft, and not even because they are unfamiliar with the visual characteristics of other styles; these things can be learned relatively easily. The problem is more like "writer's block." It is a psychological inhibition, rooted in Modernism's archaic definition of artistic creativity which comes to us directly from the nineteenth-century Romantic Movement. It places greatest emphasis on the direct, undiluted expression of the architect's ego: the personal architectural statement.

The Modern architect has been taught to evolve his own idiosyncratic style – his personal architectural language – and to develop it through successive designs. The stars of the profession are still defined by the novelty of their vision and the uniqueness of their architectural forms. But this stylistic evolution has always been a very *personal* matter, proceeding along its own peculiar course, whether or not this was appropriate to the specific architectural context. This is why, almost without exception, we can recognize a particular building as having been designed by Le Corbusier – or Mies van der Rohe, or Frank Lloyd Wright, or Louis Kahn – regardless of what it stands next to or where it is located in the world. Who would doubt that the same architect fathered both the Carpenter Center for the Visual Arts in Cambridge, Massachusetts, and the government buildings in Chandigarh, India? Their architectural vocabularies are the same even though their visual and cultural contexts are poles apart.

Eero Saarinen was the single exception to this

18 The National Permanent Building, Washington, D.C. Hartman and Cox, 1977. The National Permanent Building captures the rich visual texture of the Old Executive Office Building (Figure 19), just down Pennsylvania Avenue, but it does it with different architectural means.

19 Old Executive Office Building, Washington, D.C. Alfred B. Mullett, 1871–88

egocentric approach among architects of world reputation. His designs do not fall into one, easily classifiable style. Instead, most of them convey a refreshing feeling of having been tailored to special contexts.

Originality and Creativity: Towards a New Definition

Although a twentieth-century follower of the arts may find it hard to believe, "originality" was not always considered *the* essential ingredient of art. By the fifteenth century, the traditional three-part composition of Madonna, Child, and Holy Spirit had already been painted thousands of times, yet one does not hear of great Renaissance painters despairing because they had to follow traditional forms and subject matter and could not, therefore, express their originality. They relied on refinement of execution and inventiveness *within the bounds of the given context* to win reknown.

Our present definition of artistic creativity and the idea of fitting new architecture with old are like oil and water. To respect the dignity of a neighborhood by designing a new building that fits so well that it is not easily identified as new is incompatible with the view that originality is the prime measure of the artist. If a building blends in too well now, it is assumed that the architect was just not creative. He is more likely to be thought a hack and a copier who had no ideas of his own and so had to make variations on borrowed themes – as Michelangelo did in San Lorenzo.

The quickest way to solve this particular aspect of the problem is to change the definition of creativity as it pertains to architecture. De-emphasize the cruder variety – originality through novelty – and stress refinement within the aesthetic confines of the given visual context, whether that is modern or traditional.

This means re-learning how to identify important elements in the composition of a neighborhood (or region) and then incorporating them meaningfully into a new design. *This is a visual problem. It pertains only to the eye. It has nothing to do with what architects refer to as honesty or morality.* To think otherwise is to fall prey to left-over nineteenth-century ideas that have nothing to do with design. These arguments tend to be used most

18

19

20 Quincy Market Addition, Boston. Ben Thompson Associates, 1976. The addition's materials, size, proportion of solid to void, etc., all contradict the good sense of design criteria. Yet the addition works because it has the same visual character as the original: it is tense, linear and severe.

20

often when designers are unable to convince the viewer that the building is either beautiful or appropriate to its place; they then fall back on culturally loaded concepts such as "honesty" and "morality."

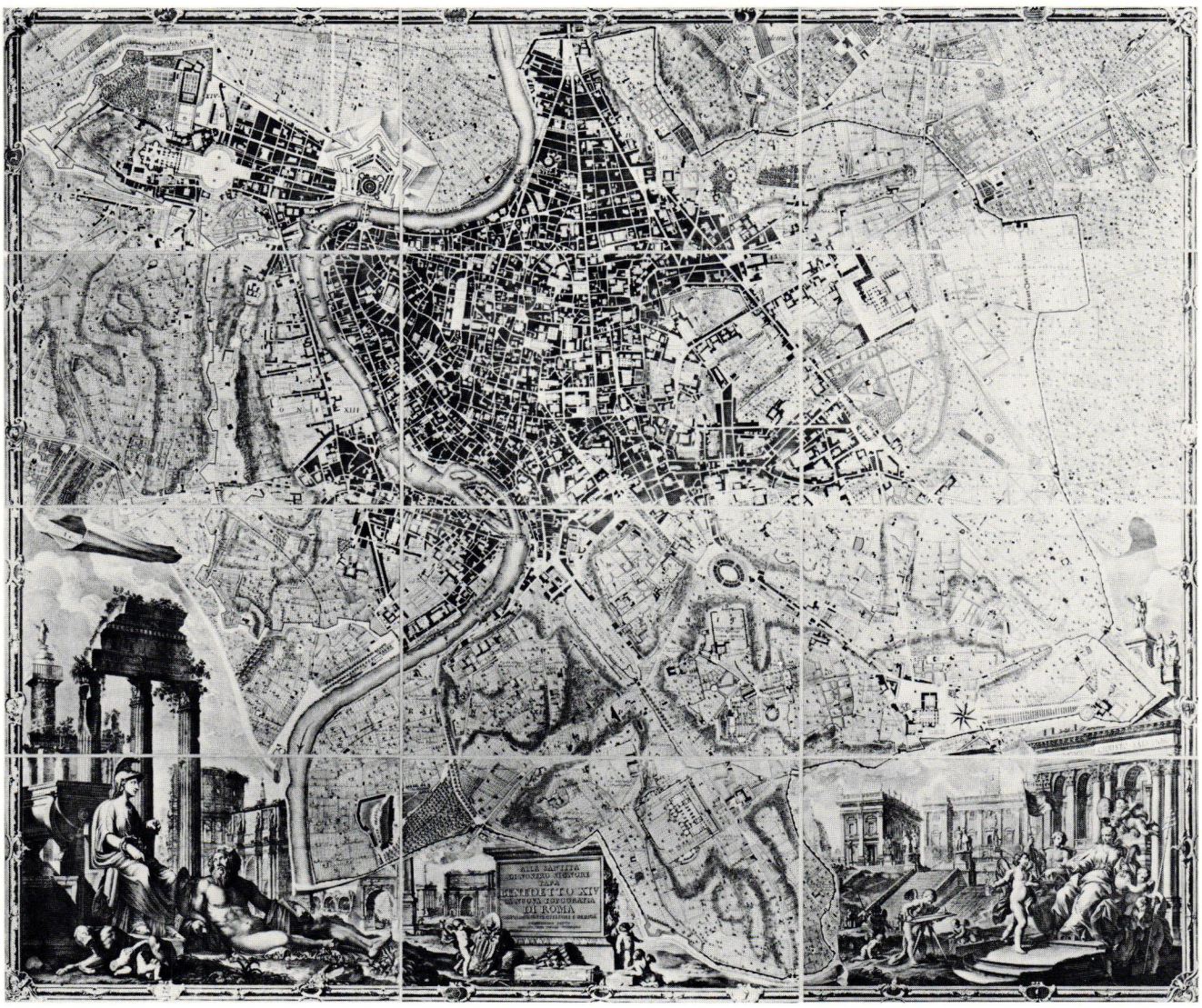
The skill of establishing visual continuity – with or without actually copying from the context – can only be regained by studying new and old buildings that make strong connections to their surroundings (Figures 18–20).

In Conclusion

Attaining a greater degree of visual coherence in our architectural surroundings is one of the main tasks of architects, planners, and developers. I did not arrive at this conviction by theorizing about the meaning of Architecture, or by considering the architect's rather vague political or philosophical responsibilities, but by looking around and realizing that visual continuity was a major component of those places which I found beautiful. It should be clear from the historical examples that these felicitous relationships do not depend on copying. But to achieve such visually coherent surroundings once again does require a change in the way we have been taught to see these relationships and a delicate redefinition of architectural creativity.

The Lesson of Rome[1]

Jon Michael Schwarting



Plan of Rome by Giovanni,
Battista, Nolli; 1748

Prologue: Why Rome?

For centuries architects have gone to Rome as a critical part of their education. Although the tradition probably has roots in antiquity, and carried through the middle or "dark" ages, perhaps the most important acknowledged executors of this journey to Rome were the architects of the fifteenth century. The Renaissance or "Rebirth" grew out of an examination and measurement of Roman space, composition, and construction. Brunelleschi, Alberti, Bramante, and Palladio et al. did not study and measure Rome only to resurrect a style, but more importantly to understand those principles and ideas which are styleless and timeless and fundamental to any architecture. When the education of an architect became codified at the Ecole des Beaux-Arts, the experience of Rome became likewise institutionalized, in the Prix de Rome, given by the state to the winner of a competition for continued education with Rome as instructor. From the Renaissance to the Ecole des Beaux-Arts, a pedagogy evolved which saw the examination of recognized important built form of the past as critical to the solution of contemporary problems.

With the Romantic movement there developed new attitudes toward artistic creativity which argued for free expression and rejection of the study of the past as an impediment to insight and invention. Although style was used eclectically to evoke specific emotions, any kind of design methodology related to academicism was rejected. Modern architectural education as developed at the Bauhaus sought to create a new pedagogy based on modern science and philosophical positivism. The *tabula rasa* innocence of Romanticism when combined with the pragmatism of the industrial revolution produced a biased attitude toward architectural problem-solving in the twentieth century in which the study of history and the examination of existing built form were denigrated as anti-methodological.

But the Bauhaus and Romantic rejection of history was based on a misunderstanding of the relationship of history to practice.

> *Architecture without history has the unchanging quality of a craft tradition, as when the old cartwright would say, "That was the way my dad made a cart and my grandad before him and that's the right way to make a cart." At the risk of enormous oversimplification, there is the essence of ancient architecture, and history appears on the scene, not as a fetter to the past but as a way of escaping from it.*[2]

It is in recognition of the value of history that students are now again offered these studies, and one can again talk about going to Rome for important pedagogical reasons. What is being advocated, in effect, is the reexamination if not the reacceptance of the role of historical precedent in the design process, or

> *envisaging all centuries and countries as a reservoir of motifs of composition, (the architect) is able to deduce certain broad conclusions, to discover in all periods the presence of a common denominator which is conceived as transcending style.*[3]

To use the past in this way requires an ability to abstract concepts as analogies for dealing with new problems, to see a certain independence of formal

---

[1] This paper originated from study during a Prix de Rome, 1968–70, and was inspired by study in the Graduate Program of Urban Design at Cornell University with Colin Rowe.

[2] *The Study of Architectural History*, Bruce Allsopp (New York: Praeger, 1970), p. 11

[3] Review of, *Forms and Functions of Twentieth Century Architecture*, of Talbot Hamlin, Colin Rowe, *Art Bulletin* (July 1953), p. 170. Colin Rowe obliquely describes his own method of teaching here in this discussion of Julian Guadet. (In the Winter 68/69 *AA Quarterly*, p. 54, Charles Jencks said the effect of Rowe's teaching was, "to give the younger generation of architects the metaphor of the past, of history, of references, as a viable generator of present form."

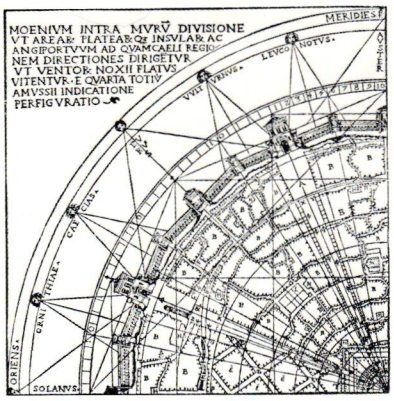
The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010022-26 $3.00/0, © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology

1a Ideal city plan as described by Vitruvius in *De Architectura*, translated and drawn by Ciseriano, 1521

1b Sforzinda, Antonio Filarete's ideal city of two rotated squares with designed buildings in *Trattato d'Architettura*, 1457–64

1c Vincenzo Scamozzi's ideal city with grid organization of a radial plan and water in *L'Idea dell Architettura Universate*, 1615

1d Palmonova, a Venetian frontier garrison town by Scamozzi, 1593



1 a

signs from cultural symbols, and to look at built form in terms of ideas, or formal and cultural typology and structure, as well as style.[4]

Twentieth-century theories of architectural problem-solving have looked to scientific method, philosophical pragmatism, and materialism as methodological models. Problem-solving has been seen as an inductive process of observation conducted to ascertain *all* the *facts* relating to a problem. Cybernetics and computers are now tools of this approach.

A number of critics, principally Karl Popper in writings beginning with the *Logic of Scientific Discovery* in 1934, have argued for a different heuristic methodology. Popper challenges the objectivity of the inductive process by arguing that the task of deciding what facts are relevant involves judgments which are intuitive, prejudice the solution, and in fact involve deductive reasoning.[5] Popper argues that hypotheses or conjecture or theories precede observation. "Only when one has some conjecture about the solution can one begin to consider the problem of criticizing that conjecture, of evaluating it, and possibly rejecting it."[6] In order to become acquainted with a problem one must *speculate* and *criticize* until, through successive attempts at *testing* to *disprove* the hypothesis, with the aid of relevant facts, the hypothesis is changed or refined to become a more tenable solution.

How is the idea of architectural precedent, which seems to have played a major role in the design process in the past, related to the thesis of Popper's *Conjectures and Refutation* and other modern heuristic theories? One can look to arguments such as that of G Polya, a mathematics theorist involved in heuristic theory. Polya suggests that, "Good Ideas are based on past experience and formerly acquired knowledge,"[7] implying that precedent, as revealed through analogy, metaphor, parable, and allegory, is a primary source for devising hypotheses. In categorizing the basic mental questions that occur when one is searching for an idea, Polya implies the role of precedent with such questions as: "Have you seen the problem before . . . or have you seen the problem with the same or similar unknown? Given a similar problem could you use its results . . . its methods?"[8]

The precedent called for in these terms, whether it be physical form or of a socio-economic-political nature, comes from history; it comes from problems one has previously solved, problems one's contemporaries have solved, the canonical solutions of modern architecture, or from all styles and periods of built form. Precedent comes not from the history of events or styles, but rather from the history of *ideas* as abstracted from events (unless one is involved in cultural resurrection).

From such an argument, a return to Rome has been reconstituted.

---

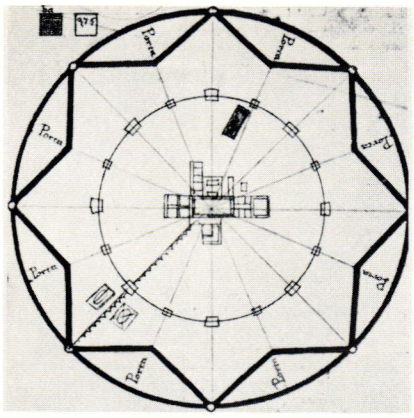
[4] Robert Venturi has written, "As an Architect I try to be guided not by habit but by a conscious sense of the past—by precedent, thoughtfully considered," and has quoted Aldo van Eyck who criticized modern architects who, "have been harping continually on what is different in time to such an extent that they have lost touch with what is not different, with what is essentially the same," pp. 18 and 19. *Complexity and Contradiction in Architecture*, Robert Venturi (New York: Museum of Modern Art, 1966)

[5] "How is the House of Science Built," William Bartley III, Popper is quoted as saying in *Conjectures and Refutations*, "observations are themselve theory-impregnated. We observe with something in mind, some theories; we never observe in the abstract, as it were. Observation is selective, and depends on our problems, tasks, points of view, theories."

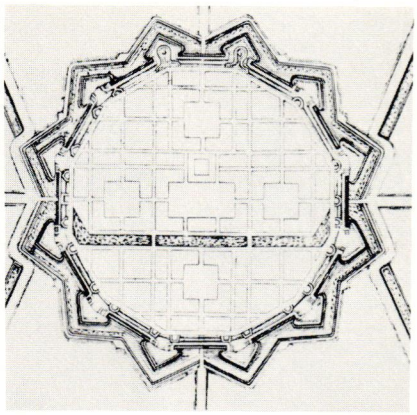
[6] Bartley, from Karl Popper's, *The Logic of Scientific Discovery* and *Conjectures and Refutations*.

[7] G. Polya, *How to Solve It* (New York: Doubleday Anchor Books, 1957) p. 9

[8] Polya, pp. xvi–xvii



b



c

d

The relation between our mind and things consists in that we think about the things, that we form ideas about them . . . In other words thinking is the endeavor to capture reality by means of ideas; the spontaneous movement of the mind goes from the concepts to the world.

But an absolute distance always separates the idea from the thing. The real thing always overflows the concept that is supposed to hold it. An object is more and other than what is implied in the idea of it. The idea remains a bare pattern, a sort of scaffold with which we try to get at reality. Yet a tendency resident in human nature prompts us to assume that reality is what we think of it and thus to confound reality and idea by taking in good faith the latter for the thing itself. Our yearning for reality leads us to an ingenuous idealization of reality. Such is the innate predisposition of man.—Ortega y Gasset[9]

Order may be defined as the degree and kind of lawfulness governing the relations among the parts of an entity. Such lawfulness, or obedience to controlling principles, derives from the overall theme or structure, to which the behavior of all the parts must conform; it also applies to the makeup of each part within itself. Without order, the organs of the human body work at logger heads with each other, and the various functions and strivings of the mind would fight each other chaotically. Without order, our senses would not function: the visible shape of an object must be clearly organized if we are to recognize, remember, and compare it with others. Furthermore, if there were no order in nature, we could not profit from experience since what we have learned serves us only so long as like things look alike and similar consequences follow from similar causes. If the world were not orderly, the mind unable to perceive and create order, man could not survive. Therefore, man strives for order.—Rudolf Arnheim[10]

Much of the history of architecture and planning can be viewed in terms of a dialectic between the ideal and the real, between utopian formulation and empirical conditions. On the one hand, fundamental to a general history of design or planning, is the history of ideal schemes and utopian proposals. Inherent in any definition of design or planning is the idea of a model or a concept, and the history of utopian planning has often served as such. Plato and Vitruvius were models for Renaissance ideal cities; these in turn served as formal models for many proposals in different historical periods and cultures, including Ebenezer Howard's twentieth-century garden city diagram and its legacy of English new towns and national capitals (New Delhi, Brasilia, Chandigarh), etc. (1a-f). On the other hand, there are theories particularly within twentieth-century Modernism, concerned with the Vitruvian idea of commodity. These demand solution to more immediate or "real," physical problems as opposed to metaphysical speculation.

Outopia, in Greek, meaning no place, and *Eutopia*, meaning the good place, have been used since Thomas More to employ the *imaginary* to project the *ideal*. As ideal projections of the good life, utopias are statements of fundamental political principles and often are pleas for major reform. Plato's *Republic* and *Laws*, Aristotle's *Politics*, More's *Utopia*, Campanella's *The City of the Sun*, Saint-Simon, Fourier, Marx, and others present analyses of social institutions in an attempt to identify major elements of society, demonstrate how they act on one another, and suggest how they may be adjusted to each other or changed to create a better world.

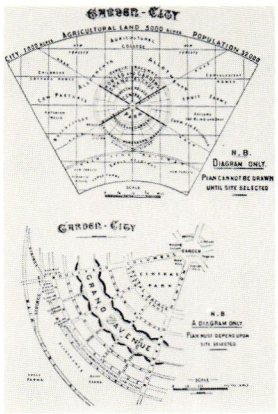
> *Almost every utopia is an implicit criticism of the civilization that served as its background; likewise it is an attempt to uncover potentialities that the existing institutions either ignored or buried beneath the ancient crust of custom and habit.*[11]

The framework for the good society, the condition of harmony in any utopian speculation, must be social, and it must be organized and institutionally articulated. The recurring discussion of the need for organized human settlement opens the way for

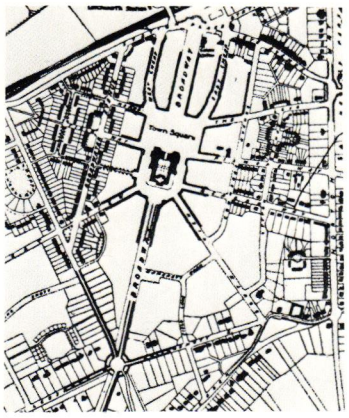
[9] Ortega y Gasset, *The Dehumanization of Art and Other Writings on Art and Culture*, (New York: Doubleday and Co., Inc.), pp. 34–35

[10] Rudolf Arnheim, "Order and Complexity in Landscape Design," *Towards A Psychology of Art*, p. 123

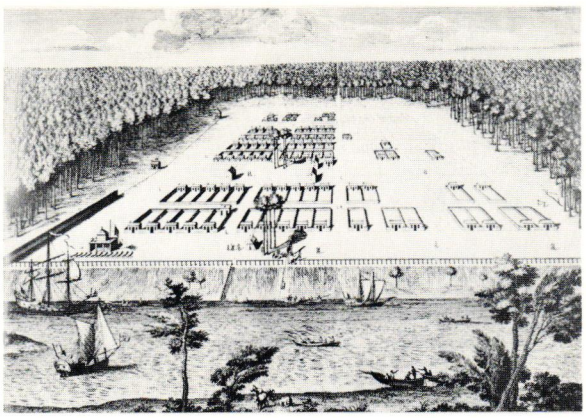
[11] Lewis Mumford, *The Story of Utopias*, (New York: Compass Books Edition, 1962), p. 2



e



f



g

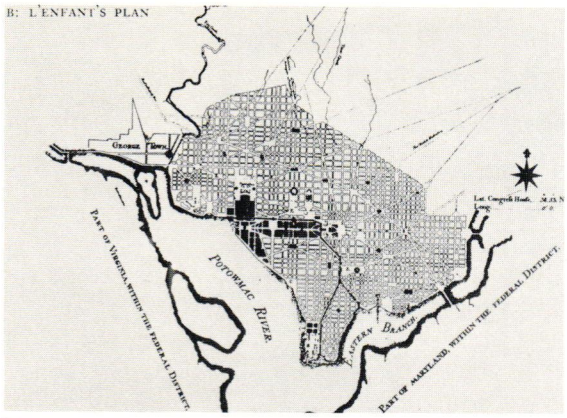
1e Ebenezer Howard's Garden City, 1899
1f Letchworth, Unwin & Parker, 1904
1g Savannah, Georgia, 1734, view of Oglethorpe plan
1h L'Enfant plan for Washington, 1791
1i New Delhi capitol by Edwin Lutyens, 1911

architecture and planning. Architecture is fundamentally involved in the issue of order. It cannot be taken lightly that the terms which are closest to describing the architectural process – plan, design, scheme, project, proposal, or program – all have intimations of social organization through formal organization. Social organizing or ordering is a political act. This act with commensurate philosophical and psychological issues has often sought representation in a visual form order or structure.

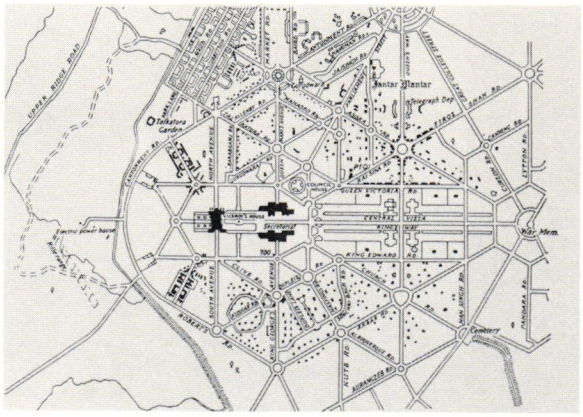
From Plato and Aristotle, who sought understanding in form, to Freud who argued that when physical events stimulate unpleasant tension they take a direction leading to a reduction of that tension, one can deduce arguments for the beneficial effects of order in the human mind, for a kind of biological and psychological entropy implying that all physical activity strives for balance and equilibrium.[12] The principles of Gestalt psychology made the relation of these ideas to architectural principles obvious. With postulates that the mind struggles for an orderly conception of reality, that "vision is not a mechanical recording of elements but the grasping of significant structural patterns," the argument delivered to architecture was that "all creation of form involves a coping with the world of experience" and concommitantly "visual form must be considered as a basic means of understanding the environment."[13]

From arguments such as these, it would be quite simple to postulate an important value for architectural utopian proposals as *analytical* hypotheses which investigate the relationship of physical-formal structures to their political, philosophical, and psychological meaning and consequences in respect to the issue of social and formal order or organization.

This discussion has dealt with only one of the elements of the proposed dialogue between ideal and real in the design process. If the first term of the dialectic would be characterized as philosophical idealism, rationalism, or utopianism, then the antithesis would be realism, empiricism, pragmatism or materialism. Whereas the former seeks to derive knowledge in general from certain primary axioms by means of deductive procedures, the latter seeks to build up or construct knowledge from basic material elements. It relies on inductive



h



i

inferences that matters of fact may be ascertained through observation. The strictest materialistic argument would be that architecture as a material thing is made up of parts possessing many physical properties and no other properties, such as ideas. Position in space and time, size, shape, mass, etc., and relationships of these are of ultimate consequence. For the architect-planner this would mean that existing political, social and physical conditions or realities must be analyzed as the context for a design. The building site has operational and physical systems, complete or latent, explicit or implicit, which constitute it, and which inform and become part of the problem requiring resolution. A building program in a materialist formulation is not a plan in terms of an ideal proposal, but ". . . a description of the spatial dimensions, spatial relationships and other physical conditions required for the convenient performance of specific functions."[14]

The synthesis of these two opposite tendencies might be the suggestions that, "It is possible to be a metaphysical idealist and an epistemological realist."[15]

> *Architecture serves practical ends; it is subjected to use; but it is also shaped by ideas and fantasies; . . . its rationale is cosmic and metaphysical and here of course lies its peculiar ability to impose itself on the mind.*[16]

On the other hand the utopian architectural proposal cannot be built, yet

> *it may instruct, civilize, and even edify the political society which is exposed to it. It may do all this, but for all that it cannot, any more than the work of art, become alive. It cannot, that is, become the society which it changes; and it cannot therefore change itself.*[17]

But if the utopian proposal is viewed in a dialectical relationship with reality, if it is opposed by an equally assertable and apparently contradictory proposition, a reconciliation on a higher level of truth can occur through synthesis. Then one can appreciate Karl Mannheim's notion of the nature of Utopia as a proposition transcending reality, which when it enters into reality, tends to transform it and by doing so, is itself transformed.[18]

This rather protracted discourse has been made to propose that the design and planning process could be interpreted as a give and take between *ideal* and *real*, between *concept* and *context*, and that many historically significant architectural and urbanistic achievements might be seen as a result of such an interplay or dialectic.

The Renaissance and Baroque planning of Rome presents a very demonstrative example of the synthesis evolved from the dialectic of ideal and real, concept and context. Interest in antiquity, in Plato and Vitruvius and their particular descriptions of the ideal city, led many Renaissance architects to describe or draw ideal schemes. Verbal descriptions by Alberti and Filarete discuss or imply the society which is to inhabit these cities. Filarete's Sforzinda, Francesco di Giorgio Martini's and Scamozzi's fortified cities for differing topographies, schemes by Vasari and the street scenes of Peruzzi, Serlio and Vignola, etc., created a body of theoretical proposals that reflected a new conception of space.

---

[12] Rudolf Arnheim, *Art and Visual Perception*, (Berkeley: University of California Press, 1965), p. 25

[13] Rudolf Arnheim, "Gestalt Psychology and Artistic Form," *Aspects of Form*, L. L. Whyte, ed. (Bloomington: Indiana University Press, 1951), pp. 204–208

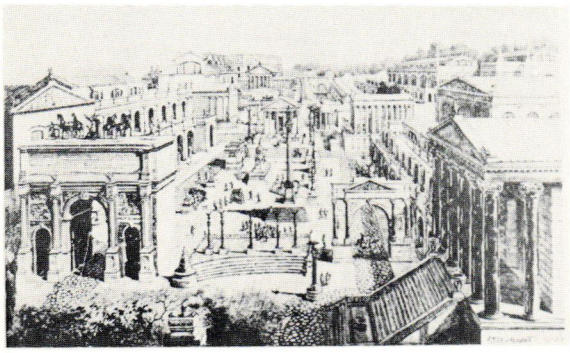
[14] John Summerson, "The Case for a Theory of Modern Architecture," *R.I.B.A. Journal* (London, June 1957), p. 309

[15] H. B. Acton, "Idealism," *The Encyclopedia of Philosophy*, vol. 31–4, (USA: MacMillon, 1972), p. 110

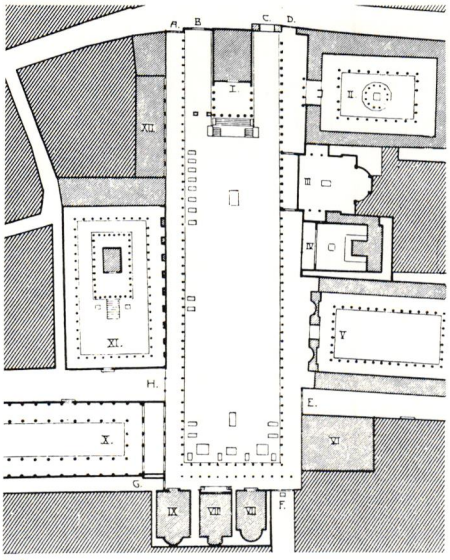
[16] Colin Rowe, "The Architecture of Utopia," *Granta*, Cambridge University, p. 20

[17] Rowe, p. 21

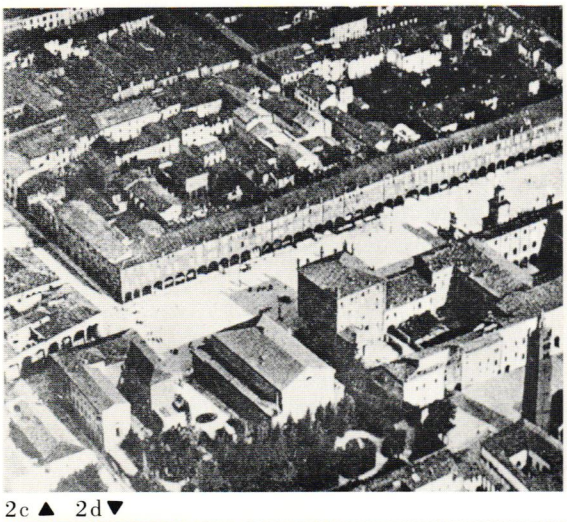
[18] Karl Mannheim, *Ideology and Utopia*, Chapter IV, "The Utopian Mentality," (New York: Harcourt Brace & World, Inc.)



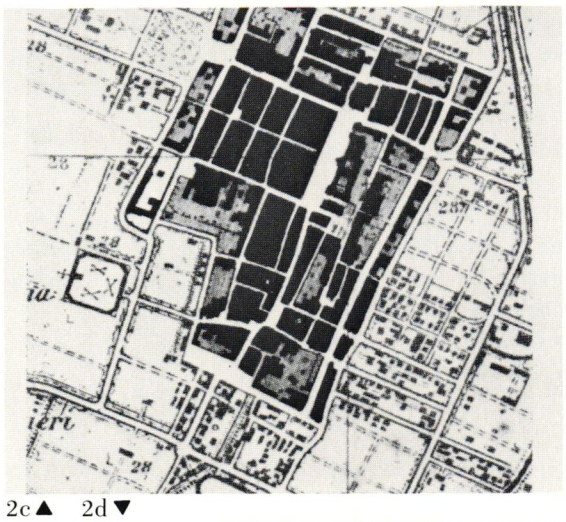
2a



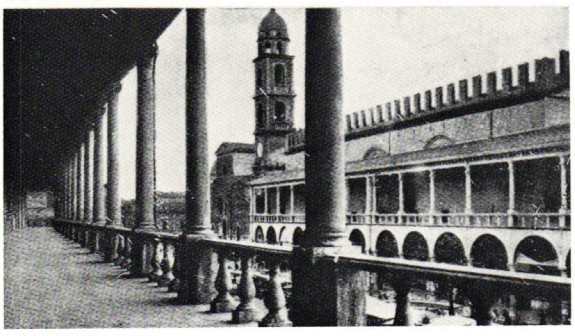
2b

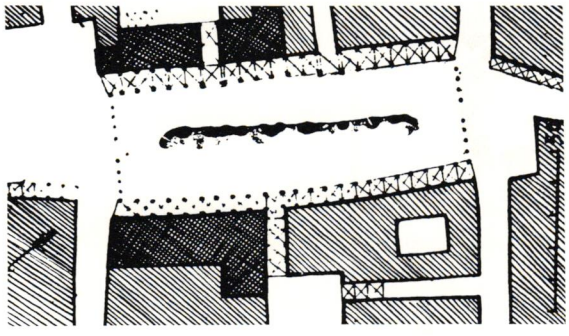


2c ▲ 2d ▼



2c ▲ 2d ▼





2a Roman Forum, reconstruction
2b Pompeii, Forum as drawn by Camillo Sitte
2c Carpi, Italy
2d Faenza, Italy

"The Renaissance artist-and-scientist had an abiding faith that space is strictly measurable and can be formally arranged within a cosmos, that all the constructions of art have a law and unity, harmony and coherence . . ."[19] These ideal city diagrams argued for an understanding of the whole, and the interrelation of the parts to themselves and to this whole. They are didactic polemics for order. It seems plausible to argue that this polemical intent, rather than a desire for actual construction, was the motivation for creation of these ideal plans. (They were only built, as in the case of Scamozzi's Palmanova, on the Venetian Frontier, when the ideal city became ideal for other reasons, as in the "practical science" of fortification.)

It has been argued that despite this proliferation of ideal proposals, Renaissance cities continued to

[19] Wylie Sypher, *Four Stages of Renaissance Style* (New York: Doubleday Anchor, 1955), p. 61

3a Vigevano, Italy

3b Vigevano: the attempt to make a new central void as well as create an articulated radial sequence around the elevated Castello can be discerned.

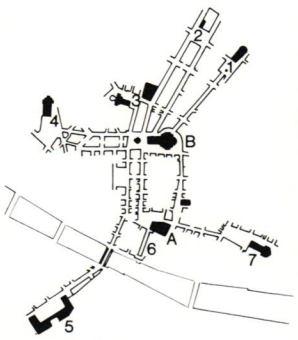
3c Piazza Annunziata, formed with Brunelleschi's Ospedale, 1427, Antonio de Sangallo the Elder's *loggia* opposite in 1516, the 1600 portico to the Santissime Annunziata, and Giabologna's equestrian statue and fountains, is an urban room.

3d Around the binuclear center of Palazzo Signoria (A) and the Duomo (B) of Florence, the Renaissance additions of Piazza Annunziata (1), Piazza San Marco (2), Palazzo Medici and S. Lorenzo (3), S. M. Novella (4), Palazzo Pitti (5) off the Ponte Vecchio, the Uffizzi (6), and Santa Croce (7), create a large-scale conceptual radial organization in the medieval development around the old Roman grid.

3e Palazzo Farnese: the double reading of edge to a positive urban space or object in a space which extends to the river and Via Giulia is discernible in this engraving.

3f The radial focusing on the Ponte S. Angelo to St. Peter's is formed by the Piazza Farnese (1), Campo di Fiore (2), Piazza Cancelleria (3), Palazzo Massimo (4), Piazza Navona (5), and Piazza S. Apollinare (6) and connects the river.

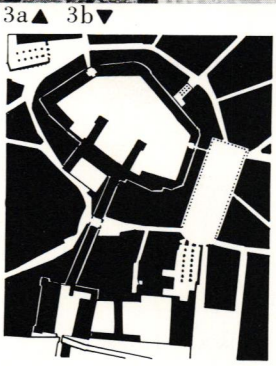
3a▲ 3b▼

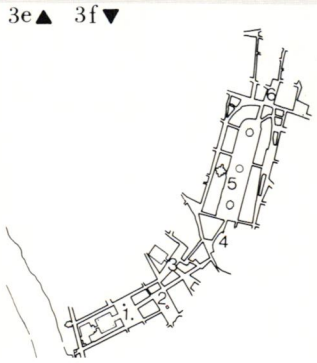


3c▼ 3d▲

A: ROME. PIAZZA FARNESE. COPPER ENGRAVING BY GIUSEPPE VASI
From *Raccoltà delle più belle vedute antiche e moderne di Roma*

3e▲ 3f▼





grow in relation to ancient or medieval patterns, essentially unaffected by these ideas. However, if one interprets these ideal proposals as *diagrams* which are not to be built but are rather to "instruct," "civilize," and "edify" the normal growth, change and transformation processes of cities, then the effects of these proposals might be seen to produce a contrary argument. There are, for instance, many Renaissance *piazzi* in Italy which are rectangular in the manner of a Vitruvian forum, and occur in the center of the towns as in the ideal diagrams (2a-d).

In a number of Italian cities a *cortile*-type space, similar to the Renaissance *palazzo cortile*, emerged as a highly organized public space. The Piazza Ducale in Vigevano, the Piazza di S. Annunziata in Florence with Brunelleschi's loggia of the Ospedale degli Innocenti, and the Piazzi Navona and Farnese in Rome (3a-f) are examples. An interesting inside-outside, public-private ambiguity allows the reading of the city as a network of streets as corridors, and *piazzi* as living rooms with attached private cells, or buildings. The Roman city made up of very small private cells for sleeping, with baths and toilets, etc., as public edifice and forum as living room, connected by streets and corridors had led Vitruvius (and Alberti following him) to say the city was like a house. Like the Romans, the Renaissance conceptual artist, as opposed to the medieval craftsman, could *conceive* of the organization of a city in the same way they could *plan* a house. Concomitantly the city could be conceived as a social organism with commensurate spaces and activities. This was fundamentally a social or humanistic idea, proposing cultural transformation. It was made into a physical and formal idea through classical interpretation or analogy and ideas (from painting) about order and space.

It is instructive to look at the plans of these four particular spaces and their cities in relation to a prototypical Renaissance ideal city plan. It is not difficult to see the Piazza Ducale as a radial central piazza, S. Annunziata as a spoke and peripheral

4a The Piazza S. Pietro (1) and Piazza di Ponte (2), as center, with the Via Giulia (3), Via Monserato (4), Via del Pellegrino (5), Via del Governo Vecchio (6), Via dei Coronari (7), and Via Condotti (8) as radials, connect S. M. del Popolo (9), S. Trinita (10), the Via Lata or Corso (11), Piazza Colonna (12), Piazza Venezia (13), the Campidoglio and Forum (14), and the Teatro Marcello (15).

4b The Falda engraving demonstrating the radial system about the Piazza di Ponte and Ponte S. Angelo

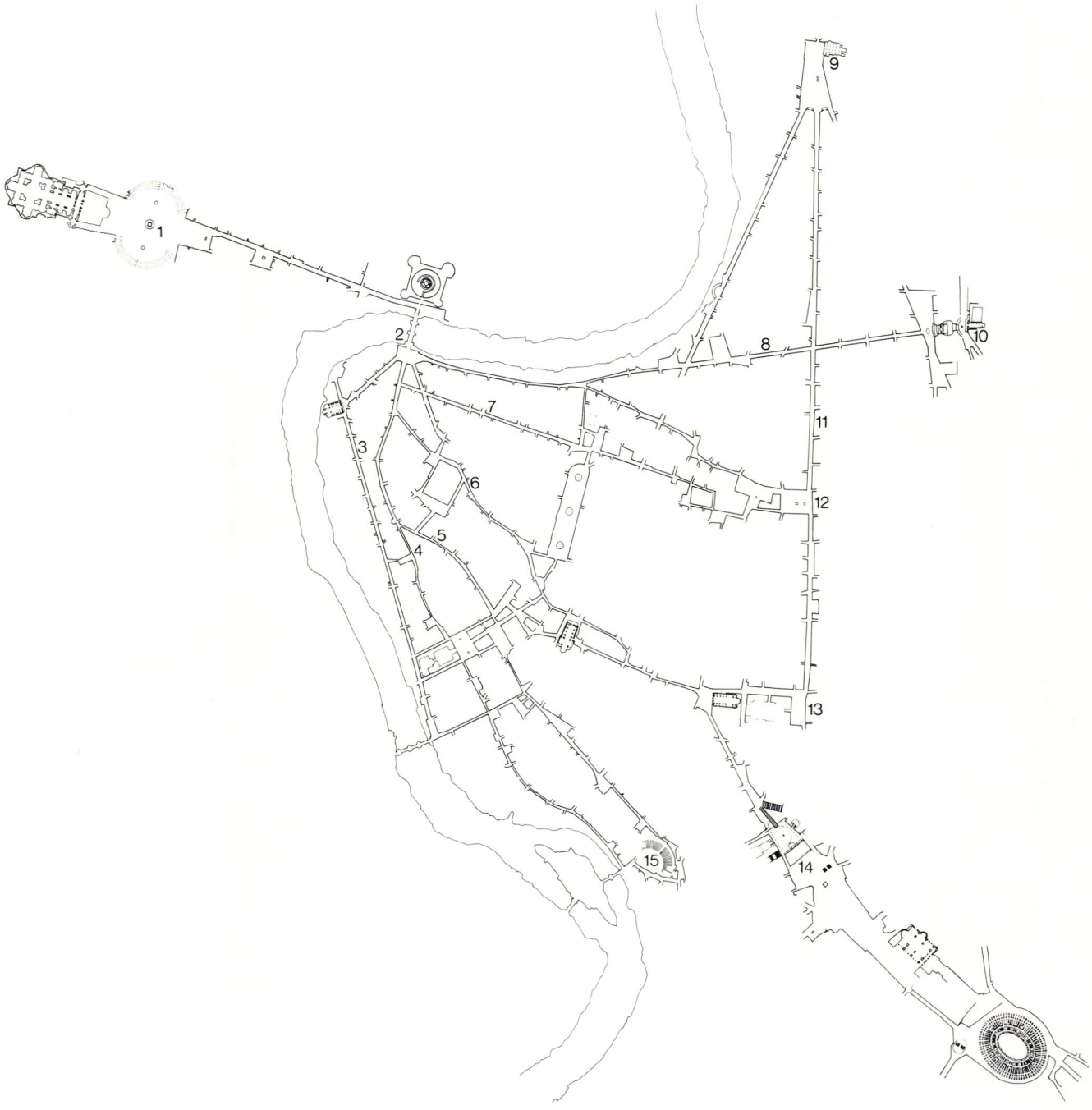
4b

piazza from the Duomo as Florence's central *piazza*, and the Piazza Farnese and Piazza Navona as peripheral *piazzi* on a concentric ring around the Piazza di Ponte, center of the new Rome created by the Vatican. Although it seems plausible to speculate that these spaces were conceived as metaphors of the ideal plans, at the same time they are distortions of the ideal. They are responses to the particular problems which occur at the scale of the space and adjacent buildings and surrounding fabric of streets and buildings. That is, they are sensitive to their immediate existing context. However, they distort this context by their relation to these other metaphors of an unadulterated city in the mind.

The local and particular histories of these isolated buildings, spaces, clients, architects, etc., are all well known. What is rarely discussed is that, because of the metaphor of ideal city organization, a larger-scale order is overlaid on the existing medieval city. The city is conceived as a whole, is organizable as such, and is simultaneously made up of local developments which not only resolve local conditions but also relate to this whole. The development of these and other cities – particularly Rome – through the sixteenth century offers a most cogent exploration of this argument.

St. Peter's and Renaissance Rome

When the popes returned to Rome, and decided to build St. Peter's as the symbol of the city, and the Vatican as the papal residence, they saw the need to reorient the medieval city, with the Piazza Navona as its center, to this new complex. The Castello S. Angelo, Ponte S. Angelo, and the Forum Pontis (now Piazza di Ponte) served as connective pieces to put St. Peter's effectively into the composition. One could interpret the continuous development of St. Peter's and the spaces in front of it, from Bramante to Bernini, as an attempt to make a succession of



4a

actual and virtual entries extending from the crypt to the Piazza di Ponte.

To conceptually relate the Forum Pontis or Piazza di Ponte to the center of an ideal city, to create enough reference to a radial system to make the metaphor read, existing streets were clarified and new ones added. The new center was thus connected to the far reaches of the medieval city and to the old centers and significant structures of the ancient city. With improvements initiated by the planning legislation of the 1480 "Restauration Urbis" papal edict, these streets (Via Giulia, Via Borgo Nuovo, Via Triumtatis (Condotti)) led to the Forum Romanum, Teatro Marcello, the Piazza Navona, the Capitolum or Campidoglio, the Piazza Colonna and Piazza Venezia on the ancient Via Lata or Corso (4a-c). Renaissance development continued the medieval streets as straight lines to the new S. Trinita del Monte on the Pincio Hill, S. Maria del Popolo at the northern entry to the city, and the Via Giulia by Bramante which paralleled the river in the opposite direction. These streets also led to open, unbuilt areas for new Renaissance and Baroque development, and the radial system provided a structure for determining the location of new buildings and spaces (S. Giovanni dei Fiorentini, Piazza Farnese, Campidoglio, Piazza del Popolo, etc.)

Local resolutions and meaning thus acquired additional significance through their fundamental relation to large-scale structuring. The existing city, restructured on the model of the ideal radial city, became an embodiment of the Renaissance notion of the city as microcosm of the universe. Thus conceived, the city represented man's capacity to understand the universe as an ordered and rational system. It could in turn enlighten man's ability to rationally organize his physical world and social institutions.

5a Giuliano de Sangallo plan for a palazzo on the Piazza Navona, modeled on the Vitruvian description of a Roman house

5b Palazzo Farnese with the Vitruvian forecourt transformed into an urban *piazza*

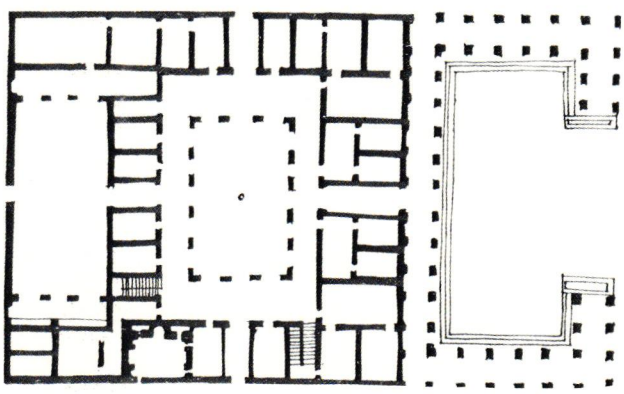
6a The Palazzo Massimo oscillates between an orthogonal Roman house and a radiating scheme built upon the ruins of the theater.

6b P. Portogese's diagram of Palazzo Massimo as a theater type helps connect the Piazza Farnese to the Piazza Navona.

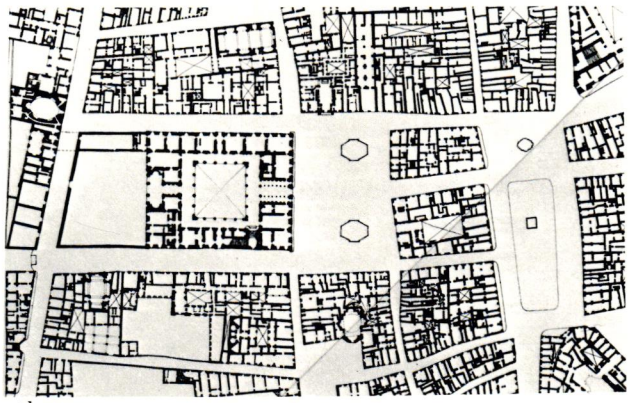
7a Michelangelo's Campidoglio, begun 1538. The splayed building creates a false perspective attenuating the climb to the Senatorio and opens the space to the Forum behind.

7b The existing conditions show Michelangelo's contextural response to given conditions of angles, *loggie*, and stairs in which he *kept* the medieval *cortile* behind the Palazzo dei Conservatori, the towers behind and on the sides of the Senatorio, and the transformation of the hill behind the Palazzo Nuovo into a grotto.

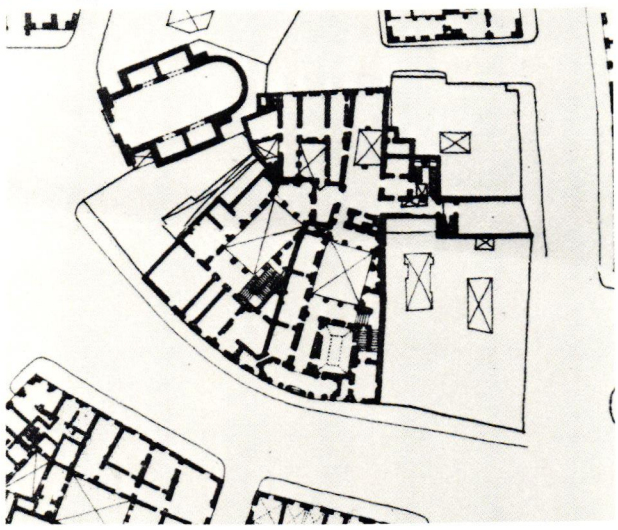
7c The Campidoglio in context demonstrates the alignment of the *loggia* of the Palazzo dei Conservatori with the Gesù and Renaissance fabric, and the Palazzo Nuovo *loggia* alignment with the Basilica of Constantine in the Forum.

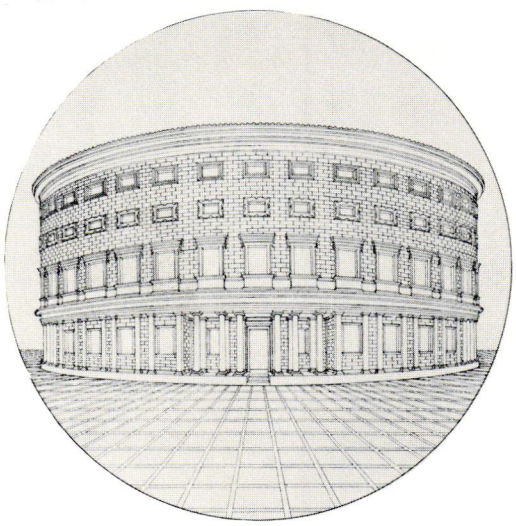


5a▲ 6a▼



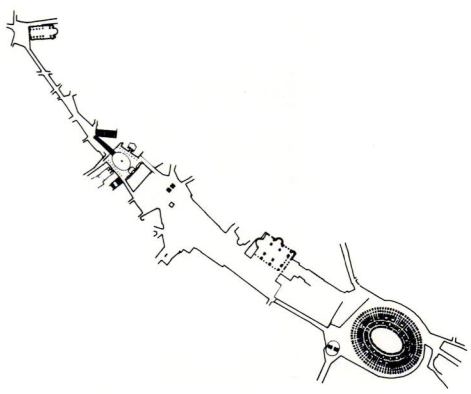
5b▲ 6b▼



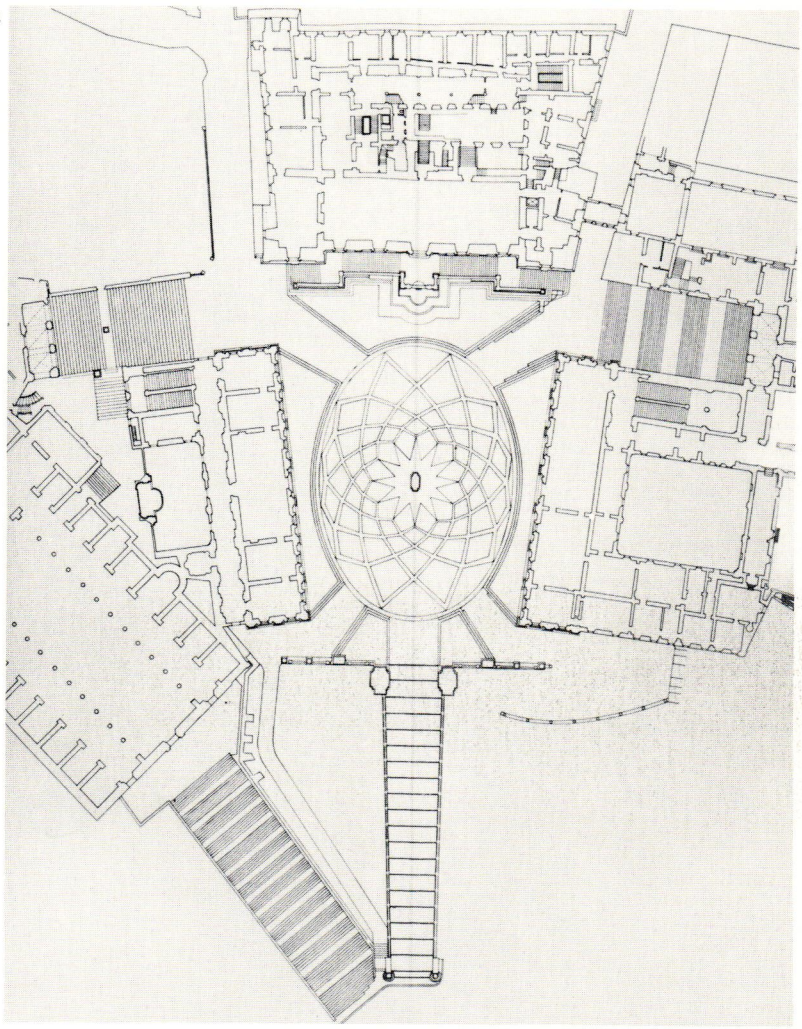


If the Piazza di Ponte "idea" generated a number of radial connections to the city, the concentric component of the diagram was also developed. The Palazzo and Piazza Farnese, Palazzo Massimi and Piazza Navona can be seen as examples of Renaissance development which relate not only to specific problems but also to this larger-scale scheme (3f). These spaces create a system of movement and open space radiating around the Piazza di Ponte and connecting the looping river.

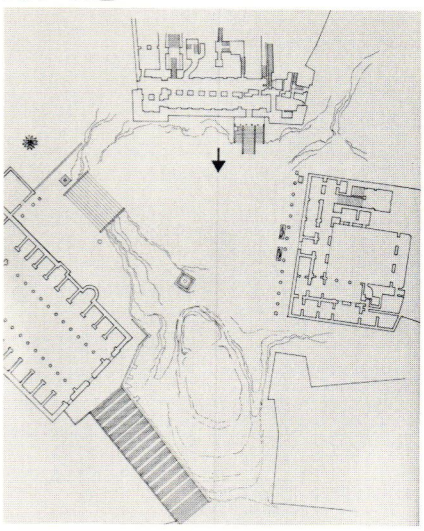
At the local level each of these spaces could also be seen to involve the ideal-real relationship. The Palazzo Farnese makes a forecourt out of city texture (5a-b). Antonio Sangallo G. takes the forecourt of the Vitruvian Roman house and produces it within the fabric (in contrast to his uncle Giuliano's proposal for Piazza Navona). The piazza can thus be interpreted as a notion of dominance by appropriation, or beneficence, in that private becomes public. The *palazzo* plan and the *piazza* were strongly enough tied to the metaphor of the antique type that there was no need to control the appearance of the surrounding buildings. The Palazzo Massimi, in front of the Palazzo Farnese, relates to the Massimi family's ancient ancestry and the fact that the site contained the foundations of an ancient Roman theater. Peruzzi alluded to the prototypical theater form in image, as well as to the Roman house prototype in plan (6a). In an earlier project Peruzzi had converted the Teatro Marcello into a *palazzo* for the Orsini. The transformation of this earlier work and the resolution of the radial theater with the orthogonal ancient house on an extremely irregular site produced in the Palazzo Massimi a masterful and dynamic sequence of spaces. By continuing around this theater type one enters directly into the Piazza Navona. By going from theater to circus the movement from Piazza Farnese and the river continues in an open space network, radially back to the river near Peruzzi's Palazzo Altemps (6b).



7a



7b▼ 7c▲



Campidoglio

The Campidoglio is the principal Renaissance *piazza* in Rome. Its form appears on superficial reading to be an ideal space inserted into a context (7a). It can be discussed as an experimental study of perspective space, being the most complete wholly conceived and executed space in the Renaissance. Yet from another point of view it was created out of a "real" concern for what existed, and involved a minimum of physical adjustment to elaborate its meaning. The angles existed, the medieval Senatorio facade looms through its new grid, behind the facade of the Palazzo dei Conservatori the original medieval court is revealed, and through the Palazzo Nuovo a grotto represents the cutting into the hill. The existing context is subtly interpreted and honored. The space is symbolically loaded, with the *piazza* and the equestrian statue, thought to be Constantine, turning their backs on the Forum Romanum and facing on axis the Forum Pontis and Castello St. Angelo (4c, 7c). However, the *piazza* closes on this axis rather than opening onto it, and from the bottom the perspective makes the trip up the hill less attenuated, perhaps implying the intimacy of state to the people at the *piazza*'s base.

The Basilica of Constantine is on axis with one *loggia* while the Gesù (first designed by Michelangelo, a friend of Ignatius Loyola) is on the other, creating a shearing of the *piazza*. There is also a vertical axis debating the longitudinal axes; the *piazza* seems to be a triangle with open corners accepting both the ancient and the modern church and state rather than supporting either. One has to symbolically climb up from either to the Senate assembly. The Campidoglio begins with a point, a star, an oval, and embodies a triangle, circle, and square – all ideal forms; its message depends on ideal meaning and statement as well as real reference and resolution.

8a The Baroque Sixtus V organization of Rome with the St. Pietro (1) connection to the pilgrimage churches. S. M. del Popolo (2), Piazza di Spagna and S. Trinita (3), Quattro Fontana (4), Piazza Quirinale (5), Porta Pia (6), S. M. Maggiore (7), S. Croce in Gerusalemme (8), and S. Giovanni in Laterano (9) overlay a larger scale organization and expansion on the Renaissance city.

8b Rome, Taddeo di Bartolo's 1413 painting of the "set-pieces" of the city

8c Rome: Giovanni Francesco Bordino's 1585 engraving of the ordered connection of the set-pieces appears as a deformed ideal city diagram.

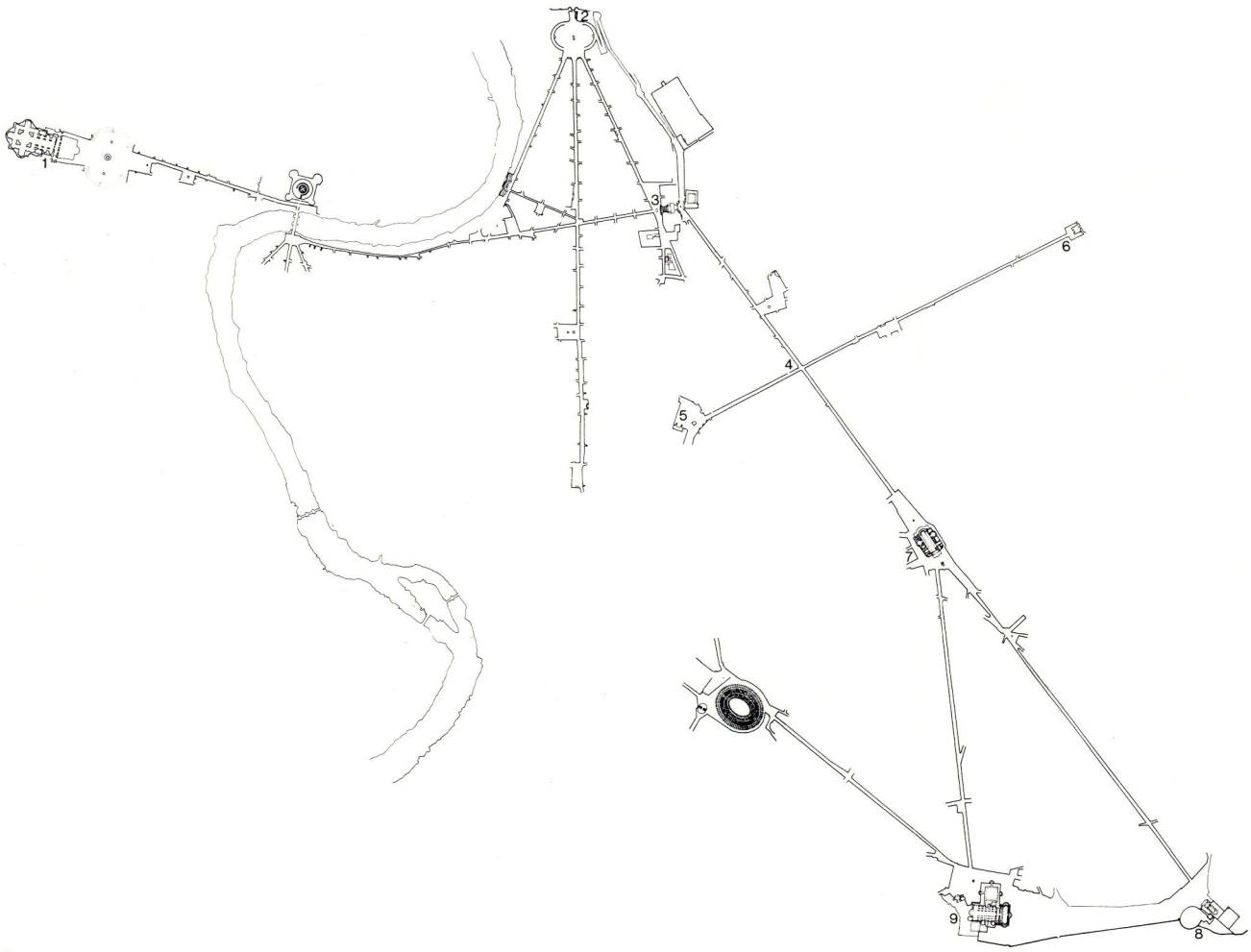
8d Rome: Antoine Lafrery's 1575 engraving indicates the symbolic program of the pilgrimage.

8e Diagram of the Renaissance and Baroque organization of Rome by Sigfried Giedion.

8f Brocchi's 1820 map illustrates the topographic condition of Rome and the Sixtus V organizations as they extend from the river through the hills of the city, providing a neutral measure of their condition.

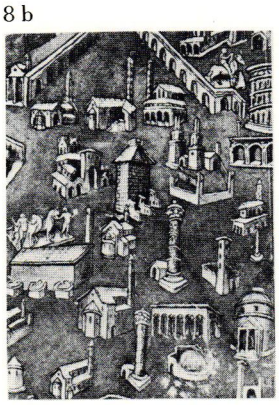
8g The Sixtus V organization, Bacon map

8h Sistine Library fresco indicating the new organization of Rome

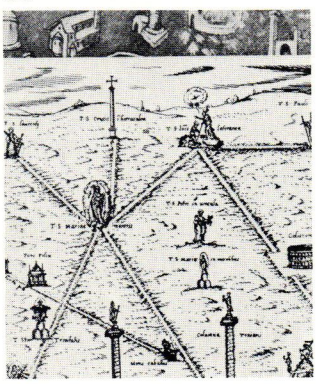


8 a

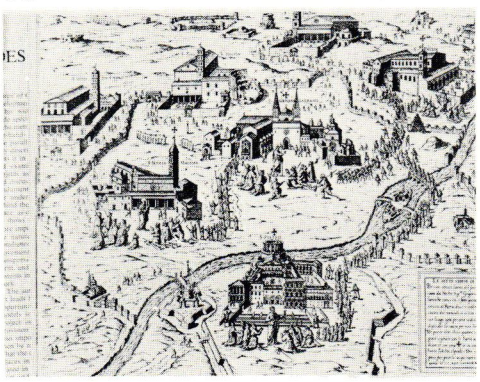
8 b

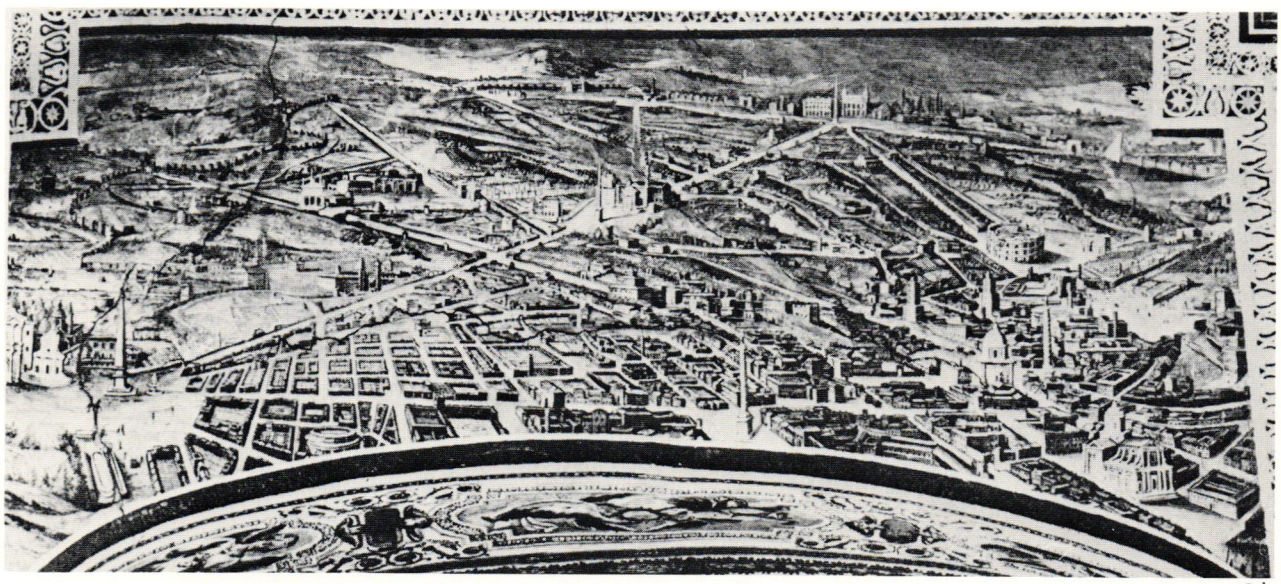


8 c



8 d





8 h

Baroque Sixtus V Rome

The 1585–1590 Sixtus V plan to connect the seven pilgrimage churches can likewise be seen as an interpretation of fifteenth-century ideal radial plans (8a-g). The Sistine plan is generically related to the Sforzindas of the Renaissance, with these churches and their accompanying external spatial development as the fine-scale adjustments which allow the large-scale idea to fit into the existing physical and cultural context, or reality. At the fine scale these *piazzi* contain ideal formal solutions as microcosms reasserting the macrocosm, which are transformed also to resolve, accommodate, and ameliorate the context into which they are inserted and ultimately become. The Baroque planner transformed the utopian ideal plan into a concept of set-pieces or ideal fragments inserted into an existing city fabric as nodal points along, or terminating, lines of movement. These were intended to clarify the organization of these lines and thus the areas related to them. The large scale network derived from ideal-city polemics and the set-pieces provided an organizational framework for the arbitrarily placed, separately conceived, dissonant forms of the existing medieval city of Rome.[20]

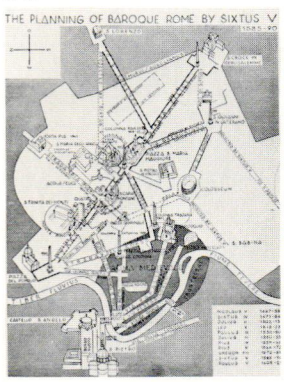
Christianity and thus the physical church building were illegal until Constantine. Once institutionalized, churches were symbolically erected on the sites of the previous underground church activities, which had had as little to do with the center and organization of the city as possible. The "real" problem for Sixtus was, as it had been with St. Peter's, to bring these fringe events into the center city. He accomplished this by bringing the city to the fringes, using the developing Baroque notion of axes of movement as the vehicle for city expansion.

Piazza del Popolo

The Piazza del Popolo is analogous to the space in an ideal city where a radial route (from the Piazza di

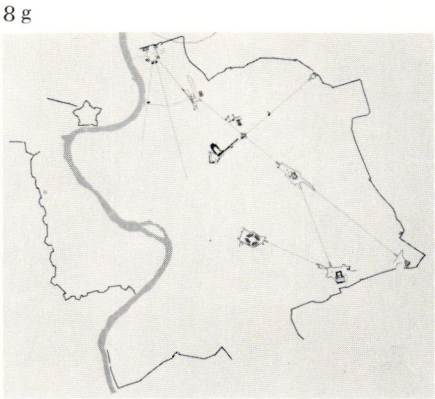
[20] This is the idea of 'tensioning' that Edmund Bacon develops in *Design Of Cities*, (New York: Viking Press, 1967)

8 e



8 f

8 g



9a The 1660 Rainaldi organization of the Piazza del Popolo with S. Maria del Popolo both in the *piazza* and at the edge because of the ambiguous reading of the oblique side. Via Ripetta (1) ends in the church, , the Corso (2), in the gate and the third street, Via Babuino (3) continues the pilgrimage.

9b The 1813 Valadier organization rejected the eccentric organizational recognition of Via di Ripetta (1), connecting Vatican to S. Maria del Popolo (2), but expands the *piazza* connection from hill to river.

10 The Spanish Steps (1) connects S. Pietro (2) and S. Maria del Popolo (3) to S. Trinity, the shift to the S. M. Maggiore etc. (4) and resolves an orthogonal and diagonal geometry.

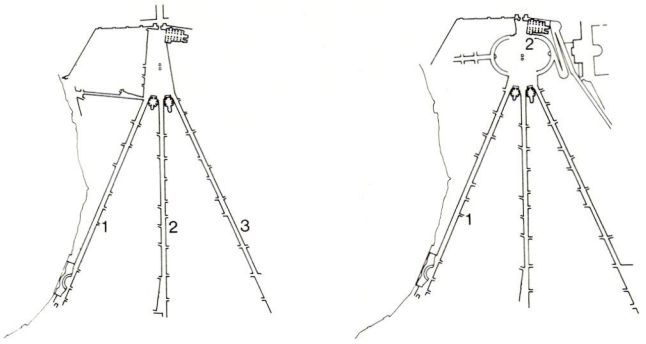
11a S. M. Maggiore (1) connects its back – by way of an obelisk, a set of stairs, and aisle entries – to the city, and its front connects both S. Croce in Gerusalemme (2) and S. Giovanni in Laterano (3).

11b The back, entry facade of S. M. Maggiore

11c Front facade, S. M. Maggiore, transparent to the medieval mosaics and tower

11d The regular nave of S. M. Maggiore

11e Plan which indicates the nave as a neutral form like a Roman Forum with an array of 'free'-formed attached chapels



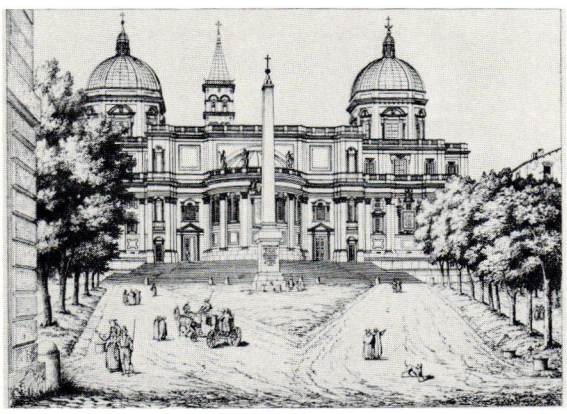
9

Ponte) intersects with the outer wall making an entry to, and exit from, the city. This space is complicated by the fact that it is also a *piazza* to a major early Renaissance church, S. Maria del Popolo. With an obelisk, Sixtus marked the intersection of the Via Flaminia, the major Roman road north, with the Roman wall and gate and the church, and projected a symmetrical trident of streets from the piazza into the city. Sixtus's trident could be seen as an attempt to organize the major natural and artificial elements of early Rome. The Via Flaminia, the middle street running to the ancient center of Rome, was the ancient Via Lata (and became the Corso); the Via Babuino runs east through five of Rome's seven hills, and the Via Ripetta runs west to the Tiber River. Rainaldi's twin churches of the 1660s reinforced this intersection of events. Despite the symmetry of Sixtus's projected trident, the Piazza del Popolo as developed in the sixteenth century acknowledged the eccentricity of the placement of S. Maria del Popolo.

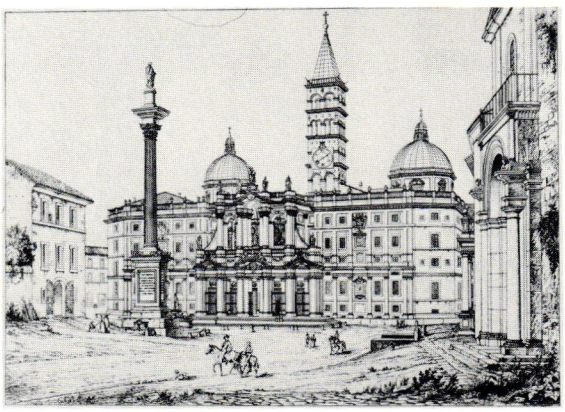
The 1813 plan of Giuseppe Valadier, in linking the Piazza with the Pincio Gardens and hill on one side and the Tiber River on the other, extends the effect of the single set-piece on the surrounding fabric. However, Valadier's exedral scheme perhaps overstates the idealization of the space in that S. Maria del Popolo is matched on the other side of the gate with identical "*poche*," possibly oversimplifying the real complexity of the intersection of events. The church and Via Ripetta from the Vatican finally lose their place in the scheme.

Piazza di Spagna

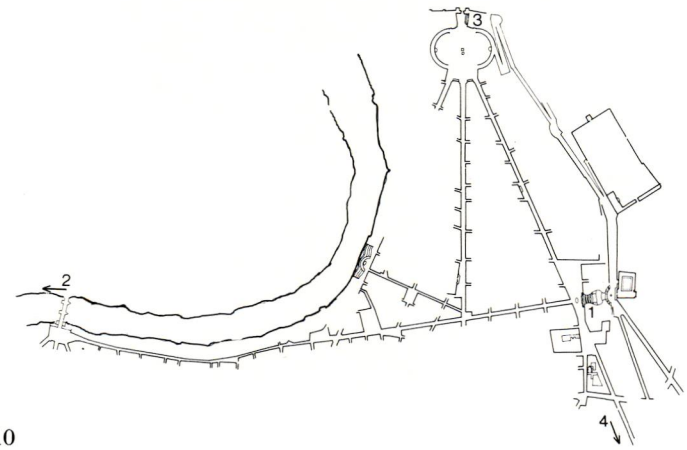
The eastern arm of the trident which goes through the hills was intended to be straight, seemingly proposing to measure the hills in height and



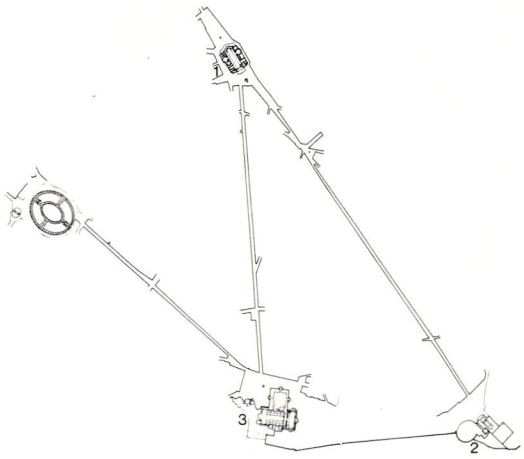
11 b



11 c



10



11 a

distance by the way they interact with the ideal line. Rather than complete the arduous task set out by Sixtus of connecting the Piazza del Popolo directly to S. Maria Maggiore, the Spanish Steps and Piazza di Spagna (10) act as a set-piece which recognizes the land forms and creates the intended connection using the existing streets and topography. As a virtually symmetrical form the steps are, in essence, ideal. In one sense, because of their purity of form, the steps can be seen, like the Campidoglio, as a foreign element collaged onto an existing situation; yet in another, they work as an elaborate contextural design. When the steps, which as an image and form suggest the hill that caused their being, linked S. Trinita and Piazza Trinita dei Monti at the top with Piazza di Spagna and Via Condotti at the bottom, the ideal set-piece began to extend its influence, to react, respond, and organize a much larger territory.

The Piazza di Spagna has a form which could be called a "bow tie," with the Fontana della Barcaccia as the knot, on axis with the steps and the Via Condotti. The bow tie is made up of two angles. One is the Corso, or orthogonal grid, which much of ancient and modern Rome in this area is made up of. The other angle is produced by the Via Babuino arm of the Piazza del Popolo trident. The Piazza di Spagna not only orients one to the trident street, but also conceptually to the major Corso system some distance away.

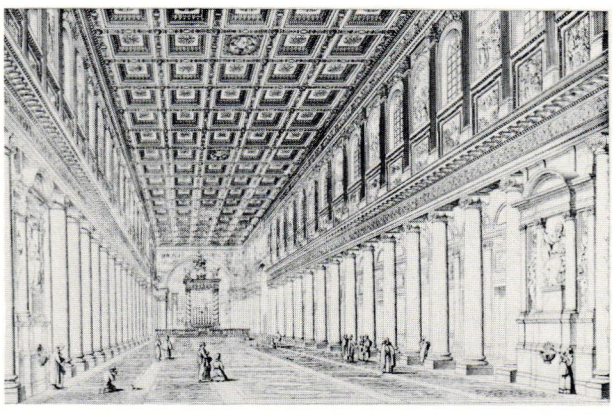
The Piazza Trinita dei Monti with the church is on the Corso system but the Villa Medici at the end of the widened boulevard which runs north out of the *piazza* is on the trident system. This upper sequence was extended by Valadier to connect with the Pincio Gardens and thus the Piazza del Popolo. The promenade, long used as a place to catch the breezes and view the city, was formalized into a spatial and ordered sequence.

The bow tie at the bottom produces, in essence, two *piazzi*, breaking down the scale as well as causing the space to look stretched and thus activated by movement forces and activities. The Palazzo di Spagna and Bernini's facade of the Propaganda Fide, and the Column of the Immacolata Concezione visible from Piazza del Popolo, are on one minor piazza while a group of trees gives a different character to the other. The Via Condotti, previously discussed as one of the Renaissance radial streets, can now be seen in reverse linking the *piazzi*, church, and the Pincio Hill to the Corso, the river and the Renaissance hub at the Piazza di Ponte.

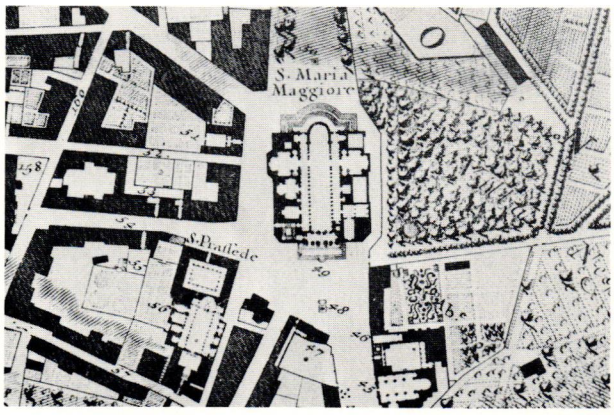
Thus what at a cursory review might have appeared to be an idealized formal design or at best merely a connector in the Sistine scheme can be seen as able simultaneously to do more. The Piazza di Spagna exists at the level of a metaphorical connector, of hill, in which it is embedded and represents, with water, towards which it faces. Or it can be seen as a local connection of four significant buildings which provides an open space orientation for a dense surrounding urban fabric.

Piazza S. Maria Maggiore

Most of the other Sistine nodes were developed in open contexts and do not provide the opportunities for analysis that the Piazzas del Popolo and di Spagna afford. S. Maria Maggiore was adjusted with a double facade to accept multi-directional entry through spaces surrounding it (11a-e). Its ideal characteristics are its facades and basilical internal configuration. These pure forms are strong enough to



11 d



11 e

11f Plan. S. Giovanni in Laterano also has a formed nave and aisles which act as a neutral container of special events: the Palazzo Laterano, a cloister, and baptistry.

11g Nave, S. Giovanni: Borromini's rigorous five-aisle plan provides the neutral structure for diverse "plug ons."

11h Facade, S. Giovanni, Galilei, 1735: in the scale of the space towards S. Croce

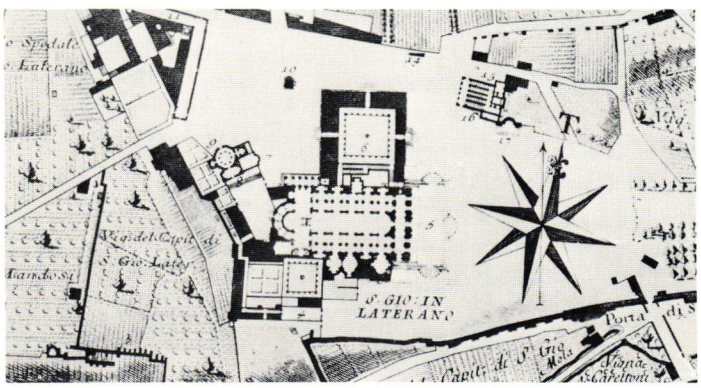
11i Side facade: Fontana (1886) turns the side into a front with a *piazza* accepting movement from the city.

12a S. Maria della Pace, Pietro Cortona, 1686, with existing conditions illustrating how little adjustment was necessary to allow the existing context to pass through an idealized space

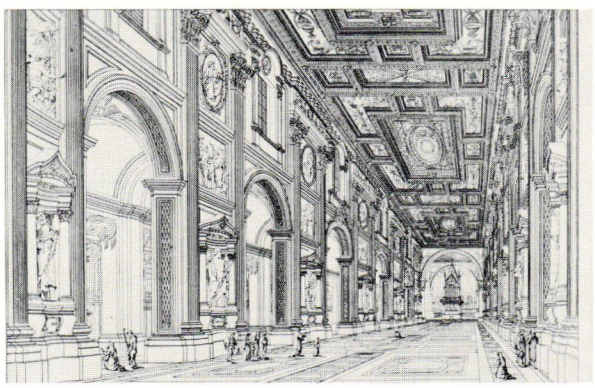
12b The portico and facade were ambiguously both a back drop and the actors.

12c Piazza Ignazio, Raguzzini, 1727, continues the space of the inside through the facade to the outside by continuation of the rhythms and organization.

12d The "stage" is defined by surfaces which also read as objects, allowing the space to move back into the context.



11f



11g

receive and order an odd series of "plug-on" chapels and an oddly configured surrounding external space. Like a hazelnut, it has a geometric center and an irregular surround. The street was widened, creating irregular spaces connecting a series of radiating streets (one of which was to connect the Colosseum or Sixtus's multi-use wool factory proposal).

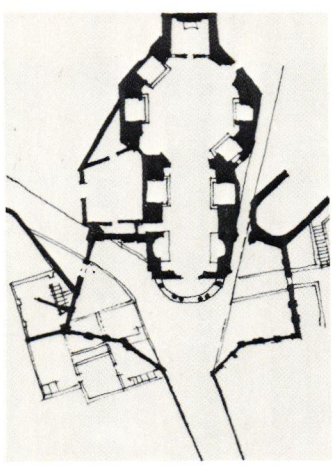
Piazza S. Giovanni in Laterano

The problem of S. Giovanni in Laterano is similar to S. Maria Maggiore. Through the addition of the Palazzo Lateranense and a new entrance into the transept of the church, which made the church a right-angled double-nave plan, a large amorphous surrounding area was transformed into a group of smaller spaces better related in scale to the buildings which defined them and better ordered as a perceptible spatial sequence (11f-i). As at S. Maria Maggiore, the church faced the wrong way for the Sistine scheme, so an obelisk, new facade and entry, and transformed spaces were used to reorient the building. The church was large enough to convert the transepts into another nave for lesser masses, keeping the main nave for high masses. Though this program related to the large city-scale, the spatial and social complexity of the church was enriched through the external changes. Large-scale concerns and local complexity and richness of space and place were brought into concert with one another.

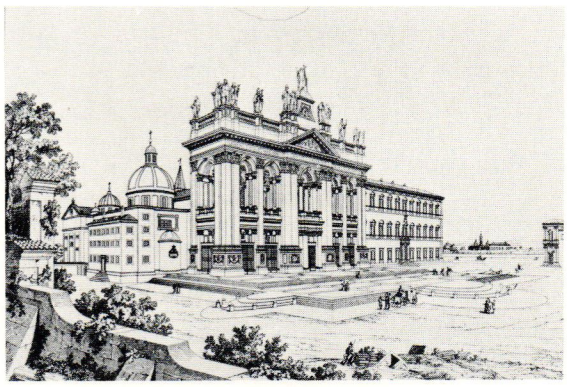
Local Focus

The Sistine strategy was to organize vast areas of Rome. It left large areas conceptually untouched by the scheme. The High Renaissance and Baroque development of Rome which could be considered outside the large-scale Sistine structure, however, also used the ideal set-piece concept by inserting local spaces, places, and organized focuses as references in local-scale areas. The Piazza della Pace, Piazza Ignazio and the Fontana di Trevi, the Porta di Ripetta, Piazza della Rotunda (Pantheon), or Piazza Navona and numerous others, make use of

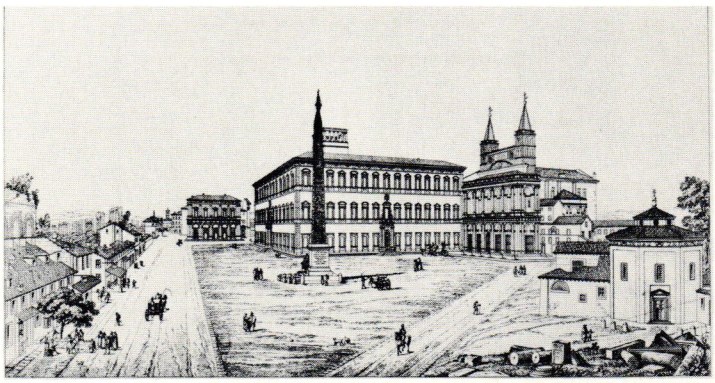
12a



12b



11h



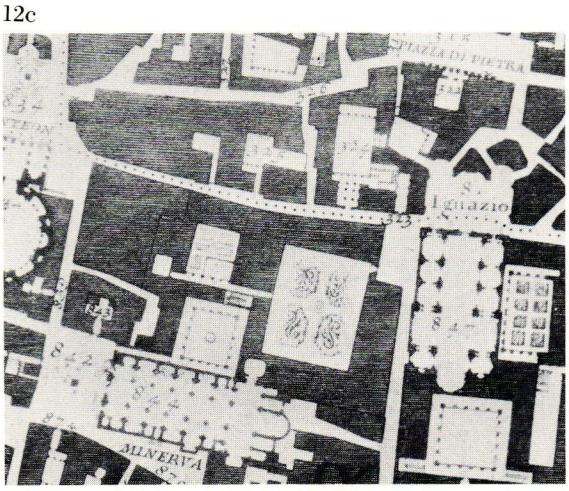
11i

the existing context and adjust it in a minimal way so as to carve out an ideal formal space. They exemplify subtle relationships between regular and irregular, by testing how far an ideal form can be adjusted or distorted and still maintain its intended reading. These Baroque spaces tend to give order to the random street patterns around them, becoming references, places and local centers.

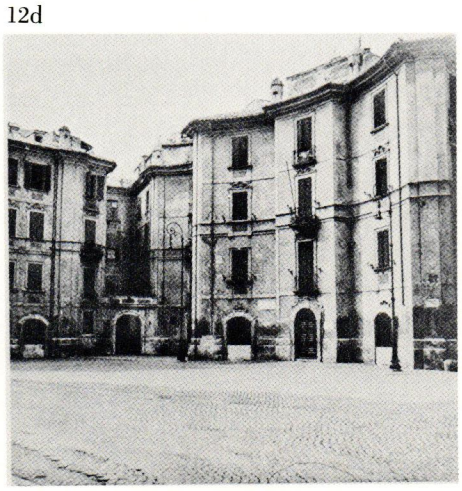
The Piazza della Pace is a minor adjustment to a street to allow recognition and stopping at a once popular church (12a,b). The space is idealized, a kind of proscenium on which the church ambiguously plays a leading and minor role by simultaneously projecting into the space and receding as a backdrop wall. The street and vista are oblique to the central axis of the church. What first appears as an eccentricity is a clue to the condition of the pre-existing street which still continues to the side through the facade of the space. The continuation is as strong a reading as the arresting space. Thus the idealization and reality work together in an interesting debate and enriched accord.

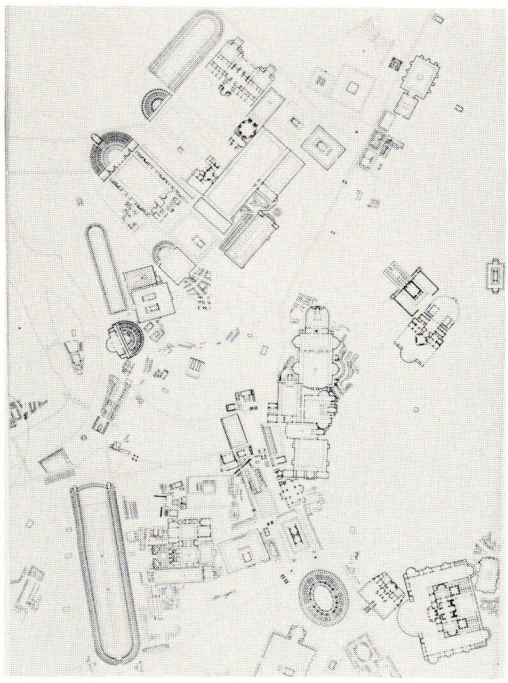
In S. Ignazio, the tripartite division of space is shaped to conform to the internal modulation of the church (12c,d). Thus the nave and aisles pass through the facade which acts as a screen (white with three large doors), into the forecourt (sienna brown) which is the city. Inside public institution and outside public space are merged. The movement sequences around the *piazza* are not interrupted, but merge into and flow through it. In fact, the Piazza itself is very open and porous to the city. Raguzzini's Piazza Ignazio, like Cortona's Piazza della Pace, subtly converts existing buildings by re-facading and minor addition or subtraction in such a way as to produce a good environment adjacent to the space as well as within it.

12c

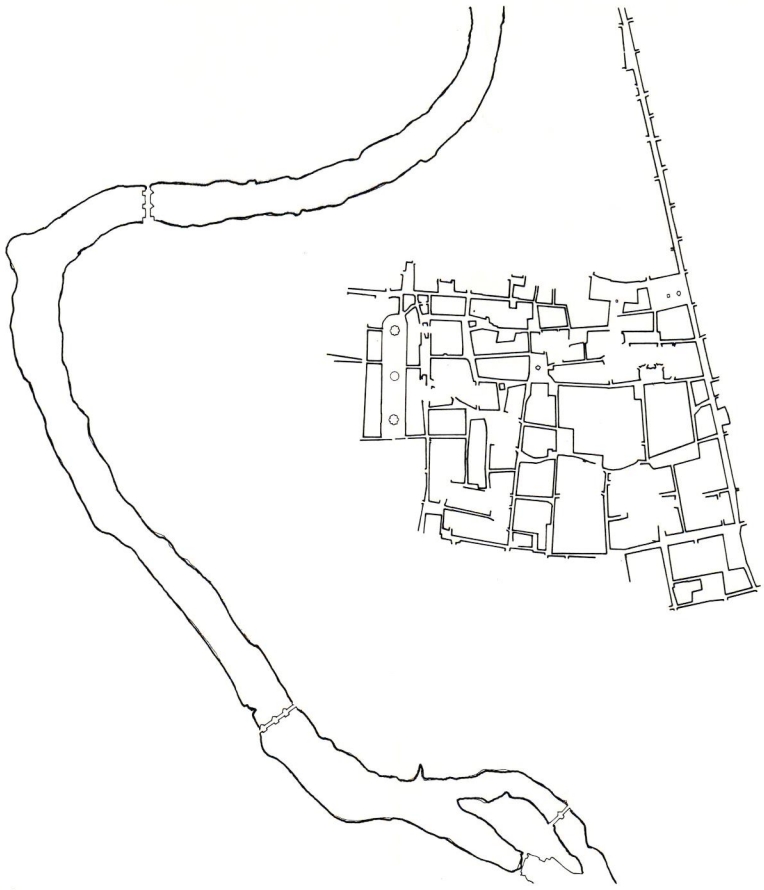


12d





13a



13b

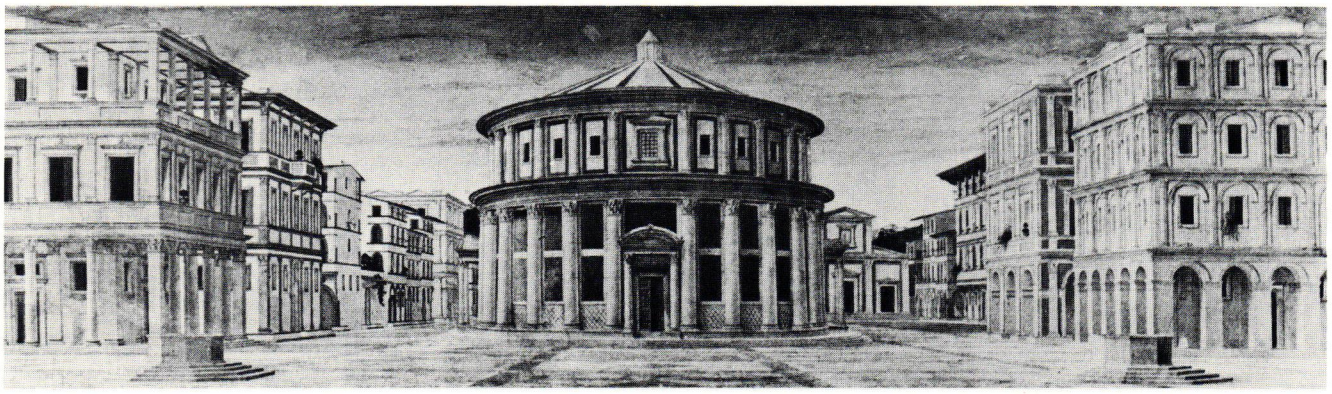
The Campo Marzo Orthogonal Organization

The *piazza* and the linkage of *piazzi* are the main organizers of the texture of Rome. There is very little grid. The Corso, the ancient spine to the north, probably made straight because the topography was flat, organizes a large area between the hills to the east and the river to the west (13a). This area appears to have been orthogonally organized in ancient Rome. Many Italian towns and cities are gridded today because during the Middle Ages it was simpler to use the Roman foundations and street systems which existed. There are a number of parallel connections from the Corso through the Campo Marzo to the Piazza Navona which is nearly parallel with the Corso. The Renaissance and Baroque church, *piazza*, and street reinforced this order, by being perpendicular or parallel to the Corso (13b). From the portico of the Pantheon, for instance, one can see the white screen facade of S. Ignazio, and from the Piazza Ignazio one can likewise see the Pantheon columns in one direction and the Corso in the other. The orthogonal order gives a clarity to this large area. It becomes another morphology binding the hills to the river.

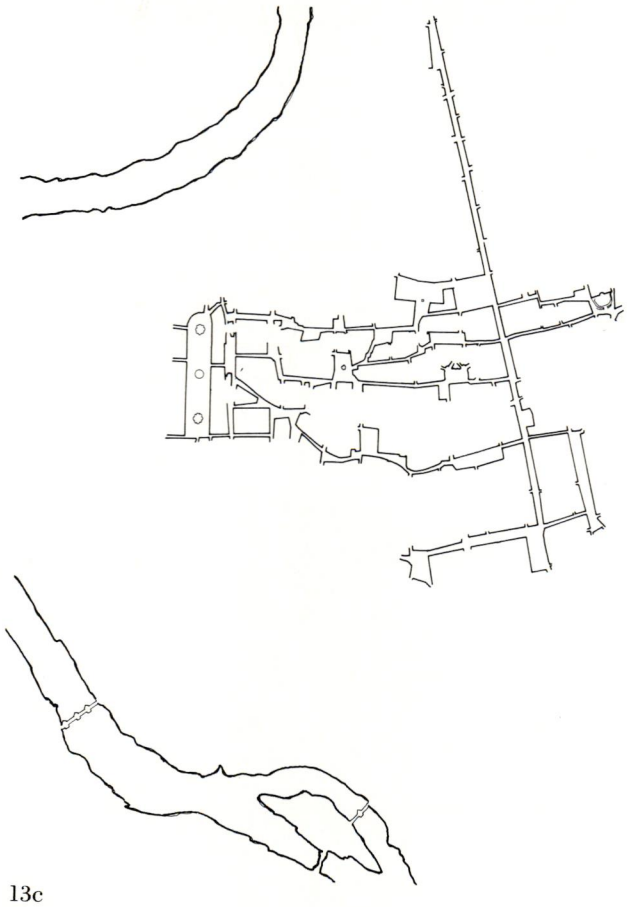
As the Sixtus V plan can be argued to oscillate between ideal radial city conception and real contextural execution, so too the small-scale Baroque *piazza* and system of linkages can be seen as moving between the same dialectical opposites. Thus in each there is to be found a synthesis which provides a physical demonstration of Mannheim's notion of a Utopia transcending reality which, when it enters reality, transforms both the reality and itself.

Building-Piazza Relationships

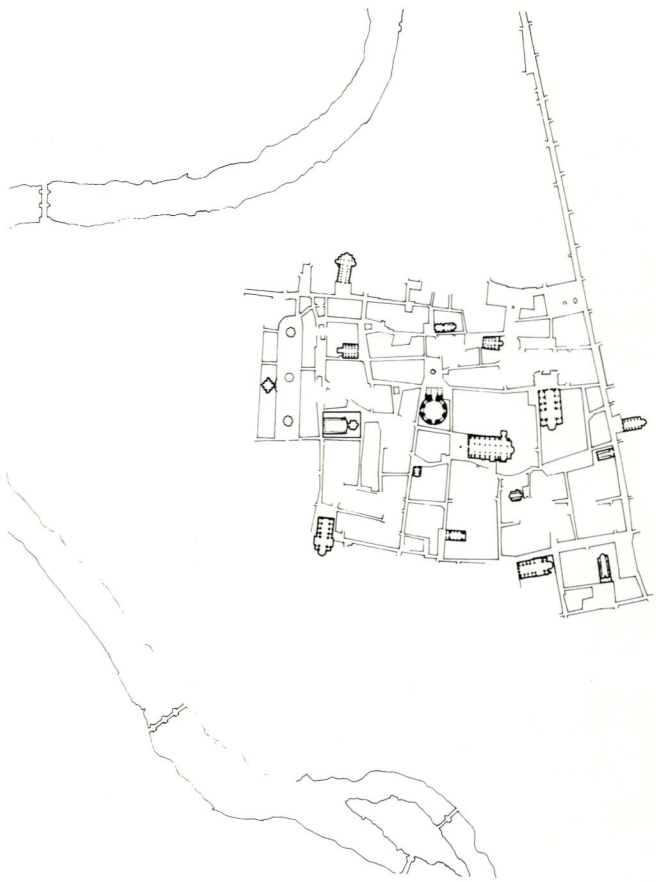
This large-scale planning methodology in fact reflects a similar means of solving smaller-scale architectural problems. Many Roman Renaissance and Baroque buildings provide interesting



14a



13c



13d

illustration of this. The Renaissance polemic for ideal forms produced examples of the ideal *palazzo* and ideal church as well as the ideal city. These writings and diagrams can be contrasted with actual Renaissance and Baroque built forms which indicate an involvement with inserting the ideal into a real context by using the implicit or latent structure of the context to restructure and enrich the ideal building type and vice versa.

Piazza Navona–S. Agnese

Borromini's S. Agnese in Piazza Navona is an important example (14b,c). The centralized plan by Rainaldi is wider than it is long and appears squashed, the flattening enhanced by false perspectives in the side chapels. Borromini carries the theme through on the facade by pushing it back, which conversely pushes the dome forward so it can be seen in the narrow *piazza*. The push and pull theme on the facade activates a frame which simultaneously ties into the existing facades of the

13a Campo Marzo, Imperial Rome

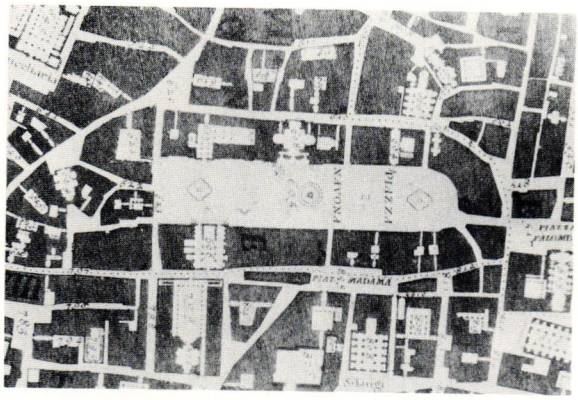
13b Campo Marzo, Baroque Rome: the orthogonal Roman condition is still organizing through the reuse of its foundations.

13c Lateral striations connect the Piazza Navona, center of the medieval Campo Marzo, to the Corso as edge of Baroque Rome.

13d The churches as interior public space obey the ancient orthogonal system.

14a "Baltimore" painting, by Laurana or Piero della Francesco, illustrating the Renaissance ideal city with the ideal distilled in the central object "temple"

14b S. Agnesi in Piazza Navona of Borromini illustrates the "ideal" pushed into the "real" context; the ideal *piazza* becomes a reuse of an existing circus. Borromini illustrates the dynamic-pulsating, yet neutral-stretching result of this condition.



14b

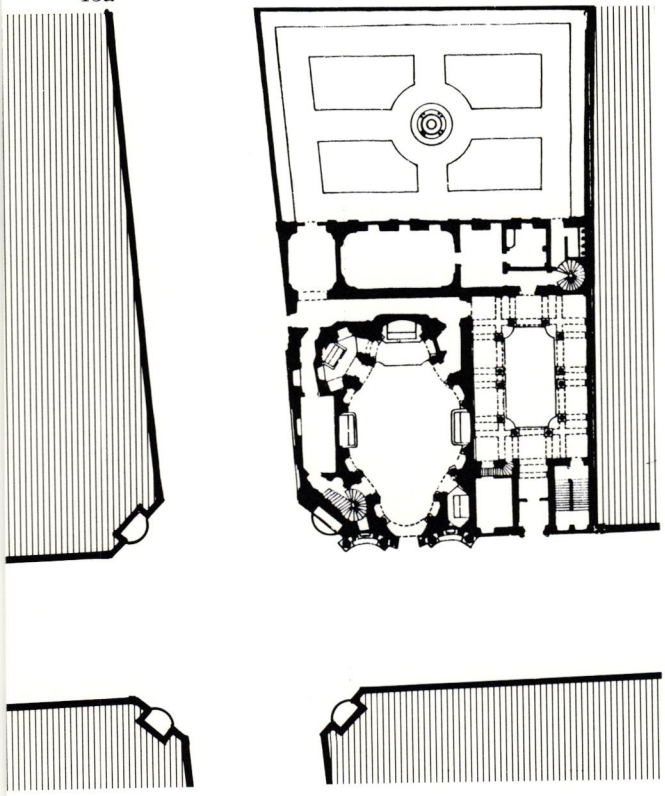
15a Borromini's S. Carlino plan "*parti*" seems to be a result of a reaction to the corner, with D. Fontana's Quattro Fontane impacting one corner causing the deformation of an ideal, centralized church into the oval, expanding and contracting versions. In the facade, the impact of the corner appears to have caused the front plane to "wrinkle" around the columns – a reaction similar to that of the plan.

15b The more pure Quattro Fontane space looks as if it deformed the church plan, squashing and pushing the *cortile* back to a more diagonal location.

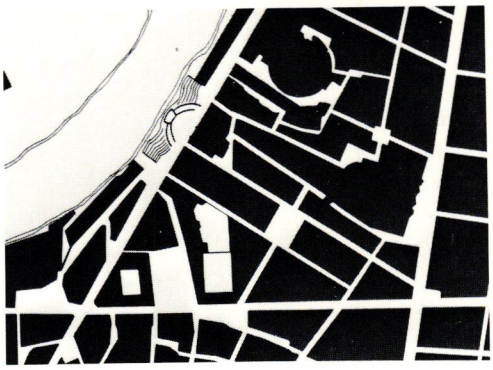
16a Palazzo Borghese in context where the external *piazzi* are more positive as figures than the surrounding masses. The internal static organization and figure of the *cortile* allows the solid of the plan freedom to go its own way as an internal organization as well as to define the external spaces.

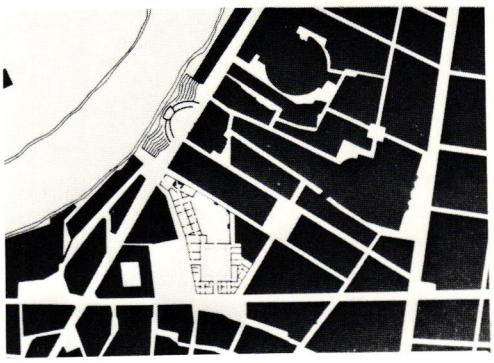
16b One side of the *cortile* is fragmented visually into a screen to offer the garden as antithesis of the urban space and to create a linear sequence.

15a

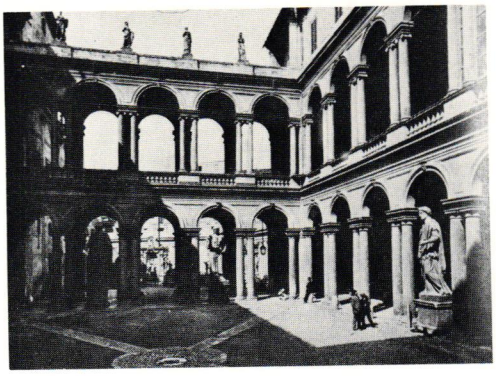


15b

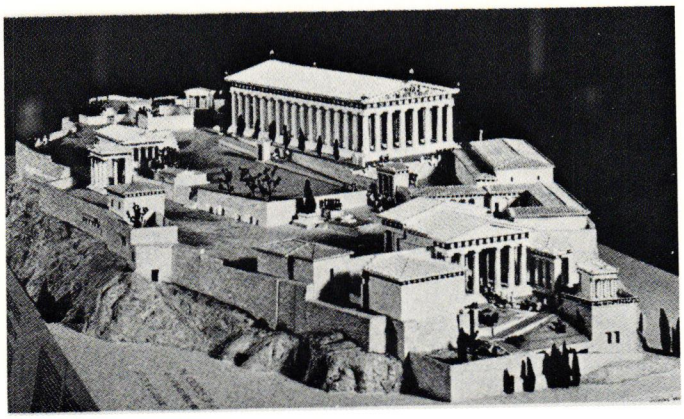




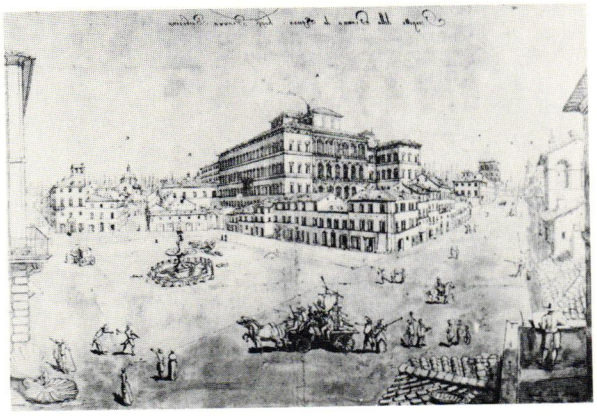
16a



16b



17a



17b

17a Sacred way, procession to the Acropolis, Athens
17b Palazzo Barberini appearing like the Parthenon from the Piazza Barberini.
17c The procession up through urban space (1), the fragment of a Palazzo *cortile* (2), and through the building and garden to the *piano nobile* (3), is a lateral layered movement up a hill.
17d Diagonal and orthogonal components of building and context.

piazza in terms of scale and rhythm. This seems to be arguing that the ideal – pure object (15a) – has been pushed into a wall – the context (15b). The axis of S. Agnese and the axis of the Palazzo Madama (in the Piazza Madama paralleling the Piazza Navona with an important entry into the *piazza*) shear past the center of the *piazza* marked by Bernini's Fontana di Quattri Fiumi. Building and space outside the *piazza* and building inside the *piazza* are related by and to the *piazza* itself (15c,d).

Quattro Fontane–S. Carlino

Borromini's S. Carlino is another provocative ideal/real solution. It is attached to the side of an important city intersection and space, the Quattro Fontane, which marks the top of a hill between the hills of S. Trinita and S. Maria Maggiore, and is bisected by a major connection of Michelangelo's Porta Pia with the obelisk in the Piazza Quirinale overlooking central Rome. It seems that Borromini's earliest experiment with the expanding and contracting wall membrane comes from the major diagonal implosion of the external fountain (16a,b). A dialogue is established between the external and internal space. The internal space, deformed by the external force, reasserts itself as a pure form of geometric perfection which then allows a monastery to be organized by it (like the chapels at S. Maria Maggiore and S. Giovanni in Laterano).

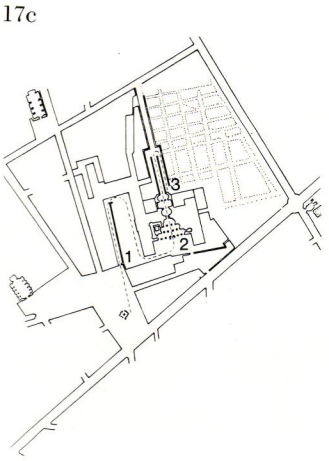
Piazza Borghese–Palazzo Borghese

The Palazzo Borghese, like S. Maria Maggiore and S. Giovanni in Laterano, uses the idealized form of the court or nave as an ordering device to provide conceptual structure for the surrounding fabric of the building itself as well as external spaces and buildings. By providing order in the center the periphery is freed to respond to both programmatic needs as well as site pressures. The Palazzo Borghese is stretched to make a facade and visual connection with the river, the rooms strung out in enfilade, each getting light and air. The formal *cortile*, because of its strong visual and conceptual identity, allows the building to take its own pragmatic or programmatic course without creating chaos. A garden on the inside and a sequence of *piazzi* on the outside are formed on the Cartesian coordinates of this *cortile*. On the outside the building functions as surface, forming urban space. Even at a large scale the spaces and the building form a web between the Via Condotti, the connector of the Piazza di Ponte to the Spanish Steps, and the Via Tomacelli, which connects the Spanish Steps and Corso to the open-stepped, and formally similar Porta di Ripetta in an angle equal to the Condotti-Corso relationship.

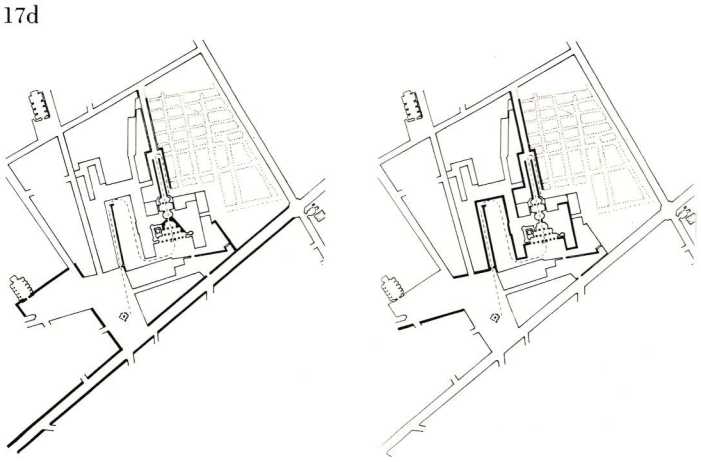
Piazza Barberini–Palazzo Barberini

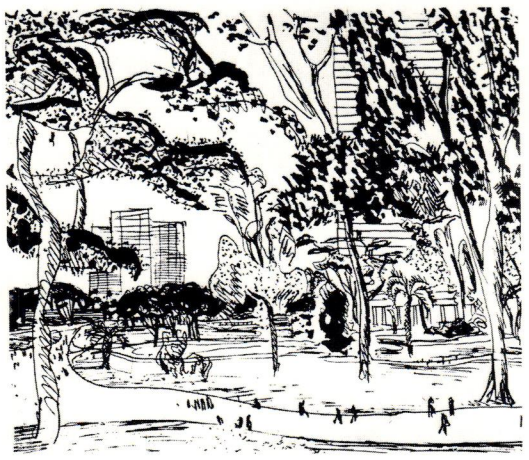
The Palazzo Barberini is another important Baroque *palazzo* manifestation related to a civic space, the Piazza Barberini. The U-shape plan can be read as a fragment of a courtyard which has been eroded by the site, or as an expanding building with wings stretching out and engaging the landscape. This virtual court exists only midway in a sequence of spaces and movement which begins in the *piazza* (17b-d) and winds its way up to the obliquely presented *palazzo* (Temple?) like the Athenian or Delphic sacred way. It passes an implied front facade, which fronts the *piazza*, into the *cortile*

17c



17d





18 Ville Radieuse, Le Corbusier, *objects in undifferentiated space*

19 Mies van der Rohe's presentation of I. I. T. shows a rejection of the context as usable spatial and ultimately social structure.

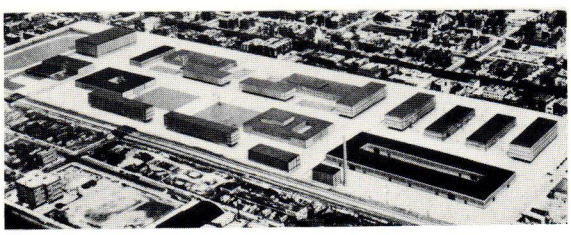
20 New York in 1930s and New York in 1950s. The polemics of revolutionary change of the cities were ignored in America but the spatial imagery of dislocation was accepted.

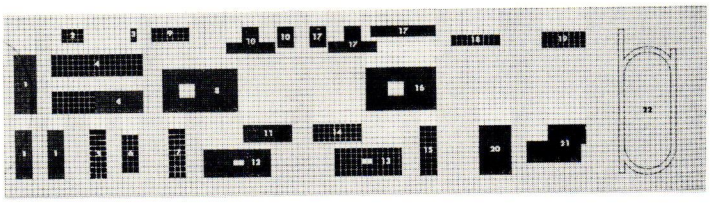
through the building, up a ramp to the garden and back to the entry, at the *piano nobile*. The two geometries which make up the *piazza* infuse the whole site plan and building to reinforce the idea that it is a *palazzo/villa* intimately wedded to its context. It derives its richness as well as its *parti* from the relation to urban texture and topography. The site destroys the *palazzo*; the *cortile* is only partially intact, the *piano rustica* is eroded, with its center on "*piloti*," and the section is sheared. Although the building appears at first free like a temple facing St. Peter's, it is in fact, like all temples, rooted in the structure of its landscape which it accentuates and from which it derives support.

The Renaissance and Baroque architect in Rome was a product of a particular humanist culture. On the one hand he was involved in the intellectual search for order, the attempt to bring conceptual understanding of the city to everyone who used it. However, the problem was not posed so simply. The city existed; there was no desire to destroy it but rather a desire to transform it into an orderly system. These architects did not simply impose an ideal form on a situation; they also perceived and responded to a structure in the existing context. The formalization which they developed was adequate and appropriate to both the problem of large-scale organization and to small-scale connection. The lesson of Rome opposes the imposition of irrelevant ideas, and thus forms, upon a given situation. Rather it involves the discovery of forms which contain notions of order through idealization, transformed in relation to notions of contexturalism, so that a certain perfection of appropriateness and consequence to existing formal and social reality is achieved.

In relation to the notion of ideal and real postulates, a significant number of today's planning proposals can be seen as misinterpretations or misappropriations of early twentieth-century planning schemes. The proposals formulated by Soria y Mata, Ebenezer Howard, Sant'Elia, Tony Garnier, Le Corbusier, and others were presented in terms of new cities and were not involved with the context of the existing city. Most of these utopian plans solved urban problems by abandoning the existing city for new counterproposals, although others, such as those suggested by Le Corbusier, proposed the replacement of the city by planned displacement or phase-out. Ideas about the relationship of old and new were discarded for the notion of a departure and separation from the fabric of the decaying city inherited from the tenth through nineteenth centuries. The new was to be a complete and self-sufficient organism replacing the old which, it was said, could no longer function.[21]

Since their inception, Le Corbusier's Radiant City and other utopian or ideal schemes have been distorted. Even when it was recognized that existing cities could not be completely replaced, the utopian schemes have been literally interpreted as solutions to present problems. The need for analysis of existing conditions, of both physical and social structure, has not been sufficiently recognized, and thus planning has not responded to the existing fabric where the problems occur. Plans divorced from their utopian or ideal intent and simply imposed on the urban fabric have created even more

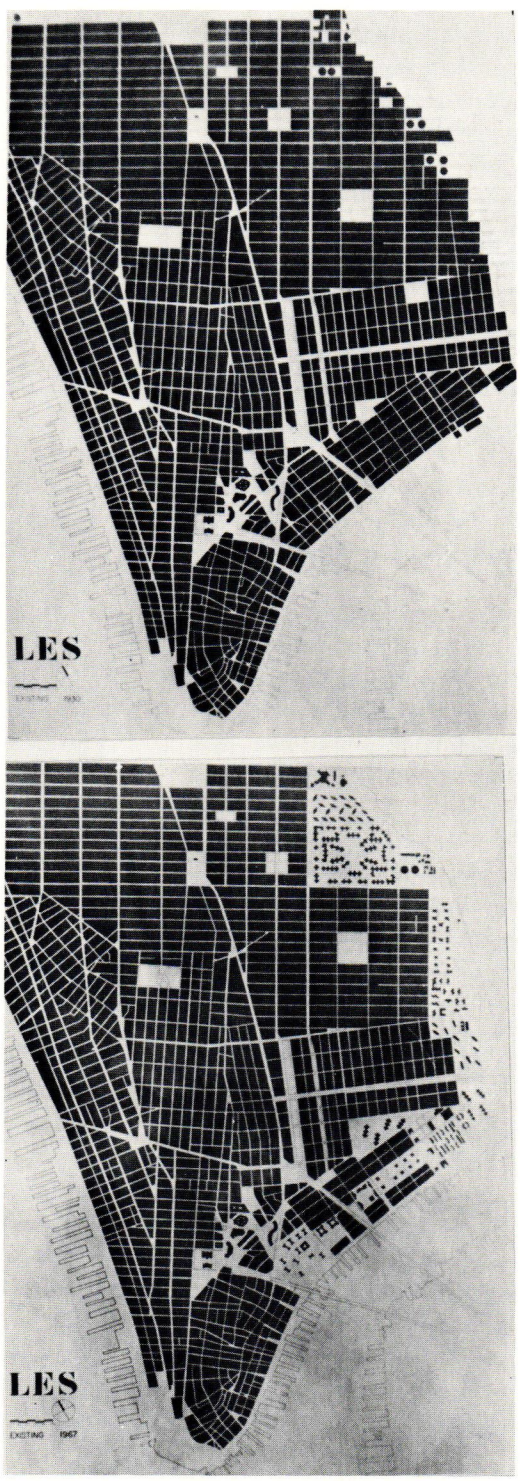




19

deleterious effects on the existing city structure, without effectively creating a new structure. Presented as a progressive or revolutionary polemic, by the end of World War II, modern architecture was accepted, and what was originally proposed as utopian in both formal and social terms was ultimately appropriated for the display of capitalistic symbols of progress. Both the forms and the content lost their original meaning. Although the industrial revolution had made the argument for starting over plausible, what was not understood in the fight for the Modern polemic was that the desire to renew the existing city was not merely a conservative argument. It might also have had something to do with fundamental social, cultural, and psychological continuity, equilibrium, or even regeneration. That change can perhaps only come about through transformation was never considered. The traditional city is now being reevaluated in these terms, even by those interested in socio-political change. We can no longer be insensitive to the complex problem of cultural and physical continuity, and its relation to the creation of the new. Theory is needed in which the existing fabric is no longer rejected but is to share in the process of renovation. The new and the old must relate to the reorganized physical and operational systems upon which both depend. The new must transform the old into a new functioning system. In these terms, it seems relevant to involve theory which discusses the interplay of concept and context.

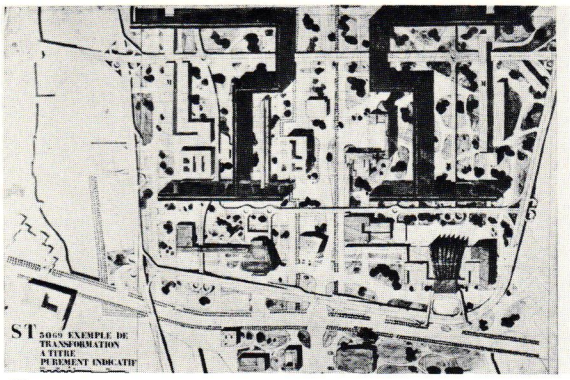
If, as Arnheim says, "Art has always been used, and thought of, as a means of interpreting the nature of the world and life to human eyes and ears,"[22] then art does not always have to state or describe *what is*, but can also be involved with *what could be*. Custom



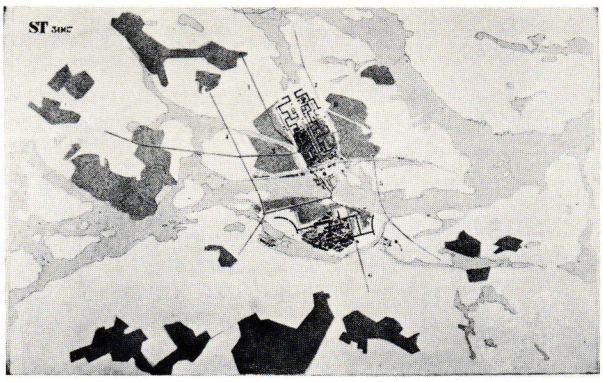
20

[21] For a discussion of these ideas in relation to housing, see "The Form of Housing," Neave Brown, *Architectural Designs* (September 1967), pp. 432–433

[22] Arnheim, *Towards a Psychology of Art*



21 a



21 b

and habit, wants and needs no doubt provide planning criteria. If the city which is made up of old and new components is conceived as transcending as well as accommodating the customs and habits presently established, schemata involving ideal and real consciousness are essential.

> *The image of the city thus seeks the universal answers to temporal problems, and by so doing reflects as well as challenges its social background. At any rate, the consistent striving for perfection is a clear indication of recurrent human desire to attain a state in which conditioned necessity is replaced by liberty and harmony.*[23]

A plan, an image of the political society in which it exists, can *propose* as well as *represent*; and it is not inherently authoritarian in so doing.

Like most historical development, the proposals of Renaissance and Baroque Rome were a manifestation of the acquisition and representation of power – the power of the church to acquire a city to represent its might to the world. They also represent the power of individual families who controlled or were related to the church, whose buildings and spaces were part of the system organized by the church. Because they were directed to the attainment and display of power, the value of these proposals as analogies is often questioned. It might be argued that Julius II, in relating his name and ambitions to Julius Caesar, and Mussolini, having not too dissimilar thoughts, made the development of Rome a lesson of warning.

But power has many possible manifestations. "Power to the people" and "the dictatorship for the proletariat" are also statements of this issue. It is not a question of power or no power, but rather how it is used, by whom, why, and for what. The struggle for power continues today between private and public forces. In this century we find a system based on philanthropy that has become too self-centered and confident to provide substantial public amenity beyond self-advertisement and maintenance (through display) of power. Private enterprise is perhaps too much removed from public problems, a situation that the fifteenth- and sixteenth-century church and seventeenth- and eighteenth-century monarchies found they could not afford for their survival. This system of power in the hands of private interest prevents any public resolution of problems for fear it will unbalance or ruin the established system.

The alternative to private power—a public control of power and thus of the planning of cities—is obviously a socio-political problem. For architecture and urban design it has two significant implications. One is the conversion of a stock of quality private buildings into public (as has occurred in the Louvre, Palazzo Pitti, Leningrad, etc.). The other, implicit in Corbusier's statement, "*une maison, un palais*," is that public planning cannot mean just something for everyone, but must aim at providing the highest achievements of the arts. What was once commissioned to aggrandize private power, to educate, comfort, and edify the elite few, must have as its goal the aggrandizement of public power and the provision of commensurate amenities for everyone.

The 1748 map of Rome by Giambattista Nolli allows a double reading which makes an interesting commentary on the relationship of public and private conditions. This map of black and white can easily be read as a code for private and public domain. All of the anonymous buildings of the city are rendered black, while streets, *piazzi*, and other open spaces are white. However, churches and other significant buildings are drawn with their ground floor plan rather than as black "*poche*." They read as white, and spatially participate with the streets and *piazzi*, and other open spaces. Are these meant to be public? The churches are public institutions of a sort but why are the ground floor plans revealed of important family *palazze*? At the time it no doubt honored the owners to be specially depicted, but the alternative meaning, revealed by a more literal reading, is undeniably present. In fact, as the church and major families have lost their power and with the growing strength of socialism in Italy, this second interpretation of the Nolli map is indeed occurring. Many once private buildings are being converted into public institutions.

[23] Helen Rosenau, *The Ideal City* (London: Routledge and Kegan Paul, 1959), p. 5

[24] Mannheim, p. 200

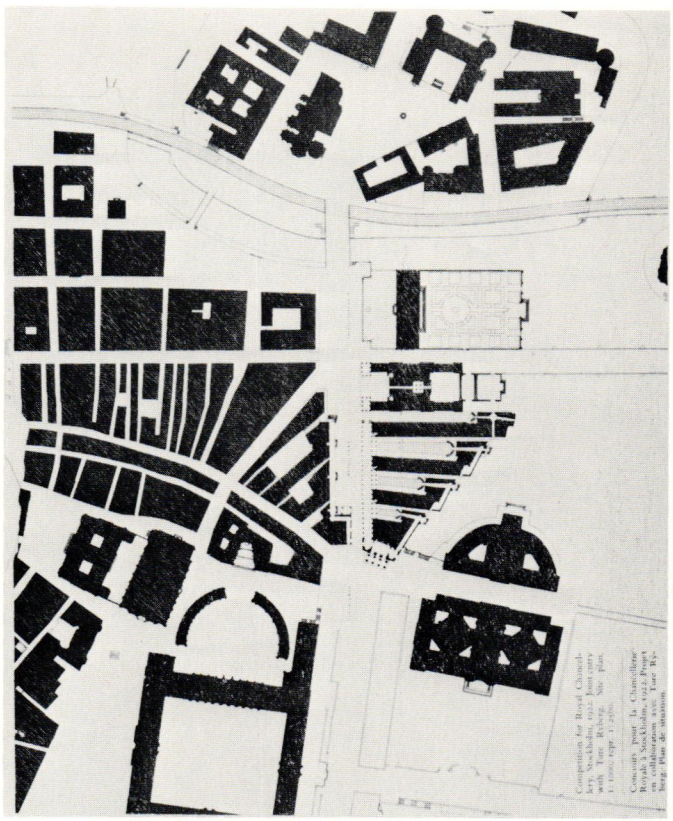
[25] Le Corbusier, *Towards a New Architecture*, "The Lesson of Rome," (The Architectural Press, 1959), p. 161

21a,b Le Corbusier's 1933 scheme for Stockholm with proposed planning extending beyond the city limits

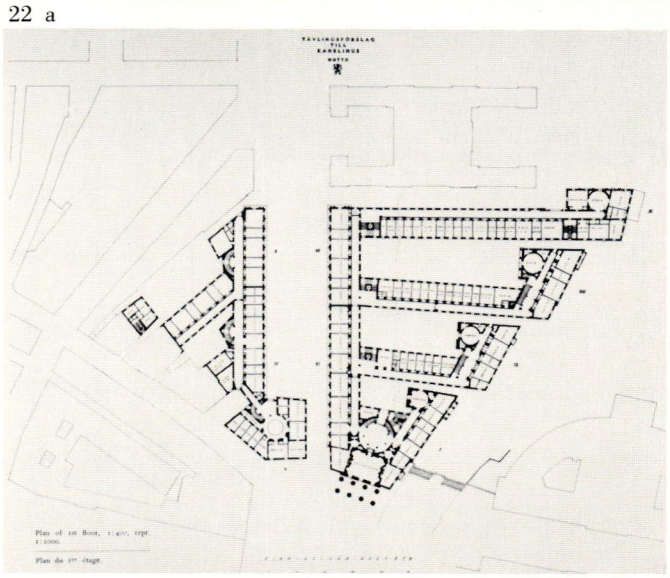
22a,b Gunnar Asplund's 1922 scheme for the Royal Chancellery proposes non-revolutionary change, attempting to revise or transform the existing context to accept new development.

Rome provides a valuable lesson which critically addresses a concern for making economic, social, and political reality consonant with the planning process. As specific precedent, the set-piece or ideal fragment as a point along a line, terminating or connecting operational systems, has a continuing relevance today. Politically, economically, and socially the Roman development of the point provided the impetus for, rather than requiring, the development of the line. In economic as well as social terms, the partial development implicit in the set-piece, as opposed to planning schemes requiring total development, would alleviate the problems of demolition, conservation, disruption, relocation, etc., that we face today.

A lesson derived from Renaissance and Baroque Rome is certain to be complex. The lessons advanced here are very general as they pertain to a belief in a primary archetype; man's elemental and persistent aspiration toward order. If social change is important then the history of utopian social and formal proposals provide precedent. The lesson is also specific in terms of the way the actual plans for Rome can be analyzed as representing particular relationships of idealistic and realistic thought process which attempted to organize and structure the city to satisfy philosophical and psychological, as well as practical and political, criteria. If a contextural approach to planning is relevant, then a study of Roman planning and similar involvements in history is valuable in terms of developing a theory based on the synthesis of real conditions and problems with ideal formulation. "The most immediate problem of [architectural] research is to bring the conceptual system and the empirical reality into closer contact with one another."[24] The lesson thus implicitly offers suggestions about the use of architectural precedent. The particular historical solutions to particular problems become available for abstraction through analogy, metaphor, etc., into ideas which exist as catalysts for, or suggestions to, the discovery and invention of new solutions for new problems. "The lesson of Rome is for wise men, for those who know and can appreciate, who can resist and can verify."[25]



22 a



22 b

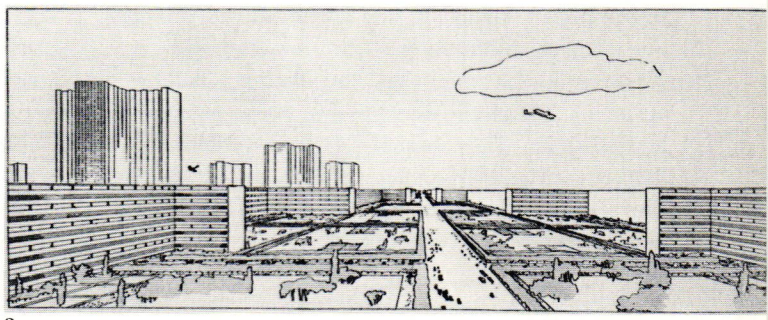
The Harlem River Houses

Roy Strickland and James Sanders

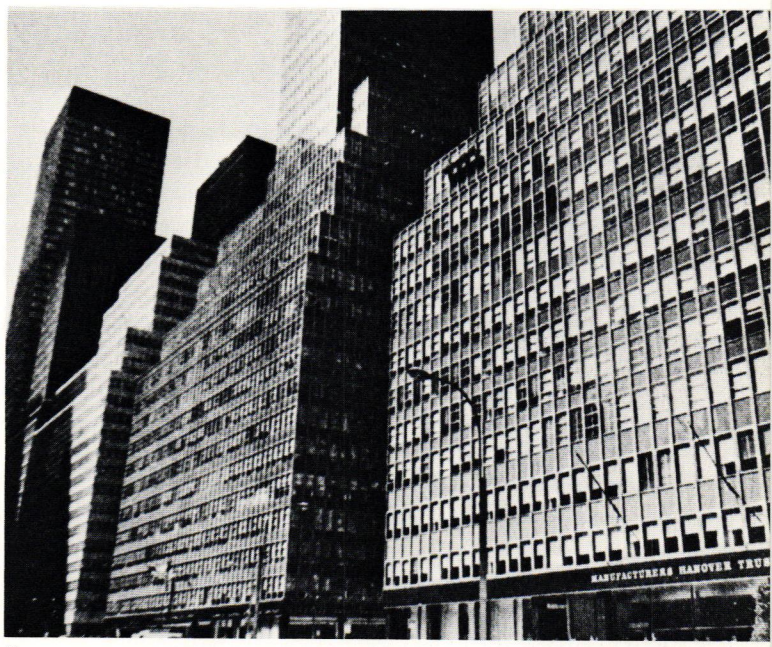
1 Polo Grounds Towers, Manhattan; Ballard Todd Associates, architects, 1968. The housing project: Post-War symbol of Harlem
2 Park Avenue, 1960s
3 City of Three Million, Le Corbusier, 1922. The shadowless, ideal city of towers-in-the-park

Harlem and the Vision

There are two popular images of Harlem. One consists of the ranks of six-story tenements and once opulent apartment houses whose formal and stylistic distinction is masked by decades of neglect and layers of grime. The other is made up of high-rise public housing projects. These projects, built on superblocks, dominate the community, the most recent among them reaching thirty stories and more (Figure 1). At their best they are sanitary; at their worst they are tombs riddled with crime. In both cases they have come to symbolize rather than ameliorate the slum.



3



2

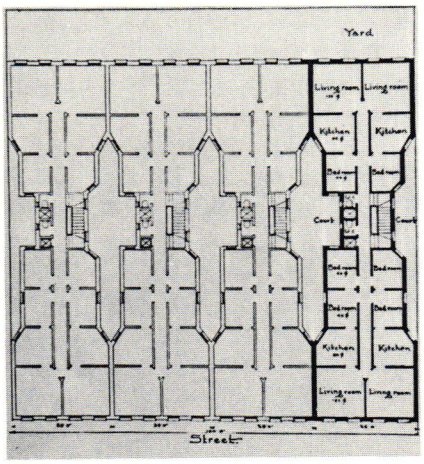
For New York these superblock projects are the legacy of Modernism. They are as prominent and as violent a change to the fabric of the city as that brought by the corporate rebuilding of Park Avenue (Figure 2). But Harlem has no sleek glass curtain wall – Park Avenue's saving grace. Instead, the housing projects are dully opaque with cheap brick, punctured by aluminum sash windows, and flecked by institutional tile.

At the edge of the projects, Harlem seems especially ragged and raw. The "rivers of trees," to which planners and architects of the 1950s had likened their superblock open spaces, have turned to flood, and belts of project peripheral roads have swept away neighborhood institutions, shops, and references.

The legacy comes far short of the promise of Modernism and the promise of the superblock, which in the radical planning literature of the 1920s and 1930s seemed to go hand in hand. The promise was perhaps best illustrated by visionaries like Le Corbusier, Gropius, and Lescaze, whose superblock urban housing schemes, penned and modelled in shadowless abstract delicacy, appeared to cleanse the slums with towers-in-the-park (Figure 3). Here was assured the aeration of the city where, argued Le Corbusier, ". . . sun, vegetation, and space are the three raw materials of urbanism"[1] – materials as distinct from New York's (or, for that matter, Paris' or Berlin's) as possibly could be.

[1] Le Corbusier, *The Athens Charter* (New York: Grossman, 1973), p. 55

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010048-12 $3.00/0, © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology



4 Tenement Houses Plan, New York City, 1887. Built from the 1879 "old law" ("dumbbell") tenement prototype, these buildings were dark and narrow and covered 90% of their 25′ × 100′ lots. Such tenements were the basis of New York's slums and a challenge to reformers to provide a decent housing alternative.

In Manhattan, Brooklyn, and the Bronx, the promise was momentarily fulfilled. With the post-World War II public housing boom, the slender concrete skeletons of high-rise housing projects rose among leveled slums. They were elegant and aerated. But despite their ample provision of light and air, once they were filled with brick and occupied by tenants, their social failures proliferated.

The Promise of the Superblock

For New York housing reformers and architects the early promise of the superblock had been especially impressive. It was the planner-architects' response to both the congestion of the slum and the advent of the automobile, whose speed and efficiency seemed to mandate a new urban traffic network that strictly separated cars from pedestrians in the interest of unimpeded movement and safety. And the superblock housing project, with its implications of reworking whole sections of the city at once, was a welcome departure from the lot and block-bound tenement projects of the nineteenth and early twentieth century when reformers had been limited in the scope of their work by the political and economic conditions of their time.

Because the superblock combined several city blocks into one uninterrupted site, it appeared the final emancipation of housing from single parcel speculative development. The parcels were based on New York City's pervasive property division—the 25 by 100 foot lot. This lot, the outgrowth of the city's single-family row house tradition, was, the nineteenth century architect-reformer Ernest Flagg said, "the greatest evil which ever befell New York City, for from this division has arisen the New York system of tenement houses, the worst curse which has ever afflicted any great community"[2] (Figure 4).

Beginning in the mid-nineteenth century, New York reformers built model tenements and developed tenement laws which by the 1920s shaped philanthropic housing projects covering whole city blocks. In series of simple brick volumes, these projects were vessels of light and air (Figure 5). Through the decades the reformers were anxious to unlock the tenement from the small site and in the process to gain greater design flexibility, more open space, and stronger control over the health and social behavior of their tenants.

It was not until government moved from its primarily regulatory role over private property (e.g. the municipal old and new tenement laws) to an activist, initiatory one of building for the collective (viz. the Housing Division of the Federal Emergency Administration of Public Works) that low-income housing could grow in Manhattan from the single block to the superblock. The Federal government, unlike the reformers, could close streets and combine blocks. (Even Stein and Wright had been prevented from doing so at Sunnyside Gardens in Queens, and their Hillside Homes in the Bronx was an uneasy compromise of *cul de sacs*.) When the Federal government decided in 1934 to build housing, it also decided to use the superblock, a form appropriate to projects of the envisioned scale of 1000 units and more. Entire slum communities were to be torn down and rebuilt as part of the New Deal.

The Harlem River Houses

The first Federal public housing project was the Harlem River Houses, located at the intersection of Seventh Avenue and 151st Street and completed in 1936. The project was designed to house black families in apartments in four and five story buildings (Figure 6). According to Talbot Hamlin,

> *the project was only a little, only a beginning, only a drop in the bucket, to be sure; but at least there the buildings stand . . . To those of us who have watched and coddled and fed the housing movement, who have talked housing and listened to each other talk housing almost continually since the war, that seems an almost unbelievable fact. We have begun to build; the words are being incarnated in brick and steel and concrete and glass.*[3]

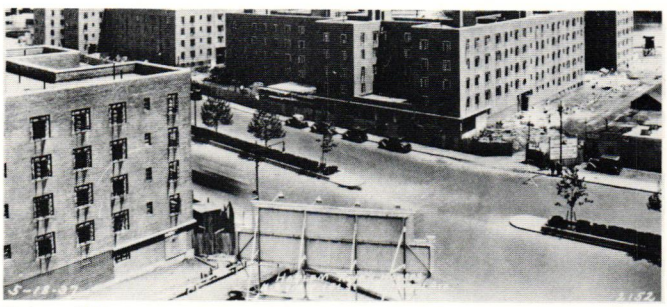
The project, now unobtrusive above Harlem River Drive, is at once the progenitor of the Harlem superblock housing project and the culmination of the New York reform housing movement's nineteenth and early twentieth century design principles. Here the promise of the superblock and large-scale modern planning principles is fulfilled, although the project's many particularized design decisions establish its continuity with the city's residential traditions of tenement and apartment house architecture and social life. This special mixture has enabled the Harlem River Houses to enjoy a continued social success that has lasted nearly half a century—a remarkable record for public housing.

5 Courtyard view, Dunbar Houses, Manhattan, Andrew Jackson Thomas, architect, 1925. One of the finest 1920s reform projects, these buildings were sponsored by John D. Rockefeller to provide improved housing for black families in Harlem.

6 Harlem River Houses, in construction, 1935. A new order rises on Seventh Avenue.

7 Harlem River Houses, view of pedestrian mall. Less than a year old, the project has a vigorous, youthful look.

Harlem River Houses is not *public housing* as it is familiar to us now, nor was it *reform housing* as it was familiar to its contemporary proponents. In today's terms, the project is a decidedly modest and traditional series of low-rise buildings of subtle details which add up to an imagery whose richness is quite distinct from that of its period's didactic – and largely paper – Modernist housing schemes (Figure 7). As the first Federal public housing project in the nation, Harlem River Houses is a demonstration project whose level of resolution at once superseded that of earlier model tenement projects and set a standard unapproachable by later projects where expedient mass-housing formulas were applied. Harlem River Houses had to be good for it had to prove that public housing could work. At the same time it opened a Pandora's box by firmly establishing the superblock as precedent for public housing.



6 ▲ 7 ▼

5 ▼

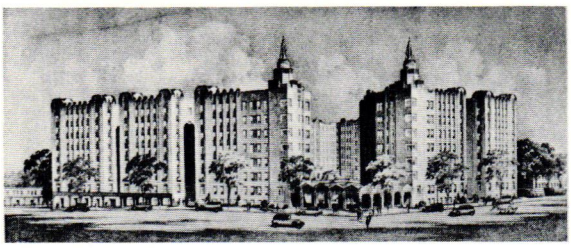
Although the Harlem River Houses' greatest importance rests in its representation of an ideal – that of the Federal government's first subsidized housing for an urban working class – its particular interest and richness are the consequence of the expressed tension between the political, social, and architectural ideals of its era, and its architects' sensibilities and skill in translating and executing those ideals. The Harlem River Houses is evocative of a Depression era American approach to urban problems which combined progressive, even radical, design theory with pragmatism and tradition. The project is transitional – breaking as many rules as it establishes yet retaining many of its city's architectural and residential traditions.

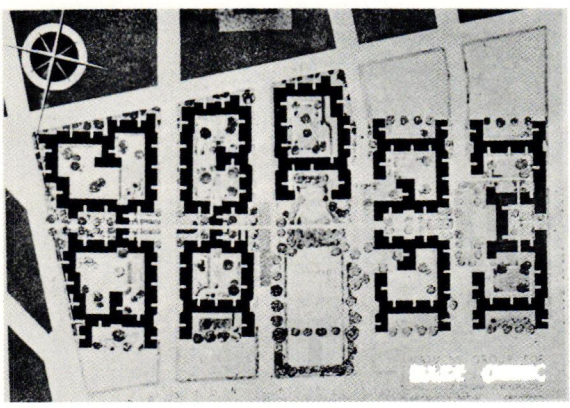
And no wonder. Architects for the project included Archibald Manning Brown, Frank Forster, Horace Ginsbern, and John Louis Wilson. Brown, classmate of Franklin Roosevelt at Choate and Harvard, was a member of the prestigious architectural firm of Peabody, Wilson, and Brown and the designer of suburban estates and country clubs. Ginsbern, a New York architect, produced numbers of the city's large, middle-class garden apartment complexes. Wilson, a Louisian, was the first black architect to graduate from Columbia. Their combination of elitism and architectural conservatism (Brown and

[2] Ernest Flagg, "The New York Tenement-House Evil and Its Cure," *Scribner's Magazine*, xvi (July 1894), 108

[3] Talbot Hamlin, "New York Housing," *Pencil Points* (May 1938), 281

8





10

8 House of William Ladd, Cedarhurst, Long Island; Peabody, Wilson, and Brown, architects, 1921. Brown was one of the architects of the Harlem River Houses and in the brick walls and casement windows of this estate are implications of Harlem River Houses' design.

9 Noonan Plaza, the Bronx; Horace Ginsborn, architect, 1931. A Moderne fantasy for the middle class, its courtyard planning principles were extended in the Harlem River Houses.

10 Plan, Hillside Homes, the Bronx; Clarence Stein, architect, 1932. Stein's planning compromise. The site plan nevertheless exhibits housing ambitions of the Harlem River Houses' decade.

11 Plan, Harlem River Houses. An almost classical arrangement of axes and courts, achieved economically through the repetition of "T," "L," and "Z" building units – each served by its own entrance and staircase. The openness of the plan, compared to the restricted courts of the Hillside Homes, is a benefit of the superblock.

12 Harlem River Houses. Grassy amphitheater overlooking the Harlem River. The classical semi-circle (turned into an embankment) resolved the project's orthogonal site plan with the diagonal of the river and was used, in the project's early days, for children's games and small theatricals.

13 Harlem River Houses, from Seventh Avenue, 1930s, with shops and "Flash Inn," a street corner bar in true New York tradition

14 Harlem River Houses, from periphery. Entrances to the buildings were generally on the interior courts, begrudging the street's traditional role.

Forster), familiarity with high density urban housing (Ginsbern), and advocacy of the user-needs of the poor (Wilson), epitomized the combination of interests, social perspectives, and social classes that pervaded New Deal projects and social programming. The architects shared in classical, Beaux Arts academic training. Brown and Forster, in their country estates, were well practiced in the synthesis of architecture and arcadian landscape (Figure 8). Ginsbern, whose stylish Art Deco apartments in the Bronx were promoted as offering homes "destined to remain ever free from mediocrity"[4] (Figure 9), was skilled in the design of efficient, well-lit and well-planned apartments surrounding open courts. Wilson, whom racism had locked out of professional practice in New York for the years following his graduation, was to design all of Harlem River's community facilities in a manner contradictory of the period's adage: "If you are poor, you are poor because you are meant to be poor."[5]

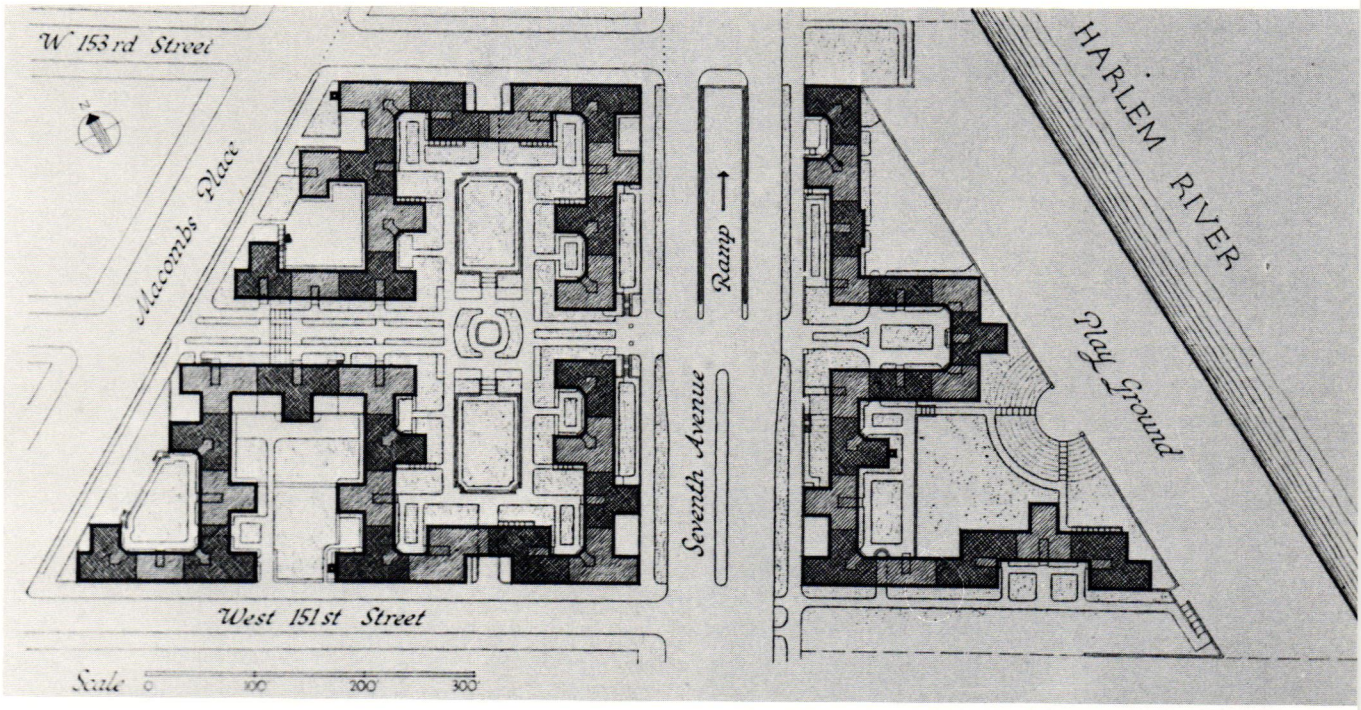
Well-known planning theorists and community designers like Andrew Stein and Henry Wright, or popular model tenement designers like Andrew Jackson Thomas, were conspicuously missing from the project's design staff. Whatever progressive planning influences touched the plan of the Harlem River Houses – and there were several, including the superblock principles of Stein and Wright (Figure 10), the low-rise *à redent* blocks of Le Corbusier's Ville Radieuse, and the dwelling unit performance criteria developed by the PWA's Housing Division – they were filtered through a classically trained architectural sensibility that, in the case of the project's practicing architects, had reached indigenous urban and suburban expression. Harlem River, from the day of its inception, was not to be an abstraction, but rather a community bred of its New York milieu.

The Project's Design: Open Space and Building Form

The Harlem River Houses combines four Harlem city blocks into two pedestrian-oriented superblocks (Figure 11). Covering eleven acres, it consists of

[4] Donald Sullivan, Brian Danforth, *Bronx Art Deco Architecture* (New York: Hunter College Graduate Program in Urban Planning, 1976), p. 5

[5] Interview with John Louis Wilson, New York, NY, July 1978



11

12

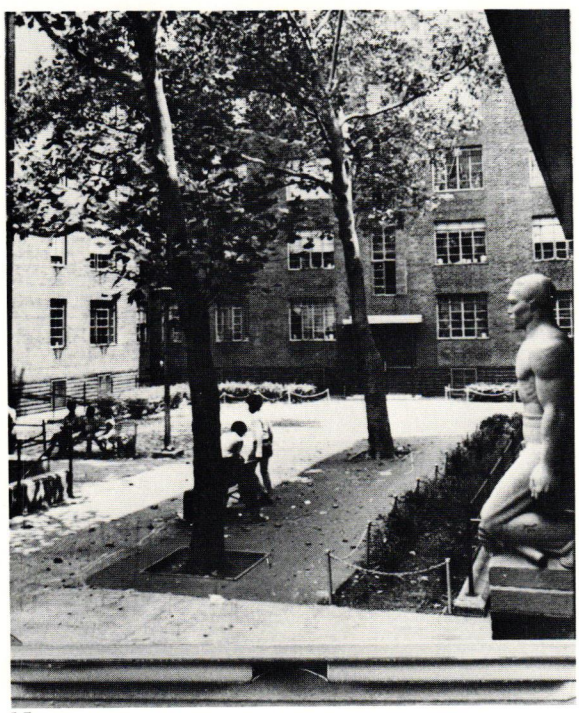
13

14

four and five story walk-up buildings with entrances turned away from the street. The buildings define a pedestrian mall, courts, gardens of various sizes, and a large, mid-block plaza. The buildings are divided into well-scaled units housing from eight to sixteen families each, and they offer floor-through apartments which helped establish standards for subsequent Federal public housing projects across the country. At the river's edge, below terraced lawns, is the site of a large athletic field and an amphitheater, both destroyed in 1957 by the building of the Harlem River Drive (Figure 12). Shops, health care facilities, a library, and a day care center are located along the project's surrounding streets (Figure 13).

Given the flexibility of the large site, Harlem River's architects vacillated between concern for street definition and an anxiousness to exploit the potential of open space. Although the project does not give the impression of being a series of free-standing buildings set in open space, it nevertheless anticipates that characteristic of later projects by bringing open space to the street side of the project in the form of U-shaped courts. As did their forerunners, the tenements, Harlem River's buildings define street space, but the housing reformers' traditional ambivalence toward the street is here memorialized by the inclusion of what amounts to a center-block circulation system of pedestrian paths. The buildings are rectangular and similar in height to their older neighbors, and the building wall is maintained along much of the project's peripheral streets; nonetheless the relocation of building entrances to inside corners of the project and the concentration of social activity on the interior courts make Harlem River, in a profound way, turn its back on the street (Figure 14).

Inside the block, the courtyard is brought to one of New York's fullest and most mature conceptions (Figure 15). Most of the courts seem city bred with formal arrangements of London plane trees, shrubs, and cobbled walks. Tightly framed by the buildings,



15

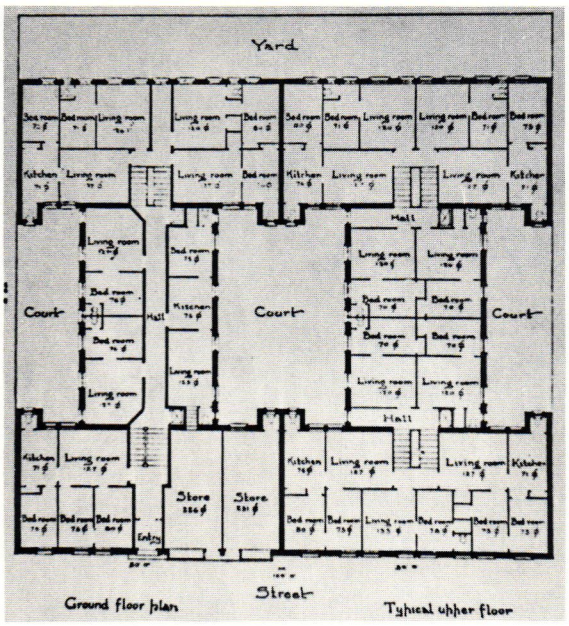
16

the courts provide access to apartments, recreation, and community facilities whose proximity to one another produces a particularly urbane interchange of activities (which makes for lively, interesting views for the apartments above). As a result, buildings, courts, and open spaces enjoy a taut relationship despite the fact that the project's ground coverage is 31%, or less than half that of the surrounding neighborhood's tenements.

A block-through pedestrian mall is the catalyst of the courts' ultimate success (Figure 7). This promenade ties together the project and bisects Harlem River's major court, where larger-than-life-size sculpture by Heinz Warneke of a black man, woman, and child aggrandize the portals to what is essentially the project's piazza (Figure 16). It also locks the project's amenities into the neighborhood because it is aligned with a community sidestreet; from 152nd Street, where the project opens up with wide building wings and shops, the view into the project gives a sense of its spatial progression. The mall brings the neighborhood to the river through a gentle change from cobbled pedestrian paths to well-planted lawns stepping down to the waterfront. (The architects' original intention of dividing the project's landscape into "urban" and "natural" halves is still apparent despite the intrusion of the Harlem River Drive.) Harlem River Houses' arrangement of buildings allows the densely built neighborhood west of Seventh Avenue to contain the project like a frame. From the center of the major court it is possible to look west and see a phalanx of tenements which breaks at the project's edge, but whose general form is carried across MaCombs Place, simplified, and suddenly allowed to breathe.

The project's connected T-shaped buildings are the Harlem River plan's most apparent holdover from new law (1901) tenement form, although their stairs have been shifted from the traditional place at the center of the tenement to the front of the building (Figures 17a,b). The staircases lead directly from the building entrances, and are vertically glazed. From the courts, these staircases break Harlem River's frontages into the double-lot, 50-foot property rhythms of the New York, new law tenement street.

In the balance among vertical stairwell glazing, the field of apartment windows, and the upward thrust of tiny bathroom windows, the project takes on a

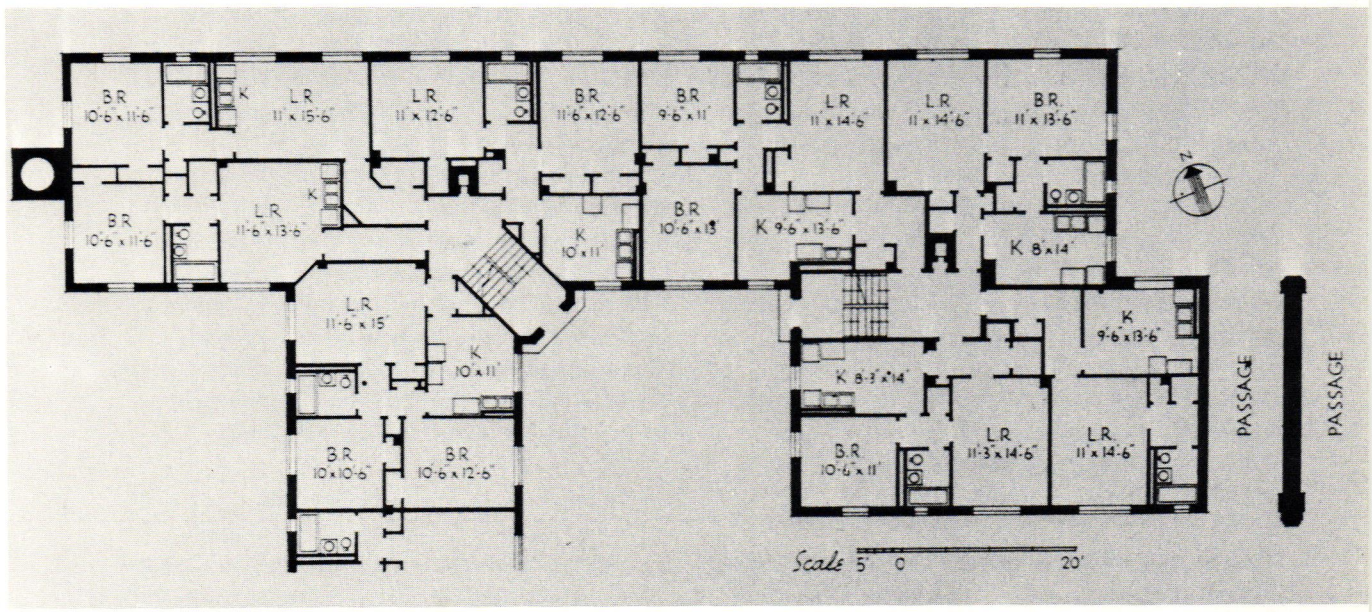


17a

15 Harlem River Houses, courtyard view, with sculpture by Heinz Warnecke. Glazed stairhall is above entry (center) and overlooks public space.

16 Harlem River Houses, main courtyard, with sculptural groups in left foreground. Compared to Figure 5, this view clearly evidences the superblock's potential for more generous open space than that offered by projects limited to a single block.

17 Comparative plan. New Law tenement, ca. 1901 (17a), and Harlem River unit plan, 1936 (17b) – a clear improvement in low-income housing



17b

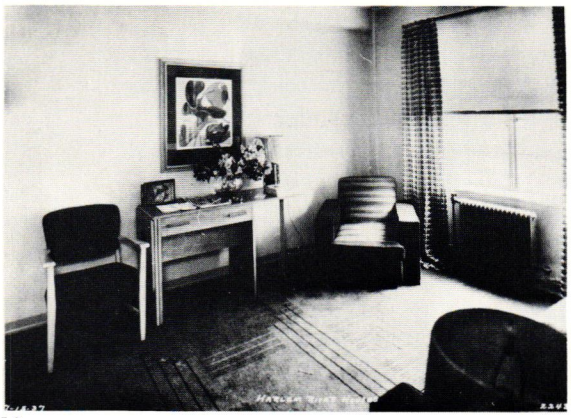
comfortable, and for New Yorkers, a familiar, domestic scale and look. The public processional of the open space and the encompassing gradations of public to private space are among the most crisply delineated of any public housing project. It is their clarity and close association that give the project a unique and thoroughly combined communal and domestic sense as well as a facility for surveillance and communication among court, entry way, and apartment.

Corbelled brickwork around the piazza breezeways and at half-basement level along certain stretches of the building wall can be associated with the first floor rustication of the New York row house, tenement, and apartment house, but is as stylistically vernacular as the project ever becomes. The sobriety with which the architects translated New York residential form to fit government-mandated efficiencies gives the low-rise buildings a simplicity in which landscape becomes the crucial element in providing a full architectural imagery. Because the uniformly brick-wrapped buildings do not have differentiated fronts and backs (in clear rejection of New York architectural tradition), the meticulous development of courtyard landscape and paving elements serves as the orientation device that is the surrogate of building ornament, the embodiment of Modernism's first principles. But Harlem River, unlike its progeny, never makes the step toward becoming an abstract solution; its sobriety, proportions, and thickly turned building elements add up to an imagery which Talbot Hamlin, writing in 1938, found "warm and inviting; the whole [having] some of that human charm one finds in the brick built portions of New England towns of the [18]'30s and '40s."[6]

The Apartments

Underlying the project's design is a Beaux Arts formalism, whose influence was still felt in American Modernism of the 1930s. A design tension exists between the project's public processional and the apartments, which are shaped to fit the building form. Occasionally twisting foyers and diagonal walls in living rooms and kitchens (familiar and acceptable to New York housing both speculative and reform), imply that the plans for the living units are less refined than those of the public open spaces,

[6] Hamlin, "Housing," 284



18

19

and that Federal public housing requirements had yet to evolve a streamlined apartment prototype.

The apartments are series of tiny rooms (Figure 17b). In the larger apartments, the living room can be circumvented by going through an eat-in kitchen, where family life might very well be centered, leaving the largest room for special occasions and the display of better furniture. This room, as attested by the Housing Authority brochures at the time of the project's opening, was correctly proportioned for a sofa, armchair or two, coffee table, and cabinet radio, but for little more (Figure 18). Harlem River's floors were hard oak, and apartment detailing was minimal and clean – perfect for being decorated in chaste Modern style, but more likely to be crowded with the first tenant's holdovers from tenement days: The broad and over-stuffed furniture would rub closely in the box-like rooms, enjoying the sunlight served up each day by an oversized casement window (Figure 19).

The generous windows were the project's most prized element. In each photograph of a model apartment interior, they appear broad and high, suffusing their rooms with light and dispelling the imagery of airless Harlem tenement flats. In these photographs a Modernist didacticism appears, and the lives of the project's residents appear to be cleansed and homogenized. But the architects' concern for light and ventilation did not deteriorate their traditional concepts of rooms. Apartment plans proceeded not from the "open space" planning principles of Modernism but maintained distinct volumes of space; even the living room could be closed off from the apartment's main stream of circulation in order to become a bedroom or sick room. The unit's dual circulation paths were considered by the architects to be a major improvement upon New York apartment design. Middle-class apartments, in which each member of the family might have his own bedroom, lacked secondary circulation routes bypassing the living room by way of the kitchen. Harlem River had them because of its low-income tenants' circumstances which might require that the living room be used for sleeping. For the poor, a baby's birth did not mean an automatic move to a larger apartment. Only later did a bureaucratic expediency prevail that applied "open space" planning principles to public housing projects – to save money on room partitions.[7]

For the reformers, the minima of Harlem River's apartment dimensions were less important than the success of the overall plan, which appeared to achieve through design what had heretofore in New York been the ephemeral product of real estate speculators, prestige, and social class: a sense of community, supported by the physical accoutrements of an ideal neighborhood. Harlem River Houses, built in the Hudson Valley brick familiar to indigenous housing from row house to luxury apartment house, seemed the ultimate refinement of the city's housing tradition. And because the apartment as a housing form had filtered up through every social class in New York by the 1930s, Harlem River's lessons were thought applicable even to the housing of the rich.

"Here in short," wrote Lewis Mumford,

> *is the equipment for decent living that every modern neighborhood needs: sunlight, air, safety, play space, meeting space, and living space. The families in the Harlem Houses have higher standards of housing, measured in tangible benefits, than most of those on Park Avenue. By contrast, every other section of the city is makeshift, congested, disorderly, dismally inadequate.*[8]

For the reformers, "neighborhood" had at last been given appropriate physical form.

Mumford's comment illustrates a very important aspect of Harlem River's design. Together with Talbot Hamlin's observation of the project's continuity with a New England brick town, it reveals that Harlem River Houses was not far beyond contemporary reformers' expectations for neighborhoods and associations with them despite its size, superblock planning, and – most radical of all – its government sponsorship. Mumford, who was critical of the Modernist didacticism of European visionaries and who advocated an American modern architecture which reflected regional materials and social life,[9] could look upon the Harlem River Houses as an expression of that architecture. In the tradition of Stein and Wright's Sunnyside Gardens, the project struck a chord with larger American

[7] ———, "A Lesson in Cost Reduction," *Architectural Forum* (November 1938), 405

[8] Lewis Mumford, "The Skyline: The New Order," *The New Yorker* (February 26, 1938) Volume 14, 42–44

18 Harlem River Houses, model apartment, 1937. The Housing Authority's Moderne vision of ideal apartment interior

19 Harlem River Houses, apartment interior. The reality

20 Even before the project was completed, thousands of Depression era New Yorkers lined up, anxious for housing.

21 Harlem River Houses, 1960s. View of central court, looking towards pedestrian mall. Thirty years later the trees have thickened to maturity and combine in a rich landscape of brick, foliage, and water. (Compare to Figure 7.)

domestic traditions which included architectural simplicity without severity, communality and friendly association among buildings, and the democratic sharing of open spaces.

20

21

The Project Today

Today, the Harlem River Houses' landscape has matured and its red brick has deepened to a patrician brown. The original casement windows have been replaced by sliding aluminum sash, and the wooden park benches have been exchanged for brightly colored plastic ones. Several shops and restaurants, which once rooted the project to the surrounding neighborhood's commerce, have been edged out by community service agencies.

The project is now over forty years old, the same age the surrounding tenements were when Harlem River first opened. Slum tenements are still next door. Adjacent streets suffer building abandonment. And the Harlem River Drive has permanently cut the community from its waterfront. In some aspects, the quality of Harlem life has declined below the level of the 1930s, when 11,500 families lined up to apply for Harlem River Houses' 576 apartments (Figure 20).

Despite Harlem's reputation as a tough and volatile place, the project's life has a decidedly relaxed air. Harlem River's open spaces are used by a wide variety of age groups from both within and outside the project. Building lobby doors are left unlocked, often swung wide open. Public halls and vestibules are virtually dirt- and graffiti-free.

New York's legendary street life, in which parents interrupt children's stickball games with calls to supper from tenement building windows, is preserved, even elaborated here. The courts, more so than the project's surrounding streets, are outdoor rooms, whose walls are formed by building facades and windows. The Beaux-Arts sequence of outdoor spaces and the synthesis of building form and landscape have translated in the project's courts the hierarchical relationships among the parts of the New York tenement street. The traditional street of facing buildings, facing stoops, and parallel edges of sidewalk bordering the asphalt road finds its

[9] ———, *Architecture as a Home for Man* (New York: Architectural Record Books, 1975) p. 21

22 Williamsburg Houses, Brooklyn; R. H. Shreve and William Lescaze, architects, 1937. New York City's other Public Works Administration housing project

23 Harlem River Houses, seen from the waterfront of the Harlem River. In this pre-highway view, the project rises from a landscaped, serpentine embankment giving onto the piers of the Harlem Ship Canal.

24 Harlem River Houses, courtyard view, 1960s. A summary of what American public housing was to have been – but only seldom became

22

equivalent in Harlem River's buildings and landscape elements.

Benches adjacent to building entries serve as congregation points and residents' lookout perches – substitutes for the tenement stoops. Differentiated paving materials – concrete aggregate for circulation paths and Belgian block for sitting areas – form the tributaries of movement and pockets of rest that are familiar to the tenement street with its half-basement inlets and low fences and walls. And dropped a step or two below the paths or "sidewalks" of the project's courts are play areas and fountains, reminiscent of the child-confiscated, fire-hydrant-sprayed street, which is here given over permanently to recreation and reshaped as small, concrete-bottomed squares (Figure 21).

Nowhere in New York has the social activity of the street been so successfully transferred to and reshaped for the special conditions of the center-block court. Here the overlapping hegemonies of interest and age groups are openly and symbiotically expressed. And because Harlem River's courts are hard surfaced and enclosed, they reflect the sounds of their users who walk, converse, and play to bring the sounds of the street to the heart of the superblock. In marked distinction from later projects, where wide open space and soft landscape either scatter or absorb sound, the courts reflect the murmur of city life to reinforce the impression of the project's quality as an urban community.

"This is a beautiful place," comments Harlem River's manager. "All these buildings close together make what's called defensible space. They should make all housing this way."[10]

Only along the project's edges at 151st and 152nd Streets, where the architects' wariness of the street makes the project's relationship to the surrounding neighborhood its most tentative, does graffiti proliferate. The decision to turn the project buildings' entrances to the court rather than have them face both the court and the street has left long stretches of Harlem River's periphery outside the project's domain. The condition of the peripheral walls makes the courts seem all the more handsome preserves or, as architect John Louis Wilson calls them, "a clearing" in the ghetto that comes right to the project's edge.

The Road Not Taken

In 1937, the Harlem River Houses appeared the most advanced expression of an 80-year lineage of New York reform housing projects. Drawing on the traditions of that lineage, it represented an enormous step towards the fulfillment of such long-held housing reform ideals as open space, light, air, and lowered ground coverage and density. Under sponsorship of the Federal government, the project achieved these goals through an extrapolation of the forms of the existing city and at a scale that seemed commensurate to the task of rebuilding New York's slum communities.

Yet in the quality of its balance between architecture and social sensitivity, it led nowhere.

Rising in Brooklyn and completed in 1938 was Brooklyn's Williamsburg Houses (Figure 22), which presented a vision virtually antithetical to Harlem River. The new project, a series of free-standing buildings set in open space and with structurally expressive and arguably more "functional" and more modern architecture, appeared to match the radical implementation of the superblock with a radical architecture. The Beaux Arts *marche* of Harlem River was replaced by amorphous spaces; the orthogonal arrangement of Harlem River's contiguous buildings was reduced to detached pavilions set fifteen degrees to the city grid; courtyard and Belgian block gave way to lawn and tarmac path. Low-income housing was stamped from a communal, mass-produced mold.

Thus on the eve of World War II these "demonstration" projects, each distinct in form and implication, but sharing a high quality of resolution and articulation, provided New York with two alternatives for future public housing. The Harlem River Houses, standing at the juncture where the traditions of New York tenement life met a bureaucracy's verbal dicta and where large-scale public housing met the particularized designs of architects and sculptors, was for the Modernist too

[10] Interview with Arthur Heller, manager of the Harlem River Houses, July, 1978

[11] "Lesson . . . ," *Architectural Forum*, 406

23

conservative and for the bureaucrat too costly for the poor.[11] Economic considerations led instead to the adoption of the European model of towers-in-the-park suggested by the detached buildings of Williamsburg Houses. In such projects, high-rise elevator buildings reduced the number of expensive building foundations to be laid while achieving housing densities equal to or higher than low-rise projects. Within the buildings, architects adopted "open plan" apartment layouts to save money on room partitions. To economize further, apartment plumbing was left exposed and such amenities as closet doors were discarded. Gone, too, were the wood floors that made an apartment something more than a shell.

Then began the public association of "low-cost" subsidized housing with poor, or substandard, housing.

Within two decades a second city emerged in Harlem and other New York communities. This city was made up of disconnected clusters of towering housing projects. At its root was the Harlem River Houses, ignored over time but standing on the banks of the Harlem River as a poignant expression of early ideals (Figure 23).

In retrospect, it appears that of all the lessons Harlem River Houses offers, it is the project's generous open space which was the most important to the builders of later projects. Superblock open space became a desirable commodity in and of itself, and it soon superseded the urban tradition of housing that Harlem River's architecture recalled. As Harlem River's progeny grew, architects assumed that still lower ground coverage and greater open space became a desirable commodity in and of itself, and it soon superseded the urban tradition of superblocks.[12] Harlem River, in its establishment of the quantifiable bureaucratic standard of lowered ground coverage forcefully indicated the new scale of conception urban housing would take.

Today, the Harlem River bespeaks a depth and sincerity of vision that provides an eloquent criticism of public housing policy as it has developed. Its lessons in courtyard life, its shaping of superblock open space with frank appreciation of concentrated urban life, its hierarchical balance between public open space and low-rise private space, and its concern for the small details of urban domestic life make it a model for housing that seeks to extend and enhance patterns of urban community. Because Harlem River is transitional – based in the urban housing tradition yet incorporating the ideals of early housing reforms and those of the New Deal – it is of a richness and maturity unmatched by later projects that were designed from expedient, replicable formulas.

24

[12] "Lesson . . . ," *Architectural Forum*, 405

The Plan of Savannah And Changes of Occupancy During Its Early Years: City Plan as Resource

Stanford Anderson

After a period in which the built environment was often viewed as inconsequential, or perhaps negative, for people and their activities, the recent enthusiasm for preservation and adaptive re-use of urban environments implies a markedly different, positive assessment. Yet we have little in the way of theory or historiography that will test or advance this enthusiasm.

Historical studies dominantly concern themselves with the origin of environments and consequently shed little light on what may be their continuing effects. Shifting historical inquiry to examine the patterns of tenacity and change in environment and its inhabiting forces would provide case studies of environment viewed not as a series of origins but as a constantly modified resource. Both the questions asked and the methods required for such studies should embody conjectures which might prove useful not only in preservation activities but also in decisions as to what kinds of new environments we should build.

Together with students at MIT, I am attempting this simultaneous advance on conjectures and information through the study of the engaging and instructive example of Savannah, Georgia.[1] However, before presenting an aspect of this study, I must set aside two counter-intuitive but nonetheless recurrent attitudes about the relation between social space and the physical city. I do not accept what is often referred to as "environmentalism" – that architecture or the physical city determines the use or interpretation of social space. We have seen so many examples of multiple uses or interpretations of the same physical environment, in simultaneous or successive instances, that the relationship cannot be deterministic. The complementary argument, that the physical environment is fully determined by the inhabiting forces, that the city is a kind of shell, that every society gets the environment it deserves, is more difficult to rebut. It collapses, however, on the same counter-examples of multiple uses or

[1] Shortened versions of these studies were presented at the 1979 annual meeting of the Society of Architectural Historians in Savannah. The work is still in preparation. The work has been partially supported by the Ernest Grunsfeld Memorial Fund of Chicago.

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010060-08 $3.00/0, © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology

interpretations for the same physical place. If we assume, for the moment, that a society builds a certain environment in a fully deterministic manner, how do we account for another part of that society, or a succeeding society, using that same environment in a quite different way? Or how do we account for quite similar social needs inhabiting radically different forms? In both cases we must recognize a degree of environmental autonomy that defeats any claim for determinism.

These denials of environmentalism and social determinism do not, however, imply a total relativity; my asserted "degree of autonomy" should not be expanded and abused to the point where we treat the relation between social space and physical environment as a matter of indifference. What follows is one attempt to understand environment more fully while avoiding the seductive simplifications offered by the claims for determinism or autonomy.

Every physical form will support multiple uses or interpretations. Form has a certain degree of autonomy. Nonetheless, every form also sets limits, be they narrow or broad, to these multiple uses or interpretations. Furthermore, each form will sustain certain uses or interpretations more fully than it will others. In both these last respects, the environment is conditional; it imposes constraints and provides support. Its autonomy is delimited and also overlaid with a pattern of conditions. Much is possible within every environment – but not everything, and not everything that is permitted is equally possible or enhanced. An obvious corollary is that for any given purpose some environments will be more supportive than others in that they meet some set of conditions we wish to establish – providing, perhaps, a relative narrowing or focus of possible use or, alternatively, allowing a broad range of associated uses. The relation between social space and physical environment is, then, not determined but possibilist.

"Possibilism" has developed as a critique of environmentalism in both human geography and in ecology. I have been describing a special case of the same argument. I am advancing a possibilist urban ecology. By "urban ecology" I don't mean to emphasize the relation of the entire city to its region or, quite generally, to nature, though this too is both present and important. Rather I would emphasize the relation of individuals, groups, populations, and societies to their physical urban environment – the relation of social space to physical environment. Even in nature these relations of organism and environment are dynamic and reciprocal. It is not only the case that the environment is a quasi-autonomous, possibilist setting for the inhabiting organisms; the organisms also change the environment, sometimes markedly or even self-destructively. The reciprocity of people with their urban environment is at least as marked as that found in nature. In neither case does environment evolve; rather it undergoes a complex pattern of changes owing to the interplay of (autonomous and quasi-autonomous) environmental forces or conditions and the consequences of (both purposive and unintentional) actions. Human action within and upon the urban environment involves, quite obviously, rational and social behavior; nonetheless, the need to recognize environmental latitude and unintended results not only remains but is all the more challenging and interesting.

The factors just mentioned, the quasi-autonomous environmental conditions and the unintended results of human action, do not receive adequate treatment in accounts that emphasize the intentions of patrons, planners, or architects. Architectural and urban works are not fully accounted for in any analysis of origins or intentions; they must also be analyzed both in and for themselves and also in their continuing relationships with those who use and interpret them. This is particularly true for urban environments which often involve more complex sets of actors in their origins, affect more people, and often have especially tenacious conditions such as street networks.

A possibilist, ecological analysis of urban environment would then particularly require means of examining the quasi-autonomous structure of environment – the environmental conditions that both frame the possible and also pattern it through varying degrees of support and constraint. The following aspect of a larger study relates characteristics of the plan of Savannah to the changing patterns of inhabitation during the earliest years of Savannah.

Despite unusually extensive information about the foundation of the Georgia colony, we have almost no documents on the explicit intentions behind the

innovative, articulated grid of the town plan of Savannah. The plan must be studied from its present form and from contemporary and later documents that touch on its significance.[2] On the other hand, we are fortunate to have surprisingly detailed demographic information for the first decade of the settlement of Georgia. The principal document is a manuscript at the University of Georgia, "A List of Persons Who Went from Europe to Georgia on Their Own Account, or at the Trustees' Charge, or who Joyned the Colony or were Born in It, Distinguishing Such as Had Grants there or were only Inmates."[3] Included in this data is relatively complete information on the precise lots to which people were assigned, or which they came to use, in Savannah. It is this locational information which permits one to explore whether, even in the first years of Savannah, locational decisions were of significance and whether alternative readings of the distinctive plan of Savannah influenced the decisions.

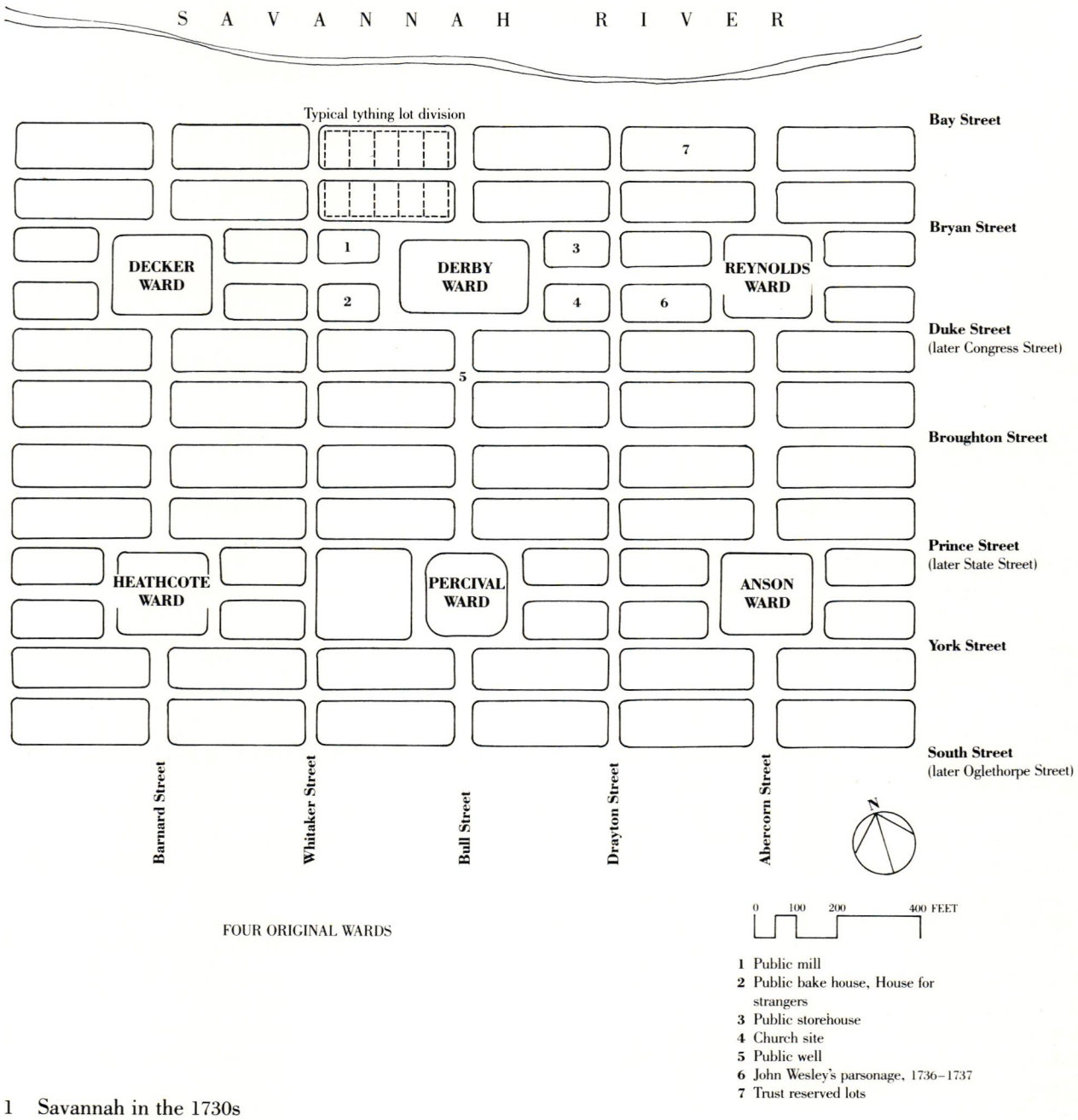
Georgia was the result of a proposal for a "charitable colony." In 1730, a group of members of the English Parliament, led by James Oglethorpe, having examined and notably alleviated the problems of debtors' prisons, turned their attention to an underlying problem: the lack of opportunity for the urban poor. Oglethorpe conceived that a new colony on the American continent might be organized and populated in such a way that these urban poor as well as continental refugees of religious persecution would have the opportunity to build productive lives. Colonists would be persuaded to go to this new land by the future promise of the colony and by various forms of immediate support: free passage for entire families, the assignment of fifty acres of land and of basic tools, and the guarantee of provisions for a period until the colonists could reap the fruits of their own farming. However, initial philanthropic enthusiasm soon waned. Oglethorpe and his colleagues – the most constant of whom soon proved to be John Percival, later Lord Egmont, who was also the compiler of the *List* on which this essay relies – had already used their positions and diligent application to persuade the Crown, the Government and Parliament to provide the lands of what came to be Georgia. Soon parliamentary appropriations were also the basic financial support of the Trustees. Government favor was premised more on the potential benefits of the Colony than on the succor of the disadvantaged: the extension and buffering of the English lands on the Spanish frontier, and the promise of economic gain in the receipt of raw materials from what would simultaneously be a new market. The Trustees solicited and won colonists whom they could send at the charge of the Trustees. But already with the first boatload, sent to found the settlement which came to be Savannah, the Trustees found it necessary to increase the size and strength of their colonization effort by assigning larger land claims to colonists who would pay their own way. Up to a maximum of 500 acres, land was assigned according to the number of indentured servants brought by these entrepreneurial colonists. Thus even the first boatload of Georgia colonists was marked by a class division. While the Trustees sought to impose the same basic rules against slavery, drink, and alienation of land on all the colonists, this evenhandedness only hastened the

[2] The precedent and origins of the Savannah plan have been studied by me for the above collective work. Such studies are not critical to the present argument and therefore are not reviewed here.

[3] In simplified format, the manuscript was edited and published by E Merton Coulter and Albert B Saye as *A List of the Early Settlers of Georgia* (Athens, Ga.: University of Georgia Press, 1949; second printing, 1967); the serial number of the MS is 14220. I fully agree with the editors in identifying the compiler of the *List* as John Percival, first Earl of Egmont and the first, extremely devoted, President of the Trustees for Establishing the Colony of Georgia in America. Coulter and Saye, while recognizing the importance of the document, cast some doubt on the accuracy of its numbers. After extensive analysis and comparison with independent demographic information, I am satisfied that the document is highly reliable through the 1730s, ceases to record information fully about the middle to latter part of 1741, and then decays with a few sporadic references.

For the purposes of the present study, it was necessary to recompile the list from its alphabetic form into one according to the lots assigned or taken up by the colonists. It was also necessary to choose temporal breakpoints where one could detail both the demographic and locational information. For this purpose, I chose the end of the first year of settlement, the date of the first official designation of lots, December, 1733; the approximate time of Savannah's greatest population in this early period and a time for which we have the best independent demographic data, December, 1736; and the last data in the manuscript. Two further intermediate break points are June, 1735, and June, 1738, coinciding with the Trustees' fiscal year (and thus some demographic data) and yielding equal intervals of one and one-half years for all but the final, more uncertain date and data.

All of the work mentioned here is voluminous and often tedious. In this article, I draw freely from that information but cannot detail it within the space available.



1 Savannah in the 1730s

rebellious activities of those who had paid their own way.

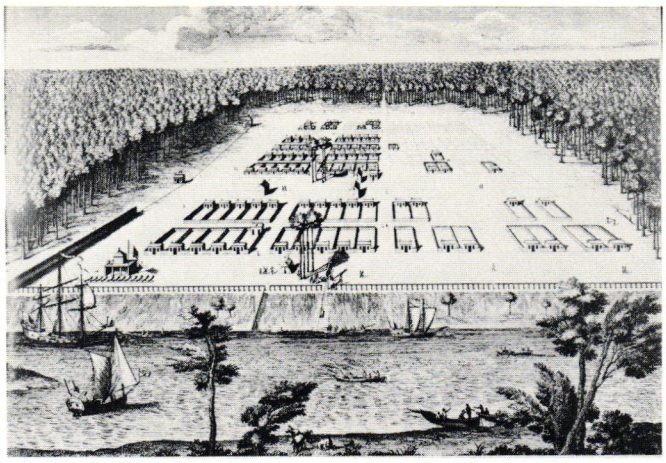
Figure 1 shows the first four wards of Savannah as they were set out in 1733 and the two easterly wards added in 1734. "Ward" is, of course, a political term. The initial scheme for Savannah, as conceived in London, called for a colony of equals each of whom worked a small piece of land but also played a role in a collaborative urban community. Equality and community were to be assured by the rules that prohibited both slavery and alienation or accumulation of land. The absence of slavery ruled out one obvious social distinction, but the two rules existed primarily to avoid the development of a situation such as that which already pertained in Carolina – the existence of great slave-owning landholders who weakened the colonial community both by the social disparity internal to the settlers and by their spatial dispersal. The willingness to accept a perpetual near-subsistence community was presumed to follow from the relative improvement this represented for those dispossessed persons sent from Europe by the Georgia Trustees.

The Trustees held for themselves most of the political control of the colony, but they did organize the first colonists for local governance. Ten freeholders (the freeholder was an adult male and was usually also the head of a family) formed a tything and had among them a tything man. Four such tythings made up a ward whose principal officer was a constable.

Purely formally, the Savannah plan can be read as a physical layout congruent with this political organization. Each replicated unit of the plan, specifically called a ward, is comprised of an open center and four quarters composed of ten parcels (called tythings) laid out in groups of five, back-to-back, sharing a lane or alley.

This isomorphism of political and topographical tythings and wards was surely intentional, played its initial role of closely fitted form and function, and has its reverberations down to the present day. However, what I wish briefly to demonstrate are alternative formal and functional readings of the plan – even within its first years.

2 View of Savannah, 1734. Engraving after Peter Gordon



The first colonists who left London for Savannah included not only the people with their tything and ward officers, but also their peers charged with responsibilities relative to the entire community: political officers such as the bailiffs, the register, the calender; persons with official functions such as the keeper of the Trust's stores, the Public Gardener, and the surveyor; and persons of esteemed or special communal value such as the doctor, apothecary and public midwife.

While even the first boatload of colonists were slightly too numerous for one ward, it is not surprising that they first filled one physical ward, Derby Ward, locating the overflow largely in the most proximate lots of the contiguous wards. It may also seem rather obvious and yet again an isomorphism of form and function that a very high proportion of the communal leaders mentioned in the preceding paragraph were assigned lots near the center of Derby Ward.[4] Here, too, on the specially reserved parcels/blocks east and west of the central open space were located the Trust's storehouse, the "house for strangers," the public bake house, the public mill, and the site reserved for the church.

There can be little question, then, but that the originators of Savannah and its first settlers saw the plan as a collection of wards. However, this assumption immediately led to certain ambiguities of physical form and function.

Derby Ward, as the first ward fully settled and with its collection of people and buildings of communal importance, had an obvious dominance over the early town. Its central space, Johnson Square, remains to this day the constantly reinforced principal square of the city. Yet for several reasons, Johnson Square could never assume the dominant central role of the main squares of colonial cities such as New Orleans or those of the Spanish New World. Johnson Square was neither unique nor central, even in the first years of Savannah. Each ward replicated not only the central space but also the full complement of Trustee lots reserved for eventual communal purposes. Each ward was too small to be a parish or a distinctive political entity in itself; the interrelation of ward to ward and the sharing of communal facilities located in one or another was implicit from the beginning and soon realized in Savannah.

In addition to these aspects of inter-ward organization and scale, there are physical aspects internal to the ward which inhibit the sole reading of the city as a collection of centralized wards.

Each ward has as many parcels on peripheral streets as on its internal streets. This numerical inhibition of the dominance of center over periphery is strengthened by the topological organization of the internal freeholders' parcels. These parcels do not ring the central square, creating a closed central group, but rather align on east-west streets which run continuously, and shortly, into adjoining wards. The original dominant assignment of people of communal importance to the internal parcels of Derby Ward, examined in plan or in lived experience, is more emphatically an emphasis on selected streets than on the center per se. This fact could be exaggerated by later incidents of use or occupation, as actually happened in the first year of Savannah. In that first year the colonists suffered a very heavy death toll. While the community leaders were disproportionately low in such loss, death did claim three men – the second Bailif, the Store Keeper and the doctor – whose Bryan Street lots faced Johnson Square on either side of Bull Street, the lots that might be considered the focus of the initial centralized occupation of Derby Ward. Thomas Causton, who lived further west on Duke Street, replaced Richard Hodges as second Bailif and Joseph Hughes as Store Keeper; by such incidents the alternative linear, street-oriented reading of the plan was emphasized.

As more settlers arrived the first four wards were virtually filled; the first of several extensions of Savannah took place with the addition of Reynolds and Anson wards to the east. While no ward evidences such a concerted policy of lot assignment as did the original Derby Ward, one can recognize

[4] Oglethorpe, a Trustee and the chief originator of the scheme for a charitable colony, accompanied the first boatload of colonists and was principally resident in Georgia for many years. Although the Trustees were highly paternalistic, as in their hold on general political control and relations with the English crown and government, they were absolutely not exploitative. No Trustee could receive any land or have any other economic gain from the Georgia colony. In keeping with this disinterestedness, Oglethorpe did not take a lot in Savannah but rather lived in a tent near the river's edge.

certain patterns. Additional colonists from the original boat and other early settlers who had "come on their own" dominated Decker Ward, and here Bay Street, the riverfront street, assumed dominance from the outset. Percival Ward, contiguous to Derby Ward on the south, was given over largely to the continuing influx of those sent by the Trustees. Thus Bull Street became the main axis from port to community center and through the living quarters of the Trust's own settlers. Until 1738, Heathcote Ward was also dominated by Trust-sent persons, and shows an unusually high proportion of people in crafts and skilled labor. Both these southerly wards were almost wholly lacking in people charged with general community responsibilities. The paucity of such persons on the southern periphery of even Derby and Decker wards resulted in little disparity between the occupants of either side of Broughton Street. This east-west street on the boundary between wards contained one-fourth of all lots in the city, was central to the city, and was the only double-sided street. While, as noted, Broughton Street was not assigned the people of note or of general responsibility, it did continually show a strong family structure and its residents were disproportionately high among those people characterized as "good planters." Percival used this term in recognizing those few people who had shown diligence and some success in seeking to make Georgia that which it was envisioned to be – a community of equal, self-respecting, self-sustaining farmer-citizens.

With the opening of Reynolds and Anson wards, a distinctive shift in lot assignment policies can be recognized. More people, both Trust- and self-sent, were assigned more quickly to the landward Anson Ward than to Reynolds. These were people of no distinctive claim or responsibility. By contrast the riverfront Reynolds Ward was now assigned an obvious importance and internally structured. At least the five westerly freeholder lots on the riverfront – on Bay Street – in Reynolds Ward were set aside as "Trust reserved"; not in the sense of the inner "Trust lots" reserved for communal purposes, but rather reserved for selective private assignment. In 1736, one of these lots was granted to the infant son of Thomas Causton, then and until 1739 both first Bailif and Publick Store Keeper. A second lot was granted in early 1738 to Will Kelway, who was valued as a trader and Spanish interpreter.

Across Abercorn Street, the other five riverfront lots were also granted with privilege and a sense of the increasing importance and distinctive use of the riverfront street. The first two of these lots were granted together with licenses for public houses. The two easternmost lots were assigned to former servants of Oglethorpe, one of whom, John Brownfeild, was both an officer of the community and involved in local and English trade. In the original assignment of Derby Ward, the riverfront lots received no special distinction and were, as noted, certainly secondary to the lots internal to the ward. The riverfront had already received de facto emphasis in the assignment and use of these lots in Decker Ward. Early reports of illicit sale of drink and of bawdy houses concentrated on riverfront lots. With the opening of Reynolds Ward, the potential of the riverfront for commercial use – trade as well as licensed public houses – became explicit policy. The original ideal of equal, family-based citizen-farmers was being displaced by a differentiated, mercantilist community. As might be expected, throughout the period considered here Bay Street was disproportionately low in families and children.

By the end of 1736 the early artisanal, and possibly commercial, strength of Heathcote Ward had fallen to an average position. Percival and Decker wards also weakened slightly. Nonetheless, Decker Ward maintained an average commercial strength relative to the entire community and, together with the old strength of Derby Ward and the new intensity of Reynolds Ward, the new pattern of dominance was across the waterfront wards. Within these wards, it was the streets closest to the river that dominated. Bay and Bryan streets, with only 24% of lots likely occupied at that time, had 46% of likely commercial activity and 48% of commercial and communal services combined. If one adds Duke Street (and still not counting the specifically communal buildings on the adjoining trust lots) the figures are 38%, 63%, and 64% respectively. The city had become river-oriented; Bay Street was active throughout its length; Bryan Street was still strongest in Derby Ward. During this period of growth of the entire town, Broughton, Prince, York, and South streets all showed significantly diminished strength – a downward course that was to intensify. Location decisions already revealed patterns in concert with neither original assignments nor overall communal change.

Near the end of 1736, Savannah reached its population peak for the early years of settlement. Disappointment in the agrarian development, discontent with Trustee rules, the Spanish threat, and erratic parliamentary support resulted in lower immigration and an increasing emigration to other colonies or back to England.

This period of decline is interesting for us in that changes of occupation become increasingly independent of the original rules of lot assignment. In the early stages of the decline, the population of Decker Ward declined proportionally; that of Derby Ward was steady while Reynolds Ward grew rapidly. Derby and Decker wards maintained their earlier commercial strength while Reynolds Ward actually increased its commercial and communal service. Heathcote Ward suffered major erosion in all these respects and Anson Ward proves never to have gotten off the ground. Actual gains near the waterfront provide even greater relative dominance for these wards and streets. In these landward wards, only Broughton Street as much as held with the average rate of decline. In the late, worst stages of decline, Broughton Street showed relative gains in population and commercial activity. These last two observations are documented in the table below.

At the end of the record here under discussion, Savannah had suffered a decline to a population smaller than it was in the first year of the settlement. Every ward and every street shared in this decline although Bryan Street retained its earlier amount of most certainly identifiable commercial activity. Relative strength continued to accumulate in Derby and Reynolds wards and particularly on Bay and Bryan streets in those wards. At the end of our record, Broughton Street ran counter to the general decline: with 25% of available lots it had 30% of the population, 34% of the wives, and 50% of the "good planters."

Savannah had retrenched as a stratified river town with its potential as a larger, more articulated fabric hanging in the balance. The late showing of relative strength on Broughton Street may have presaged a next stage in which Bay Street represented the external and mercantile potential of Savannah, and Broughton Street the internal, familial and agrarian potential.

Here I shall only mention that, with the revival of Savannah in the later eighteenth century, this pattern did emerge, complemented by the concerted use of the center of Decker Ward as the market square. In the nineteenth century, the city rapidly added new wards to the south. The availability of new residential areas there and the growth of local commercial activities made the only double-sided street near the existing commercial zone, Broughton Street, the latent resource for a new commercial pattern – Broughton Street as Main Street.

While this account of urban occupancy of early Savannah has been severely condensed from a more detailed study, the point of its telling must be reinforced. On the one hand, we may note various kinds of human actions, ranging from preconceived conventions of political organization worked out in

	% of available lots	% of all lots likely occupied	% of population	% of all commercial	% of all commercial and communal
June, 1738					
Derby and Reynolds wards	34	36	43	64	67
Three riverfront wards	50	56	63	82	84
Bay and Bryan streets	25	29	30	64	57
Bay, Bryan and Duke streets	38	43	49	78	74
Broughton Street	25	23	22	19	10
End of report					
Derby and Reynolds wards	34	36	33	69	72
Three riverfront wards	50	59	63	84	89
Bay and Bryan streets	25	28	27	61	61
Bay, Bryan and Duke streets	38	40	41	77	78
Broughton Street	25	28	30	24	11

London, through changing policies of land assignment by the local officers in Savannah, to considered location decisions by Savannah residents, and even to mere accidents of life in Savannah. On the other hand, we note several characteristics of an urban environment. The town plan of Savannah was also a convention – a newly innovated convention – worked out in London. Within its own formalisms there are ambiguities that lead to alternative readings – additive wards vs. a network of streets, multiple centers vs. peripheries that join in a systematic web, an east-west layering established by the parcelling and related subsidiary streets, to mention only three. There are effects of scale – the ward that is too small to become an enclave, and balances between center and periphery because it turns as many lots outward as inward. There are effects of the addition of ward units; for example, Broughton Street lengthens and continues to have 25% of all the lots of the town as new wards are added to east or west. That is, Broughton Street becomes a greater land resource than any ward and possesses additional powerful characteristics such as centrality, linearity, and symmetry. Finally there are the interactions of the real topography of Savannah with its plan conventions. The river not only delimits growth to the north, but gives specific potential to the northerly streets and wards. Small streams, change of level, and low-lying ground inhibited the growth of Savannah to east and west after the ward unit had been repeated six times along the river. The location of the garden and farm lots of Savannah well to the south reinforced north-south movement channels versus the articulated location of freeholder lots and activities along east-west channels. The common land between the town and the gardens was a convention that secured a large tract of land into which the city could expand for more than one century.

Both these human actions and the plan characteristics have unintended as well as intended results; instances of each have varying degrees of longevity. We may observe, then, two relatively autonomous but conjoined systems: the changing physical city (in this example analyzed as a system of plan conventions) and a historical course of urban activities.

Neither system determines the other; there is not only much slippage between the two, but this slippage is necessary if change in one (which may have ramifications throughout its own system) is not always to require concomitant (and possibly extensive) change in the other system. This much speaks to the autonomy of the two systems, but, if left at this, would return us to the irrelevance of enquiring into the relation of the two systems.

I have spoken, however, of the "relative autonomy," or the "quasi-autonomy," of the two systems. Savannah – or, in this analysis, the plan of Savannah – is selected and commended on the basis that *this* plan convention, with its unusual combination of intricate articulation and replication, has been able to lend environmental support to a series of quite different patterns of habitation. It has supported synchronic patterns of use, sometimes resisting and testing, channeling but not inhibiting diachronic patterns of changing use. And for this very reason – that is, its openness to reinterpretation and positive support of different uses – wholesale change of the physical fabric has not been necessary. Indeed, for an American city, Savannah has shown a remarkable durability with concomitant benefits both in the efficient use of resources and in the cumulative reinforcement of certain increasingly valued environmental qualities.

There are several conclusions I wish to draw from this exposition:

1 the hypothesis that all urban environments operate similarly to this analysis of two systems – social space and environmental resource – in reciprocal, possibilist relations defined by limits, thresholds, and reinforcements rather than by determined causation;

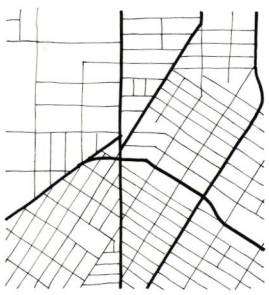
2 that, while all urban environments work in this way, some physical organizations, such as the plan of Savannah (and this could be extended to the three-dimensional fabric as well), are advantageous in that their diversity and potential multiple interpretations better sustain synchronic complexity and temporal change;

3 that interventions in the social or physical fabric of cities which are based on another understanding – for example, determinism or total autonomy – are then misconceived and more apt to have undesirable, unintended consequences;

4 that the relations hypothesized here require theoretical, methodological, and historiographic development.

Streetgrids as Frameworks for Urban Variety

Paul Groth



1 A section of the Oakland, California, streetplan.

". . . and the site for the project covers four typical blocks just off Third Avenue." For most architects, such a description conjures up an automatic mental image – Chicago, Des Moines, or Los Angeles; a streetgrid on reasonably flat land. All gridiron *sites* are alike, since all gridirons themselves are alike.

Yet all grids were *not* created equal. They were endowed by their engineer and speculator subdividers with varying opportunities for urban design, although most architects are shamefully ignorant of the differences from one grid to another. Even a sensitive designer like Lars Lerup has breezily characterized the complicated street patterns of Berkeley and Oakland, California, as a single "long swath of grid" (Figure 1).[1]

The architect's insensitivity to the streetgrid can be traced to design-school brainwashing which reminds students only of the grid's role in standardization – molding building plans, facade lines, heights, and functions within a straightjacket. Traditional design history texts and courses, if they have dealt at all with American streetplans, have intoned a familiar litany drawn from John Reps's 1965 text and the anti-grid bias of writers like Sam Bass Warner and Lewis Mumford. The litany includes a quick look at the few "good" grids (New Haven, Philadelphia, and Savannah), a glimpse and a sneer at the New York City plan of 1811, and a quick dissolve to the "evil" plan of the Illinois Central Railroad with everything labelled on a standard plat except the name of the hapless new town. Having thus dispensed with the grid, the litany swings over to the genesis and development of curvilinear plans, "garden" cities, City Beautiful boulevards, and finally superblocks. Such study may adequately review *innovations* in street form but it hardly prepares architects for design practice on sites along everyday American streets.

The current trend towards "design for diversity" is another force behind the grid's apparent unpopularity. Since some level (as yet unspecified) of variety and individuality is affirmed as a positive environmental attribute – and correctly so – the perception of grids being all alike only strengthens the urge to destroy or ignore such uniformity wherever possible.

If we wish to design for diversity, however, we have much to gain from learning to recognize nuances in

[1] Lerup lets this phrase slip by in an otherwise interesting discussion in *Building the Unfinished: Architecture and Human Action*, Volume 53, Sage Library of Social Research (Beverly Hills, California: Sage Publications, 1977), p. 79.

Figure 3 is reprinted from *Building the Unfinished: Architecture & Human Action*, Sage Library of Social Research, Vol. 53, by Lars Lerup, © 1977, p. 94, by permission.

Ed. Note: This article was completed for *The Review* in January 1979.

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010068-08 $3.00/0, © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology

the typical American streetplan: its origins and initial intents, how differences in it have developed, how our building and environmental management policies may in turn affect it, and how we can better respect or enhance differences which already exist between one area and another. We can learn to see street layouts not merely as sterile initial plans (à la Reps) but as a collection of artifacts which reveals the processes of urban building.

Some Points of Departure

First, a definition. In the following pages those who care deeply about clinical precision of language may wish to substitute "orthogonal street pattern" for "streetgrid" as a generic term for streetplans using straight streets and rectangular blocks. Gridirons (which, like football fields, imply a pattern of long narrow blocks) and checkerboards (with truly square blocks) are special cases of orthogonal patterns.

Second, a distinction. Streetgrids are similar to – but separate from – the agricultural land division scheme set up in the Continental Congress's Land Ordinance of 1785. The two schemes have interweaving but different histories.[2]

Third, a warning. If you begin to enjoy analyzing common American street patterns, your design colleagues are apt to conclude that you have lost either your mind or your sense of propriety (or perhaps both). Knowing a few basic articles of a "pro-grid creed of faith" may help you defend yourself. (These tenets of faith are only reviewed here; more complete support can be found in the sources noted.)

Article 1 A grid can be a symbol of positive and humane values. The streetgrid historically has been a common symbol not for greed but for rational urban life. In its adoption in ancient Greek colonies, in the Roman castrum, and particularly in medieval bastides, the grid of equal, almost interchangeable blocks symbolized the emancipation from traditional restraints and the achievement of relative egalitarianism and geometric order. Geographer James E. Vance suggests that instead of castigating the grid plan as "dull-witted, unaesthetic, and somehow speaking of a lower use of man's intellect, we might better view it as one of the great inventions of the human mind."[3]

Article 2 Viable human settlements with a proper sense of community can thrive on a grid streetplan as well as on some other form. Historian Thomas Winpenny has charged headlong into the opinions of John Reps, Lewis Mumford, and Sam Bass Warner to defend this tenet, attacking Mumford's mystical belief in a relationship between the satisfaction of human needs and the complexity of the street system. Winpenny reminds us that no psychological theory supports the contention that grid plans

[2] For basic reading on streetgrid history, see Dan Stanislawski, "The Origin and Spread of the Grid-Pattern Town," *Geographical Review* 36 (1946): 105–120; Ferdinando Castiglioni, *Orthogonal Town Planning in Antiquity* (Cambridge, Massachusetts: The MIT Press, 1971; original Italian edition, 1956); James E. Vance, *This Scene of Man: The Role and Structure of the City in the Geography of Western Civilization* (New York: Harper's College Press, 1977); John W. Reps, *The Making of Urban America: A History of City Planning in the U.S.* (Princeton, New Jersey: Princeton University Press, 1965).

To trace the separate history of the agricultural land-division grid, see Amelia Clewly Ford, *Colonial Precedents of Our National Land System as It Existed in 1800* (Madison, Wisconsin: Wisconsin University Bulletin, History Series Volume 11, Number 2, 1910); William D. Pattison, *Beginnings of the American Rectangular Land Survey System 1784–1800* (Chicago: Publications of the Department of Geography, University of Chicago, 1957); Hildegard Binder Johnson, *Order Upon the Land: The U.S. Rectangular Land Survey and the Upper Mississippi Country* (New York: Oxford University Press, 1976); and J. B. Jackson, "Jefferson, Thoreau, and After," *Landscape* 15 (1965–1966): 25–27.

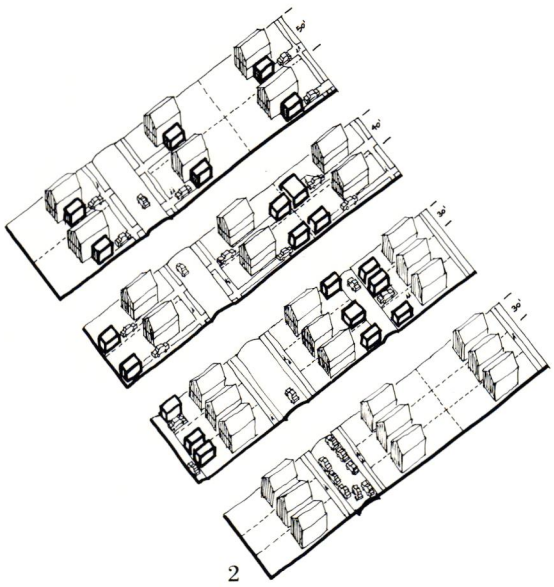
[3] See Vance, *This Scene of Man*, pp. 44–45; the quotation is from p. 45. See also John Brinckerhoff Jackson, *American Space: The Centennial Years: 1865–1876* (New York: W. W. Norton and Co., Inc., 1972), pp. 68–69, and Richard Pillsbury, "The Urban Street Pattern as a Culture Indicator: Pennsylvania 1682–1815," *Annals of the Association of American Geographers* 60 (1970): 428–446.

2 Relations of plot size to later adjustment for parked cars.

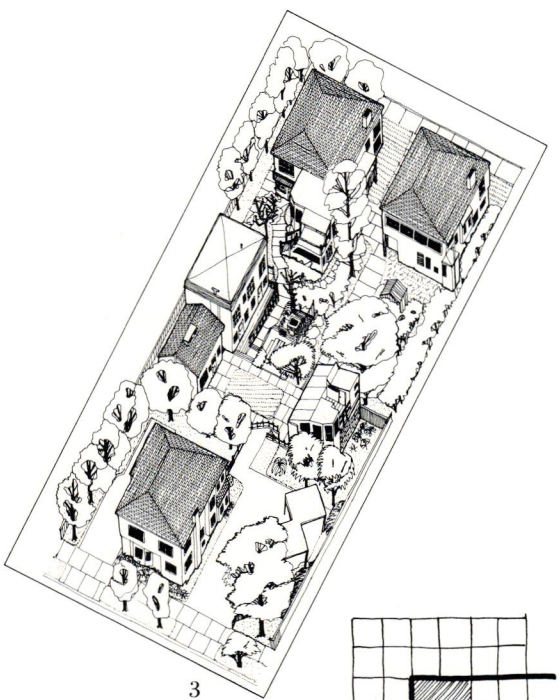
3 Unlike Nolen, Lars Lerup sees great hope for backyard buildings on narrow plots. This view from *Building the Unfinished* shows three houseplots in Berkeley, California, as transformed by their owner, "Mrs. Ivy," and her tenants. Realization of this casual weave of gardens and apartments depended upon common ownership.

4 Three typical variations of streetgrid plans in America. At the top, the Law of the Indies plaza plan associated with Spanish colonial settlement; in the middle, the Lancaster Courthouse Square plan which developed in Pennsylvania; at the bottom, the Shelbyville Courthouse Square plan which is most common in the American South and the regions later settled by Southerners.

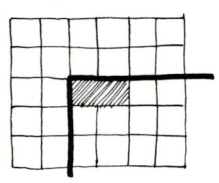
5 Henry McMurtrie's 1819 map of Louisville and its environs. Each of the grids shows very different expectations for later development.

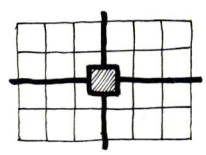


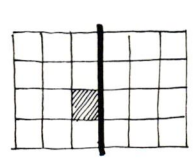
2



3







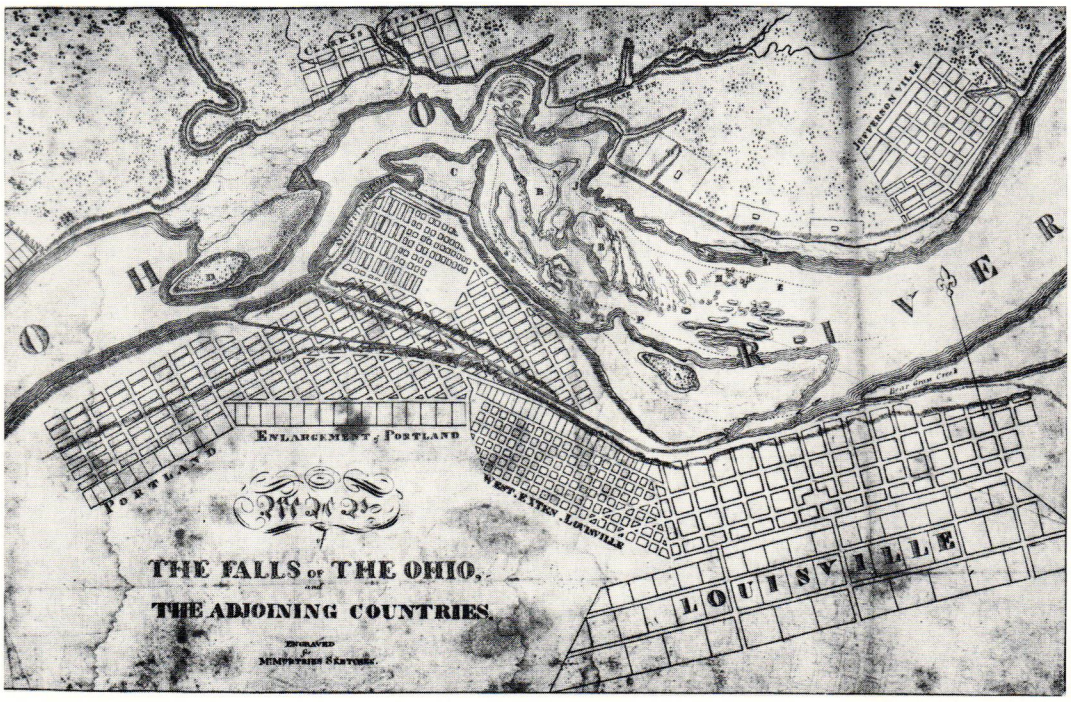
4

prevent the development of a sound sense of place, and that for newcomers the easily comprehensible grid can be a source of security.[4]

Article 3 Streetgrids do not necessarily create mechanical monotony in urban design and may, in fact, be the best possible provision for "organic" growth in a city's future. Grids, like curvilinear streetplans, can be developed unimaginatively and monotonously or with great freedom; the critical element in a visually successful streetscape is not the streetplan but the skill used by planners, designers, and building users in realizing design possibilities. Furthermore, the grid has adapted itself well through long periods of growth and change. Manhattan's 1811 grid has allowed enough spontaneous, "natural" overlapping of human activity so that Christopher Alexander can describe New York as an "organic" city.[5]

Article 4 The grid *allows* but does not *cause* high density. Streetgrids are indeed the most efficient form for compact settlement, but the decision to build compactly must be seen as policy, not as a result of street form. Although Garden City schemers railed against "grid density," the concurrent vernacular standard of grid density in the U. S. was eight to ten houses or less to the acre, the same standard set for the English Garden City.[6]

With these points of departure in mind we can go on to examine several urban growth processes which result in streetgrid diversity. The simplest sort of diversity begins with the original plat design. Other diversity begins in the process of early settlement, when blocks and building lots are adjusted to initial uses and inadvertently frozen into those early forms. Still other diversity arises from accretion of new urban fabric. Hierarchical redesign of streetgrids is another diversifying process, and American cities have seen many phases of such adjustment – in the late 1800s, for example (when the need for specialized social areas was a primary impetus) and in the 1920s and 1950s (when the combined influences of urban growth and transportation planning provided new functional requirements for both new and pre-existing grids).



5

Differences in Initial Design

Such mundane details as the size of a standard building plot have provided key differences between the urban fabric of one American city and another, both during their initial growth and more importantly in later rebuilding and intensification of use. Consider, for instance, the addition of garages to American residential districts after 1900. The plots of some subdivisions were wide enough for attached garages, others allowed only for driveways squeezed through to the backyard, and still others had alleys with rows of garages. Some had none of the above (Figure 2).

These differences change our experience of the streetscape today – as we drive from wide-open streets to an adjacent zone where everyone must park his car at the curb – and they also open different possibilities for future design.[7] In a 1929 study, urban planner John Nolen noted that lots like those in Brookline, Massachusetts, were "too deep" and had fostered undesirable rear buildings and backyard houses, which in turn led to congestion and lowered real estate values. In the 1970s, other designers have a far more positive view of the potential of narrow, deep lots (Figure 3).[8]

There are a number of design differences to note while experiencing a grid for the first time (either while touring or while studying the neighborhood context for a design commission). The plan may truly have been a uniform grid or, instead, one of three typical variations which are indicators of culture regions and innovation diffusion within the United States (Figure 4).[9] Provisions for public services and social spaces may have been niggardly or completely lacking (as in some company towns, which can occasionally be further identified by unusually small blocks), a gesture (as in Philadelphia's parks), or ample (as in some Victorian plans like those for Oakland and Stockton, California).

Contrasts of initial form often reflect different assumptions of future function. For example, the present-day city limits of Louisville, Kentucky, contain three very different grids for three distinct cities: the original Louisville, whose intended citizens drew lots for half-acre sites; Shippingport, laid out as a transshipment suburb of Louisville; and Portland, built to serve the eventual canal around the falls of the Ohio River (Figure 5).[10]

Simply the names of streets hold quickly accessible clues to the aspirations of the streetgrid developer or former residents. After living with our designer's

[4] Thomas R. Winpenny, "The Nefarious Philadelphia Plan and Urban America: A Reconsideration," *Philadelphia Magazine of History and Biography* 101 (1977): 103–113.

[5] These points are made persuasively by Leslie Martin, "The Grid as Generator," in Leslie Martin and Lionel March, eds., *Urban Space and Structures* (Cambridge, England: Cambridge University Press, 1972), pp. 6–27. Martin cites Alexander's article, "A City is Not a Tree," in *Architectural Forum* 122 (April 1965), pp. 58–62 and (May 1965), pp. 58–61.

[6] Martin, "The Grid as Generator," stresses the importance of policy over form. The Garden City comparison is made in John Nolen, ed., *City Planning: A Series of Papers Presenting the Essential Elements of a City Plan*, 2nd ed. (New York: D. Appleton and Co., 1929), p. 23.

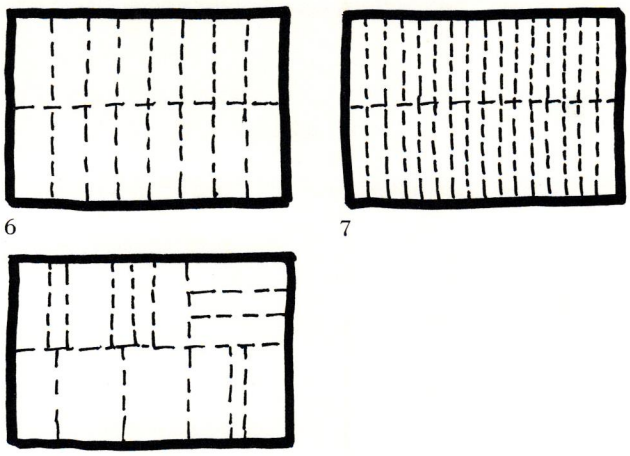
[7] Tom Harvey of the Department of Geography, University of Minnesota, first brought to my attention the connection between parked cars on the street and plot width.

[8] Nolen, *City Planning*, p. 32. For a more positive view see Lerup's glowing descriptions of Mrs. Ivy's block in Lerup, *Building the Unfinished*.

[9] See Reps, *Making of Urban America*; Pillsbury, "Street Pattern as Culture Indicator;" and Edward T. Price, "The Central Courthouse Square in the American County Seat," *Geographical Review* 58 (1968): 29–60.

[10] Compare Reps's thorough but disjointed treatment of the towns at the Falls of the Ohio (in different chapters of his book, pp. 212–214, 314–321 and 361–362) with the treatment in Ralph H. Brown, *Historical Geography of the United States* (New York: Harcourt, Brace, and World, 1948), pp. 240–244. The best resource for learning to intelligently tour or study a new city is probably Grady Clay, *Close-Up: How to Read the American City* (New York: Praeger Publishers, 1973).

6 Contrasts in plat maps and actual ownership patterns. The upper block shows a typical block as platted; the lower block shows a typical ownership pattern – including the surprisingly frequent development of ownership lines which run perpendicular to platted lots.
7 Block platted in ten-foot segments.
8 Glessner residence, Prairie Avenue and Eighteenth Street, Chicago. H. H. Richardson, architect, 1887.
9 Vandeventer Place, St. Louis, 1890.



6 7

lexicon for streets (which seems limited to "cul-de-sac" and "pedestrian mall"), speculating on the differences between places named "Third Avenue" versus "Willow Lane" might be instructive as well as fun.[11]

Early Adjustments of Blocks and Plots

Understanding the initial design of a city is important but the first settlement within the land divisions is even more crucial, as the dominant process is then adjustment of block size and plot dimensions to actual use. Close examination of a city map (or trying to cut through the side streets of a strange city) reveals many places where an odd row of large blocks was re-platted, or a street or two removed for a few blocks to create a larger building site or to avoid a now-vanished swale or pond. Today these aberrations in pattern give instant clues to past people, processes, or institutions that have been politically or economically dominant.

The classic example of plan adjustment is Philadelphia, where Penn's blocks, designed for large houses set in green gardens, were cut into thirds. The resulting building lots, as small as 15 feet by 60 feet, encouraged inexpensive row houses two or three rooms deep. Planners later extolled the small plot size as ideal for wage-earners' housing. The efficient urban expansion and construction which Philadelphia's grid plan and block subdivision made possible "may well have produced windfall profits for developers," Thomas Winpenny admits, "but it is far more significant to note that this same process also provided unprecedented levels of privacy and home ownership for those who otherwise would not have been able to afford such amenities." The small lots, Winpenny claims, spared Philadelphia from the tenement.[12]

The regularity of American city streetscapes, so often glibly blamed on the *streetplan*, is more often a result of rigid maintenance of original plot sizes within the blocks or of rapid development by a single builder. Both factors mean that fewer variables operate in the development of the streetscape.

Where varied streetscapes are found, even in areas of rapid building, the variety can often be linked to plot sizes which were adapted during initial settlement. For instance, a 30-foot wide plot often abuts plots 40 or 50 feet wide, even where the original "platted plot" was 20 feet (Figure 6). To facilitate the adjustment of initial plot size, some subdivision plats in the late 1800s adopted 10-foot wide lot segments so that buyers could more easily describe their unique plots (Figure 7).

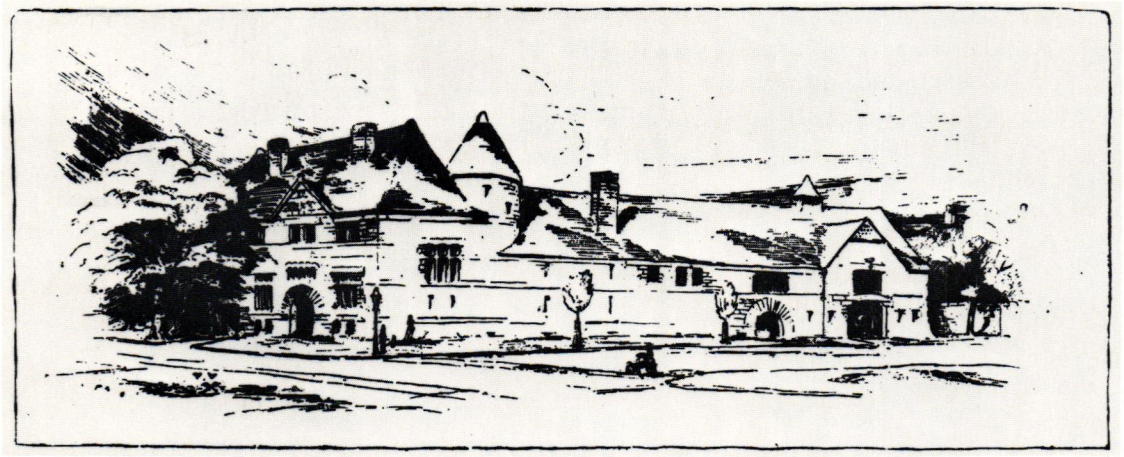
This diversification of the plot pattern in many American cities has had a clear influence on later architecture. To the chagrin of many architects, building plots – especially large ones – can be expected to last far longer than the landmark buildings designed on them. 150-foot by 125-foot corner lots on American Main Streets provided exactly the necessary setting not only for spectacular Queen Anne houses in 1890 but also for Standard Oil service stations and Safeway grocery stores in the 1950s. Meanwhile the unassuming 1890s cottages built on the 35 by 125-foot lots next door have survived to this day. Minor designers who wish to leave a permanent monument of their art might be well advised to cultivate clients who own small plots not located on street corners.

In general, *the plot is more permanent than either the building or the street.* The grain of plots, set not by the original plan but by initial occupance and building on urban land, is perhaps the most enduring physical aspect of the city.[13]

Re-design for Functional and Social Hierarchies

In the heyday of American streetgrid platting, the 1800s, most areas of the new big cities were a jumble of occupations, classes, shops, and homes. As late as 1860 simple rowhouse buildings on standard plots could shelter families and workplaces alike. Later, as urban functions became sorted into different areas, various re-designing schemes – alleys, paving and utility plans, and professional urban design – helped adjust the egalitarian streetgrid to the new hierarchies of the industrial city.

Cutting alleys or new streets through large blocks provided the easiest way to adjust the street and plot framework to more concentrated or finer-scale building design. Expert city-watcher Grady Clay has noted that city leaders could relegate into alleys all sorts of undesirable aspects of streetscape life – stables, barnyard smells, and animal noises



8

associated with the prevailing transportation system; garbage piles left from home food preparation; wood and coal sheds and ash heaps of the private energy supply, or the social realities of servants and classes of people too poor to rent houses with street frontage. Just as building interiors in the late 1800s separated servants' rooms and hallways from family spaces, so too access to land came to be conceived in socially hierarchical terms.[14]

Differences in services and utilities reinforced the hierarchy of streets and alleys. Garbage collection for alley residences could be conveniently ignored; Philadelphia alleys did not typically get water service in the 1800s so the advantage of private single-family housing noted by Winpenny was not long-lasting. Elsewhere, wage-labor homeowners chose to postpone assessments for utilities in order to keep housing costs within an affordable range.[15]

The system of alleys also allowed a greater specialization of "front" and "back" in urban building. The Glessners's neighbors on Chicago's Prairie Avenue may have been aghast at H H Richardson's house design not only because it differed so much in style from their own houses but also because it ignored the front-and-back rules of the alley and streetgrid. Richardson placed the real front door, the carriage entrance, on the interior of the lot (usually reserved for second-class services), and he celebrated the stable and service entrances in a public street display (Figure 8).

Just as developers differentiated grid blocks for lower classes, urban designers found ways to create distinction in the grid for upper-class homes. Private roads could be made of standard grid segments once they were purchased from the city and separated from the common domain by gates, walls, and elaborate street ornament. Narrow roadways – in spite of the ample spaces between facing houses – increased the impression of aloofness in the schemes. Vandeventer Place of St. Louis was the epitome of this sort of differentiation (Figure 9).

Designers often planned the roads behind streetgrid segments like Vandeventer Place for smaller homes, squeezed onto smaller sites but still commanding the higher prices of respectable neighborhoods. As might be expected, the plot lines of such schemes have lived longer than the grand buildings and

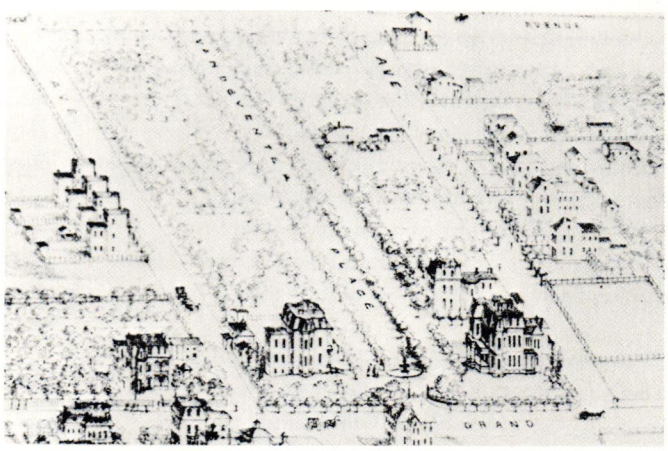
[11] For an entertaining and readable introduction to the literature on place names, see George Stewart, *Names on the Land: A Historical Account of Place-Naming in the United States* (New York: Random House, 1945).

[12] For the turn-of-the-century planner's view see Charles Mulford Robinson, *City Planning, With Special Reference to the Planning of Streets and Lots* (New York: G. P. Putnam's Sons, 1916; first published in 1911 under the title *The Width and Arrangement of Streets, A Study in Town Planning*); Winpenny's comments are in "Nefarious Philadelphia Plan," p. 11.

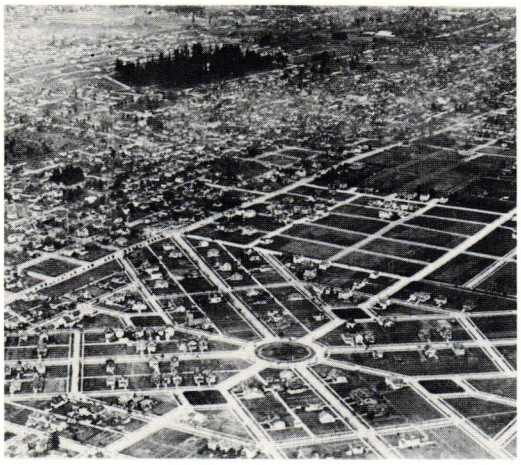
[13] M. R. G. Conzen demonstrated this to be true in his classic studies of centuries of growth in two English cities. See "Alnwick, Northumberland: A Study in Town-Plan Analysis," *Transactions of the Institute of British Geographers* No. 27 (1960), and "The Plan Analysis of an English City Centre," in Knut Norberg, ed., *Proceedings of the IGU Symposium in Urban Georgraphy, Lund, 1960* (Lund, Sweden: C. W. K. Gleerup, 1962): 383–414. Vance agrees with the general principle in *This Scene of Man*, pp. 124–125.

[14] Grady Clay, "Long Live the Alley!" *Planning*, Journal of the American Society of Planning Officials 44 (June 1978): 14–18

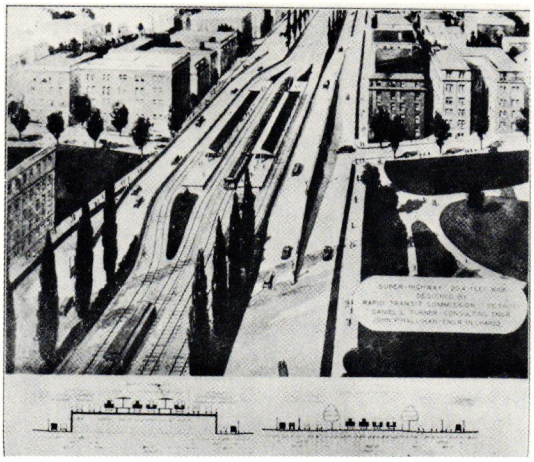
[15] See Sam Bass Warner, *The Private City: Philadelphia in Three Periods of its Growth* (Philadelphia: University of Pennsylvania Press, 1968), pp. 109–110, and Roger D. Simon, "Housing and Services in an Immigrant Neighborhood," *Journal of Urban History* 2 (1976): 435–458.



9



10



13

functions. The front houses have been replaced by apartments, while the back-alley houses remain enclaves of single family homes.

Differentiation by Addition: Mini-grids

As pure form on a featureless plain, a grid can be extended uniformly and indefinitely in every direction. The fact in American urban growth is that few American cities actually have *been* extended in such a way; Manhattan's 10-mile extension of a single streetgrid is the exception, not the norm. The original Spanish streetgrid of Los Angeles lies at an angle to its surrounding streets, as the original grids do in so many other American cities, partly because until recently American city governments lacked the strong central control needed to extend their initial platted pattern. Even where the agricultural grid meshed with city roads (as in Chicago) the resulting street plan was not a single grid system but a co-ordinated assortment of "mini-grids" – chunks of differentiated plots added onto the existing city. As developers independently subdivided fields into urban streets they adopted amazingly different patterns: roads at 90° or 45° angles to the roads in neighboring mini-grids, patterns parallel to adjacent streams, or whimsical designs which they expected to have a grand future effect (Figure 10). Even in those cities where the subdivisions have all been orthogonal patterns oriented to the cardinal points of the compass, different subdivisions become differentiated (just as original city plans) by contrasts in lot and street sizes, type of promotion, speed of sale, and provision of utilities.[16]

The typical American city is thus not a single giant streetgrid but a jumble of mini-grids which create many special architectural sites at their junctures: jogs in roads, "T"-intersections, and occasional diagonal vistas (not necessarily City Beautiful diagonals, but potentially striking nonetheless). These subtle but real chances for special architectural notice, as simple as an axial approach to a home or school, go unused or ignored so often in American urban landscapes that we can surmise that American builders and designers have *perceived* all gridiron lots as being identical, even when they are not.

The Engineer's Transportation Hierarchies: Maxi-grids

The jumbles of mini-grids in almost every American city are masked today because they have been encased within the engineer's hierarchy of major transportation routes. Because this adjustment process has been so widespread, most of us have little idea how alien and puzzling an "original" cluster of mini-grids can be to a modern motorist. St. Joseph, Missouri, is one example of a city which has large districts with no street-widening or clearly indicated through roads. When traveling in St. Joseph, unlike most other Midwestern or Western cities, one becomes immediately aware of the idiosyncrasies of each mini-grid because the joints and road-jogs between the different grids are still fresh and raw. Street details are obvious but the whole pattern of the city is not. One searches in vain to find a fast route to the edge of town; such routes exist, and are marked on street maps, but are indistinguishable in the streetscape. Cities like St. Joseph are valuable reminders of how drastically our street systems and perception of the city have been altered by such simple changes as smoothing out jogs in curbs and roads for automobile traffic and widening the through roads.

The engineer's first complete restructuring of the grid came with streetcar networks. Streetcars allowed the intrinsically non-centric grid to focus access more effectively into a single urban center of department stores and office blocks. Later, when the

[16] The differentiation of mini-grids within the urban fabric has not been widely studied. Grady Clay, *Close Up*, pp. 42–52, looks at basic mini-grid phenomena. Roger Barnett, "Suburban Subdivision: The Morphogenesis of Housing in Stockton, 1850–1950," (unpublished Ph.D. Thesis, Department of Geography, University of California, Berkeley, 1973), studies in detail the cyclic phases of subdivision and their drastically differing effects on subsequent urban building and function. See also Roger Barnett, "The Libertarian Suburb: Deliberate Disorder," *Landscape* 22 (1978): 44–48.

[17] The competition, sponsored by the City Club of Chicago, was published in A. B. Yeomans, *City Residential Land Development* (Chicago: University of Chicago Press, 1916). The wide range of solutions includes a "non-competitive proposal" by Frank Lloyd Wright.

[18] See the sections on Detroit and Indianapolis in Austin F. Macdonald, ed., *Planning for City Traffic*, special number of the *Annals of the American Academy of Political and Social Science* Volume 133 (September 1927), especially pp. 33 and 66.

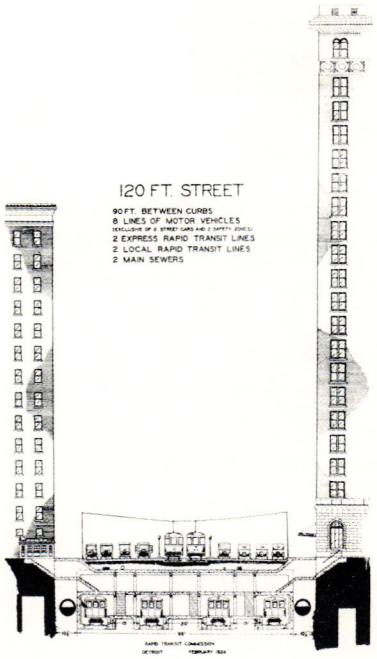
10 Ladd's addition in Portland, Oregon. A distinctive mini-grid platted in 1892 as a partially philanthropic effort for workingmen and their families.

11 Comprehensive plan for super-highway system in greater Detroit, 1926.

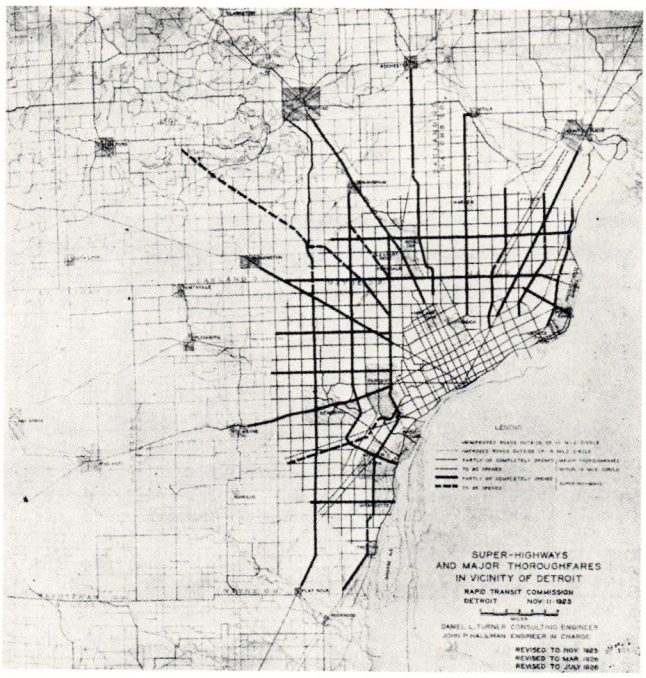
12 The street cross-section adjusted for automobiles. In already built-up areas of Detroit, engineers assumed a two-level future development.

13 The wider cross-section of the maxi-grid intended for new areas of greater Detroit. Engineer John P. Hallihan assumed in 1927 that the maxi-grid of the near future would look like this.

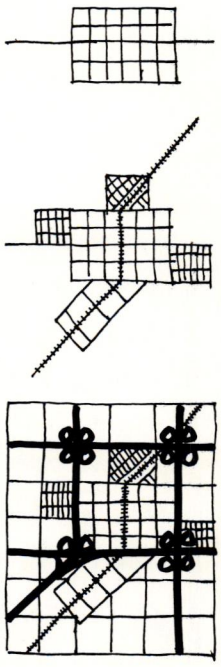
14 Three generations of grids. At top, a pre-railroad initial grid; in the middle, the initial grid with later mini-grid additions; at the bottom, the maxi-grid of freeways.



12



11


14

major transportation problem became automobile congestion, patterns of one-way streets and traffic bypasses were imposed upon the jumble of mini-grids. Streetwidth standards for the scientific network of through roads drastically increased beyond the old uniform standard for horse-and-buggy easements.

As streetwidth standards increased, so too the size of the units in the urban grid expanded from single fields and other small parcels to whole square-mile units. By 1913, long before Frank Lloyd Wright designed his Broadacre City, the quarter-mile sections of the rural grid had been accepted as the standard urban unit; that year a competition was held to awaken interest and generate possible solutions for contiguous Garden City subdivisions bounded by typical section roads yet designed with "community interests" in mind.[17]

Ignoring Daniel Burnham's attempts to pin the city center and business activity in position with diagonal roads, planners with distribution rather than concentration in mind used mile-square urban units within their "maxi-grid" of transportation routes. In the 1920s Detroit's planners assembled the land for a comprehensive system of 204-foot wide rights-of-way laid out in a grid at approximately three-mile intervals, supplemented by intermediate 120-foot wide major thoroughfares at one-mile intervals on the formerly 66-foot wide roads (Figures 11-13). Indianapolis engineers planned boulevards at intervals of about two miles, with a smaller thoroughfare grid at one-half mile intervals meshing with the rural grid.[18] The lowest end of the pre-auto hierarchy, the alley, was dropped in most plans as the scale of the grid expanded.

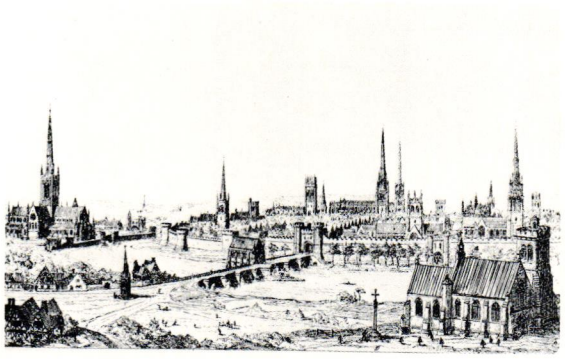
Le Corbusier thus did not need to propose superblocks for New York City in the 1940s any more than Leslie Martin needed to propose superblocks in 1972. In most American cities a superblock grid has essentially existed since the 1930s. The standard of a two- to four-mile superhighway grid, usually stretching along agricultural land-division boundaries or other joints between mini-grids, has become today's basic streetgrid. The highways of Los Angeles, Detroit, San Jose, Indianapolis, and Denver delimit maxi-grids inside which the old mini-grids with 50- and 60-foot wide road easements are, in effect, service alleys (Figure 14). The variety of the original mini-grids, so obvious in 1900, still exists but has been masked by the effect of the maxi-grid.

These five processes of change – design, initial settlement, social specialization, accretion, and traffic routing – have given American city streetplans subtle but real variety. As designers, we must resist lumping all the historical and physical diversity of American city streetplans into uniform categories like "typical four-block sites." Although only one of the many formal and social contexts in which urban architecture must take place, the streetplan is nonetheless rich in potential clues to the processes of urban building patterns, to the history of urban growth, and to differences and variety which can aid in the creation of livable and beautiful cities. Our American jumbles of grids are not straightjackets which must inevitably lead to uniformity, but inherently diverse forms which in turn can foster further variety.

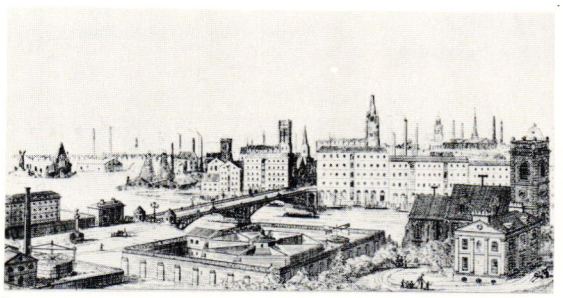
The Context of the Modern City

David P. Handlin

1,2 A. W. N. Pugin: Catholic town in 1440; the same town in 1840



1



2

Vladimir Nabokov once wrote that as far as the novelist was concerned the

> *art of integrating telephone conversations still lags far behind that of rendering dialogues conducted from room to room, or from window to window across some narrow blue alley in an ancient town with water so precious, and the misery of donkeys and rugs for sale, and minarets, and foreigners and melons, and the vibrant morning echoes.*[1]

The contemporary architect faces a similar dilemma. He finds it easy to appreciate the pre-industrial city, and, even though he probably has had little or no direct experience of that context, he thinks he feels at ease in it. On the other hand, although he lives in, uses the facilities of, and contributes buildings to the modern city, he often considers this a troubling and perhaps even an alienating environment.

It is not difficult, especially when separated by time and distance, to discover much that is appealing in the pre-industrial city. It had a manageable and easily comprehensible form. It was usually self-contained, with distinct boundaries, often walls of fortifications. Beyond were the fields that nourished the town's inhabitants; within was a pattern of streets and buildings which was the setting for the economic and civic life of the community. The streets served the simple traffic of pedestrians and donkey carts. They often were twisted and discontinuous, since direct and speedy routes were not critical to an economy that was sluggish and undemanding of its physical context. The buildings along these streets could be varied, even picturesque; but the small size and compactness of the town provided a condition of continuity which both drew together the diverse elements of the townscape and left occasional spaces for prominent civic and religious monuments.

The modern city, by contrast, often seems inaccessible and unknowable. Whereas before 1800 the largest city contained at the very most 100,000 inhabitants and measured not more than a mile or two in diameter, the modern metropolis can now have 10,000,000 citizens and often spreads over many dozens of square miles. The increasing prominence of electronic communication has further compounded the problem of giving limits to the city, and has added a significant dimension to a system of communication that is more shaped to accommodate automobile transportation than the pedestrian. In such a context the pattern of building that characterized the old city is virtually unrecognizable. Vacant lots stand next to skyscrapers; buildings of glass and steel (perhaps already anachronisms) contrast sharply with the masonry and wood remnants of nineteenth century and earlier developments.

Those who have experienced the transition from the traditional to the modern city have had two main reactions to this change. Some have been so repelled by the modern city that they have tried to find ways to reverse the tide and return to the familiar, manageable context they imagined to have existed in the past (Figures 1,2). Others have tried to extract distinctive characteristics from contemporary developments and have based a vision of a new urban order on these qualities.

A third, less common position has been not to posit a fixed, ideal state for the city either in the past or the future, but instead to accept that change is the essence of the modern city and that, within certain limits, this condition can be a source of richness and strength, not just for the form of the city but also for its economic and civic life.

One way to understand the implications of this point of view is to examine the urban ideas of a person who adopted it. George E. Hooker was well qualified to have an opinion about the shape and meaning of cities. He spent much of his life thinking and trying to do something about the growth of Chicago during one of the city's most important periods of development.

Before he arrived in Chicago in 1895, Hooker had a varied career. Born in Vermont in 1861, he

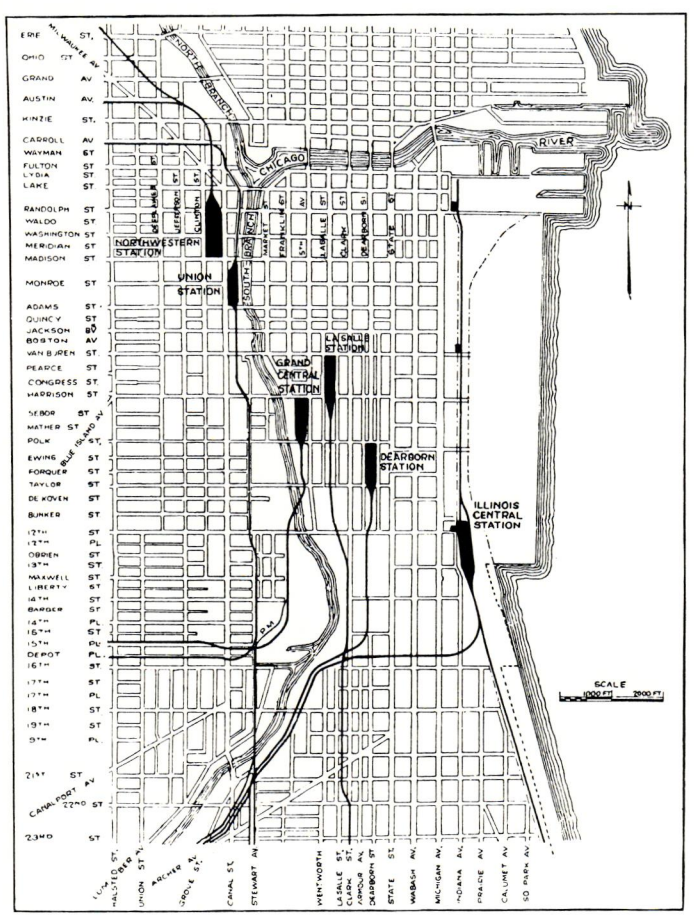
[1] Vladimir Nabokov, *Pnin* (New York, 1969), 30. Much of this article is a development of ideas and material in Chapters 2 and 3 of my *The American Home: Architecture and Society, 1815–1915* (Boston, 1979).

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010076-14 $3.00/0. © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology.

3 The through route: Evanston to Hyde Park
4 Chicago: The terminal problem
5 Chicago: A one-room apartment
6 City Club of Chicago
7 Camillo Sitte: Salzburg

3

4



graduated from Amherst College in 1883, received a law degree from Columbia in 1885, and then decided to become a minister. After three years with the American Home Missionary Society, Hooker travelled to Europe and found his true calling in the study of urban problems. He returned to the United States in 1895 and settled in Chicago where he primarily remained till his death in 1938.[2] In 1830 Chicago was a tiny military and trading outpost with about 350 inhabitants. By 1893, the year of the famous World's Fair, the city's population approached a million, and people were then frequently predicting that this statistic would increase several fold in the coming decades. This context gave Chicago's inhabitants a unique perspective on what the possibilities of the modern city could be.[3]

Hooker always understood that the physical context of a city had to make sense at three levels. The pattern of streets and buildings was vital, first of all, to the economic life of the community. Like other students of the modern city, Hooker understood that the growth of cities had been accompanied by an increase in real income. Sociologists and economists further realized that an individual's economic independence was the prerequisite of his political independence.[4] Important questions about the

[2] Biographical material on Hooker from: a speech by Adena Miller Rich at a memorial service for him at Hull-House, Chicago, March 23, 1939

[3] The growth of Chicago has frequently been written about. See, in particular: Harold M. Meyer and Richard C. Wade, *Chicago: Growth of a Metropolis* (Chicago, 1969).

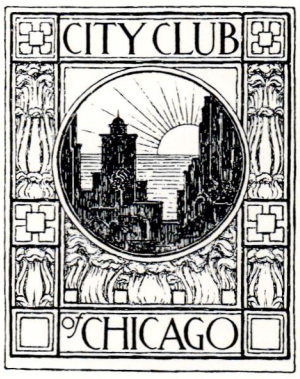
[4] Adna Ferrin Weber, *The Growth of Cities in the Nineteenth Century* (New York, 1899), 410–478

[5] George Ellsworth Hooker, *Street Railway Legislation in Illinois, 1897* (Chicago, 1897); George Ellsworth Hooker, *Report to the City Council of Chicago on Local Transportation Development in Great Cities* (Chicago, 1904).

[6] Hooker's activities at Hull-House are discussed in the speech by Rich at Hull-House, 13–16; see also: file card listings at Hull-House, University of Illinois, Chicago Circle campus, Chicago. The scope of the City Club's activities is best understood from *The City Club Bulletin*, which began publication on February 20, 1907.

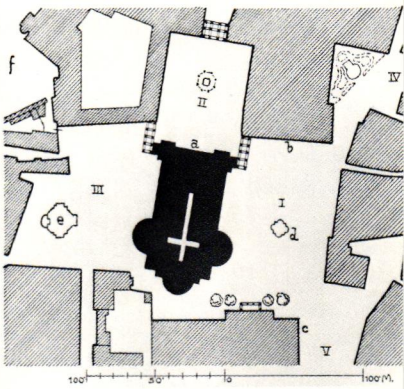
[7] For Hooker's relations with Sitte: George R. and Christiane Crasemann Collins, *Camillo Sitte and the Birth of Modern City Planning* (New York, 1965), 56, 86.

[8] For instance: Le Corbusier, *The City of Tomorrow* (London, 1977; orig. pub. 1924), 14. Of course, Sitte has had a revival in the past few years.



6

5



7

distribution of the increase in income that had been produced as a consequence of the growth of cities remained. But Hooker believed that no matter how excellent it might be in other respects, if the urban context did not function as an efficient mechanism for the city's economy, then it was a failure.

The economic life and the physical environment of the city were connected in many ways, but the most important point of contact was the transportation system. Not only did Hooker, as Secretary of the Chicago Transportation Commission and as the author of several important reports on the railroad systems of Chicago, understand that the transportation system had a direct bearing on the cost of goods produced and thus on wages, but it also provided access to vast areas of what had come to be the preferred type of housing in Chicago – the separate home, the suburbs of which were an integral part of Chicago. Although Chicago's transportation system had many problems, Hooker thought none was more critical than the future of its steam railroads. He felt that if these railroads did not have to end, as they did, in terminals in or near the downtown area, but instead could carry on through the center of the city, the overall efficiency would be vastly increased (Figure 3). Through routes would mean less transfer of freight, quicker and easier access to and from the suburbs and less congestion in the downtown (Figure 4). The cooperation of the many different companies involved was necessary to achieve this end. But since Hooker felt that the resulting benefits would be enormous, he tried for many years to bring the diverse and often opposing parties together.[5]

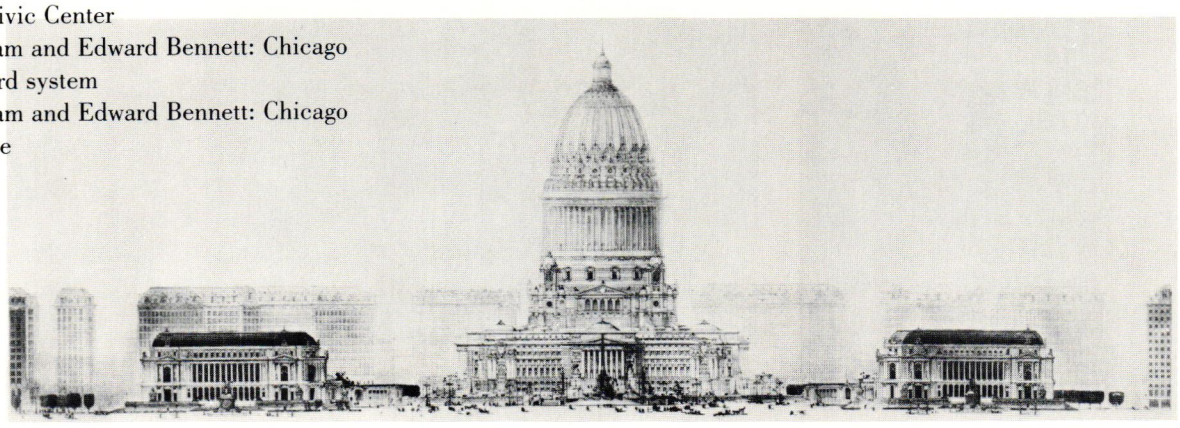
Although economic prosperity was vital, the city also had to make sense as a context for the social welfare of its citizens. Even by the turn of the century, few residents of Chicago could claim to be long-time inhabitants of that city. The vast majority had recently arrived from rural America or the peasant villages of Europe. Many of the values they had acquired and lived by in those contexts seemed to have little relevance as they tried to forge an existence for themselves in the large city. Reformers, therefore, asked whether the city was (according to Upton Sinclair) a "jungle" or (to use Robert Woods' word) a "wilderness," or was it instead (as Frederick Howe indicated in the subtitle of his famous book) "the hope of democracy." (Figure 5)

In arriving at a resolution to this question, it was of vital importance to understand the extent to which Chicago was a community, to know how its diverse citizenry could be drawn together in a pattern of mutual respect and dependency. To further this end, Hooker was an active member and supporter of two institutions. In 1893 he was a resident at Boston's South End House and a year later lived for nine months at Toynbee Hall, the pioneering English settlement house. When he arrived in Chicago, he became a resident of Hull-House and lived there for over forty years. A patron of Hull-House's arts, always at its recitals, exhibits, plays, and lectures, Hooker was known for his ability to bring out debate on public questions and policies in this great forum for Chicago's increasingly diverse population. He was also from 1905 to 1917 the Civic Secretary of another significant institution, the City Club (Figure 6). The function of this organization was to bring professionals, businessmen, politicians, intellectuals, and concerned citizens together to discuss the problems of the day. As Civic Secretary Hooker not only organized lectures and discussions about a wide variety of issues, but he also set up task forces that made reports on matters of concern in Chicago. These groups were often headed by eminent figures and included people of the calibre of Jane Addams, John Dewey, Jens Jensen, George Herbert Meade, and William Drummond.[6]

As much as Hooker understood that the city had to be successful in its economic and social dimensions, he was also convinced that its physical context had to have an "aesthetic and spiritual" content. Hooker came to this conclusion through contact with a seemingly anomalous source, Camillo Sitte, whom he had met during his trip to Europe and whose book he intended to translate into English.[7] Many modern commentators have questioned Sitte's relevance to the modern city.[8] In his love for the medieval past and his distaste for the intrusions of transportation systems on the ancient fabric of the city, Sitte has often seemed a hopeless romantic (Figure 7). Hooker, however, found an important meaning in what Sitte had written.

The first point he drew from Sitte was that any city – ancient or modern – had to have aesthetic value. This message was by no means obvious to the many people who participated in the making

8 Daniel Burnham and Edward Bennett: Elevation of the Chicago Civic Center
9 Daniel Burnham and Edward Bennett: Chicago street boulevard system
10 Daniel Burnham and Edward Bennett: Chicago railway scheme



8

of Chicago. Businessmen, in particular, could understand the relationship of the physical environment to the economy. They might also see that it was important to shape the city – through the provision of parks, decent housing, cleaner streets, and dozens of other means – so that its citizens might be more healthy and therefore lead more fulfilling lives. But it was often difficult to explain to them that specific, sometimes costly steps had to be taken to make Chicago attractive. This was a theme that Hooker continually addressed at the City Club.

As important as this message was, Hooker drew a more specific meaning from Sitte's works. The American city could never emulate the admirable European towns, with their narrow streets leading to irregular squares which were presided over by wonderful churches. Nevertheless, the landscape on which American cities was located did provide a kind of *genius loci*, and there was a picturesque variety inherent in the many types of buildings that were necessary to house the institutions of a modern city. As young as Chicago was, it also already had a history. All of these sources could be used to make an urban landscape that in its own way was as rich and diverse as the old medieval town.[9]

Hooker's vision of the economic, social and aesthetic context of the city can be understood by examining his response to the *Plan of Chicago* that, after many years of preliminary studies, Daniel Burnham made public in 1909. The scope of the subjects treated in this document was without precedent. The area to which Burnham devoted the most care was the heart of the city, the primary entrance to which was a vast harbor, part of an improved Jackson Park, stretching southward along Lake Michigan. On axis with the harbor was the city's cultural center, featuring the Field Museum, which gathered under one roof "the records of civilization culled from every portion of the globe, and representing man's struggle through the ages for advancement." To the north of this massive building was a new structure for the Art Institute which would help to make Chicago the most comprehensive art center in the country. To the south was the new building for the Crerar Library, a gigantic repository of books for students of the social, physical, natural, and applied sciences.

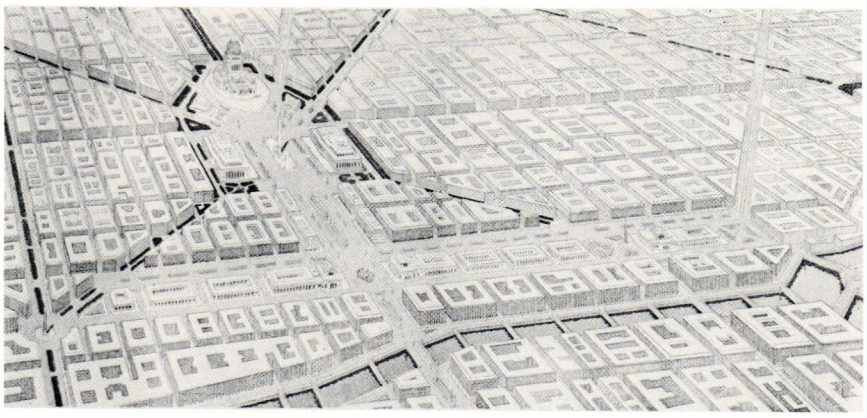
Parallel to this row of three buildings was Michigan Avenue, which Burnham wanted to widen to two hundred fifty feet to contain the vast flows of the city's north-south traffic. Burnham took great pains to design a two-level circulation route for Michigan Avenue, reserving the upper level for pedestrians and horse-drawn carriages and the lower level for service transportation. Through this careful zoning of different types of movement, Michigan Avenue was free to become Chicago's ceremonial thoroughfare adorned with sculpture and fountains in front of the three impressive buildings of the cultural center.

On axis with the harbor and Field Museum and intersecting with Michigan Avenue was another monumental boulevard, Congress Street, which led through Chicago's main business district of offices, hotels, shops, banks, theaters and churches, all of which were restricted in height to create a uniform urban landscape. After Congress Street crossed the Chicago River, it intersected with Canal Street which Burnham had transformed into a unified complex of railway terminals. Congress Street then widened to three hundred feet and culminated in a gigantic civic center that featured a huge city hall with a dome that dwarfed that of St. Peter's in Rome. This structure was flanked by two other groups of monumental buildings, one to house the offices of the federal government, the other for Cook County administration (Figure 8).

If this sequence of boulevards and buildings was the heart of Chicago, the network of streets throughout the city was its arteries. Burnham managed to transform the grid of Chicago's streets into a comprehensive system that would serve the city's future growth. He widened many existing streets and divided them to accommodate different types of traffic. Burnham also planned diagonal streets leading to the Civic Center, so that it would be possible to move quickly from one corner of the city to another. The other major element in this transportation system was a network of ring roads

[9] Hooker's name appeared on the masthead of *Der Stadtebau* (Collins and Collins, *Sitte*, 56). George E. Hooker, "Camillo Sitte, City Builder," *Chicago Record-Herald* (Jan. 15, 1904), 6; Hooker, "The German Municipal Movement," *Chicago Record-Herald* (Jan. 30, 1904), 8.

[10] Daniel H. Burnham and Edward H. Bennett, *The Plan of Chicago* (Chicago, 1909); see also: Thomas S. Hines, *Burnham of Chicago* (New York, 1974), 312–346.

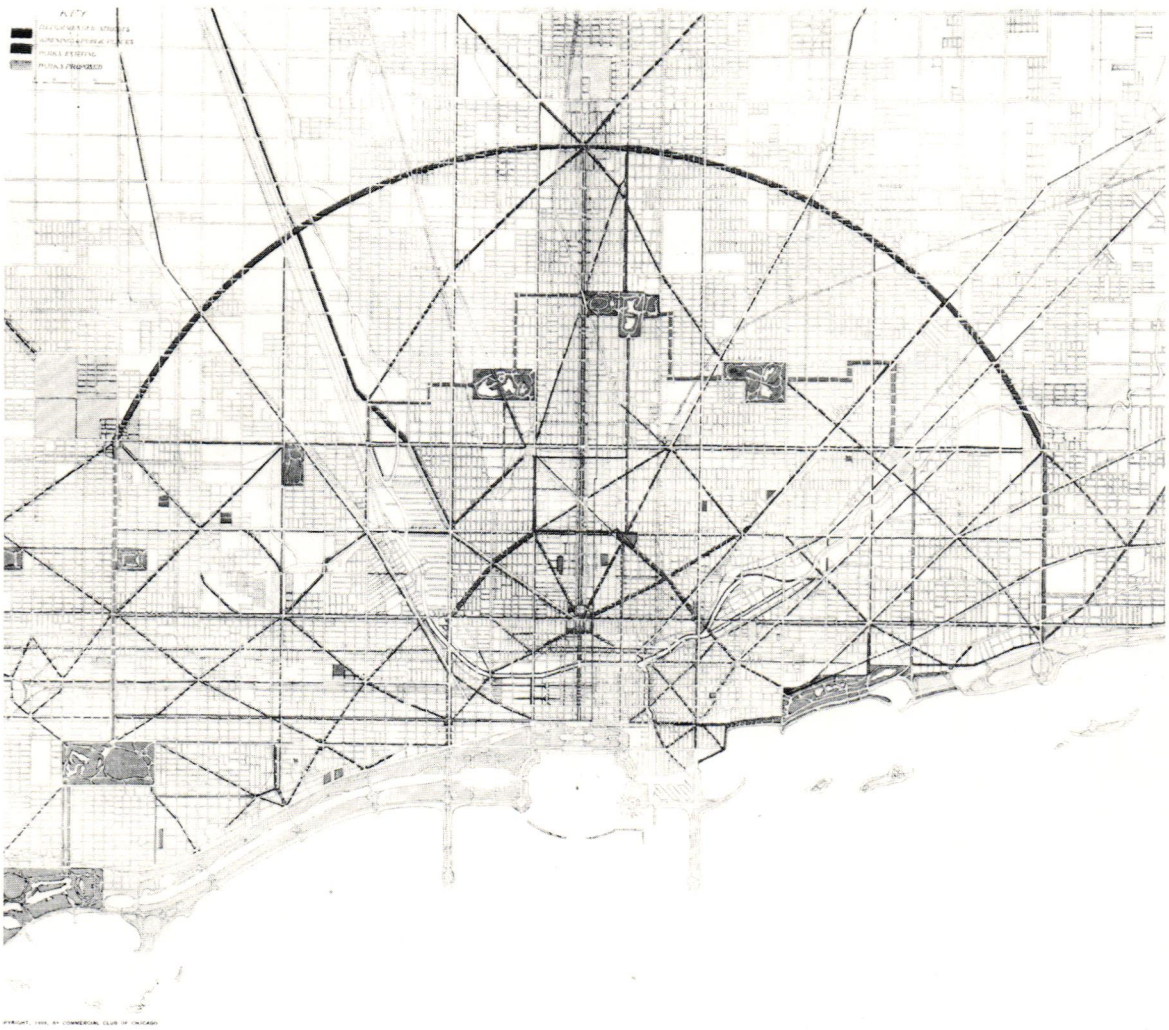


10

around the city. The innermost one enclosed the Civic Center and the business district, the next was composed of the boulevards that from the 1860s had been laid out to connect Chicago's main parks and the last was located on the far periphery of the city. A broad, elliptical highway, this vast thoroughfare was designed to join the North, South, and West Sides when Chicago had been extended in all directions by the automobile (Figure 9).

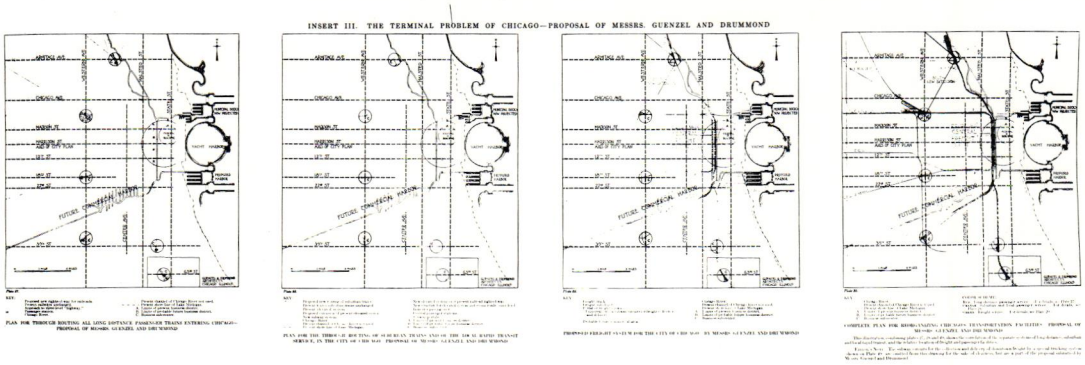
Chicago's transportation system was intimately linked to its parks, which insured "good health and good order." Burnham's first priority was to join all the lakefront parks, thus reserving this valuable area for public use. He connected this long strip by tree-lined boulevards to the city's major parks, to three new parks located on the outer ring road and thence to a continuous system of nature reserves. By extending Chicago's parklands up to fifty miles from the center, the forward-looking Burnham insured that the city's residents would always be close to this most valuable source of recreation and inspiration.[10]

Since Burnham and the publicists for the *Plan* made acceptance of the document tantamount to a declaration of good citizenship, it was difficult to criticize it. In a review in the *Survey* Hooker simply chose to describe the *Plan's* main outlines, much of which he applauded. Nevertheless, he did introduce an element of criticism into his discussion. Although Burnham had done much to straighten out the street plan, he had hardly addressed the question of railway transportation in Chicago. Nowhere in the *Plan* was there a map which showed

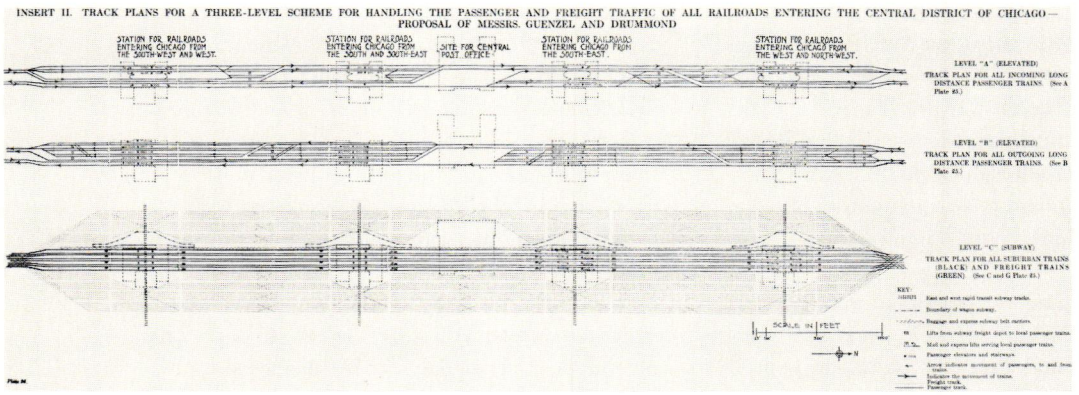


9

11 Guenzel and Drummond: The terminal problem of Chicago
12 Guenzel and Drummond: Three-level track plan for all passenger and freight traffic entering Chicago
13 Guenzel and Drummond: Section through a passenger station
14 Guenzel and Drummond: Sketch of the courtway
15 Guenzel and Drummond: Sketch of the courtway



11



12

clearly the main or the local railways either as they were or as they should be. Nothing affected the general organization of Chicago as much as the chaotic network of railways, with their hundreds of track crossings at grade, the resultant loss of efficiency, and the carving up of the city into awkward parcels of land. Burnham also had not addressed the terminal problem. He simply had decided to take three of the existing terminals and to push them back from the center of the business district. The other terminals he planned together along a north-south line, across the Chicago River.

The *Plan's* treatment of transportation was deficient at other levels. It recommended the enlargement of the elevated railway loop so that it surrounded an expanded business district. It also proposed the creation of a street railway passenger loop, a subway loop, and a freight subway loop, all on approximately the same location. All of these recommendations were well taken, but they were all based on the assumption that the inefficient terminal system would remain. Burnham, in effect, had done no statistical studies to identify how the city worked. His was at best an intuitive interpretation, controlled by a judicious sense that it was unwise to tamper with any of the separate jurisdictions that had been established by each of the railway interests in the city.[11]

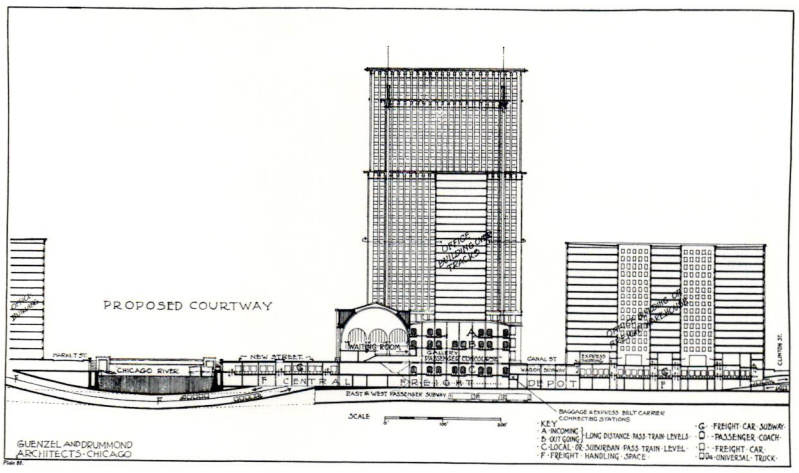
If the *Plan* lacked information on which to make a valid transportation policy, then there was an even weaker basis on which to decide how and where the vast bulk of Chicago's citizens should live. The *Survey*, that great magazine of social work, stated the case simply by saying that the *Plan* should be volume two of a study of Chicago. Volume one needed to be a study of the city's diverse populations, their needs in housing, employment and recreation. It was one thing to widen and add streets to the city, while knocking down slums and at the same time saying that better housing should be constructed, but it was another to know how to carry out such a policy, to understand the dislocations that would ensue, and to try to formulate the mechanisms within governmental agencies, social work organizations, and other institutions that would enable all of this activity to take place equitably.[12]

Even the image of Chicago that was proposed in the breathtaking drawings of Ferdinand Janin and Jules Guerin was not above criticism. Hooker noted that the main source came from France:

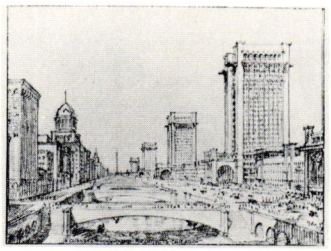
> *It is the formalism of the great master, Le Notre, and his followers, as expressed especially in and about Paris, that is referred to for principles of street planning; it is a Parisian of the present day who, if we mistake not, is alone quoted as a contemporary authority on city planning; it is a Parisian who is brought to Chicago to make special studies for the civic center; it is Paris whose street plan most conspicuously illustrates the 'round' or 'star' points which characterize the reformed street plan proposed, and the 'circuits' which characterize both that plan and the transportation proposals.*

The results of these influences were evident in the *Plan's* perspective drawings. Huge clusters of coordinated buildings were located at focal points, from which streets fanned out to distant suburbs, the whole effect being coordinated by a uniform skyline (Figure 10).

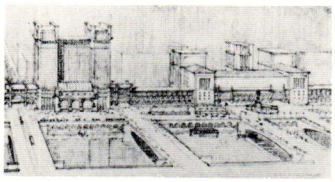
The acceptance of nothing in the *Plan* required a greater stretch of the imagination by a person



13



14



15

familiar with Chicago in 1909. In the *Plan* all of Chicago's skyscrapers, including some that had been designed in Burnham's office, had been magically truncated by the imposition of a uniform building height. In addition, the discontinuity – both horizontally and vertically – that was the inevitable product of Chicago's pattern of growth – had conveniently been smoothed over by the uniform volumes that receded in perspective. Perhaps most important of all, in the bird's-eye views the city's vast residential and industrial areas that surrounded the business center were made to blend imperceptibly into each other. All of this emphasis on continuity and uniformity, the admirable qualities of Paris, seemed wrong to Hooker. Not being a designer himself and not wanting to inject a sour note into the discussion of the *Plan*, he only suggested that Burnham had missed out on "splendid and picturesque possibilities" and that positive results might be achieved by exploiting the "variety" of Chicago's buildings.[13]

The implications of Hooker's suggestions became clear in the next five years in studies for which he was the catalyst. His work at the City Club after 1909 was in large part conceived in response to the *Plan's* shortcomings. He continued to make studies of Chicago's transportation problems and to propose solutions to the tangled network of tracks that engulfed the center of the city. Convinced that the city streets belonged "not to the traction interests, but to the people," Hooker was frequently seen on street corners, stop watch in hand, counting people and cars.[14] Hooker not only wrote about these subjects himself in an effort to marshal hard information that could be used as the basis of well-conceived decisions, but as Civic Secretary of the City Club, he also sponsored architects and planners to make proposals for the center. None was more admirable and none more reflected Hooker's views than William Drummond's. His plan was based on a linear system of transportation that ran north-south between Canal Street and the Chicago River (Figures 11,12). This vast artery carried not only long distance passenger trains, but also commuter and freight lines. All were coordinated on a multi-level track system that avoided the conflicts of the separate systems, but which also made each accessible to the others. Running perpendicular to the north-south artery were several east-west subway and elevated lines which in one direction went under the Chicago River directly to the downtown and in the other out to the western parts of the city (Figure 13).

Above the multi-level train tracks were office buildings, the main one of which was a central post office. The perspective drawings of this complex little resembled those in the *Plan of Chicago*. Tall buildings were mixed with low ones; a vast "courtway" boulevard was contrasted with the often-bridged Chicago River, which was an important channel of water communication. The style of these structures was not derivative of the arid classicism which American students at the Ecole des Beaux Arts imported with much pretention and little understanding. Instead, the buildings of this vast communications center, the heart of the city, if not also of the nation, were representative of the work that in the previous twenty years had been built in and around Chicago and had already been labelled a Chicago or Prairie Style (Figures 14,15).[15]

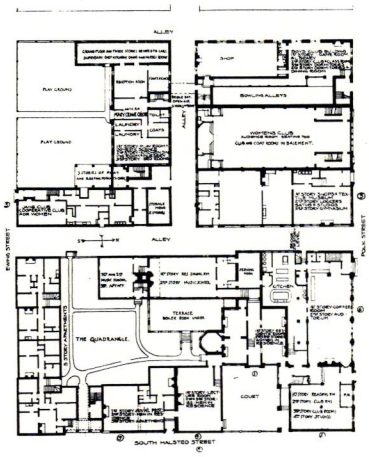
[11] George E. Hooker, "A Plan for Chicago," *The Survey*, 22 (1909), 796

[12] "The Vision of Greater Chicago," *The Survey*, 22 (1909), 735

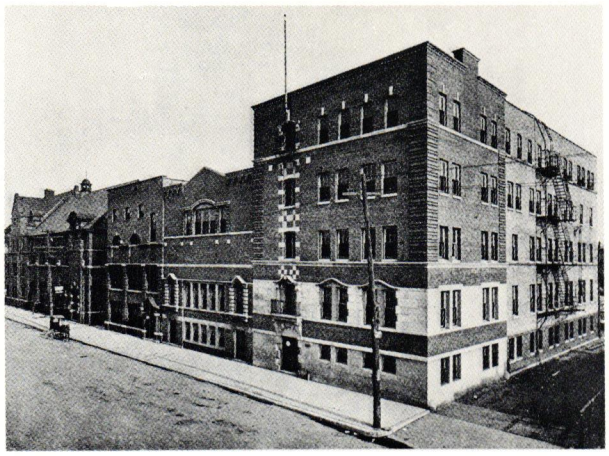
[13] Hooker, "A Plan for Chicago," 789–790

[14] Speech by Rich at Hull-House, 7. George E. Hooker, "Congestion and Its Causes in Chicago," *Proceedings of the National Conference on City Planning*, 2 (1910), 42–57; City Club of Chicago, *The Railway Terminal Problem of Chicago* (Chicago, 1913), 81–98; George Ellsworth Hooker, *Through Routes for Chicago's Steam Railroads* (Chicago, 1913)

[15] City Club of Chicago, *The Railway Terminal Problem of Chicago* (Chicago, 1913), 55–76; on Drummond: Suzanne Gauschinietz, "William Drummond: I. Talent and Sensitivity." *The Prairie School Review*, VI (1969), 5–19, Gauschinietz, "William Drummond: II. Partnership and Obscurity," *The Prairie School Review*, VI (1969), 5–19



16



17

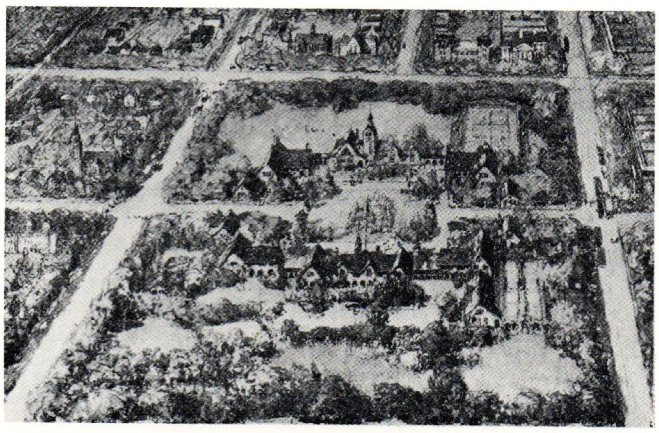
Described as a man who tried to represent the "interests of the many rather than the interests of the few" and a "friend of labor when labor had few friends," Hooker took many steps to further the social welfare of Chicago's citizens. But he had a special concern for housing and city planning. He was one of the early participants in the conferences on city planning and housing, which, starting in 1909 and 1911 respectively, became annual events. These national meetings were of great importance to Americans interested in these subjects. Before this period many people had been concerned about city planning and housing, and they had often formed local organizations to study and do something about the problems around them. However, what they could learn and achieve was usually circumscribed by local circumstances. A national organization presented greater opportunities. At each conference speakers delivered papers on a wide variety of subjects, and thus helped to sharpen the members' perception of these issues and to acquaint them with the means with which they could attack the city planning and housing problems in their communities.[16]

At the City Club Hooker set up several task forces to study the housing of Chicago and to press for more effective regulation by the local government. In 1913 he helped mount a large housing exhibition at the City Club and thus focused attention on some of the city's deplorable conditions. This work complemented the informative reports that Sophonsiba P. Breckinridge and Edith Abbott were then doing about the problem of lodgers and residents of furnished rooms in Chicago. Because of their transient status, no one was less able to make their voices heard than the lodgers and inhabitants of furnished rooms, and yet no one was in greater need of better housing.[17]

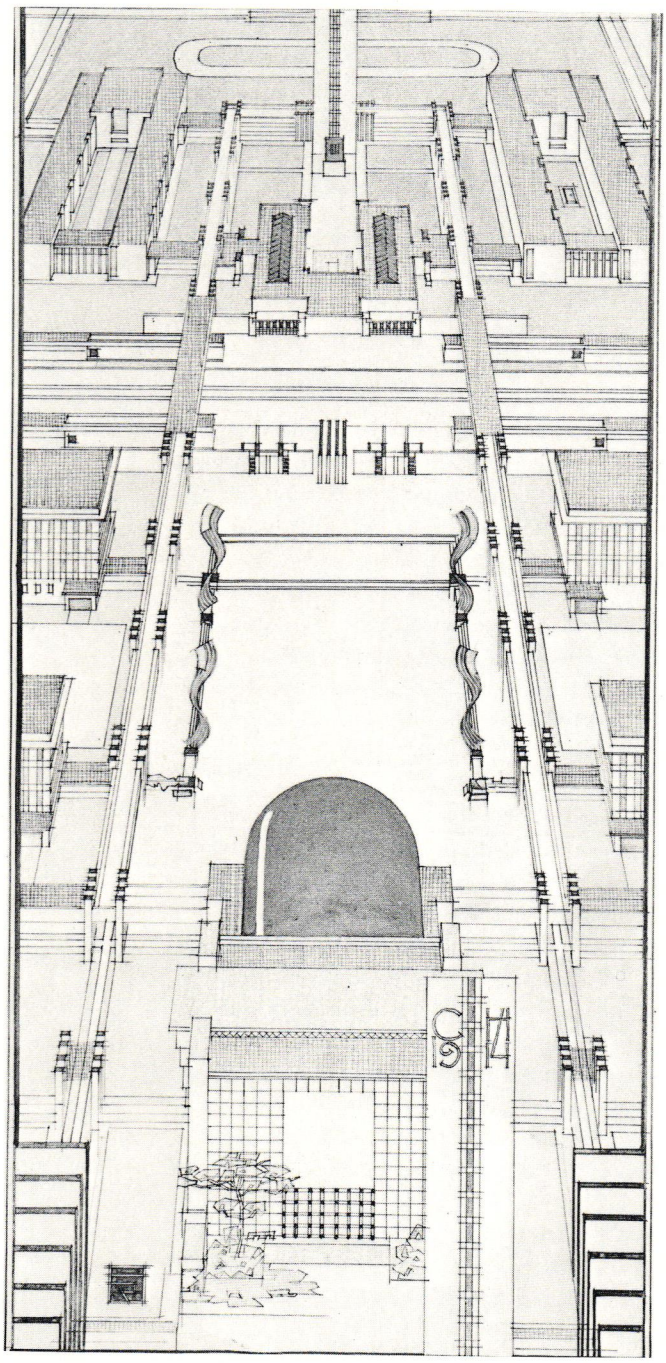
Hooker also continued to be interested in the form of the American city. The buildings at Hull-House can be read as an expression in microcosm of his aspirations for the broader urban context. Hull-House was originally located in an old mansion. Over the years, as the institution grew and specific parts changed and expanded and new structures were added, the overall result was not unified in a formal sense. However, as Fiske Kimball, the eminent critic and historian noted, Hull-House in all its diversity had an effect of "true picturesqueness" which avoided an institutional connotation (Figures 16, 17). This quality was not achieved by accident. It was a carefully controlled effect that was intended by Hull-House's architects, Pond and Pond, a firm which also built the headquarters of the City Club.[18]

Hooker's ideas about the aesthetic possibilities of the American city were also articulated in several City Club studies. Whereas the *Plan* had put the emphasis on the heart of the city with its breathtaking perspectives of the harbor, Michigan Avenue, and the Civic Center, the City Club was more interested in the vast outlying areas of Chicago, the areas of residential and industrial decentralization. To formulate ideas about what these places should be like, the City Club promoted two competitions. One, for a neighborhood center, reflected the interest that in the previous ten years had grown up around the need to organize suburbs with a distinct center, a focus for these growing communities. Competitors, therefore, had to link community buildings with local stores and public institutions. To do so they had to make this aggregate both significant in scale but not overly domineering, and to show how it fit into the pattern of streets that encompassed it. Most solutions, including the winning one, relied simply on an aesthetic borrowed from English garden suburb planning (Figure 18). Indeed this had been a strong influence at the City Club. Raymond Unwin, Thomas Mawson, Thomas Adams, and Henry Vivien had all visited and spoken at the City Club in the previous years.[19] One exception, however, was the entry of Rudolf Schindler, who had recently arrived in Chicago from Vienna. Drawing in a manner that reflected his Viennese background and the work of Otto Wagner and Josef Hoffmann, Schindler came to terms with the great volume of traffic that was an integral part of the modern metropolis by basing his scheme on a system of elevated walkways over main streets (Figure 19).[20]

The more interesting competition was for the development of a quarter section of land on the outskirts of Chicago. This hypothetical site was connected by streetcar lines to Chicago's business district, about eight miles away. The square tract had not yet been subdivided and was without trees or buildings. But the surrounding area was laid out with the prevailing gridiron of streets and had on it a typical array of scattered frame houses. Large factories were located a half to four miles from the



8



16 Pond and Pond: Hull-House
17 Pond and Pond: Hull-House (Polk Street)
18 Jens Jensen: Design for a neighborhood center
19 Rudolf Schindler: Design for a neighborhood center

[16] Speech by Rich at Hull-House, 6–8. See, for example: George E. Hooker, "Congestion and Its Causes in Chicago," *Proceedings of the National Conference on City Planning*, 2 (1910), 42–57; George E. Hooker, "Discussion," *Proceedings on The National Conference on Housing*, 2 (1912), 268–271; "The Philadelphia Housing Conference," *The City Club Bulletin*, 5 (1912), 409–417; "The Third National Conference on Housing," *The City Club Bulletin*, 7 (1914), 1–12.

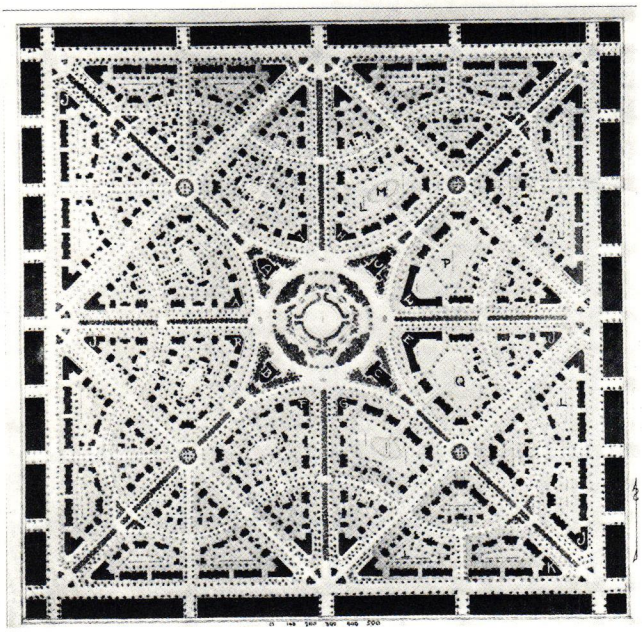
[17] Studies of the lodger and furnished room problems appeared in the *American Journal of Sociology*: Milton B. Hunt, "The Housing of Non-Family Groups of Men in Chicago," 16 (1910), 145–170; Sophonsiba P. Breckinridge and Edith Abbott, "Chicago's Housing Problem: Families in Furnished Rooms," 16 (1910), 289–308; Breckinridge and Abbott, "Housing Conditions in Chicago, III: Back of the Yards," 16 (1911), 413–468; Abbott and Breckinridge, "Chicago Housing Conditions, IV: The West Side Revisited," 17 (1911), 1–34. See, also: "The Third National Conference on Housing," *The City Club Bulletin*, 7 (1914), 2, 10–12.

[18] Allen B. Pond, "The Settlement House III," *The Buckbuilder* 11 (1902), 178–185; Fiske Kimball, "The Social Center," *The Architectural Record* 45 (1919), 527–531.

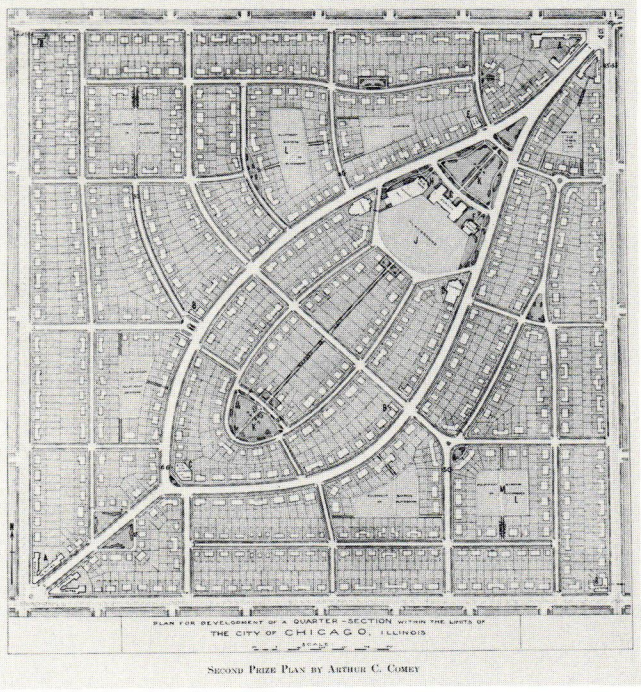
[19] See, for instance: "The British Town Planning Act," *The City Club Bulletin*, 4 (1911), 126–132; "Garden Cities in England," *The City Club Bulletin*, 4 (1911), 132–140; "Town Planning in England," *The City Club Bulletin*, 4 (1911), 264–269; "Co-Partnership Housing and Garden Cities," *The City Club Bulletin*, 5 (1911), 281–289. On the neighborhood center competition: George E. Hooker, *Program for a Competition for Plans for a Neighborhood Center* (Chicago, 1914); City Club of Chicago, *Neighborhood Center Competition: Bibliography on Neighborhood Centers* (Chicago, 1914, mimeo); George E. Hooker, *Neighborhood Center Competition: First Meeting of Participants* (Chicago, 1914, mimeo); "The Neighborhood Center Competition," *The City Club Bulletin*, 8 (1915), 77–78. The competition had a distinguished jury that included George H. Meade, Robert K. Spencer, Irving Pond, Howard Shaw, and Charles Mulford Robinson. It was won by Anna P. Schenck and Marcia Mead.

[20] David Gebhard, *Schindler* (London, 1971), 24, 26–27

The east and west halves of the property, as shown on the plan, are subdivided on slightly different principles so as to show two of the many possible variations of the scheme. The east half follows the practice in the English Co-partnership Suburbs,



20



SECOND PRIZE PLAN BY ARTHUR C. COMEY

21

site. The competition's rules stated only that a given number of families be accommodated on the quarter section. There were no further directions about what kind of housing was required or what additional facilities were necessary.[21]

Although hypothetical, the site was typical of many that were then being developed on the outskirts of Chicago. The entries to the competition were varied. One was submitted by a sanitarian whose primary concern was the orientation of buildings to sunlight. Other contestants wanted to create a neighborhood with an impressive center. They broke out of the grid by running main, diagonal streets from the four corners of the site to an imposing complex of buildings that contained a neighborhood center, shops, a post office, banks, and other facilities for the public (Figure 20).[22]

The schemes that took the first two prizes also tried to deflect the grid as it entered the site, but they did so with curved streets that avoided "deadly monotony" and added "character" to the suburban development (Figure 21). As in European garden suburbs, the winning schemes distinguished among several grades of streets which were laid out so that through traffic routes did not intersect with quiet, residential areas. The housing in these plans was sited according to well-defined rules, but within this context it was deliberately varied to add to the picturesqueness of the street. As the focus of the site, each scheme had a neighborhood center near a public park.[23]

These entries had positive qualities, but two designs stood out from the rest because they were endowed with a special perception about the possibilities of urban development at this time in the Midwest. William Drummond was an ardent believer in garden suburbs. At the National Conference on Housing in 1913 he announced that "city society is sick," and he outlined a vision not only of a city settled in garden suburbs, but also of a society that acknowledged that "human life is the most precious thing we know."[24]

Drummond believed that a tax on the unearned increment of land would provide the funds to finance the building of the communities that would be the context of his ideal society. His prototypical settlement was a version of the "neighborhood unit." Drummond divided the entire city into areas which were approximately a quarter section large and which were linked together by Chicago's transportation routes (Figure 22). Each would be a social and political unit with an "institute" that would serve as the nucleus of the community's intellectual, recreational, and civic life.

Drummond's plan stands out from other schemes based on neighborhood centers, not only because of the intensity of his idealistic vision of what a

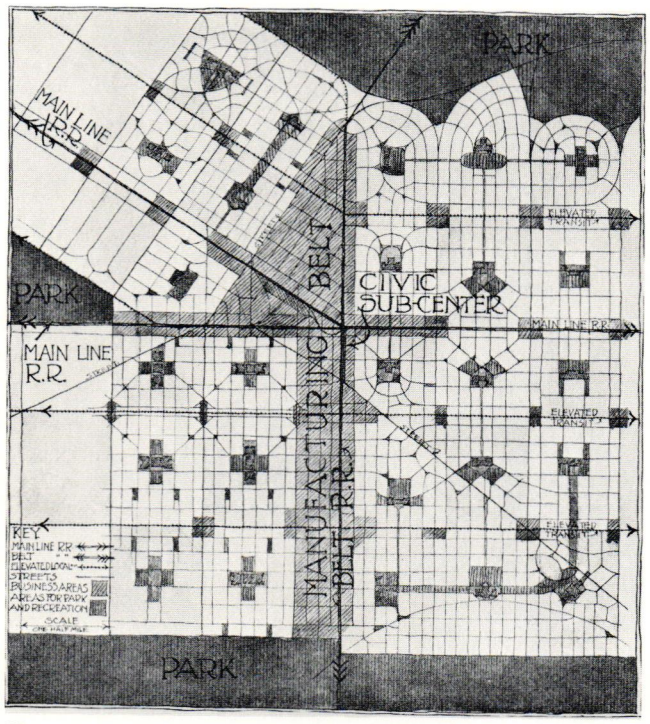
[21] Alfred B. Yeomans, *City Residential Land Development* (Chicago, 1916), 1–5

[22] Yeomans, *City Residential Land Development*, 28–31, 50–52, 56–60, 84–86

[23] Yeomans, *City Residential Land Development*, 10–19

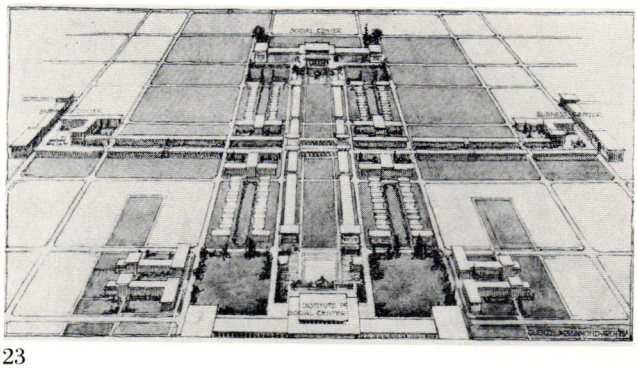
[24] William Drummond, "Discussion," *Proceedings of The National Conference on Housing*, 3 (1913), 99; see, also: "The Third National Conference on History," *The City Club Bulletin*, 7 (1914), 6

[25] Yeomans, *City Residential Land Development*, 37–44



22

20 Louis H. Boynton: Quarter section plan
21 Arthur Comey: Quarter section plan
22 William Drummond: A city area developed on the "neighborhood unit" plan
23 William Drummond: The "Nucleus" of development



23

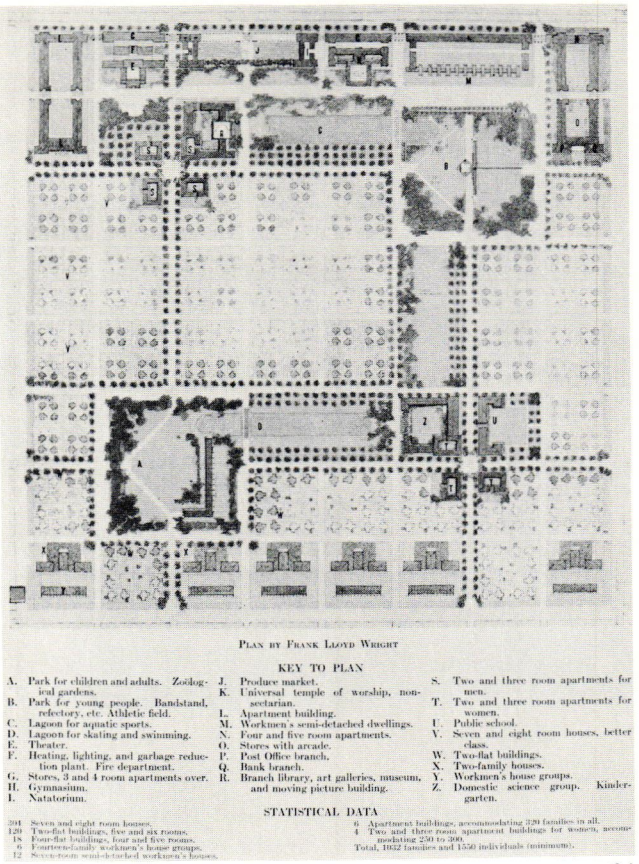
community could be, but also because he made a unique interpretation of its physical form. Instead of creating an introverted community by laying out curved streets or running diagonals to the center, Drummond tried to find a system of streets and landscaping that was compatible with the flat prairie. Since Chicago's "greatest claim to the eye" was the "long-sweeping distances everywhere evident," Drummond created vistas "so disposed as to emphasize the freedom of involvement and the breath of space which are the chief characteristics of the great western prairie. . . ." (Figure 23)

He achieved this effect not in a plan that was simply to be built at one time in its final and perfect form, but instead in a pattern of building that could accommodate the growth of the community. Apartment buildings, low-cost housing, the institute, and the business center would be constructed first to provide a "nucleus or frame in the articulation of the plan." This group of buildings would establish the basis for the pattern of development that was to follow, as outlying areas would later be filled in with other structures. In the interim, vacant land could be used for agriculture. However, no matter how many buildings were later added, once the nucleus was constructed, the basis of the community and a pattern for future development was established.[25]

In a brief competition entry Drummond did not have the opportunity to show in detail how his plan would be put into practice; nevertheless his drawings and his notion of the nucleus of future development suggest ideas that were far ahead of their time. When everyone else was trying to find ways to control urban growth and to fix a final urban form, Drummond seemed to intimate that the inexorable forces of the modern city could themselves be used as the basis not only for a new type of community, but also for a new pattern of urban architecture.

The other significant scheme, a non-competitive entry, was by Frank Lloyd Wright. Wright had no fundamental misgivings about the kind of buildings that had grown up in and around Chicago. He accepted the "characteristic agglomeration" of business buildings, apartments and houses that existed in every suburban part of Chicago. He also extended the grid of streets through the site. These elements were more than adequate as the basis of both a satisfactory community and an urban landscape. To them Wright, therefore, added only "minor modifications in harmony with the nature of the aggregation."

Wright's zoning of the site put larger buildings on the band of blocks at the north and south, where the transportation lines led to Chicago's business district. The southern band of blocks, which was bordered by a less travelled street than that on the north, contained groups of several kinds of multiple



PLAN BY FRANK LLOYD WRIGHT

KEY TO PLAN

A. Park for children and adults. Zoological gardens.
B. Park for young people. Bandstand, refectory, etc. Athletic field.
C. Lagoon for aquatic sports.
D. Lagoon for skating and swimming.
E. Theater.
F. Heating, lighting, and garbage reduction plant. Fire department.
G. Stores, 3 and 4 room apartments over.
H. Gymnasium.
I. Natatorium.
J. Produce market.
K. Universal temple of worship, non-sectarian.
L. Apartment building.
M. Workmen's semi-detached dwellings.
N. Four and five room apartments.
O. Stores with arcade.
P. Post Office branch.
Q. Bank branch.
R. Branch library, art galleries, museum, and moving picture building.
S. Two and three room apartments for men.
T. Two and three room apartments for women.
U. Public school.
V. Seven and eight room houses, better class.
W. Two-flat buildings.
X. Two-family houses.
Y. Workmen's house groups.
Z. Domestic science group. Kindergarten.

STATISTICAL DATA

204 Seven and eight room houses.
120 Two-flat buildings, five and six rooms.
18 Four-flat buildings, four and five rooms.
6 Fourteen-family workmen's house groups.
12 Seven-room semi-detached workmen's houses.
6 Apartment buildings, accommodating 320 families in all.
4 Two and three room apartment buildings for women, accommodating 250 to 300.
Total, 1032 families and 1550 individuals (minimum).

24

residences. These "background" buildings protected the rest of the quarter section from noisy city traffic. The north and south parts of this site were connected by a meandering green belt, which provided a walkway for children and contained all the educational facilities of the community as well as a lagoon for ice skating and swimming (Figure 24). The greater part of the quarter section was, therefore, left "quiet and clear" for houses. Wright covered this area with his "quadruple blocks," a system of land subdivision which gave each house a corner lot and left each homeowner protected from all others (Figure 25).

Although Wright acknowledged different categories of residents, everyone had easy access to the public facilities. At one level the quarter section would be a neighborhood insofar as the residents used and supported these institutions. But Wright's ideas about what made a community were not restricted to these programmatic elements. The significance of his plan was that he recognized the importance of other, less explicit but more fundamental connection features.

One element that organized Wright's quarter section was his landscaping. Through tree-lined streets and a continuous green belt, he drew the disparate elements of the site together. But Wright achieved the same effect with an even more important device, the grid of streets. Unlike other architects and planners who despised it, Wright realized the great significance of this pattern of communication and transportation that was so much a part of the American landscape. The grid extended out from the quarter section to other parts of Chicago, to roads laid out on the ordinance survey lines and ultimately to the remotest corners of the United States. Within the quarter section, when properly inflected, the grid organized the buildings and landscape and even continued into the pattern of sidewalks and planning modules of the houses.

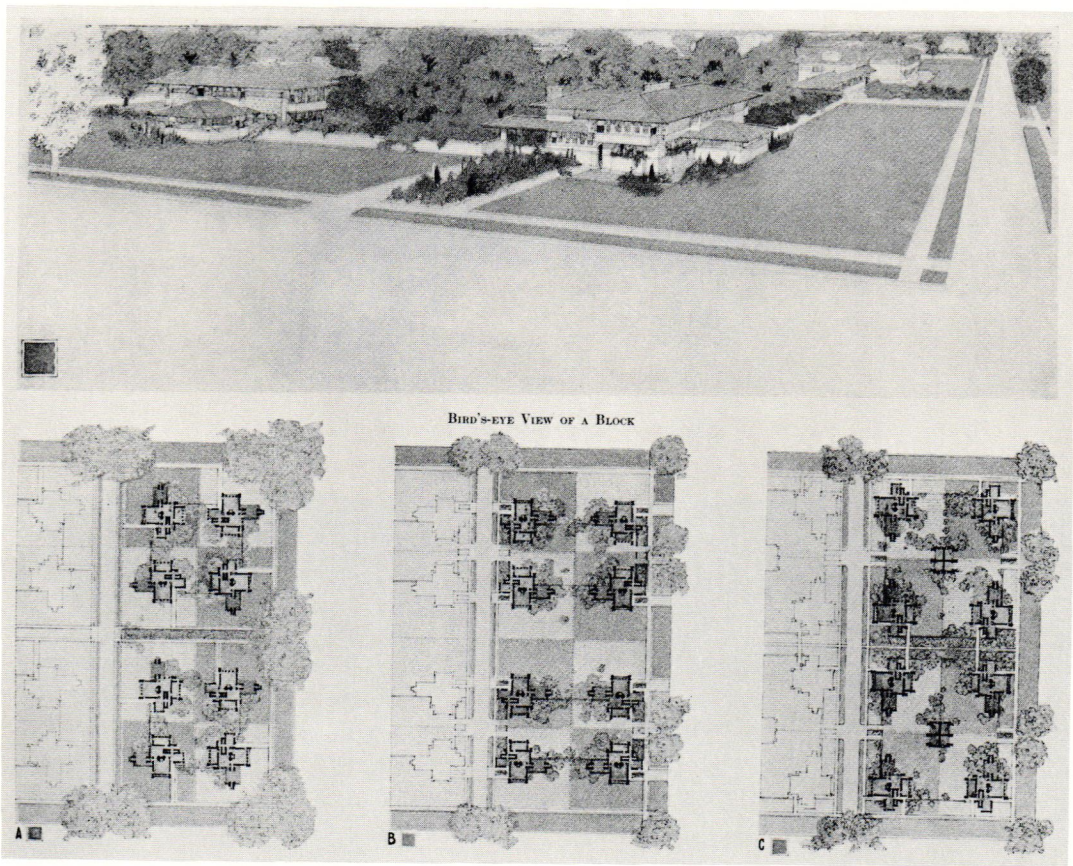
The grid had an importance in time as well as in space. It had its origins early in American history, and its use extended back to ancient civilizations. In 1913 the grid was still useful, and Wright could then only assume that it would guide future development. The grid of streets, in summary, joined neighbors, Americans from coast to coast, and people throughout the world, past, present and future. Instead of fragmenting a neighborhood, it could be the basis of a community that was much richer and more complex than contemporary versions of the self-contained village.

Wright prefaced the remarks that accompanied his drawings with Thomas Carlyle's statement: "Fool! The Ideal is within thyself. Thy condition is but the stuff thou shalt use to shape that Ideal out of." Unlike William Drummond, Wright did not base his plan on a vision of an ideal community, nor was he interested in applying European ideas to the American context. In city planning, he wrote,

> *we are obsessed by the old world thing, in the old world way with the result that, in this grim*

[26] Yeomans, *City Residential Land Development*, 96–102

[27] On Wright's understanding of the classical tradition: Henry-Russell Hitchcock, "Frank Lloyd Wright and the Academic Tradition of the Early Eighteen-Nineties," *Journal of the Warburg and Courtauld Institutes*, 7 (1944), 46–63; Handlin, *The American Home*, 299–329



25

workshop, our finer possibilities are usually handed over to fashion and sham. Confusing art with manners and aristocracy, we ape the academic Gaston or steal from 'My Lord' his admirable traditions when our problems need, not fashioning from without, *but development from* within.[26]

Wright did not write about Europe in this manner out of ignorance. Indeed, he understood the admirable ancient traditions more thoroughly than any of his contemporaries.[27] The most important lesson he learned from this background was to distinguish between the shadow and substance of inherited forms. His ability to do so allowed him to transcend the worn out formulas that most of his contemporaries so easily used. Wright, thus, avoided what could be nothing other than an essentially retrospective and inappropriate architecture and, instead, elaborated a language that could give expression to the myriad of everyday facts that formed the substance of the context for which he was designing.

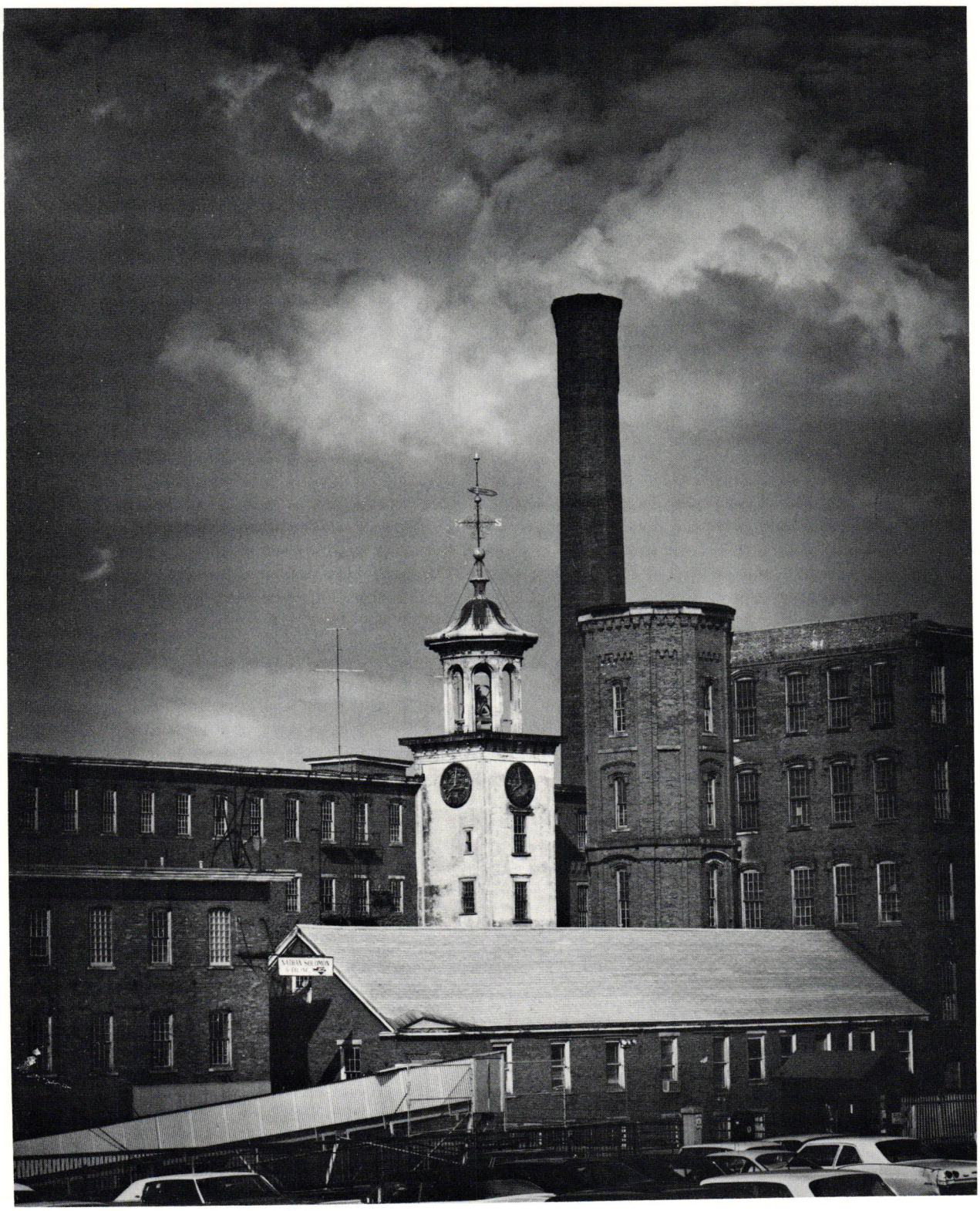
George Hooker also understood the importance of these facts. A city could only properly serve its inhabitants if those who shaped it came to terms with them. In a period when the context of the modern city – in its economic, social, and aesthetic dimensions – is still evolving and when, to echo Nabokov, we are still learning the art of integrating telephone conversations, the message implicit in the scope of Hooker's interests continues to be timely.

24 Frank Lloyd Wright: Quarter section plan
25 Frank Lloyd Wright: A quadruple block

From Building to Architecture

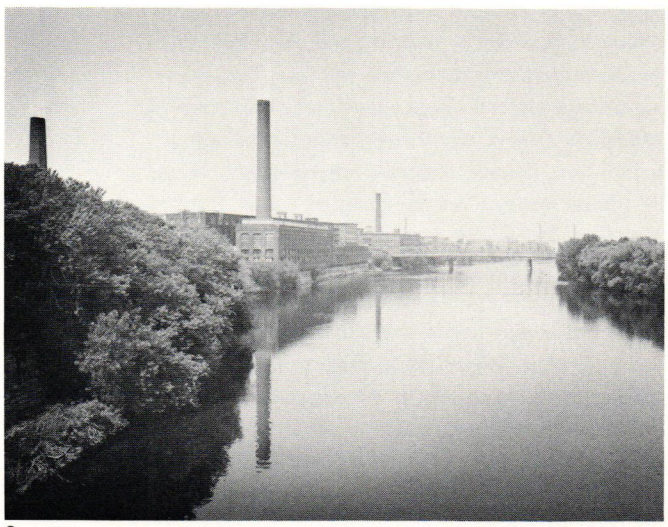
The Emergence of Victorian Lowell

Randolph Langenbach



1 Boott Mills, Lowell
2 "The Mile of Mills," Lowell
3 The Park Service in Lowell

Architecture provides an important reflection of a culture. It is a document of the social as well as artistic attitudes, ambitions, and goals not just of its individual creators, but of society as a whole. City planning provides a similar document on a larger scale, especially if the plan is realized in the third dimension during the same era in which it was laid out. By this token, a "new town" provides an unusual opportunity to examine the impact of the social forces at work on the physical environment of a whole community in a given time, by bringing together the abstract ideals of the founders with the practical realities faced in the field by the community builders of succeeding generations.


2

3

The planned industrial cities of New England provide rich contexts within which to examine what the built remains of a place can reveal about its social history. Lowell, Massachusetts, the first and most famous of these cities, is particularly notable, for it has long held a special position as a symbol of the rise of industry in the United States, and the social system which supported it in its earliest phase. Now, with the recent founding of the National Park, Lowell has emerged as a new popular historical symbol, gaining a status previously accorded only to the natural wonders of the West and the battle monuments of the Revolution in the East.

The history of Lowell is commonly divided into two historic periods: the first, a twenty-year period when the city was world famous as an almost utopian, model, industrial community, and the second, when it had declined into an ordinary and drab industrial town. The interest in Lowell as an historical symbol has naturally emphasized the importance of the first period in its history rather than the subsequent years. In fact, the city's resurgence as a National Park came about primarily because the record of its early years made it so famous.

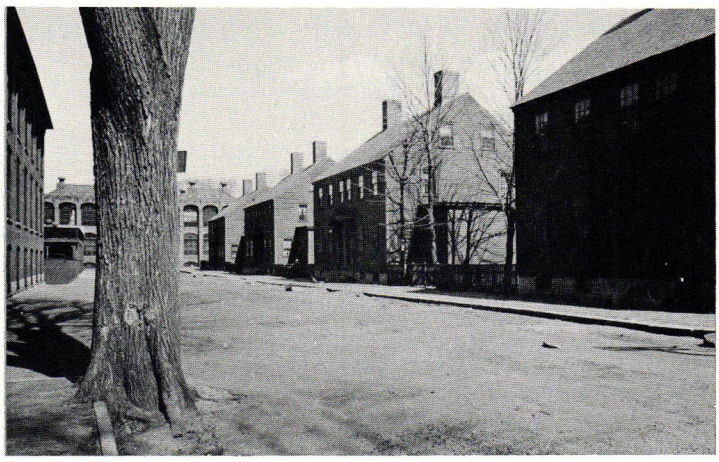
Because of this historical emphasis on its early decades, there is a danger of overlooking the valuable lessons that a more comprehensive treatment might reveal. By celebrating the beginning years of Lowell, it is easy to ignore the later

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010090-16 $3.00/0, © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology

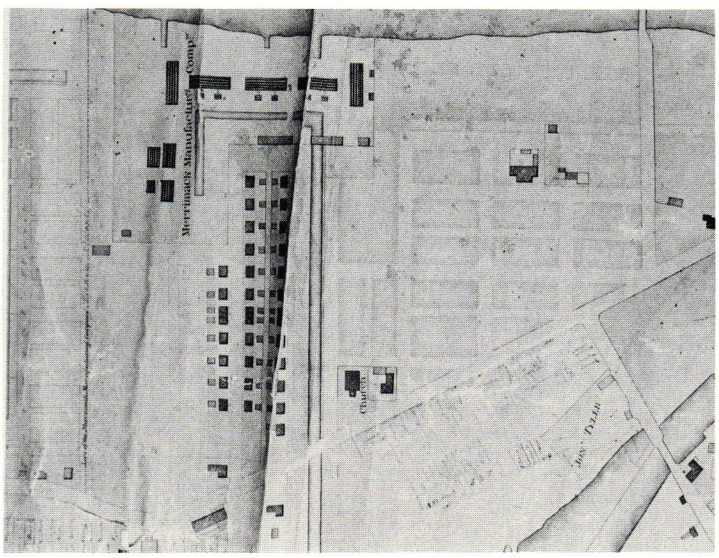
4 Plan of Lowell showing the Merrimack Mills, 1827. This plan shows the orderly layout of the five original mills and the rows of the first boardinghouses. The plan also shows the original corporation-built church (lower center) and the mansion built for the first and most famous agent, Kirk Boott (right). The layout of the future Boott Mills is barely perceptible adjacent to this mansion.

5 The boardinghouses of the Merrimack Manufacturing Company, constructed in 1822

evolution of the city as technology advanced, as the community began to mature, and as immigrants began to displace the native workers. Equally significant are the cities which were laid out and established later, according to similar planning principles, namely Nashua, Somersworth, Dover, and Manchester, New Hampshire; Lawrence and Holyoke, Massachusetts; and Biddeford and Lewiston, Maine. A discussion of the architecture related to these later developments in Lowell and its sister cities may add a new dimension not only to our understanding of the growth of industry in the United States, but also to the interpretation of the early history of Lowell, which we are using as a primary example.



4



5

The stylistic changes which occurred in the designs of the mills of Lowell and related cities between 1840 and the post-Civil War period symbolize the social and economic changes that each city underwent during the same period. These changes in architectural form and style in Lowell, in particular, document the fundamental shift from the relatively comfortable paternalism of that city's early years to the relatively stressful later period.

Instead of declining into old age during the second half of the nineteenth century, Lowell was only then beginning to mature as a city. Some of the stresses in its social structures were part of the growing struggle within the local community to break free from the autocratic control of the Boston-based corporate operations. At the same time, the proliferation of machines throughout New England and afterwards, throughout the South, placed Lowell within a competitive framework which was very different from the position it had maintained during the first two decades of its history. This change in Lowell's status can only have been inevitable, but it serves to illustrate the uniquely favorable, but short-lived, economic context in which early Lowell existed.

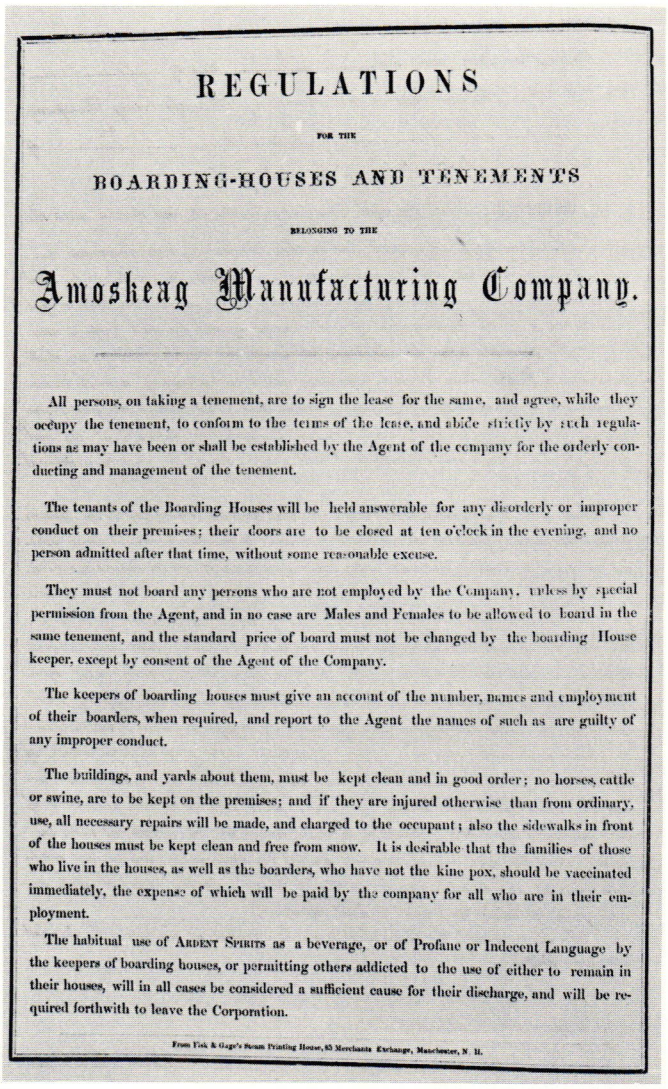
Lowell was largely the outcome of the efforts of Francis Cabot Lowell who, in Waltham in 1813, assembled the first successful, completely mechanized cotton mill in the United States. While the importance of Lowell's innovation and the transfer of British technology to America in establishing industrialism should be recognized, the project would surely have failed without the enormous capital resources of a number of Boston

6 The boardinghouse regulations of the Amoskeag Manufacturing Company; similar regulations existed for the Lowell corporations.

entrepreneurs. This Boston money, made in the mercantile trades, was to be used for industrial development when the 1812 war with Britain closed the ports. Lowell was the first major product of the redirection of this investment capital. The city was established in 1822 after F C Lowell's death by a group of his former partners, led by Nathan Appleton and Patrick Tracy Jackson. New England, especially Rhode Island, was already dotted with mill villages, some of which undoubtedly had power looms before the founding of Lowell. Lowell stands out, however, because it was conceived of as an industrial community of unprecedented size even before the first sod was turned for the first mill.

Lowell was in every sense a planned, industrial "new town." For the first time the scale of the factory had expanded beyond the architectural confines of a single building, and the problem of housing the laborers had transcended the simple provision of minimal residential quarters. Lowell's original layout was more orderly than most of the earlier, Rhode Island mill villages. In Pawtucket, the first major factory town in New England, the growth of many separate, small factories led directly to the haphazard construction of many mills, small and large, along the river adjacent to a series of small dams and weirs. In Lowell, the first mills were arranged in a single, straight row facing the water power canal with their backs to the river, and housing was laid out in regular rows on a rectangular plan. Five mills were constructed in Lowell within the first three years, three with their broad side to the river and one on either end perpendicular to the row. The central mill had a belfry in its ridge. The bell, of course, was more than ornamental, being used to signal the beginning of each part of the workday.

The most famous aspect of the plan of Lowell was its social system. Francis Cabot Lowell, followed by Appleton and Jackson, conceived of the plan to attract single, native women from the rural farms to work in the mills, housing them in strictly proper and carefully managed boardinghouses. This was a way of obtaining the necessary labor force to operate such a large-scale industrial establishment in a time of labor shortage. It was these boardinghouses which so impressed such diverse personages as Charles Dickens, Michael Chevalier, Davy Crockett, President Jackson, and many others. They became part of the formula in all of the similarly founded



REGULATIONS

FOR THE

BOARDING-HOUSES AND TENEMENTS

BELONGING TO THE

Amoskeag Manufacturing Company.

All persons, on taking a tenement, are to sign the lease for the same, and agree, while they occupy the tenement, to conform to the terms of the lease, and abide strictly by such regulations as may have been or shall be established by the Agent of the company for the orderly conducting and management of the tenement.

The tenants of the Boarding Houses will be held answerable for any disorderly or improper conduct on their premises; their doors are to be closed at ten o'clock in the evening, and no person admitted after that time, without some reasonable excuse.

They must not board any persons who are not employed by the Company, unless by special permission from the Agent, and in no case are Males and Females to be allowed to board in the same tenement, and the standard price of board must not be changed by the boarding House keeper, except by consent of the Agent of the Company.

The keepers of boarding houses must give an account of the number, names and employment of their boarders, when required, and report to the Agent the names of such as are guilty of any improper conduct.

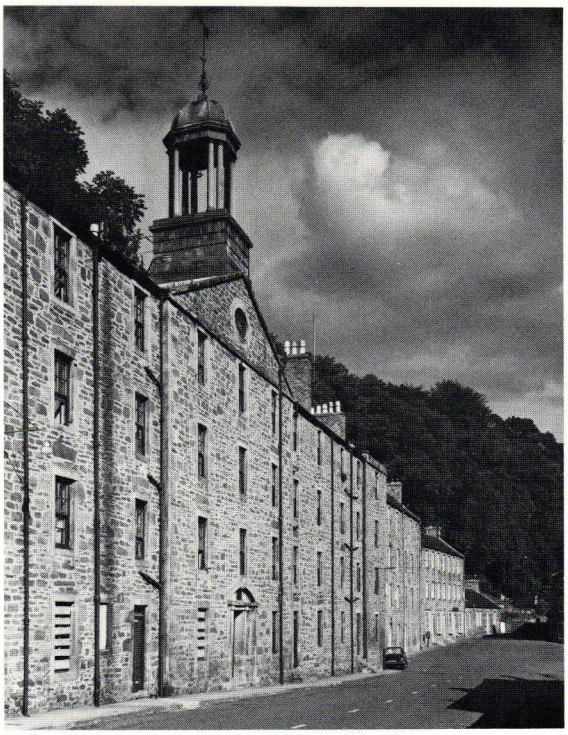
The buildings, and yards about them, must be kept clean and in good order; no horses, cattle or swine, are to be kept on the premises; and if they are injured otherwise than from ordinary use, all necessary repairs will be made, and charged to the occupant; also the sidewalks in front of the houses must be kept clean and free from snow. It is desirable that the families of those who live in the houses, as well as the boarders, who have not the kine pox, should be vaccinated immediately, the expense of which will be paid by the company for all who are in their employment.

The habitual use of ARDENT SPIRITS as a beverage, or of Profane or Indecent Language by the keepers of boarding houses, or permitting others addicted to the use of either to remain in their houses, will in all cases be considered a sufficient cause for their discharge, and will be required forthwith to leave the Corporation.

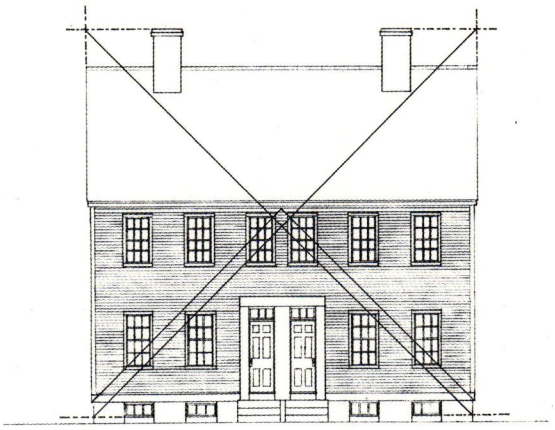
From Fisk & Gage's Steam Printing House, 83 Merchants Exchange, Manchester, N. H.

6

7 New Lanark, Scotland
8 Elevation of the first boardinghouses in Lowell – reconstructed by the author from Figure 5 – showing the formal geometry of the facade.
9 Amoskeag Corporation housing, Manchester, New Hampshire, constructed 1840–50
10 Amoskeag Corporation housing, Manchester, New Hampshire, constructed 1840–50



7▲ 8▼

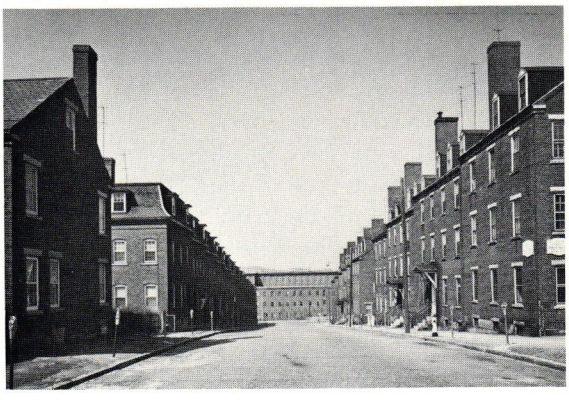


mill cities which followed Lowell, and in some places (such as Manchester, New Hampshire) they continued in use, with many of the same rules and regulations, long after the native girls had left the mills.

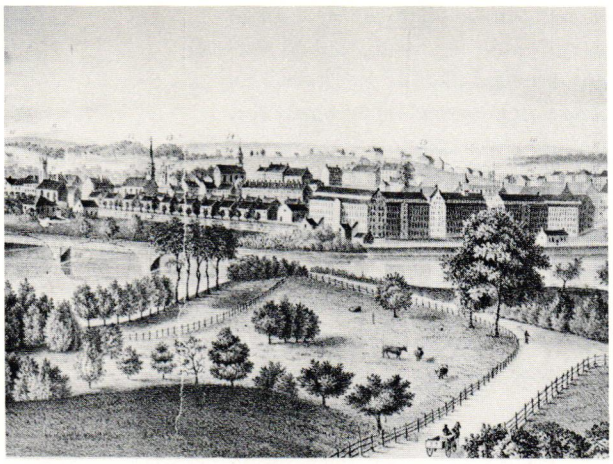
This "boardinghouse system," as it became known, along with the other provisions of corporate paternalism both inside and outside the mills, placed Lowell alongside of utopian industrial developments such as Robert Owen's New Lanark in Britain, and Godin's Philanstere in France. However, while some of the procedures were similar to these in practice, the prime purpose of Lowell was not to create a utopian community, but to found one which would work. Physical attractiveness and certain utopian social principles were as much or more a product of sound business judgment as they were a result of idealism on the part of the entrepreneurs. The mill girls and their parents tolerated nothing less than the moral standards imposed, and, in a nation with a shortage of labor, they provided the only available labor supply. As it turned out, the boardinghouses were a canny business decision; they both attracted the labor and were very favorably received by the press and the public. Lowell's good press continued for its first twenty years, helping to ease the resistance to the introduction of textile factories and industrialization as it spread throughout the United States, and giving the Boston industrialists a remarkable political advantage.

The balance of utopian social principles and industrialist pragmatics found expression in the architecture and planning of Lowell.[1] The first boardinghouses constructed for the Merrimack Manufacturing Company were wood clapboard houses resembling the traditional New England farm houses of the day, and would not have looked out of place in a Shaker village. Each building contained two separate boardinghouses. These identical wooden dwellings extended out from the mills in long rows. In the later mill complexes, brick row houses supplanted these wood duplexes. Fire protection was one stated reason for this change, but the architectural expression of durability and permanence was also undoubtedly part of the reason for the decision. Not surprisingly, the

9▲ 10▼



[1] For a thorough and creative study of the architecture of early Lowell, see John Coolidge, *Mill and Mansion*, 1931.



11 View of Lowell, 1834, from across the Merrimack River showing the housing and the mills of the Merrimack Manufacturing Company before the construction of the Boott Mills

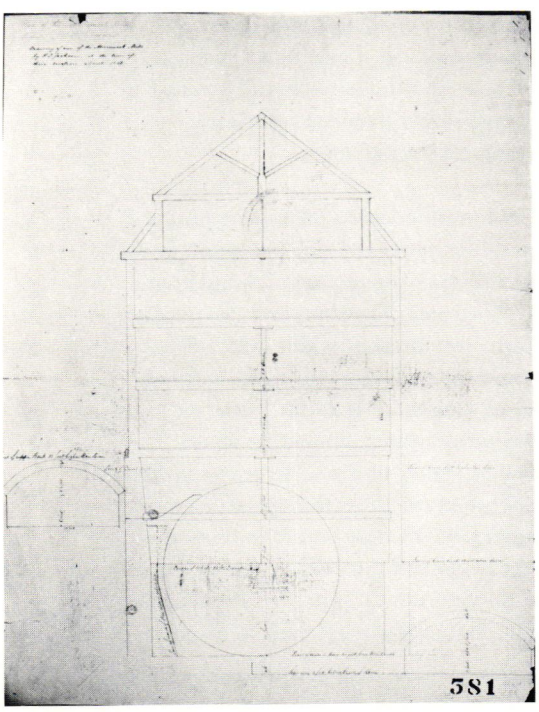
12 Belknap Mill, Laconia, New Hampshire, ca. 1825. One of the few surviving examples of the early Lowell mill type, with the front stair in a projecting gable-roofed ell on the mill's long side and the small belfry on the ridge.

13 Section of the Merrimack Mill #1, ca. 1822, showing the original water wheel

12

boardinghouses were prominent and substantial buildings, especially after brick supplanted wood for the exterior. Resembling Beacon Hill townhouses, these later brick structures were designed to the same standards of taste, and even on occasion by the same architects. The best surviving examples can be seen in Manchester, New Hampshire.

Besides the boardinghouses, the corporations provided a church, a library, a lyceum, and a savings bank. All of these were arranged in the town whose plan was basically very simple: a main street with shops and public buildings on both sides, and a cluster of identical houses for the workers leading off from the main street to the mills. The mills were large structures with the same simple, Federal-style detailing as the boardinghouses and dominated the scene, more because of their size than because of any architectural treatment. A significant design contribution was in the landscaping of the whole area. Lowell's basic plan may have been simple but, with rows of elms, public parks, and deed



13

14 The medieval town hall in Marburg, Germany. This building shows an important similarity with the early Lowell mill type. The projecting front ell served the same purpose as it did in Lowell, providing space for the staircase where it would not interfere with the main floor space.

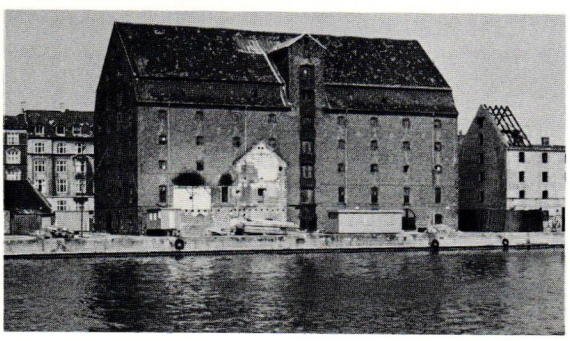
15 Early nineteenth-century warehouse, Copenhagen. A projecting stair was not needed, but otherwise the Copenhagen warehouses have a remarkable resemblance to the Lowell mill type.

16 Middle Mill, New York Mills, New York, 1824. This is a rare example of an 1820s mill which had unusual architectural pretentions, carrying a full pedimented gable with a Georgian bell tower. Contrasting with the simplicity of the mills in Lowell, this mill indicates what resulted when an entrepreneur intended that his mill have a formal and impressive architecture. This remarkably significant building was given to the village of New York Mills in the late 1960s, but was neglected and eventually destroyed by the town authorities. The Mill was originally built with a pitched roof with tall chimneys on the gable ends. The stone part of the tower has been raised one story, altering the mill's original classical proportions, but the elaborate wooden belfry appears to be the same as originally built.

14

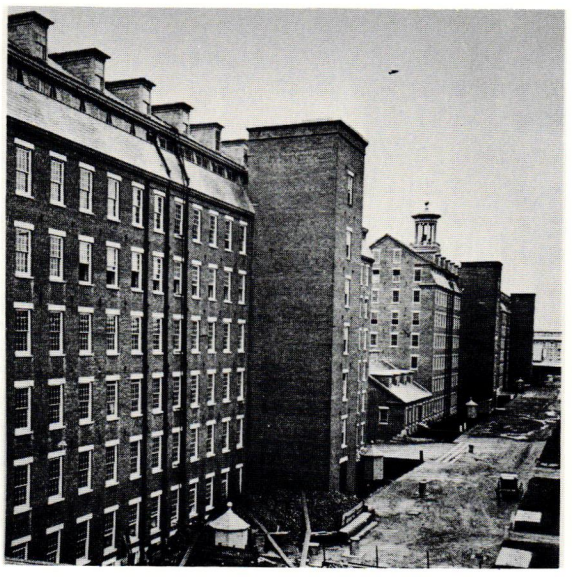
16

restrictions controlling the building heights, site coverage, and building use, Lowell and its sister cities achieved a level of refinement and amenity in their environments rarely matched in other speculative new town development.



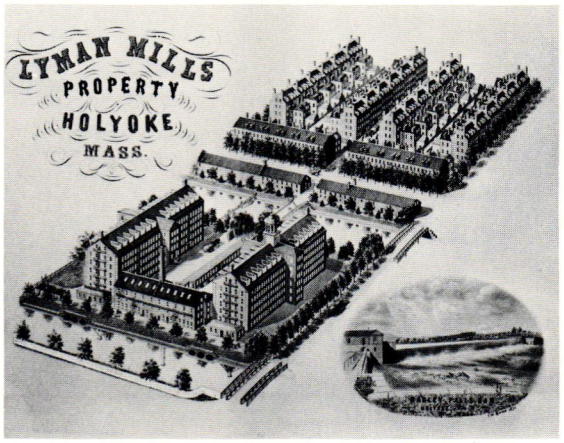
15

The first mill in Lowell constituted a basic building design that would be employed time and time again as the city expanded, not to mention its imitation throughout the Northeast. Over the first two decades the basic pattern, established by this 1822 mill, changed only in size, structural strength, and fire resistance, not in architectural form. It was a marriage between the barn and meeting house common to New England, and was a vernacular type of building which had parallels throughout Europe and the United States. Even as larger mills were constructed, they retained the simple unadorned appearance of the first Lowell mills. In Manchester, for example, the first mill was referred to as having



17

[2] C E Potter, *History of Manchester*, Manchester, N.H., 1856

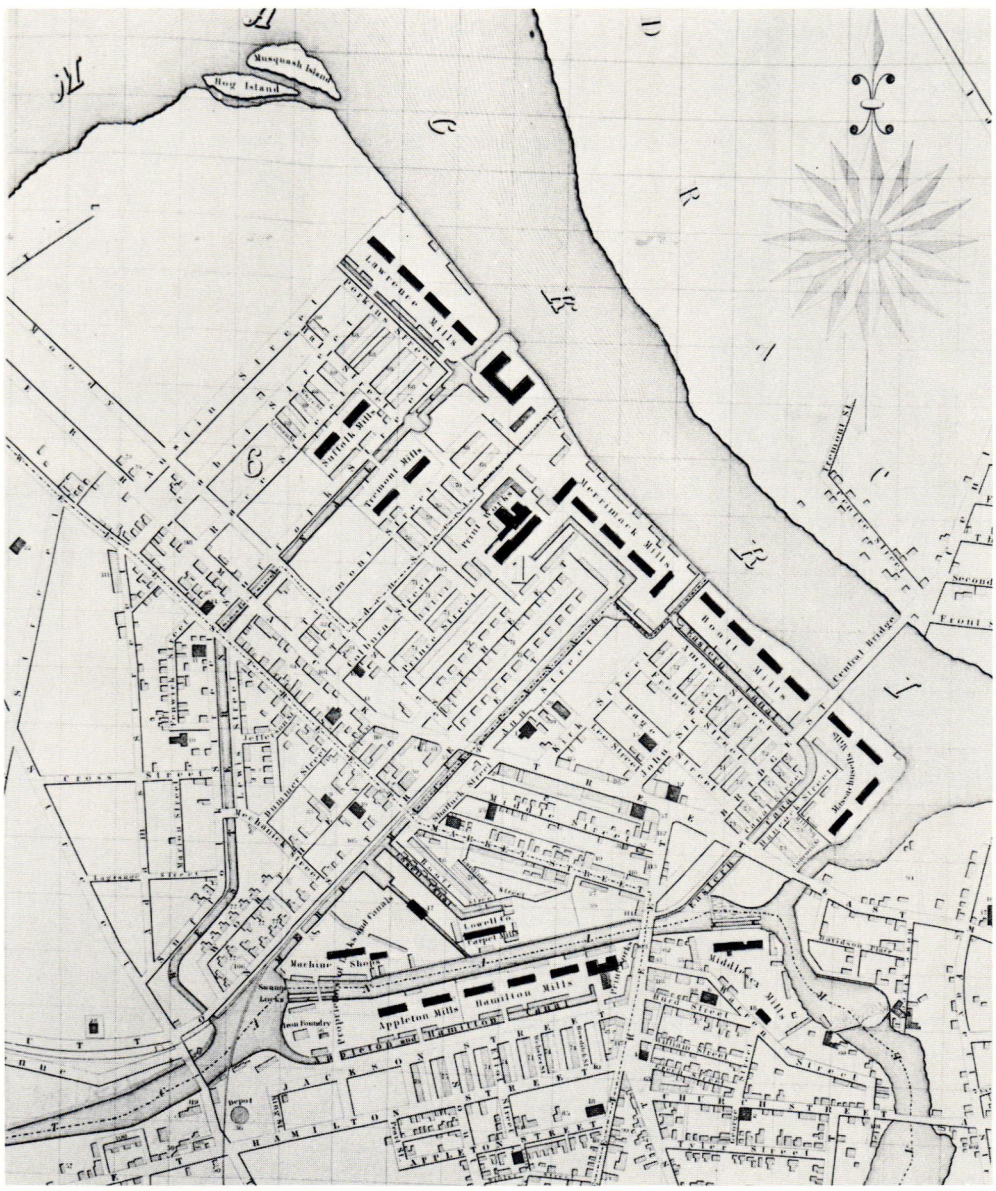


18

17 Bay State Mills, Lawrence, constructed in 1845. These mills are the tallest known to have been constructed according to the Lowell plan, and with nine stories, must come close to setting a record for traditional mill construction. Perhaps they exceeded the limits of practicality, because they were demolished and replaced in the 1880s.

18 The Lyman Mills, Holyoke, 1850

19 Plan of Lowell, 1841. This plan shows how the orthogonal layout of each mill cluster did not extend across the entire city, and how the downtown area (center) was squeezed between the two areas of mills.



19

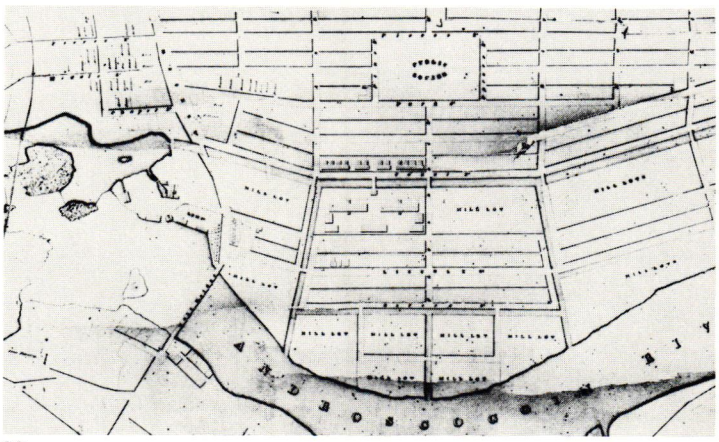
been built according to "the Lowell Plan."[2] By 1845, when Lawrence was founded, the size of each mill had been greatly expanded in length and in height. The first mills constructed in that city, the Bay State Mills, were remarkably oversized versions of the original Lowell mill type, rising nine stories, at that time a remarkable height for a wood and masonry structure less than sixty feet wide and full of machinery. As late as 1850, the type appeared again in the Lyman Mills of Holyoke with just a slight vestige of Greek Revival trim.

In the case of every city modeled upon Lowell, the pattern was the same, with the first mills designed according to this original formula, and only later phases of mill construction showing more expressive and fashionable examples of architectural taste. In other words, the entrepreneurs chose to begin in each city with functional buildings devoid of any contemporary architectural statement, except for an occasional cupola containing a bell. The matter of style was considered insignificant compared to the need for utility.

The plan for the first mills and housing in Lowell can easily be seen to be at the root of each succeeding millyard development, not only in Lowell, but also in each of the cities which followed

20 The symmetrical plan of Lewiston, Maine, 1851
21 Lewiston, Maine, ca. 1870. This view of the planned mill town taken at an early stage of Lewiston's growth shows the intentional order of the canal, the mills, and the boardinghouses – all landscaped with elm trees by the developing company.
22 Lewiston, Maine, with the elms fully grown, just prior to their demise from the blight.

21



20

22

it. However, after twenty years of growth and development had taken place, the simplicity of Lowell's original plan became lost in a tangle of diagonally intersecting streets, with mills and housing located on both sides of the main street in a pattern that left clusters of housing isolated by double ranks of mill buildings and mill canals.

The Lowell plan of 1835 does *not* resemble a classical layout of a pre-planned city. Lowell was not planned for grand visual effect despite the influence of the late-Baroque planning in Washington and in the original plans for Paterson, New Jersey. The canals provided some remarkable opportunities for visual design, but, at least initially, they were almost entirely unexploited.

Despite their grand intentions the entrepreneurs founded, during the first phase of Lowell's growth, a series of separate and distinct companies and built individual millyards with separate canals, sometimes without any relationship to each other.

23 Plan of Lowell, ca. 1830. This plan provides a remarkable view of the grand scale of a part of Lowell which was never completed. Only nine of the twenty-two mills shown were ever built, and even those exceeded the capacity of the available water power until a new canal was constructed in 1845. The massive area of company housing needed for such a development is shown as many parallel brick blocks, with a unique touch of Baroque in the tiny circles to relieve the monotony. Except for the circles, this plan resembles the layout of early Manchester, New Hampshire, most closely, but as a vision of an unrealized development of massive scale, it is a precursor of Holyoke.

24 Plan of Lawrence, 1845. Lawrence exhibits the simplified layout of the later cities with mills and canals parallel and adjacent to the river, followed by the boardinghouses, the commercial center, the town common, and the private residential areas.

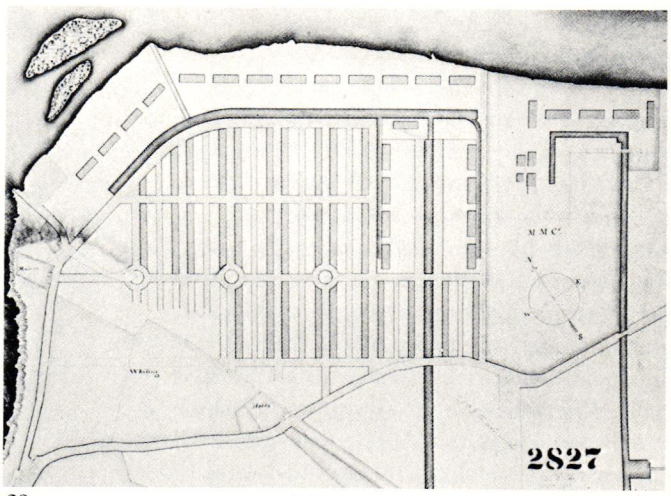
25 Salt's Mill, Saltaire, England

Later a wider canal had to be constructed at great expense to increase the water supply to the older canals. Only in the later cities did a single plan encompass the entire city, and only in the case of Lewiston, Maine, one of the last cities to follow Lowell's model, does the original city plan show an overall, urban design unity,[3] although the failure to develop one of the key, main-canal mill sites prevented the completion of this impressive scheme.

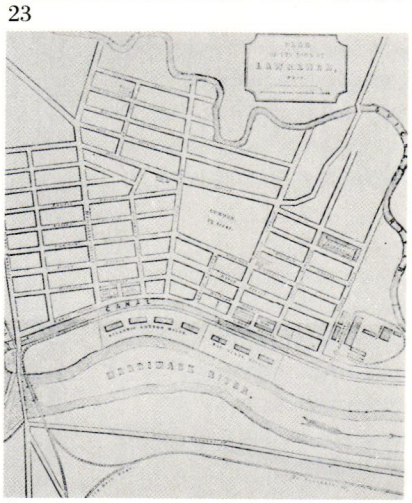
The lack of visual expression notwithstanding, the plans of the cities which followed Lowell were more orderly, with the canal or canals parallel to the river, the mills in an orderly row between, the rows of boardinghouses opposite, and the main commercial street and the grid of private residential streets running adjacent to the whole group. It was, in fact, the plan of Lowell's individual millyards, rather than its city plan, which became the formula for the layouts of the later mill towns. The plans of Manchester, begun in 1837, and Lawrence, begun in 1845, show a clear linear pattern defined by the rows of mills on one side and the workers housing, main street, and private residential area on the other.

The plan of the millyard clusters in Lowell, in which each cluster represented an individual company, was the basic building block for the total plan of these later cities, but it was not until these later developments that there emerged a layout which was of *city* scale. When Michael Chevalier visited Lowell in 1939, he wrote, "Lowell is not amusing, it is decent, peaceable and sage." This perfectly characterized both the virtues and the limits of early Lowell. Particularly revealing is the lack of any singular architectural symbol which could have given early Lowell a central focus or identity. The symbols were the boardinghouses and the mills as building types, to be repeated in rows as far as practicable. Lowell sharply contrasts with those utopian communities which used sophisticated architectural expression in their plans, such as Robert Owens's proposed project for New Harmony, and the more business-oriented Saltaire by Sir Titus Salt, outside of Bradford, England.

It is remarkable how durable Lowell's basic architectural and planning strategies were, surviving



23


24

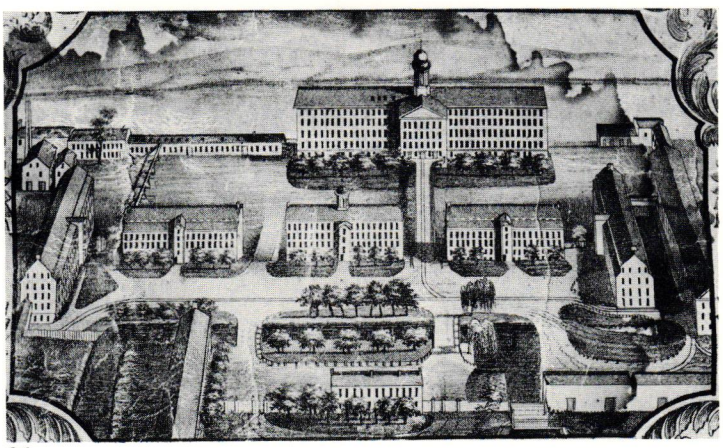
25

[3] This should not be confused with the results in Manchester and other cities where urban design of a high quality resulted from the subsequent extension and rebuilding of the mills, etc.

into the 1850s at an enlarged scale but in a form that otherwise differed little from Lowell's earliest millyard developments. What is more significant, however, is the fact that during the very period that Lowell's formula was being applied to the planning of Lawrence and Holyoke, additions to existing millyards in Lowell were already varying substantially from the original mill type and layout. The Merrimack Manufacturing Company provides two very important examples of the architectural changes which were taking place. First, in 1845, the same year that the original Bay State Mills were planned in Lawrence, the Merrimack Company constructed a large New Mill in an elaborate Greek Revival style, complete with pilasters between every window. And the stairs, instead of projecting from the body of the structure in a separate ell, were absorbed so as to preserve the architectural effect. The mill with its central, pedimented gable was placed directly at the foot of the tree-lined Dutton Street, making it a visual focus from the railroad station in the city center.

This new emphasis on architectural style and effect culminated in the late 1860s with the construction of the new Dressing Mill in the same millyard. This building affected the scene far more dramatically than did the New Mill, transforming as it did the most important vista in the oldest section of Lowell, the view down the Merrimack Canal.

The Merrimack Dressing Mill became an important element in terms of urban design as well as architecture. The view looking down the Merrimack Canal toward the Dressing Mill from the center of Lowell – with the original City Hall behind, the original church to the right, and the home of the company agent to the left – must have been one of the most impressive architectural compositions in America during the nineteenth century. The corporation boardinghouses formed a long, almost unbroken row on the left beginning with the modest, wooden dwellings of the first phase and ending with the larger, more dramatic "Long Row" constructed in the 1840s. The church was followed on the right by the house of the first Boott Mills agent, the high school, and more houses. The Dressing Mill was the tour-de-force, commanding the elm-lined canal space and providing a focal point (slightly off-center) with its tall Italiante Victorian tower. The total view was a masterful composition of elements which fit



26

28

29

26 Merrimack Mills, Lowell, 1850, showing the "New Mill" of 1845 behind the original 1820s mills

27 View of the Merrimack Canal, ca. 1880, showing the Dressing Mill

28 The Merrimack Dressing Mill, ca. 1865. The Dressing Mill was built in 1863 as a two-story structure and later was raised to six stories, with the tower probably jacked up in the process.

29 View showing the Merrimack boardinghouses and Dressing Mill in 1929

27

together into a wonderful hierarchy of form and detail.

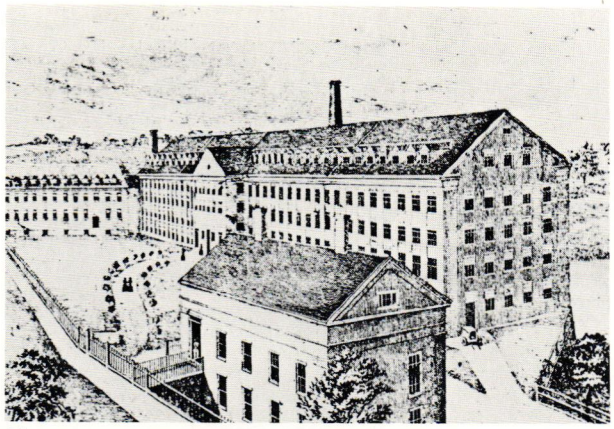
Originally the view down the canal was terminated by one of the five 1822 Merrimack mills. The space formed by the canal and Dutton Street was not conceived then as architectural space with its own unique or dramatic character. Built behind the older row of mills, the large New Mill marked the beginning of a substantial architectural effort to distinguish the millyard. And it was the Dressing Mill that established a dramatic architectural symbol befitting the Merrimack Company's prestige as the largest and oldest corporation in Lowell. In the process the canal became more than a utilitarian source of power, it became a vital part of the visual composition terminated by the mill with its tower. This act of establishing an architectural "sense of place," specifically designed to impress, marks the emergence of a community within the city concerned with the corporate and civic image – not the same image of decency and moral purity remarked by Dickens and Chevalier, but of local identity, pride, and economic prowess.

30

A strong local community had emerged from the domination of Boston residents and at times even found itself in conflict with those interests whose authority seemed threatening. Even though the mills remained under the ownership of Boston-based corporations until the twentieth century, people who lived in Lowell, whether they worked for the companies or not, had an increasing influence on the architectural form of the city, with much of the design and construction of the mills and other structures in the city becoming the responsibility of Lowell residents.

In Manchester, founded twenty years later than Lowell, it is interesting to note that much more power and responsibility was delegated to local managers earlier on, and greater political autonomy was given to the local community sooner than in Lowell. The results in terms of design are marked. In no cities other than Manchester did the prestige architecture of the Victorian era – with the towers, gateways, and elaborate iron details – find such a close and sympathetic integration with the simple, late Federal-style detailing of the Lowell mills and boardinghouses of the first generation of growth.

An important social force was beginning to affect all



31

30 The Amoskeag Mills, Manchester, New Hampshire
31 The Salmon Falls New Mill, 1845

of the cities, providing a powerful incentive for architectural expression beyond the Lowell mill and boardinghouse formulae. This force may be seen especially well in the experience of Salmon Falls, a smaller mill community modelled on the Lowell plan. In about the same year as the Merrimack New Mill in Lowell, the Salmon Falls Company constructed a mill in an almost identical Greek Revival style. The new mill was credited by the local paper as having "a more finished appearance than we recollect ever to have noticed in a factory . . . more elegant in outward appearance and interior finish than any other similar structure in America."

The 1851 Salmon Falls Company Directors Report reveals that Salmon Falls in the later 1840s and 1850s was competing with Lowell for factory workers, whereas formerly: "a preference was shown for Salmon Falls (especially by the parents) over the large towns in that vicinity and especially over Lowell."[4] Initially Lowell had been beyond the region of Salmon Falls, but by the 1840s, the center of gravity had shifted from the rural areas like Salmon Falls to the urban – even cosmopolitan – setting which Lowell had by then become. The 1851 Directors Report continues:

> *The workers do not include so large a proportion of girls from the respectable farmers' families. They can find employment at home. . . . The preference is now given to Lowell and the largest manufacturing towns.*[5]

The large and impressive brick mill was a clear reflection of the Salmon Falls Company's desire to impress people with its importance and urban sophistication, and the new mill's similarity to the Merrimack mill was probably more than coincidental.

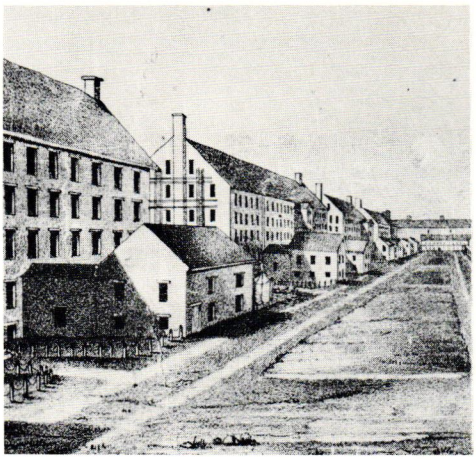
The building of the Merrimack New Mill and later the Dressing Mill mark a larger shift taking place at this time. The competition which Lowell began to experience is part of the inevitable process marking the growth of an industrially based society. Hitherto the machines had competed with hand work, and thus had the market to themselves. During this time, spanning the first two decades of Lowell's growth, the mills were made as inconspicuous as possible so as to be more easily accepted by an uncertain public, thus accounting for their lack of individuality and up-to-date architectural expression. By the 1840s these halcyon days were over and the market began to reach the saturation point. Wages began to drop and the New England native women gradually left the mills, to be replaced by immigrants for whom the lower wages were acceptable. From the standpoint of attracting buyers and investors, the stature of a company became more important than the amenities for attracting workers, as the different companies were thrown into increasing competition with each other, and this began to be expressed in the architecture of the mills for the first time.

While Salmon Falls felt threatened by the cosmopolitan attraction of Lowell, Lowell was feeling the pressure of a new economic context. It was the first and largest textile-producing city, but the time was rapidly approaching when it would cease to hold a favored position and instead would have to compete as an equal against its neighbors. Lowell responded to the competition from hundreds of places like Salmon Falls in both areas of production and prestige. Moreover, having developed sufficiently to attract a local community of major strength, the town of Lowell began to assert its civic individuality; it was the town's effort to give the Merrimack Company and itself a visible identity that led to the building of the New Mill in 1845 in the prevailing architectural style, which made it almost identical to the one in Salmon Falls.

Was there a relationship between the decline of Lowell from its so-called utopian first period and the architectural changes which emerge from the same period? Frequently, the architectural quality of a place is seen to parallel its social decline, yet these new mills were far more elaborate and distinguished examples of their architectural style than the earlier mills had been. In the case of Lowell, the relationship of the changes was more complex. The fact that many mill buildings such as the Merrimack New Mill and the Dressing Mill achieved a sophisticated architecture does not necessarily mean

[4] Gordon Grimes, "Portrait of Salmon Falls," *New Hampshire Profiles*, November 1974, p. 30

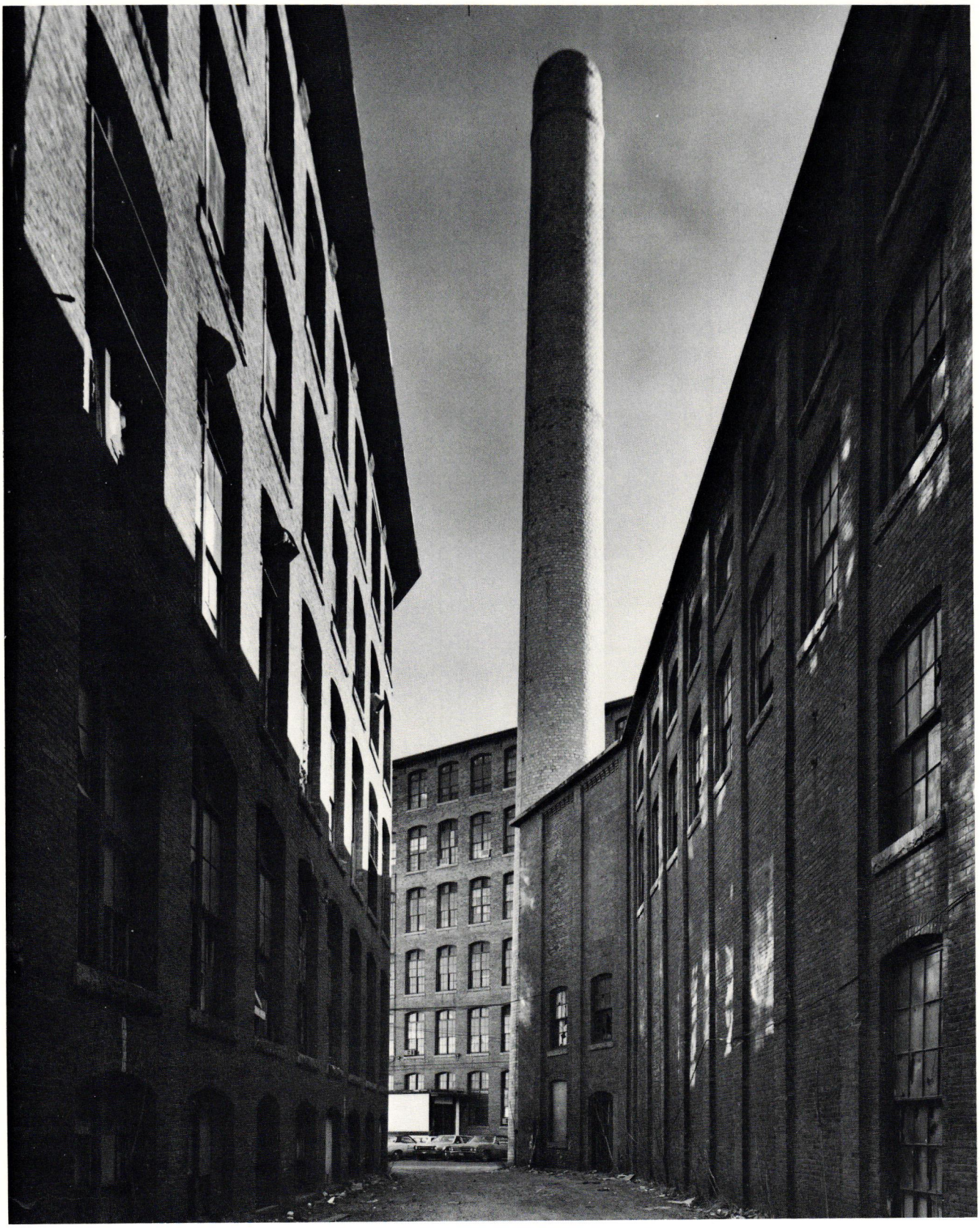
[5] Grimes, "Portrait of Salmon Falls," p. 30

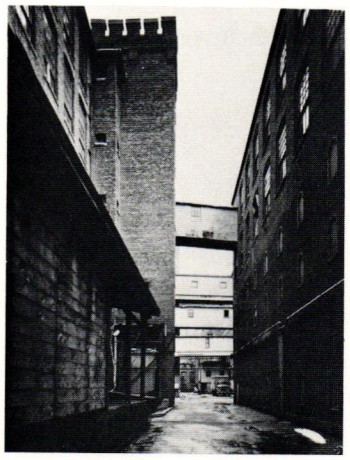


32

33

35





34

32 The Boott Mills, 1850, as they were originally designed

33 The Boott Mills, ca. 1870. This view is similar to that of Figure 32 and shows the millyard in the 1860s. The mills were joined together with the distinctive stair towers, including the bell tower which remains a landmark in Lowell today.

34 The Appleton Mills, ca. 1880–1920. Overbuilt within their confined layouts, many of the Lowell millyards failed to achieve the design distinction of the Merrimack or the Boott Mills.

35 The mills, powerhouse, and chimney of the Lowell Manufacturing Company, Lowell

that the environment became more liveable, or even more attractive. The shift was in two directions: While the principal mills became more elegant and the simple, repetitive designs of the earlier mills gave way to unique building forms with their elaborate bell towers, the millyards on either side often became darker and more congested. Additional mills were built with little thought toward an ultimate planning goal. Many of the amenities and landscaped spaces around the boardinghouses ceased to be improved or even maintained and eventually when the demand for space exceeded what was available in the millyard, cotton warehouses began to replace even the boardinghouses.

In examining the historical drama of the Industrial Revolution for its causes, one is attracted to the supposition that the invention of the machines precipitated the industrial period. But, critical as that invention was, it is also important to understand that this revolution would not have occurred in the form that it did, or expanded so rapidly, had it not been for both the prior accumulation of capital and the concurrent expansion of the market. For a time, a unique condition existed in the economy of textile production. The first Lowell corporations were able to produce cloth in industrial quantities while distributing it in a market whose price structure was still shaped by a pre-industrialized economy. As long as machine goods competed with hand goods, profits were enormous and even wages were high. The time soon came, however, in the 1840s and 1850s when machines began to compete with machines. It is at that point, and not at the moment of invention, that the age of industry as we know it was launched. Only then did the discipline of industrial life become complete. The need for maximum speed of production had become a principal ingredient of success, and wages, the one flexible cost within the factory, had been forced by competition into a major decline. The maturation of the industrial economy was a two-stage process, and Lowell's so-called idyllic period fell within the first. It is upon its transition to the second that the city experienced fundamental changes and gradually lost its reputation as a utopian industrial community.

At its best the architecture of the late nineteenth-century mills and public buildings of Lowell stood as an almost heroic expression of individual and corporate pride and sense of purpose; at its worst it created a dense urban environment which was oppressive without relief. Taking its place in the context of the early, staid, conservative environment of the Lowell Chevalier called "decent, peaceable and sage," the best architecture of the late Victorian period added drama and enriched the city's appearance, giving it much of the visual character which survives today.

Space Is the American Mediator, or The Blocks of Ithaca: A Speculation

Peter Smithson

1 Old Burying Ground, Cambridge, Massachusetts. The American sense of space. "With the coming of the Fence Laws 1870–1880, and the stock thus kept in, the fences began to come down around lawns, graveyards, and gardens; it is a nineteenth century aesthetic movement." J B Jackson, November 1975 (P.S. paraphrase).

2 Ithaca, New York. The space pattern of the town.

At its most poignant the uniquely American sense of space can be experienced in the rural burying grounds of Upper New York State. A gentle grassy margin between the road's edge and the scattering of headstones; a few small flags flutter, a few trees. Each headstone stands alone in simple cut grass. There is no cemetery wall or fence; there are no family-plot kerbs or railings; and there is no monument to the collective dead. . . . The spatial feeling of the headstones, of free and independent equals, survives even when the burying ground is fenced off and crowded-in. It is a mode of expression natural and native to the American people.

When I was in Ithaca in the spring of 1975 I looked for the first time at a zoning map of an American town. The zoning map of Ithaca was, I discovered, a definition of a space-mode as well as a zoning ordinance. For example, in Use District R-1 the minimum lot size for a one-family dwelling is 10,000 square feet, with a minimum width at the street line of 75 feet. This dwelling to be a maximum of three stories (or 35 feet) high and cover only 20 percent of the lot. The front yard is to be 25 feet deep; both side spaces at least ten feet wide and the rear yard 25 percent of the lot depth to a maximum of 50 feet.

Even in the commercial areas space requirements are defined. In Use District B-2 the minimum lot size is 3000 square feet, with a minimum width at the street line of 40 feet. The building is to be a maximum of six stories (or 70 feet) high and 50 percent of the lot may be covered with buildings. One side space is to be at least ten feet wide, the other at least five feet; and the rear yard 15 percent of the lot depth to a maximum of 20 feet.

Such strict definitions with known and accepted urban spatial intentions are now almost unknown in Europe. But they are part of living American tradition.

On a previous visit to Ithaca some three years earlier, I had become aware that the means used to make the formal collective space which is the old Cornell campus – a string of isolated blocks around

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010106-10 $3.00/0, © 1981 by The Harvard Architecture Review, Inc. and Massachusetts Institute of Technology

3

5

a made-flat plane was utterly un-European.[1] The only mediator between building and building, and between the individual building and the collective group is interval . . . and trees.

Interval, or distancing, is I believe the language of American urbanism. Where in Europe we would have walls, steps, ha-has, eminences, screens, colonnades and so on as devices of mediation and connection, here at Ithaca there was, in the original layout, only variation of interval. That the blocks of Ithaca are isolated, self-contained, temple-like; their formal energies contained within themselves, is of first importance. The layout is a circle of wagons with irregular gaps between them . . . Thomas Jefferson must be spinning in his grave.

But it was with an architectural bombshell of Jefferson's time that this specifically American architectural language started. That bombshell was the newly acquired knowledge of the separated and absolutely contained geometry of the Greek Doric Temple.

It is said that in the American colonies by 1750 the evangelical religions had successfully preached the direct responsibility of the individual to his Maker. There were to be no mediators.

> *The old community of the village, its physical forms bodying-out the earlier social and religious code, had been replaced by another ideal—that of the individual self-sufficient homestead whose spatial image is separated, scattered, houses; the sacred place shifted from the church and the meeting house to the home.*

There was also the mood in America for an acceptance of classicism . . .

> *Even the New England village which we think of as white by definition, was apparently grey or brown until the late eighteenth century when under the impact of the classical movement it was painted white to look like marble.*[2]

Now Stuart and Revett started measuring and drawing in Greece in 1751, and returned from there to England in 1755. Their book, *Antiquities of Athens*, came out in four volumes: Volume the first in 1762 and Volume the second in 1787. This second volume has measured drawings of the Parthenon, the Erechtheum, and the Propylaeum to the Acropolis in Athens . . . Page V is a plan which shows the Parthenon strikingly isolated on the made-platform of the top of the Acropolis. No mediators – enclosures, walls, statues, steps – are shown, and nothing of

---

[1] You could say that identical means are used in Europe to define military collective space – the barrack square surrounded by huts – the *campus martius*.

Before we discuss the early development of the Cornell campus, we should examine Olmsted's prophecy of campus form. It was an excellent forecast for Cornell and for American college and university campuses in general. National interest in establishing institutions for higher education in agriculture and "mechanic arts" was at least forty years old when the Morrill Act was passed in 1862, but little thought had been given to the physical form such institutions should take. By 1865, Olmsted, who had been Executive Director of the U.S. Sanitary Commission in the early years of the Civil War, had an opportunity to think through the problems of these new campus forms. In 1864 he had prepared plans for a new site for California College, and in 1865 the Trustees of Massachusetts Agricultural and Mechanic Arts College asked him to advise them on a plan for their grounds. He thought his advice might be significant to all of the new Morrill Act colleges, so, the following year he published his report under the title: A Few Things to Be Thought of before Proceeding to Plan Buildings for the National Agricultural Colleges.

. . . proposals were listed for the instructional buildings. The first would house lecture rooms and faculty studies. The second would house scientific laboratories, lecture rooms, and museums; the third, space for quiet activities – library, reading rooms, and drawing and writing rooms; and the fourth, assembly spaces – gymnasium, armory, and general assembly hall. The second and third buildings would be fireproof; the others, less expensively built. Each type of activity would have an appropriate building. Each could easily be enlarged or remodelled. Each would be detached from the other buildings, set back from the highway, with trees, shrubbery, and turf about it, and accessible by good walks. The provisions of the Morrill Act would also require a parade or drill ground. Olmsted suggested this might as well also be a green, "a ball or playground for the students." He therefore proposed that it be bordered by shade trees and seats. Since it was representative of a rural town hall or courthouse, the general hall of assembly should open onto this green.

(From Kermit Carlyle Parsons, *The Cornell Campus: A History of Its Planning and Development* (Cornell University Press, 1968), pp. 20, 21 & 22.)

[2] J. B. Jackson, October 1975 (P.S. paraphrase)

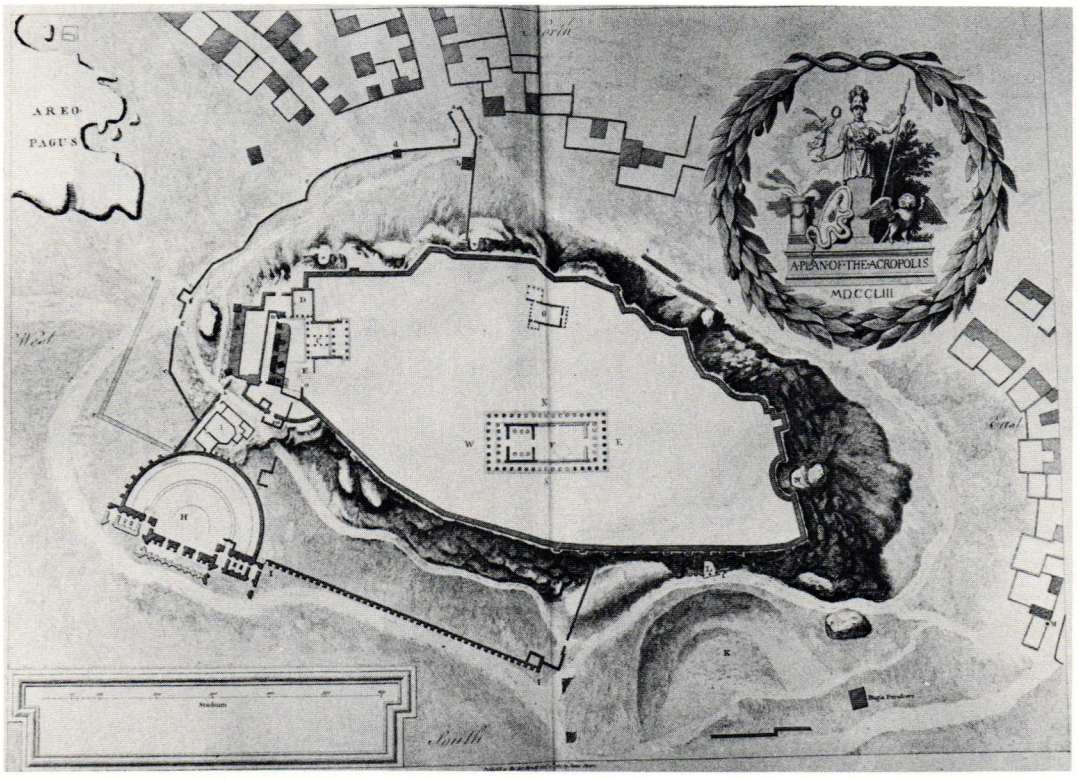
[3] "The Setting of the Periclean Parthenon," G. P. Stevens, *Hesperia*, Supplement III (American School of Classical Studies at Athens: 1940)

[4] Benjamin Latrobe was in the office of S. P. Cockerell (1754–1827). The Indian Style Cockerell (Sezincote, 1803) was a founder member in 1791 of the Architect's Club of which Revett was a country member. (Summerson)

[5] *Architecture in Britain 1530–1830*, John Summerson (Harmondsworth: Penguin Books, 1954), p. 344

[6] Summerson, p. 341

3 Cornell campus. Any European device of mediation would not be very useful.
4 The Acropolis of Athens. The Parthenon shown strikingly isolated on the made platform of the Acropolis.
5 The Maison Carrée at Nîmes. The flanks are seen better than the front.



4

them was known, for the top of the Acropolis was then covered with houses. Indeed, convincing plans of these ancient mediators were not published until just before my own first modest Greek studies in the 1950s – a gap of 200 years.[3]

Volume the third of *Antiquities of Athens* was published in 1794, and this has the Theseum, the temple at Corinth, and material from Delos. Volume the fourth, the final volume – both authors were now dead – appeared in 1816.

By the time Benjamin Latrobe left England for America in 1796, the first three volumes of *Antiquities of Athens* had been published.[4] Latrobe must have carried the astounding, spatially revolutionary and fashionable Greek idea with him, as it were with the lice in the seams of his trousers. No architect could ever forget those few staggering images; and where else – if it is true – when we find Latrobe "utilizing (from memory) the order of the Erechtheum," would he have seen it?[5] Most easily in the second volume of *Antiquities of Athens*.

Not that Latrobe himself (or in fact anybody anywhere at this date) designed peripteral (columns all-round) temples. He did not. But he must have reinforced by his presence the already-seeded notion that the temple form could stand – indeed its disciplines work best – in isolation; separated, distanced, from other events. This was perhaps the essential American understanding – and probably started from a misunderstanding of how the Roman temple worked.

The post-second-world-war books on Roman architecture say that the Roman temple was essentially frontal. It stood in a symmetrical enclosure with its back against one side. When the priest read the auguries, they were within the area before him frontally.

Now Thomas Jefferson's architectural
> *enthusiasms can be epitomized in two admired buildings; first, the Maison Carrée at Nîmes, the perfect Roman temple; second, the Hôtel de Salm in Paris, the perfect application of Roman forms to a modern programme. Jefferson's conception of the architecture appropriate to a new Republic crystallized rapidly, and it was closer in loyalty to the Maison Carrée than to the Hôtel de Salm. The temple-form dominated. When, therefore, he was asked, in 1785, to send over from Europe a design for the Virginia State Capitol, it was as a great Roman temple that he immediately envisaged it.*[6]

But the way we see the Temple at Nîmes – the Maison Carrée – now is as almost free-standing; admittedly its back is closer to one side of its present enclosure than the other, but it has most space on its flanks. We see the flanks better than the front (at present for traffic reasons as well as spatial ones – even on Sunday). It can be seen as acting as a completed all-round object.

It seems entirely reasonable for Jefferson to look to a Republican Rome and by extension to Rome generally for an architectural language for the new Republic. However, the separated temple-form that became the preeminent American type-building was

6

not of the tall, high-podium Nîmes sort, but of the easy-sitting shape of the temple, more or less complete on the ground in Athens then, as now, and published in Volume the third, the shape of the Theseum. This separated temple-shape was architecture's contribution to the classic period of the American landscape:

> *the period of republican simplicity between the founding fathers and the Civil War, when the grid—the lightest of bindings, the minimum of collective support—located an interchangeable man in the interchangeable landscape of an idealized egalitarian social order.*[7]

I am, of course, aware that many things played their part in the acceptance of this separated temple-shape as the most common American building type. In the North, as in Ithaca, there is good reason for the squat, compact, temple-like block as the all-purpose building-type – the extreme cold weather that lasts for many months. Any European device of mediation of the outside space would not be very useful. The ha-ha invisible under the snow, the wall-walk drifted-up, the steps icy. The language of mediation needs to be deployed indoors with the one main temple door firmly closed behind one.

Of course the very widespread use of wood suggests that interval would be a good fire-break, and that the larger the building, the wider should be that interval. The simple open timber-framed barn is a temple in its primitive state; even the balloon-frame house arriving in the 1830s is temple-shaped and could furthermore be said to have the tautness of skin of the truly Neoclassical architecture which had just come into being in Europe.

It may be that there was an eighteenth-century programme description of a possible Neoclassical architecture: so there was in the late nineteenth and early twentieth centuries for a possible Modern architecture. But Neoclassical architecture as a fact emerged in Europe around 1810; Modern architecture around 1920. Each lasted at most ten years and each is rare.[8]

For me, Neoclassical architecture as a fact crystallizes in two buildings: in the Altes Museum in Berlin by Karl Friedrich Schinkel, built in the years 1823–28; and in Downing College in Cambridge by William Wilkins, built in the years 1807–21. And it was with Wilkins that the new sort of space emerged.

If we approach Downing College along Tennis Court Road this road itself has a quite amazing feeling about it; grey, long, and strange. On the right runs the enclosing wall of Downing's temenos, following it along some six hundred Attic Feet and turn into the first break in the wall offered on the right. The back of the College's west range is straight ahead. Originally these bricks also would have been a matte creamy-white. This west range is part of the original 1807–21 building campaign of separate blocks with only screen walls between them. Along the back of the range northwards, what we now see has had the gaps filled in to provide more rooms – becoming in fact projecting bays on this side – in 1873. Rounding the end, the unphotographable central space spreads before us.

The original Wilkins-separated blocks are restrained to the point of making one want to hold one's breath. And that the court should remain open to the southeast, so the sun and the wider gardens beyond flow-in is a marvellous intervention of fate. These separated blocks and that simple flat space between comprise, I believe, the single most important architectural invention of the whole period since the Enlightenment.

The naked, Spartan, space-mode of Downing had in fact no takers in Europe, and was not picked up again at this level of understanding and purity for another century.

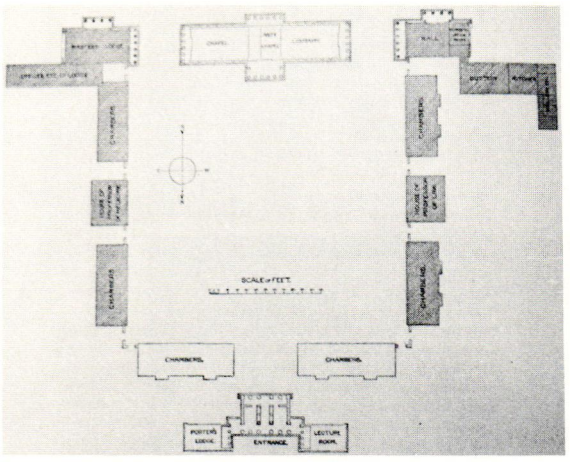
In "1817 Latrobe assisted Jefferson with *his curious and interesting scheme for the University of Virginia. It was to be a settlement consisting of pavilions, each containing a classroom and a professor's lodging, the pavilions*

---

[7] J. B. Jackson, October 1975 (P.S. paraphrase)

[8] I have found, I think, one example of Neoclassical architecture in America . . . the Jared Sparks House, once at 48 Quincy Street, now moved over to Kirkland Street, in Cambridge, Massachusetts; built in 1838 (the year of the Euston Arch, but that was not Neoclassical but Greek Revival) by William Saunders for Daniel Treadwell. In domestic Greek Revival architecture in America the portico addresses the street frontally in the Roman manner.

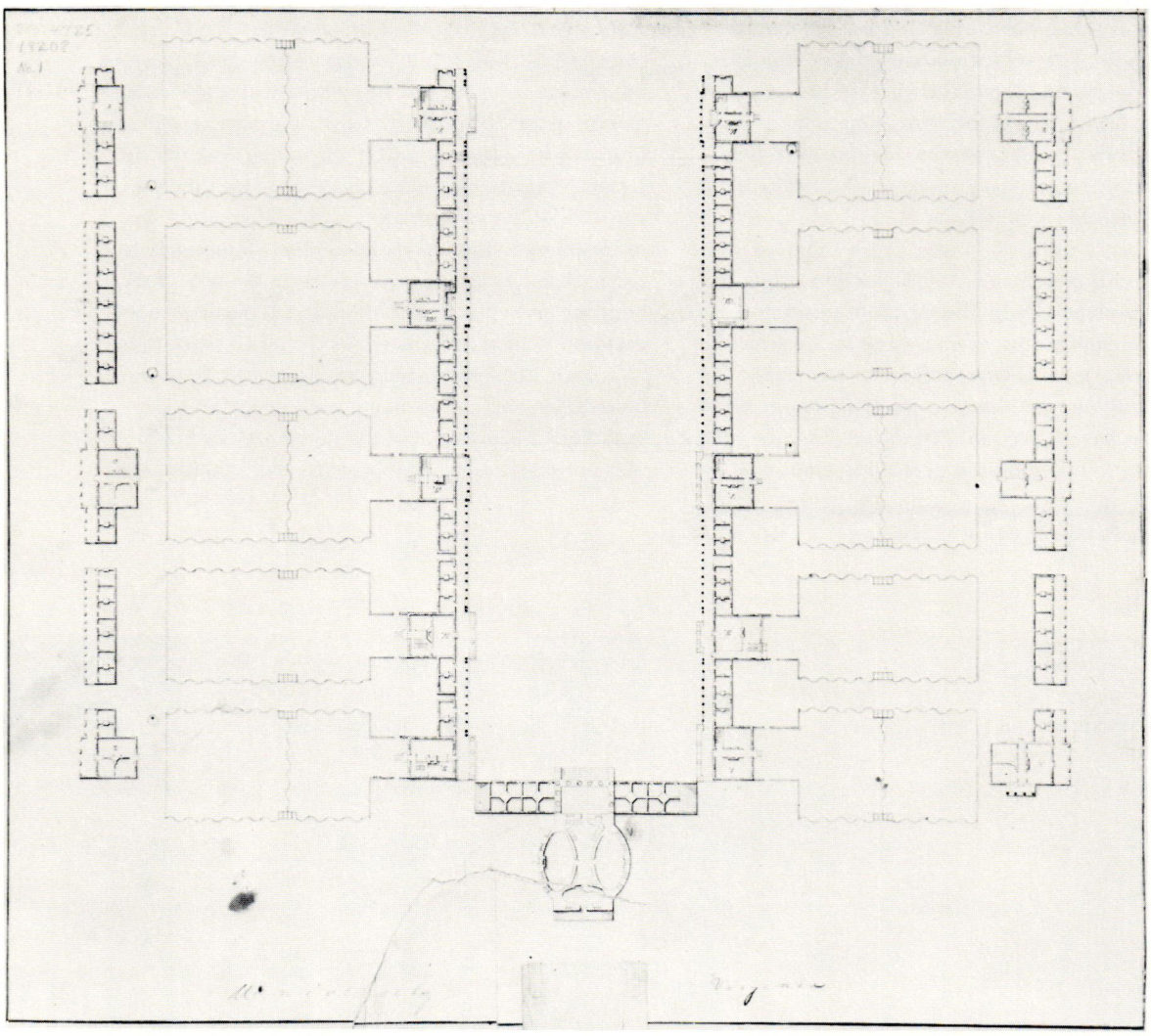
[9] Summerson, p. 345



7

8

6 Summit, New York. The separated temple shape.
7 Downing College, Cambridge. Ground plan of proposed South Block designed by William Wilkins.
8 Downing College, Cambridge. Neoclassical space.
9 University of Virginia. Maverick plan of 1821. Supposed initiating design for Pavilions V, VII and X, Latrobe Pavilion VII, and Thornton.



9

focus, vista, colonnade, wall, courtyard, terracing and so on – with the emergent American language of repetition of identical (or near-identical) independent temple-like forms pegging out space by interval. Interval became the language of American urbanism. Interval that varies with the importance of the institution it symbolizes. In American cities, if one comes to an interval between the built-up blocks one expects an institution of some sort, usually the city hall has the largest, then the art

> *being linked by colonnades in a formal plan, dominated by a great Pantheon. It was Jefferson's last important contribution to American architecture and one which had the effect of initiating the type of American classic house which was to flourish in the thirties and forties.*[9]

It represents the arrival in America of the formal campus idea stated in a language of architecture which combines the deployment of the classic European language – of hierarchy of size, symmetry,

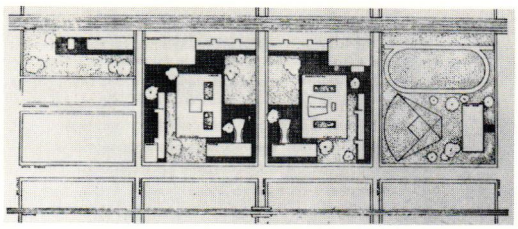
10a Illinois Institute of Technology, Chicago. Preliminary scheme, 1939. European Neoclassical space. Mies van der Rohe

10b Illinois Institute of Technology, Chicago. Final scheme, 1940. American space.

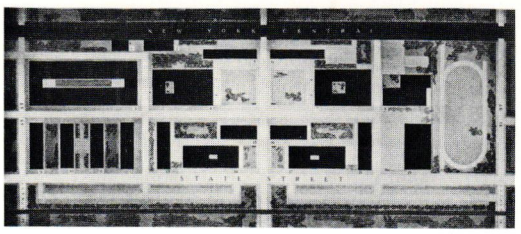
11 Eames house. Site plan.

12 Johnson house. Site plan.

13 860 Lake Shore Drive, Chicago. Site plan.



10 a



10 b

gallery, the library, the fire station, the police station, and so on down to – in the smallest communities – the doctor's office. It is the accepted language.

Calculation as to distance (interval) is a natural ability in Americans – travel time by hours, walking by blocks. Place descriptive ability is much less marked, and sense of location in time – history – almost absent. The very widespread use of the grid system supports this sensibility and has the effect of flattening space, even if the real topography is somewhat hilly . . . that is why one thinks of New York as flat when one has experienced it as distinctly domed. American space is flat.

Hierarchy of importance is established by interval, indicated horizontally by the extent of territory covered, or, in the city, by space left open, and classicized by trees. Horizontal space abounds.

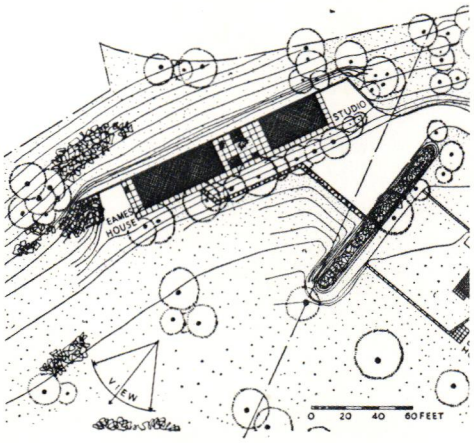
Penn said that the road was more important than the property – a reversal of traditional values – and certainly in the late-grown cities the amount of space in the public domain was and is vast. In 1900 Denver was 45% street space.[10]

Interval was after all the mediator between the grind and screech of the streetcar and the unprotected, thin-wood-walled small house with its pediment fronting the road that was almost universal in the new cities.

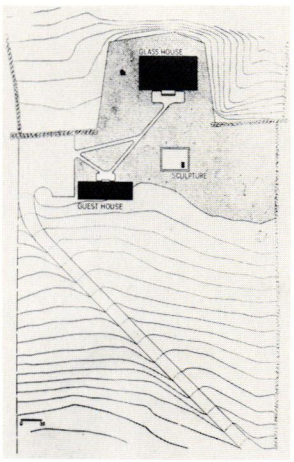
After the 1890s even the European-modelled commercial cities like Chicago or New York cease *as an ideal* to have streets. Beginning with the spatial marvel of the Reliance Building, towers rise into the free air where the naturally understood American language again operates. And in our own time the car-park of the supermarket – which is merely ostentatious to the European visitor – is not only a car-park but is an interval related to the size of the building and operating through the American space tradition to turn the supermarket into an institution . . . to invest it with social meaning. Furthermore, interval is good and sanitary, and the separated building an expression of the deeply felt belief in the sacredness of private property and enterprise.

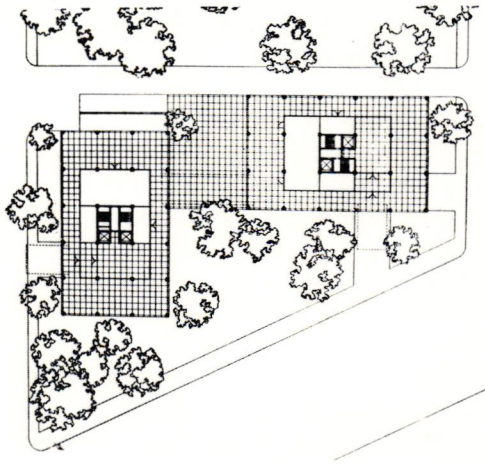
[10] J. B. Jackson, October 1975 (P.S. paraphrase)

14 University of Virginia. The Lawn.



12





13

If one accepts that space is the American mediator; that its chosen articulators are the temple-form and the tree; it will perhaps explain to Americans the icons – the more than admired American buildings – which European architects seem to have used to intercede on behalf of the well-being of their own architecture in the period since the second world war. For the person who picked up the naked, Spartan, Neoclassical space-mode was of course Mies van der Rohe. His earliest buildings at IIT in the early 1940s were seen by those of my generation as having the quintessential American qualities – *Interval, Repetition, Tautness, Trees.* So also the Eames House (1948), Philip Johnson's own house at New Canaan (1948), Mies' 860 Lake Shore Drive (1948–51); and by Skidmore, Owings and Merrill, the Heinz Vinegar Plant (1950–52), and the Chicago Hancock Tower of the seventies. All of which followed the original Mies' intuition as to the nature of a truly American architecture. We in Europe see all these buildings as peripteral temples, or as piled up temples; their disciplines returning into themselves; having and needing interval but capable of resisting spatial abuse because of their self-containedness. They can even be classified jokingly like temples by the number of columns of their *pterons*, for example:

Temple at Bassae, Arcadia	6×15	(420 BC)
Minerals and Metals Research Building IIT	5×8	(1942–43)
Lake Shore Drive, Chicago two temples, each	4×6	(1948–51)
Hancock Tower, Chicago	7×7	(1970)

Jefferson at Charlottesville – by the use of separated temple-formed blocks in a representational composition – had freed the architecture of the rebel colony from formal spatial dependence on the old world.

Excerpts from Smithson Seminar Student Papers

Introduction: Peter Smithson

The themes of these essays were first discussed at the Harvard GSD during the fall semester of 1975 in a small seminar meant as a back-up for a studio programme which would supposedly prepare students for design within the American space tradition.

Really I suppose it was for myself; for I had discovered earlier in that same year at Cornell University that my own obsession with extending the language of modern architecture so that it is able to deal with the traditional European 'mediating' devices – walls and gates, changes of level, and so on – had absolutely no meaning to Americans. For American architecture works, and has always worked, another way.

This modest seminar started with a presentation of the historical European language of mediators and with my understanding of how the American architectural language worked without them.

The seminar then visited by train, in marvellously sunny weather in December, the Lawn of the University of Virginia. Since then each student has written down the idea he presented at the seminar. My instruction was that the essays be terse and say only the things which arose from personal observation on the ground; they noticed many things that architecture grown-ups miss. It is a heavily edited version of these essays that is presented here.

Editor's Note: Alison Smithson, August '78

As the student papers – whose titles indicate the nature of the individual investigations – cannot be printed in full, a selection has been made of thoughts or insights which seem to the Editor to be fresh and relate to the paper that structured the seminar.

To a European architect/urbanist, these thoughts taken from the student papers of '76 seem to end on a very depressing note, . . . but this is probably the American reality. All the cardboard facsimiles of "Heroic Modern meets barn," in colours like Indian totems for tourists, are maybe a sign that the colonists have been overcome by the geographic space of America; and as the now indigenous people are busy re-creating the gear of the American Indian that went with such spaces.

Comment by Michael Hickok, Teaching Assistant

I think it is important to remember that the concept of an *American space tradition* is new to all of us. The papers often seem to have very little inter-relationship. They speak to widely varying aspects of that concept. But if such a tradition does exist it must go very deep into our culture and each portion of the built environment must be viewed from this new perspective. Hopefully Peter Smithson's paper begins to provide the necessary focus.

All the columns rest on small individual bases, which sit directly on the ground. Furthermore there is virtually no change of plane from the grass of the Lawn to the paved floor under the Colonnade. (In 1825 this may well have been a dirt floor.) This in itself is not remarkable, although it is an unusual practice among classical architects. However, when viewed from across the Lawn the effect is remarkable. Because of the height of the grass and the distance from which one views it, the columns almost appear to grow out of the ground. – "Interval at Charlottesville," M E Hickok (Figure 15)

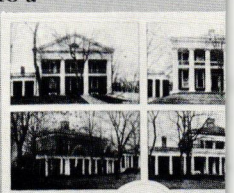
The tree was a code, or sign, that carried the hope for future prosperity through one's efforts – a pastoral ideal; provided for a society of yeomen seeking the creation of the "middle landscape." Intrinsic to this was a striving for a unity with nature, and between men. – "The Tree in America," L S Jablin (Figure 16)

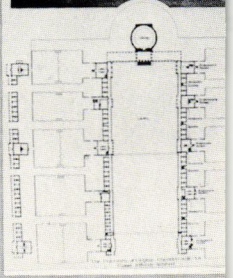
Their livelihood was farming; though they were not real farmers, they were craftsmen and artisans and hunters and fishermen. They lived in considerable poverty for a long time, working long and hard for a minimal reward. They were thorough pioneers: their attitudes and concepts of space shaped, or at least helped keep open, the space they occupied. – "Comfortable by Themselves: Towns and Villages in Northwestern New England, Particularly Vermont," G Heller (Figure 17)

15

16

18 a





17

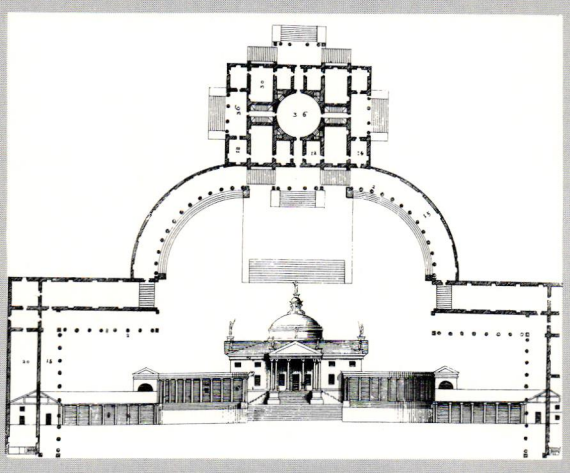
Wright felt that the location of a service station was a kind of sign-post marking the point where lines of communication and mobility had overlapped with sufficient intensity to form a "distribution point." The gas station took on a symbolic meaning in Wright's mind because he saw it as "an important advance agent of decentralization by way of distribution and also the beginning of the establishment of the Broadacre City." So important was this new building type to Wright that he produced a detailed design for a "Cantilever Gas Station" with "neon tube lighting and gas bells suspended with flexible hose pendents." —"The Coming of the Automobile," R W Whatley

Beginning at the Rotunda (library at the University), Jefferson extended axes, and parallel to the major one he built the colonnades and pavilions, observing the same symmetry of mass as Palladio's villas. But Jefferson varied his wings: each pavilion is different, and the spaces between the pavilions increase the farther they move away from the Rotunda. This is significantly different from Palladio, a difference reflecting the passage of two hundred and fifty years as well as Jefferson's own social vision. —"Andrea Palladio and Thomas Jefferson: Their Buildings Set in Space," M Heard and B Mostue (Figures 18a,b)

The contention is that Jefferson consciously designed the land to dominate the buildings at the University of Virginia. —"Commonplaces of American Space before Thomas Jefferson," J Lehto (Figure 19)

The next Custom House to be built on Wall Street took this symbolism even further and re-created a Greek temple in which to conduct its business. In the last years of the nineteenth century and the early years of the twentieth century, when cities like New York became too crowded to permit the building of more temples on the ground, temple was piled upon temple until visibility and corporate dignity were achieved. —"American Corporate Space," R M Warner (Figure 20)

In general, American space is a continuous phenomenon, and the quality of space is directly related to its quantity. More space serves architecture better, and ultimately the best relationship between two buildings is no relationship at all. Anything else appears to be a compromise. The American city is such a compromise. —"American Town and City Tradition," A Dvorak (Figure 21)

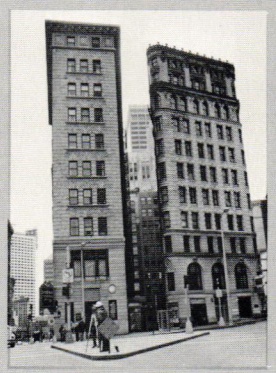


18 b

The introduction of the car managed to distort or destroy the delicate relationships that had evolved. The response has been to reinterpret those elements which once supported the image of the house and street, into defense mechanisms. Fences have been put up, just crude enough to keep people away. Shrubs and trees are allowed to grow high enough to obscure (or better, protect) the houses. Porches are considered simply as a second layer of defense, having lost their social value as sitting places. The views and smells from them are no longer pleasant. These devices however are not rugged enough to cope with the new problems. They can only emphasize them. —"Dana Street," P Cravitt (Figure 22)

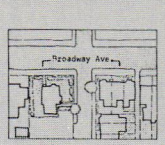
Walking along or across Harvard Square, the signs set up at right angles to the building are a measure of the space and time through which the pedestrian makes his way. A rhythm, unintentional and in most cases, unconscious, is set up, as on Cambridge Street. . . . European signs are, in general, especially in historic districts, attached as ornament, clearly subordinate to the structure of the building, while in the US the sign (provides) plays an important role, either augmenting the architecture or rivaling the building. Perhaps signs are used more often in the United States because they fill the gap left by the non-use, or use in a limited context, of the more traditional European mediators. —"The Sign in America," T Holtz (Figure 23)

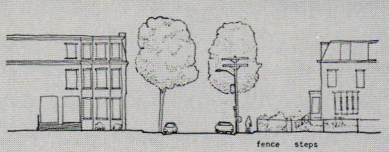
21



20

19





22

23

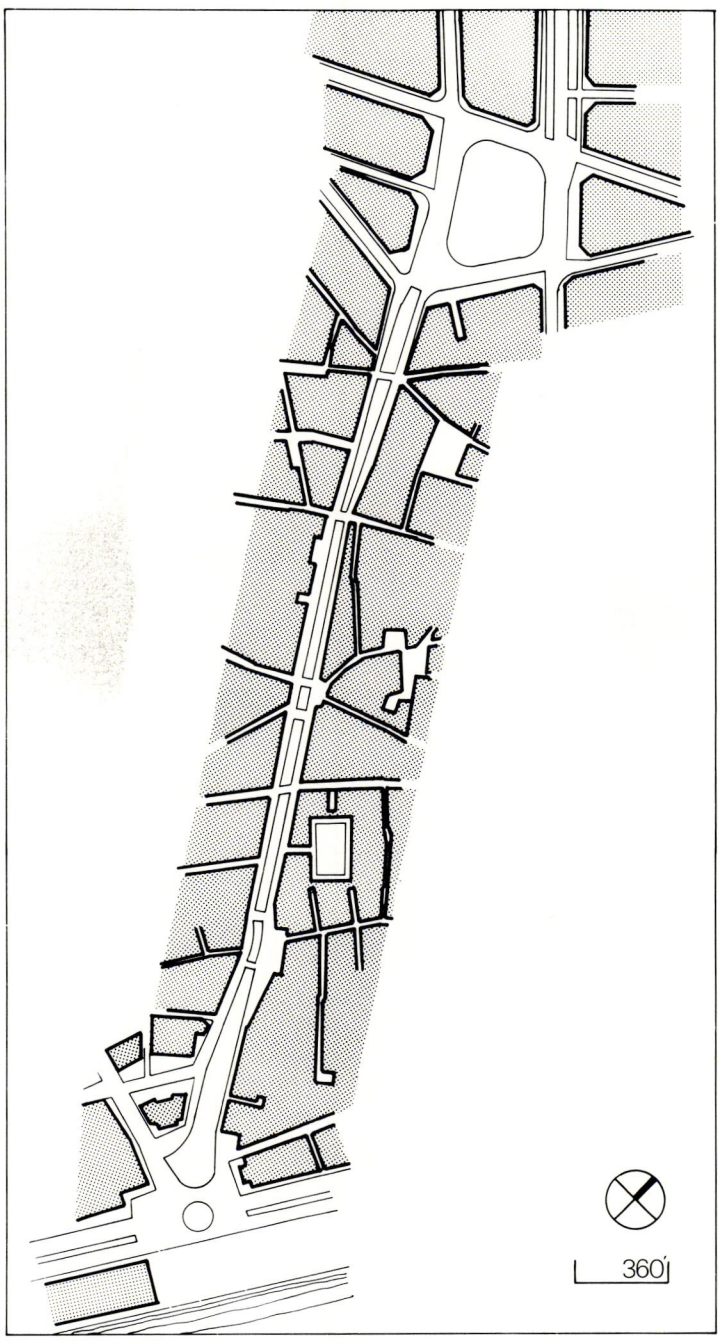
The Asymmetrical Spine: A Generator of Design

The Analysis of the Form[1]

William L Rawn III

In older cities of the world, the most common street is the long, linear street with similar forms on each side of the street. Most cities of Europe and many in this country are dominated by this generalized form. But sometimes, due most often to a special feature of the natural landscape, a special institutionalized use, to the intersection with another urban form (e.g. a plaza), or to unexplained events of history, one side of a street is different from the other. This asymmetry produces some intriguing formal results and has important implications for the nature of the street in the city. Applied to a building context and freed from some of the constraints of the urban scale, other formal implications follow. This analysis seeks to better understand some of the formal implications of the asymmetrical street and apply some of that learning to design at the building scale.

In its most traditional form, from medieval times to the nineteenth century, the street has been a linear form, relatively narrow, bordered on each side by built form of roughly the same scale. This "balanced" or "symmetrical" form of the street became institutionalized in the Renaissance; it became almost an absolute rule in the nineteenth century. Of course, such a form requires a certain communal care, a community sensitivity often difficult to enforce in the democratic and capitalist societies of the Western world in the twentieth century. Likewise certain tenets of the so-called Modern Movement of the twentieth century often questioned and usually ignored any reliance on a symmetrical street edge. In addition, the evolving American cityscape ignored this tendency toward symmetrical street edges. The American experience is due to various factors: the consciously anti-urban bias of this country, a bias related in part to the dominant English and German influences on our culture; the agriculturally based American economy and culture; and the concomitant abundance of land requiring less concentration of and less relationship between buildings within any built form concentrations which might exist; and the fact that much of the American cityscape has been built in the twentieth century, long after the dominance of the Neoclassical tradition and long after the



1 Area plan, the Ramblas, Barcelona
A Plaza Cataluna, B Plaza Real

[1] The article printed here is based on "Part Two" of "The Asymmetrical Spine: A Generator of Design," William Rawn's thesis for the degree of Master of Architecture, Massachusetts Institute of Technology, 1979. – ed.

The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010116-12 $3.00/0. © 1981 by William L. Rawn

automobile began shaping the form of the street rather than the pedestrian shaping that form.

This part of the thesis is focused on the nature of the street space and its ability to work successfully in the urban landscape. Success in this sense is measured simply by the ability of the street to generate pedestrian activity. A rule of thumb can be stated most elementally: the greater the activity, the more successful the particular street. Since this thesis is applying its findings to the generation of design of an individual building[2] which must rely on pedestrian, not automotive, movement, this simple measure is even more fundamental for our purposes.

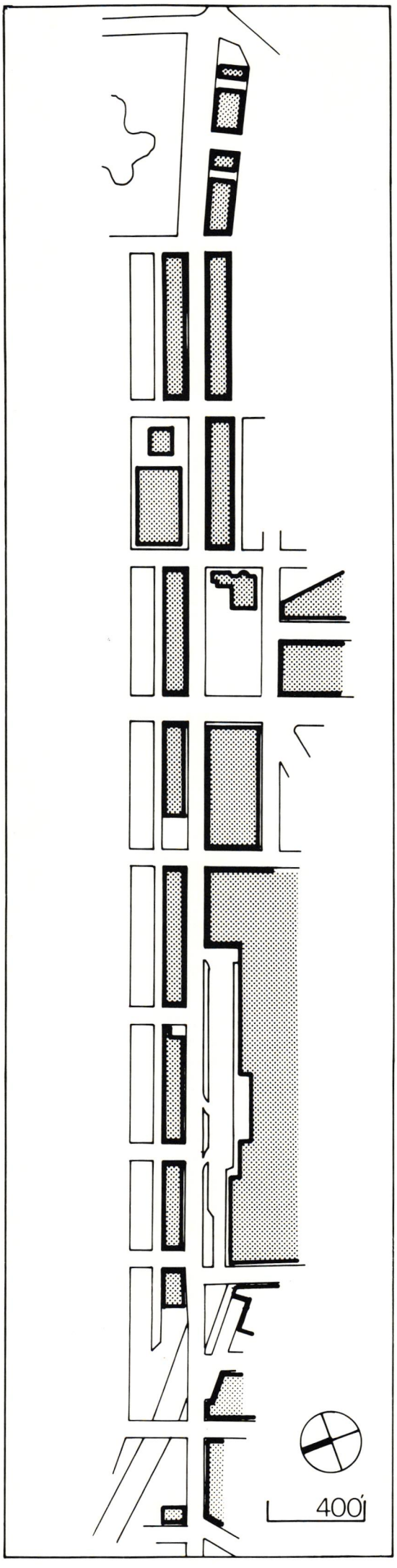
European streets which generate a large level of pedestrian activity, and particularly successful commercial streets, have in almost every case, a symmetrical form – the buildings on both sides of such a street are of similar scale and use. That similarity leads directly to a sense of balance. And that sense of balance seems to encourage uses and ambiences which generate a high level of human activity. Where a well-balanced, high-activity commercial street suddenly loses that balance, the level of human pedestrian activity abruptly declines. An example of this can be found in the changes that occur at the harbor end of the Ramblas, the most important walking street of Barcelona.

The Ramblas of Barcelona is justifiably famous around the world. From Plaza Cataluna at the north to some point near Plaza Real (south of the Opera House), an almost unbelievably high level of activity is maintained on the street at all times of day and night. It is a famous walking street, a *paseo*, a street to which people of all classes go in order to see and to be seen. It belongs to all of Barcelona, and in the summer to all the world. Its series of newstands, bird cages, flower stalls, and cafes make the stretch from Plaza Cataluna to Plaza Real very successful in its generation of human activity. This is undoubtedly due to a whole series of physical, cultural and economic factors. The width of the Ramblas compared to its height is one factor. Another is the relative narrowness of the parts of the street devoted to the automobile. A third is the very narrow sidewalks along the storefronts on the edge of the street. A fourth is the generous width devoted to the central walking portion of the street. A fifth is provided by the added definition of the space, volumetrically, by the overhanging trees along the street. A sixth may be its central place in the urban design of the city in that it is the single straightest path through the very dense and complicated Barrio Gotico part of the city.

Nonetheless, shortly after Plaza Real, all this sense of human activity immediately changes. Many of the above physical factors have remained and in fact the last portion of the street goes from Plaza Real to the edge of the harbor. One might think that this would be an important, often exciting, and certainly activity-generating part of the paseo. However, at a point immediately south of the entrance to Plaza Real, one factor of the six listed above changes, first ever so slightly and then in a more major way. First the edge of the east side of the street is slightly pulled back due to a small square which increases the distance between the central portion of the street and the shops on the street edge. Now this square is filled with parked cars. Some distance farther, on the west side of the street, some of the old buildings have been torn down and several new buildings have been built. These are set back from the street, they are taller than the five or six story norm, and they have been designed in a generally institutionalized Franco-governmental style. And here the high level of human activity suddenly stops. Fewer people walk down this portion; even fewer walk beyond here to the edge of the harbor. This change is caused in part by the change in the sense of balance between the two sides of the street.

In the United States, the analysis is somewhat more complicated due to the influence of the automobile on our street forms and on our commercial building forms. For example, any generalizations about the balance-lack of balance, symmetry-asymmetry of highway strip development is beyond the ken of this thesis. Likewise the role of the suburban shopping mall is beyond this thesis though one cannot help but note that the highly symmetrical and spinal nature of suburban malls, that result of careful market studies, shows a certain economic, if not physical, bias toward symmetrical spinal organization. Nonetheless in those commercial sections of our central cities where the pedestrian

[2] "Part One" of the thesis was an analysis of the asymmetrical spine form at the building scale by means of a specific proposal for a waterfront hotel in Boston. – ed.

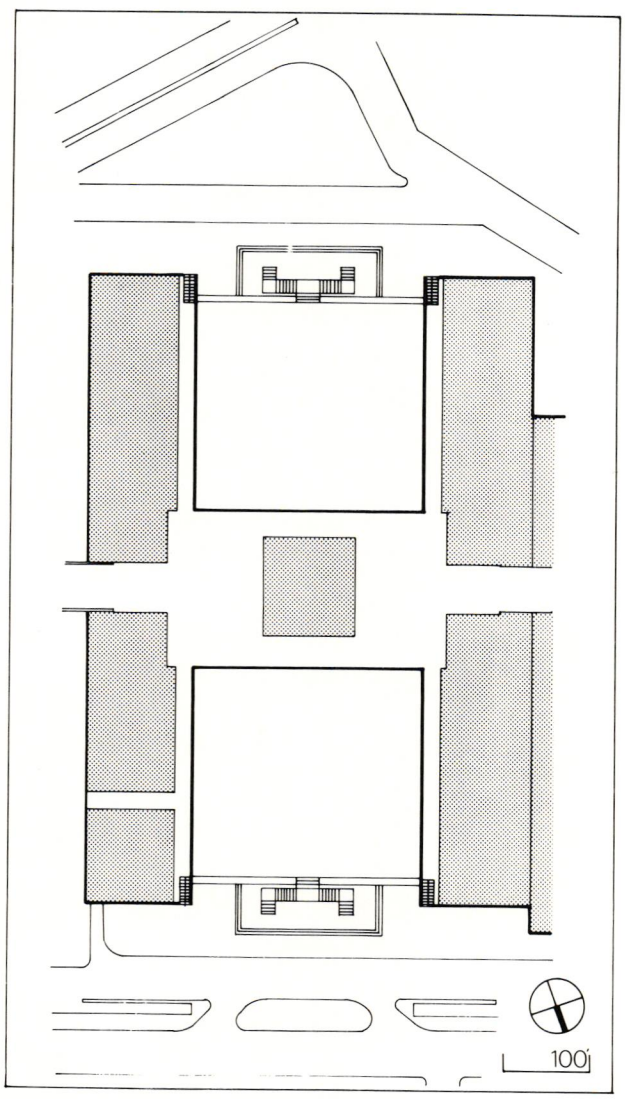


2 Area plan, Boylston Street, Boston
A Public Garden, B Copley Square, C Prudential Center

plays a major role, this tendency toward symmetry is very strong and those commercial streets which lose such symmetry often lose an important level of human activity.

An example of this factor can be found in the many changes that occur on Boylston Street, Boston. Boylston Street between the Fenway and the Commons has always been a major urban street in Boston. Traditionally it has been the major commercial street for the Back Bay. Major elements of the city including Copley Square, the Public Gardens, and the Boston Public Library abut this street. Yet today, physically, it is marked by a loss of any sense of place. Admittedly this is an almost metaphysical concept, but physically it is a very disorienting and inconsistent street.

Economically, this malaise is easier to see. Originally a street marked by strong commercial establishments, today it is full of parking lots, pizza parlors, fast food or fast sales activity. There is an inordinate amount of undefined open space along the street. As one travels eastward on Boylston Street from the Fenway, for the two blocks on either side of Massachusetts Avenue, the entire north side of the street is eaten away by the Turnpike. The street is one-sided here and very weak. Before Hereford Street, the Turnpike crosses under the street and destroys the south side of the street. The Prudential Center then extends for at least two blocks on the south side of the street. Strange drop-off areas, parking spaces, and up/down ramps occupy the important area immediately adjacent to Boylston Street here. In effect, the south side of the street is pulled away from the street. As a result, the north side of the street is weakened. Farther down the street, the institutionality of the Boston Public Library weakens the north side of the street between Exeter and Dartmouth Streets, for here on seemingly prime real estate there continues to exist a large parking lot. Likewise the institutionalized nature of an insurance company headquarters weakens both sides of the street immediately east of Clarendon Street. Only the block between Berkeley and Arlington Streets has an urban, well traveled sense of street with vibrant and successful shops. This is due, in part, because this is the only block with generally equivalent forms and uses on both sides of the street. Unfortunately the block facing the Public Gardens has been so adversely affected by its long-time designation as part of an urban renewal area



3 Site plan, the Prudential Center, Boston

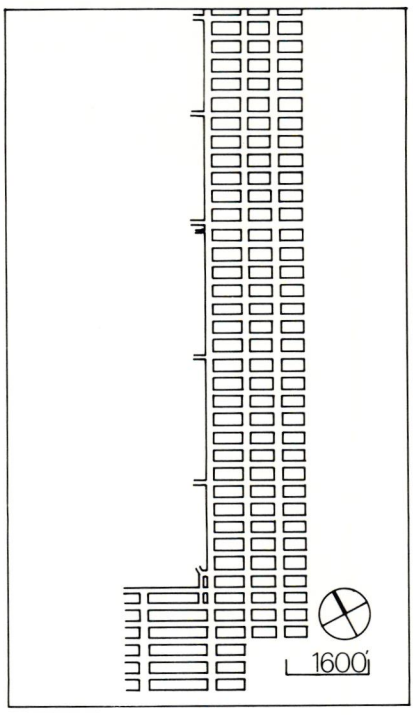
that it is unrealistic to comment on the effects of the Public Gardens on this block. Nonetheless, as a totality, the street is a physical and economic problem, and many aspects of this problem are directly attributable to the unbalanced nature of the physicality of the street.

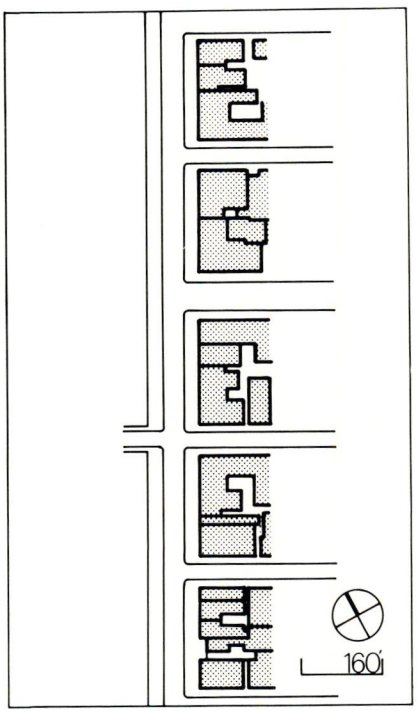
Likewise even at the scale of a large building project, the same issues emerge. For example, the two parallel commercial "streets" or "walks" in the Prudential Center between Boylston Street and Huntington Avenue are unsuccessful for reasons similar to the two urban examples cited above. The commercial level of the Prudential Center (one level off of street level and connected to the street by escalators) essentially consists of two, single-sided corridors (with stores on the "strong" side and a big glass wall on the "weak" side). These two corridors run parallel to each other on either side of the high-rise building. In effect, the corridors connect Boylston Street with the areas of the city near Symphony Hall, Northeastern University and the Massachusetts Avenue section of the South End. Given the way pedestrians could move from these outlying areas to the center of the city, these two corridors should be bustling with people at all hours of the day and night. Yet, to the contrary, these corridors are almost always empty. This is a physical fact. Also it is an economic fact. The Prudential Insurance Company has had continual problems renting out this space; rents are low; there are often empty stores; the more westerly corridor is now filled with more institutional business uses (e.g. stock brokers' offices). Normal retail stores find it difficult to survive. No doubt, there are a variety of factors for this condition. Yet given its natural geographic advantage and the huge economic potential related to the office building and the two hotel buildings, one of the problems is the single loaded aspect of these corridors. The strong side is straight and very continuous. The weak side has no inherent strength; instead it simply looks out upon a dull plaza. Besides being boring, the space has an unbalanced sense to it.

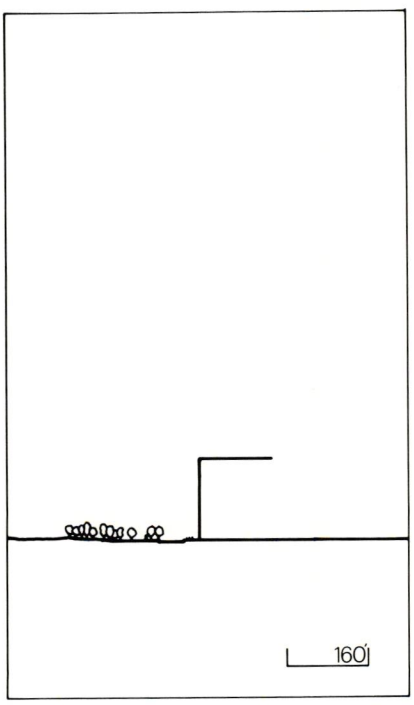
In the face of these generalizations and three examples, one could ask: Why even be concerned with the asymmetrical spine model? There are at least three reasons for such a concern:

1 The asymmetrical pattern is often presented by architects and planners as an important variant to

4 Upper Fifth Avenue, New York City
A Area plan, B Neighborhood plan, C Street section
5 Alamitos Bay Boardwalk, Long Beach, California
A Area plan, B Boardwalk plan, C Boardwalk section







4

the normal street and built-form patterns of the city. In part, this represents their attempt to consider a set of varied experiences for a cityscape rather than the normal, double-loaded street.

2 Such a form could become desirable as a response to a particularly important object or condition in the natural landscape. One would think that a city should respond positively to a specific natural edge condition such as an ocean, harbor, river, valley, gorge, mountain, of simply a vista. Yet, despite a natural human interest in such vistas, most cities fail to take advantage of such opportunities. For example, the city of Constantine, Algeria, straddles a very deep and spectacular gorge, yet the city turns its respective two backs to the gorge and instead faces its streets and buildings away from the gorge. The response of many American cities to their riverfront or harborfront settings often is similar. Thus the tendency to consider symmetrical streets as more important than fascinating vistas is very strong. But with the growing interest of our urban inhabitants in their natural settings, the asymmetrical setting will become increasingly important.

3 Such a form, the shape of a single-loaded corridor or hallway, has often been a feature of individual buildings, and since this thesis is applying the learning from the urban design level to the individual building level, this learning about the asymmetrical spine from the urban design scale becomes a necessary part of the process.

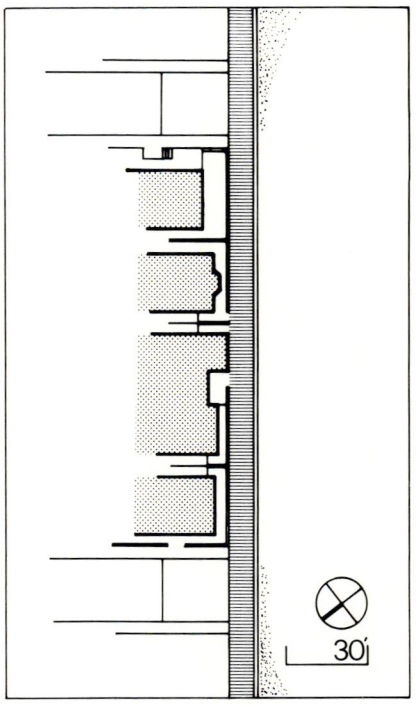
Exceptions to the above examples of unsuccessful asymmetrical situations can be found. There exist asymmetrical streets or spines which generate a successful level of pedestrian activity. The term "spine" has been chosen rather than "street" because spine can include linear paths of smaller dimension than a typical street. It thus becomes important to discuss those factors which produce or encourage a successful level of pedestrian activity within the asymmetrical spine pattern. Following are four examples which are successful in different ways:

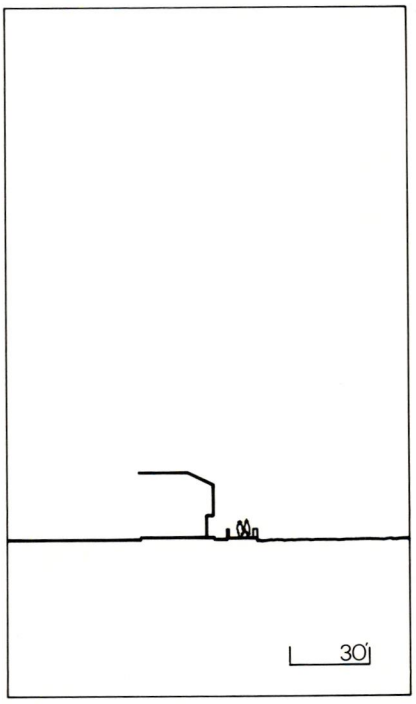
Upper Fifth Avenue, New York City
Upper Fifth Avenue is a well-known street. Though not a commercial street and admittedly quite

different from the Fifth Avenue south of 59th Street, nonetheless it is exceedingly vibrant and full of human activity. Here is a street which has no shopping and yet is always full of people. Some are walking fast with a strong sense of mission; others are simply strolling. It should be noted that the strong side of the street is marked by a series of apartment and hotel buildings often ten to fifteen stories high. The weak side, along the park, is marked by a set of factors of continuity. There is a high wall (seven feet high, too high to see over) running along the edge of the park. There are several rows of trees paralleling the street. There are periodic openings to the park but these usually occur every three or four blocks. Walking along this street, one is not really part of the park, except that the trees and sometimes the hills of the park can be seen over the wall. One knows that he is part of the street; one sees what is ahead and behind. There is a sense of balance. In effect, one does not feel he is about to fall off the edge into an undefined park setting, but instead he feels that he is part of a well-defined street setting.

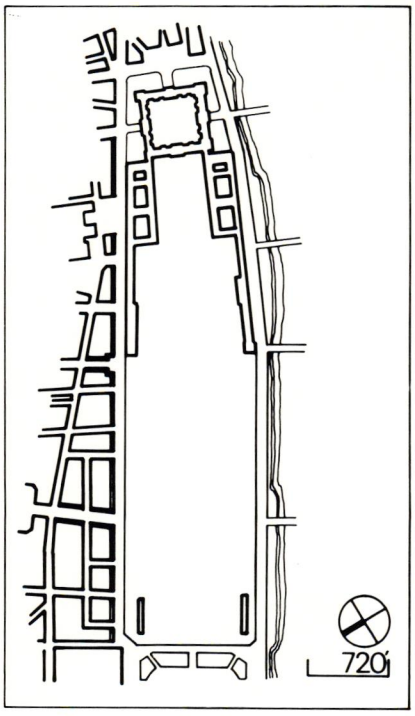
Alamitos Bay Boardwalk, Long Beach, California

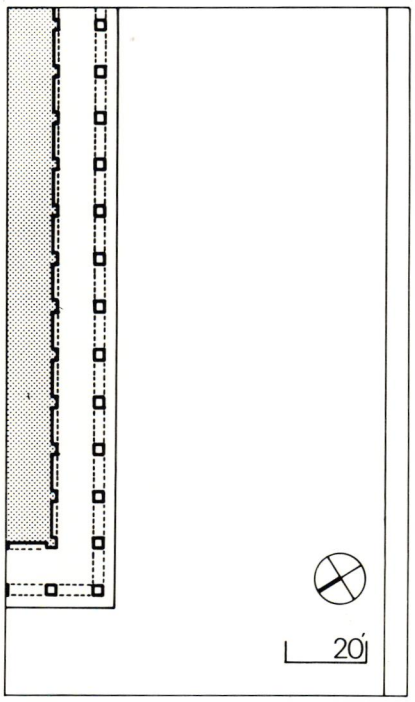
In this rather quiet, very residential section of Long Beach, a narrow peninsula is defined by three linear paths: (a) a cement walkway along the bay; (b) a four lane, slow-moving main street running down the middle of the peninsula; and (c) an older wooden boardwalk running along the edge of the ocean and its wide sandy beach. Unlike other places with this almost tripartite separation of streets, the edge street (in this case, the boardwalk) is the center of pedestrian activity. In fact, only the dead ends of the side streets abut the boardwalk; there is no possibility for "driving by" to see who or what might be on the boardwalk. And yet it is a very crowded street. And no commercial establishments are on the boardwalk; only private homes. All the houses are one or two stories high; there is an occasional three-story apartment building. And the boardwalk works successfully not only on hot, sunny, summer days but also on cold, foggy, and windy winter days. Some factors which contribute to this success include: the continuity of the edge of the boardwalk; the variety of elements on the strong side; the constancy of the railing on the weak side; the almost invisible but still felt volumetric forms of the ocean and the wide beach; the perpendicularity of the wooden boards of the boardwalk to the line of

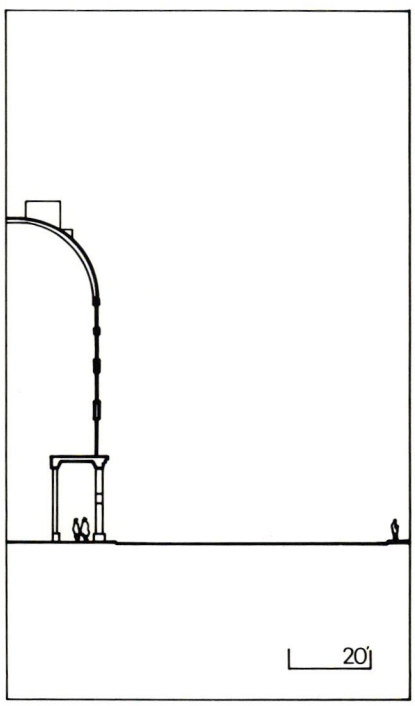




5







6 Rue de Rivoli, Paris
A Area plan, B Street plan, C Street section
7 Cafe fronts, Ibiza
A Area plan, B Cafe plan, C Cafe section

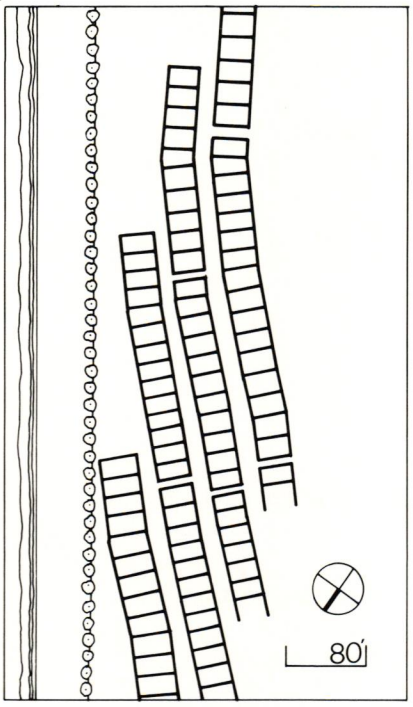
movement. These factors, pulled together, produce a very successful asymmetrical spine.

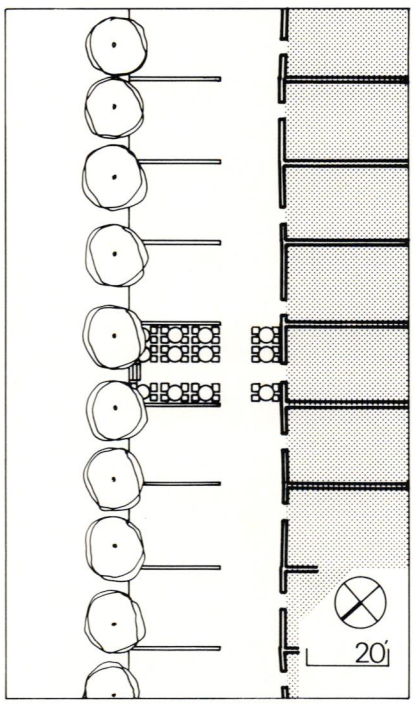
Rue de Rivoli, Paris

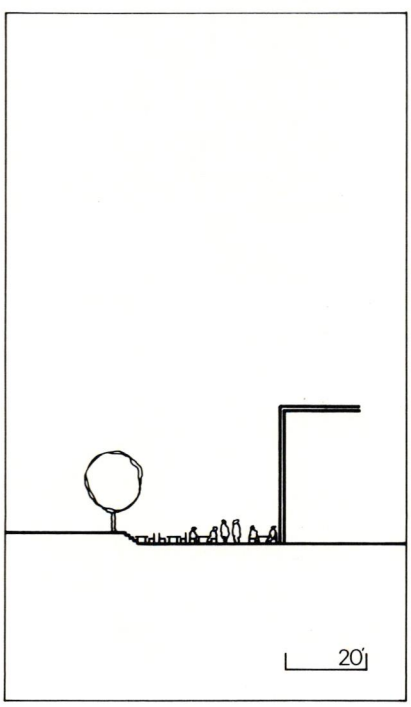
When one tries to think of major shopping streets in Europe which are single-sided, it is difficult to name very many. Yet always Rue de Rivoli comes to mind. This is due probably to two factors. One is the relation of the strong side of the street to the Louvre and the Tuileries. That relationship is marked by a certain sense of balance. The strong side of the street is first balanced by the Louvre as a built form; one might say that the trees and edge of the Tuileries also balances the built, strong side. Nonetheless, in other cities, buildings can face a park with the same balancing elements (e.g. trees, rail fence) and yet that street is not necessarily successful in our terms. Therefore, in this case, a far more important factor may be the nature of the edge on the strong side of the street, namely the arcade. And in effect, the success of the Rue de Rivoli with its admittedly very high level of activity, is due more to the arcades and the nature of the space within the arcades than to the relationship of built and unbuilt sides of the street. The arcades provide a continuity, a permeability, and a perpendicularity that is important. They also provide a sense of balance, a sense of edge that makes the path a pleasant one to follow. The arcade keeps the pedestrian from falling off into the dangerous and open space of the street, and in effect, substitutes for the lack of building on the opposite side of the street.

Cafe Fronts, Ibiza

On a very different, much smaller scale, is the set of cafe fronts facing the harbor in Ibiza. Ibiza, the town on the island of the same name, is an old hill town made up primarily of narrow little streets running parallel to the contours of the hill, with occasional paths moving up and down the hill. The streets parallel to the contours are the primary streets, and even as the town has changed today from a quiet fishing village to a bustling center of the international chic, the roles of the streets remain the same (only the numbers of people have increased). This set of streets comes down the hill to the harbor edge, in a rather undefined way (e.g. there is no continuous street along the harbor). Thus there is no sense of the *paseo* or evening walk along the harbor. Indeed, certain parts of the harbor edge are quite vacant at the same time that the inner







7

streets of the town are alive with activity. But there is one part of the harbor edge which is exceedingly active. This is an area, down three or four steps from street level, marked both by that level change and by a row of trees, and then further defined by a series of rows of cafe tables set in front and across the spinal path from the actual cafes. These cafes are very small (15 feet wide) and there are only three or four rows of tables. But along the cafe fronts is formed a small path. It is this path which is always full. People do not walk along the parallel path at the top of the three steps (a little closer to the harbor); they walk in this well-defined path at the building edge. Again, the level change, the continuous row of trees, the continuity of the tables, the perpendicularity of the storefronts on the strong side all give the pedestrian a sense of ease in an inherently unbalanced situation.

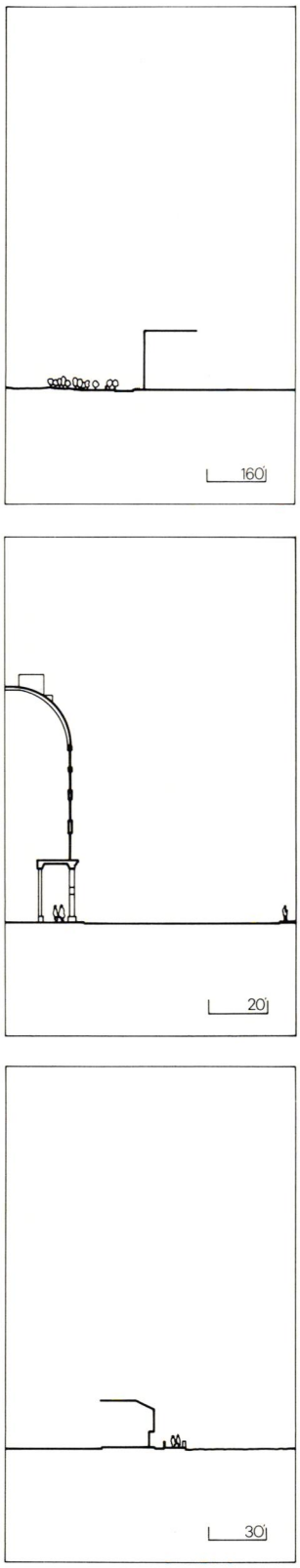
From this analysis, it seems that there are various factors which can help to generate activity or more particularly make people feel relatively comfortable along an asymmetrical spine. Of course, if a sense of comfort can be achieved, it is then much more possible to take positive advantage of site circumstances which in many asymmetrical situations can be quite spectacular. These factors include:

A Sense of Balance

It appears critical that the spine, in order to encourage human use, must have the sense of being balanced. The symmetrical spine, by definition, has this balance; the asymmetrical spine, by itself, is not balanced. There is a general sense that if human activity is to be encouraged, particularly in a commercial setting, a person must feel that he will not fall off the edge of the spine and indeed that as he moves from one edge of the spine to the other (or more reasonably, as he feels the sense of one edge and another), he has the feeling that he is continually moving between (and indeed almost bouncing off of) one edge and another. This balance is achieved in a variety of ways:

Relationship of Scales Somehow the scale of the weak side (meaning the less built side) must relate to the scale of the strong side (the built side). For instance, in the Fifth Avenue example, the trees of the sidewalk and more importantly the trees and

8 Street sections
A Upper Fifth Avenue, B Rue de Rivoli, C Alamitos Bay Boardwalk
9 Street sections
A Ibiza cafes, B Alamitos Bay Boardwalk
10 Neighborhood plans
A Ibiza cafes, B Upper Fifth Avenue

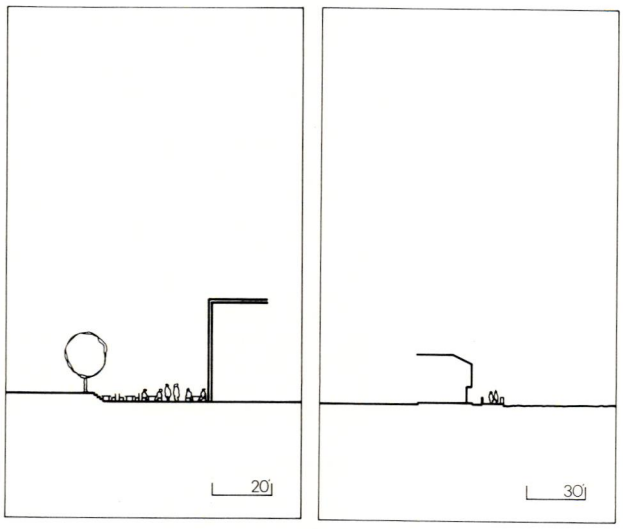


8

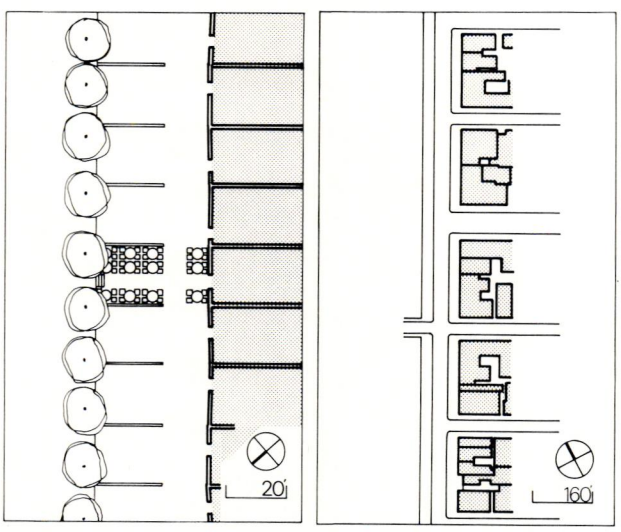
hills of Central Park begin to have the same scale as the buildings on Fifth Avenue. That balance at the urban design scale starts giving a clear definition to the street. Moreover in the Fifth Avenue example, the seven-foot high wall along the park edge provides a sense of balance at the human scale. In the Rue de Rivoli, the balance is direct (and in a sense symmetrical) in that the arches which form the street edge of the sidewalk are the same as the arches which define the store edges.

Sense of Edge The sense of edge has a potentially fascinating effect on scale. In the Alamitos Bay example, the weak side edge is well defined by the continuous 29-inch high wall. But in addition to the definition of the spine, in effect that edge starts to define the volume of the beach. Though the beach is huge in comparison to the houses, in a sense the positive volume of the houses begins to be balanced by the necessarily larger negative volume of the beach. Walking down the boardwalk, one can feel secure, balanced between the built-defined houses on one side and the edge-defined beach on the other. (The edge condition and volume of the beach is made importantly more defined by the fact that it has two well-defined edges, the boardwalk wall on one hand and the water's edge and resultant crest of sand near the water's edge on the other hand.) A similar set of edge conditions provide balance to the Ibiza cafe fronts. The buildings on one hand are well defined; the open space occupied by the tables and the low wall form a negative volume which is well defined by its edges on the other. In a sense, here in concert with the trees, a volume is created out of the negative space which is narrow and tall, much like the positive volume of the buildings.

Continuity of Form on the Weak Side
In all these examples, there is a clearly defined edge on the weak side. In this case, I do not refer to the edge defining a balancing of volume discussed in item one above but instead I refer to a simple, direct edge, a sense of enclosure, a sense of something to "bounce off of" in order to move back to the other side of the spine. To do so effectively, the edge must be continuous. On Fifth Avenue, it is a very tall, seven-foot high wall; at Alamitos Bay, it is a very thick and heavy, able-to-be-comfortably-sat-upon low wall; on the Rue de Rivoli, it is the arch system separating sidewalk from street; in the Ibiza cafe front location, it is the placement of tables and



9



0

chairs which gives definition to the edge. The continuity of edge not only gives it the strength to be a symbolic edge but also it gives it sufficient definition to form a real edge (in the real experiential sense of walking down the spine and having a physical edge). Consider the different experience if these were a constantly changing set of edges (e.g. if the boardwalk had a large variety of different low walls instead of one strong image of wall). Likewise, consider if the Central Park wall were made of many different materials, some opaque, some transparent, some short, some tall. At a slightly larger scale, the sense of street of Fifth Avenue would be similarly destroyed if each crosstown street penetrated the wall of Central Park, a circumstance which would again break down the necessary strength of continuity on the weak side of the spine. Likewise the continuity gives the weak edge sufficient strength to begin to balance the stronger side of the spine.

Built Form on the Strong Side Perpendicular to the Spine; Penetrability yet Continuity of Sense of Mass on the Strong Side

The built forms on the strong side of the spines analyzed above are clearly perpendicular to the direction of the spine. This perpendicularity is defined in different ways, in ways that accentuate the divisibility and differentiation of the various elements. Examples include slightly different sizes of buildings (Fifth Avenue), slight separation of similarly scaled buildings (Alamitos Bay), the clear definition of different entrances (Fifth Avenue, Ibiza cafe fronts). Yet in all these cases there is a continuity of the sense of mass on the strong side. In short, there is a discontinuity of the individual elements yet a clear continuity of the sense of the whole.

Likewise this continuity yet differentiation implies that each element is somehow penetrable. They may not all be public spaces, but in their appearance with doors and activity, there is the sense of the strong side of the spine being penetrable. In the Fifth Avenue example, the sense of penetration is further enforced by the constant repetition of the entrances to the crosstown streets. With regard to penetrability, imagine the opposite condition in the built form of the strong side if it were a long continuous singular wall. To walk along such a wall would deny a person any sense that the built form were anything but a wall, and the strong side of the

spine would simply be a wall rather than a discontinuous and penetrable street edge.

Elements in the Spine Perpendicular to the Path

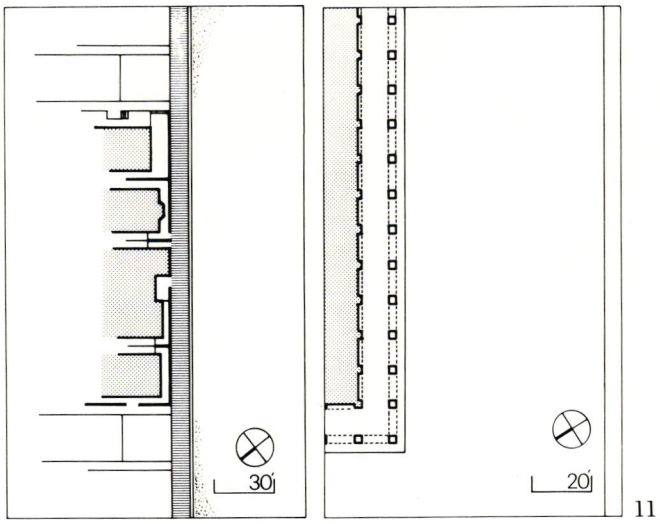
While the spine itself has a very strong direction, in most of these examples there were clear elements in the spine which break up that long path and give the participant a sense of progress along that path. Examples include the 2×12 board perpendicular to the boardwalk path in Alamitos Bay and the arches along the Rue de Rivoli. At the larger urban design scale, the very clear penetration of the space by the rapidly occurring crosstown streets plays the same role on Fifth Avenue. In a sense, these elements act just like the continuing sets of storefronts or doors or buildings which mark a person's progress on a symmetrical, double-sided street.

Definition of Vertical Corners of the Spine

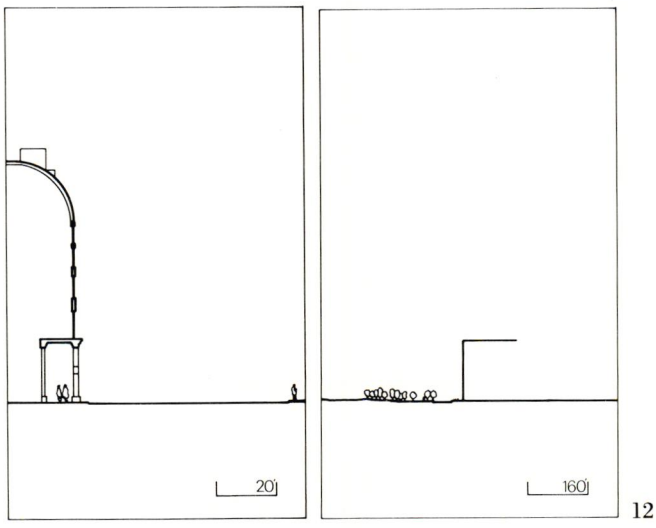
This element of a well-defined set of vertical corners to the volume of the spine arises directly from the clarity of the edge condition which has already been discussed in two related ways in item 1 (definition of volume of negative space) and item 2 (continuity of edge to give it strength) above. Likewise, the clarity of the edge of the weak side and the continuity of edge of the strong side clearly defines the vertical edges of the volume of the actual occupied spine. Sometimes that vertical edge is itself built (Rue de Rivoli); sometimes it is clearly defined if not quite built (trees along Fifth Avenue); and sometimes it is implied by the clarity and continuity of the edge (wall of Fifth Avenue, low wall of Alamitos Bay). In all cases, it further defines the spine and makes movement along it much easier. Consider how undefined such a spine would be, in the volumetric sense, if there was no edge to the weak sides of any of the spines analyzed here.

Continuation of Part of the Form from a Previously Balanced, (and often Double-Loaded) Condition

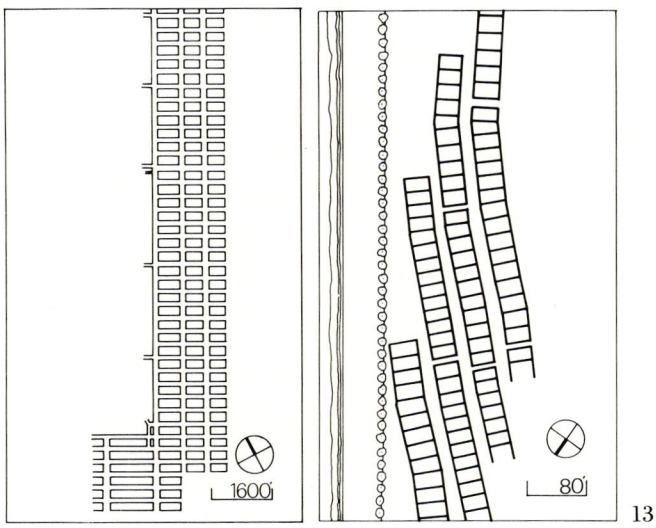
Another way of improving the sense of volumetric continuity and the sense of continuing a sense of balance in a less balanced setting occurs when the asymmetrical spine is a direct continuation of a previously symmetrical spine situation. Upper Fifth Avenue is a continuation of Lower Fifth Avenue, a generally symmetrical spine; the memory and clear association with the other end of the Avenue can be powerful. Likewise, the Ibiza cafe front area is a



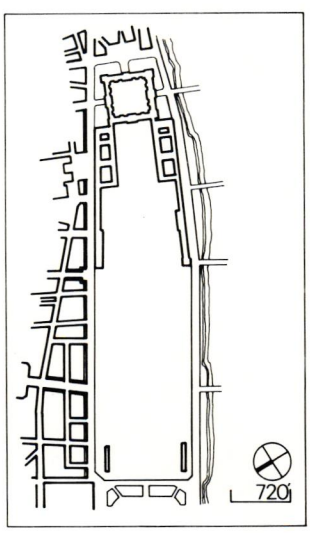
11



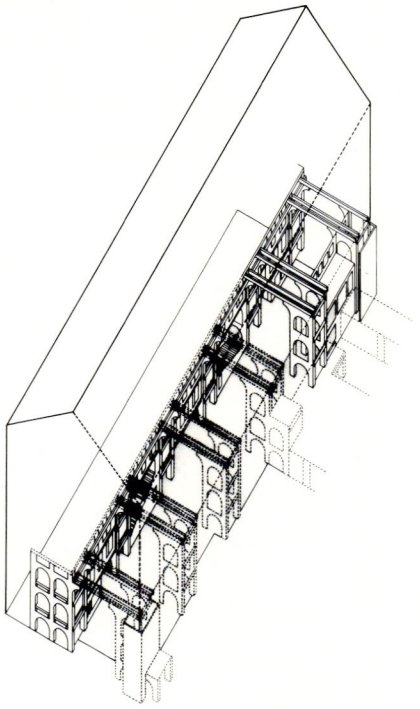
12



13



11 Street plans
A Alamitos Bay Boardwalk, B Rue de Rivoli
12 Street sections
A Rue de Rivoli, B Upper Fifth Avenue
13 Area plans
A Upper Fifth Avenue, B Ibiza Cafes, C the Tuilleries
14 Axonometric view of proposed waterfront hotel, Boston, Massachusetts. William L Rawn, III, January 1979



14

continuation of a narrow and well-defined two-sided street (with similar five–six story buildings) and that associative aspect of the asymmetrical spine with its symmetrical predecessor is a part of that spine experience. On an urban design scale (and thus more related to the experience of the street rather than the experience of the arcade), the Rue de Rivoli itself is single loaded opposite the Tuileries, yet farther to the east, opposite the Louvre, that street has a symmetrical setting.

When considering the design of an individual building and developing a set of typologies for such a building, the sources of learning about those typologies are varied. In this case, I chose one set of typological sources: sources from the urban design scale. The varieties of organization and the generation of design from such organization is, of course, infinitely more varied at the building scale than at the urban design scale. For example, the major constraint of street making, the accommodation of transportation, is a more minor constraint at the building scale and in fact circulation patterns can be incredibly varied at the building scale. Nonetheless, in the case of asymmetrical linear paths, there is much to be learned from the urban design scale. The patterns of successful accommodation to this form at the urban design scale can, I think, have major impact on the success or failure of the asymmetrical spine at the building scale.

In addition, with specific regard to the asymmetrical spine, there is a general bias in favor of such a form at the building scale. The hatred of double-loaded corridors and the love of the single-loaded variety is but the most obvious example. Yet even the most recent history of architecture abounds with dreadful examples of single-loaded corridors. Perhaps the nature of that asymmetry has not been considered seriously enough. Perhaps opportunities have been lost in the almost blind pursuit of the single-loaded prototype.

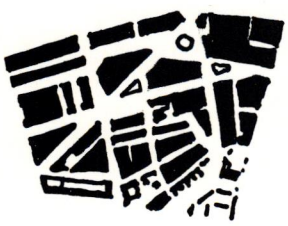
Thus this thesis does not attempt to evaluate all typologies which might apply to asymmetrical spines at the building scale. But it does attempt to be very complete in its consideration of those factors which can be learned at the urban design scale and applied to the building scale for this typology.

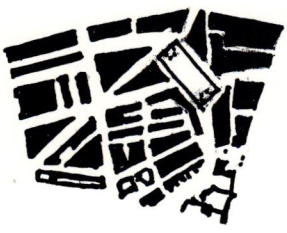
This application of experience from the urban design scale to the building scale is even more important in the design problem presented in Part One. For here, I have designed a very public, very populated mixed-use facility. Thus the factors which encourage a high level of pedestrian activity at the urban scale might very well be the same factors encouraging such activity in a mixed-use, urban building. The integration of a wide variety of public and semi-public hotel uses in the same building requires even more care in this regard. Also, given the nature of the spine in this design solution and the formal possibilities of "streets" and "buildings" within the building become even more analogous to the same objects at the larger urban design scale.

Moreover, the investigation of this typology, through the device of designing a single building, might shed new light on the typology itself. This investigation has certainly focused attention on the issue of scale in the asymmetrical spine situation. It has focused attention on the various types of continuity and discontinuity found on the strong and weak sides of an asymmetrical spine. The design has attempted to resolve some of these issues in order to make a more lively, more used and more usable street and public space. Indeed the design has focused attention on the careful planning and design of the public space of a building in a way which hopefully can provide for a more intriguing public experience in that building. Perhaps in this way, an inherently asymmetrical spine can develop some of the positive aspects of the symmetrical shopping street and yet retain the advantages of light and vista inherent in its asymmetrical setting.

"Urban Architecture: The Park Square Sketch Problem"

A public discussion of urban architecture based on sketch proposals for Park Square, Boston, prepared by architects and student teams in a period of twelve hours, November 3, 1978.





Date: November 4, 1978

Location: Sanders Theater, Harvard University

Sponsor: The Harvard Architecture Review

Designers: Diana Agrest
Edward Larrabee Barnes
Charles Moore
Steven Peterson
Harry Weese

Critics: Edmund Bacon
Robert Slutzky
Anthony Vidler

On November 3, 1978, five distinguished designers convened at the Harvard Graduate School of Design to address the problems of urban architecture. Assisted by Harvard students, each designer was asked to give new coherence and character to an historically prominent but presently forlorn area of downtown Boston known as Park Square. The following day, the designers shared the stage with three noted critics when they presented their sketch solutions to an audience of 600 students and practitioners at an afternoon symposium in Harvard's Sanders Theater. An edited version of the symposium transcript is reproduced here, followed by our own thoughts on the lessons and importance of this exercise for the theory of urban architecture.

The Park Square site is a point of intersection for Boston's varied city fabric, and an area of extremely rich architectural imagery. Within Park Square, the theater district meets the business area, the "red-light" district borders the commercial zone, and socially disparate neighborhoods converge. Each of these areas is composed of identifiable building types, making the site the meeting place not only of a variety of functions, but also of a variety of built forms. In addition, four major avenues, each spawning an intermediate grid of smaller streets, end abruptly at Park Square. It is one of Boston's most intense intersections of street patterns, building types, and urban functions.

The site is bordered on the west by a high-rise business district built in the 1930s; on the north, by an urban park, the Boston Common and Public Garden; on the east, by deteriorating commercial and entertainment districts; and on the south, by a low-scale, high-quality residential neighborhood called Bay Village.

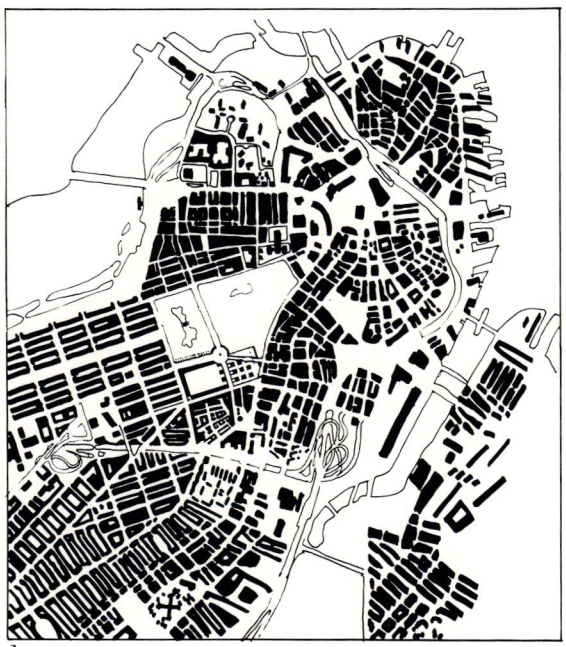
Park Square today has a seedy look that obscures its numerous excellent buildings and urban experiences. It is a mixed bag of buildings: colonial houses, converted rowhouses, nineteenth-century commercial buildings, and twentieth-century bus stations and luncheonettes—all of which have been deteriorating throughout most of this century. But Park Square is potentially one of the most exciting areas of Boston, and an area, it was felt, in which designers could find both the stimulus and freedom to experiment with urban form.

Vidler: . . . I must say that it's one of the few public symposiums, and I've been to a lot in the last four or five years, that I genuinely regret not being able to publish in *Oppositions*.

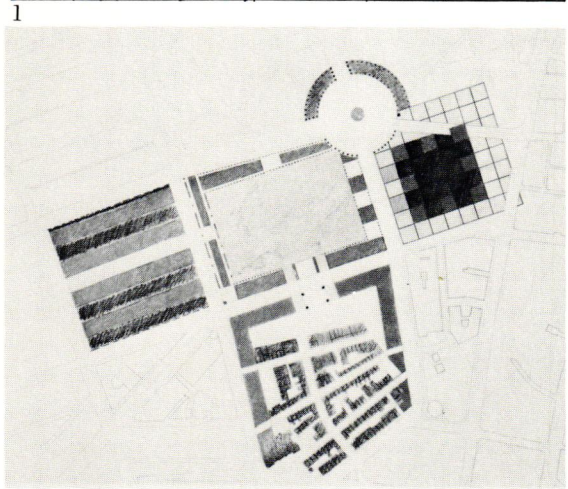
Moore: I guess it's worth noting that what we've tried to do here the last couple of days is really two things; one is to provide for an issue of the *Harvard Architecture Review* which presses us towards taking polemical stances even when we don't know where to put our feet – and making something that will resound, hopefully, through the pages of that periodical. I use the word periodical loosely. The other thing we're trying to do, as others have eloquently put it already, is to come up against a real problem with a set of people interested in doing that with us. The real problem in this case was part of Boston which was really daunting when we went to look at it and not because anything was specifically wrong with any of the shapes we saw – because they did or did not have historical reference or whatever – but because it was uninhabitable. It doesn't have any comfortable places for people to be – the people who are there look miserable in the heat and/or cold, suffering from the bus fumes and from a general agoraphobia that comes as much from their not belonging there as from the spaces being too big. So the natural architect's impulse to improve the situation by making the spaces bigger and better – brings one up short pretty quickly.

Diana Agrest

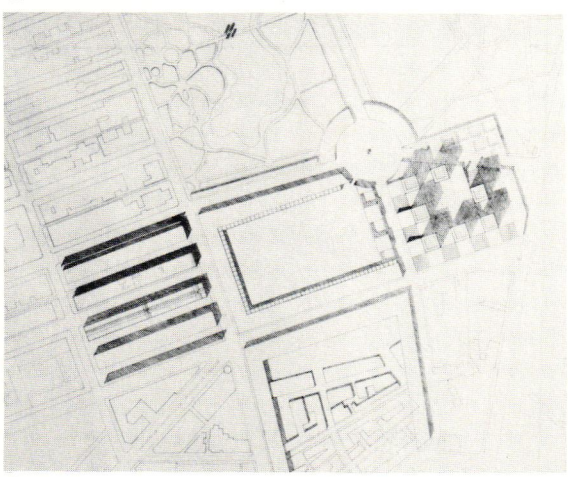
student team: Chris Cirgenski
Elizabeth Counihan
Phillip Eagleburger
Jo Landefeld



1



2



3

Agrest: I saw this problem as one of an area which, lacks definition. The definition that the area lacks is really a problem of its not having any edges or form of containment which define any of those areas which comprise it. My first thought was this; limiting the intervention to Park Square proper, – it was not very clear as to what Park Square was anyway – would not be the proper kind of intervention. So as architects are always omnipotent, I tried to go a little bit further.

The second thing I thought was that, together with being nondefined space, this was a space of intersection, or the potential of intersection. All different types of buildings old and new, and different traditions in the city of Boston, seem to intersect there, creating that climate of confusion. So I thought I would create a space of intersection, a space which would really symbolize, in a sense, the whole history of Boston, and this would also contain and define the area. I did the figure-ground plan in order to see the relationship between this area and the rest of the city. You can see then in the larger plans that my intention was to bring together all the different typologies and articulate them through a central space, and that these types would bring one part of the history of Boston and would be transformed into the next one. So what I did was erase much more than my friends here have erased, including the Statler Hotel.

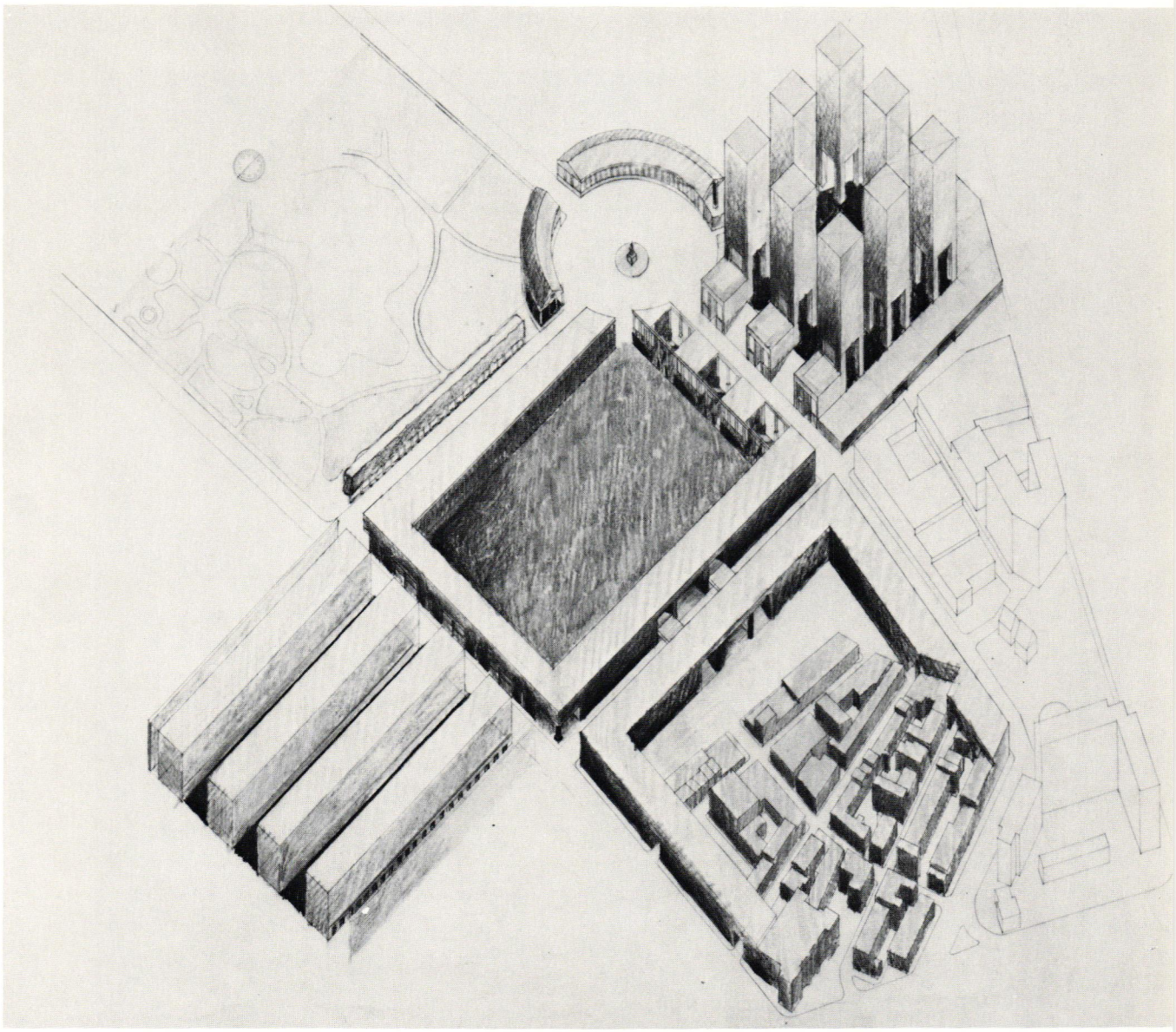
I emptied that square completely. I enclosed this very nice area, Bay Village, with a wall, a wall building, which would really define it. I kept the Park Square Building, an arcade building, and I replicated it three times – not exactly as it was, but a building of that type. This would create a whole situation of urban spaces, both inside and outside. All these arcades then penetrate through gates to the square. In the third square on the right I left the edge of the Common and the diagonal street. [Boylston Street – ed.].

Each of these blocks represents something that I'm leaving and something that's being transformed. In the first case I take a building type that generates a space, the arcade building; in the second case I leave a fabric which generates another type of space, the wall building; and in the third case I leave the urban structure that would modify this block.

1 Plan of Boston with Agrest's scheme for Park Square
2 Agrest's Plan
3 Agrest's Roof Plan
4 Agrest's Axonometric: neighborhood of Bay Village at bottom

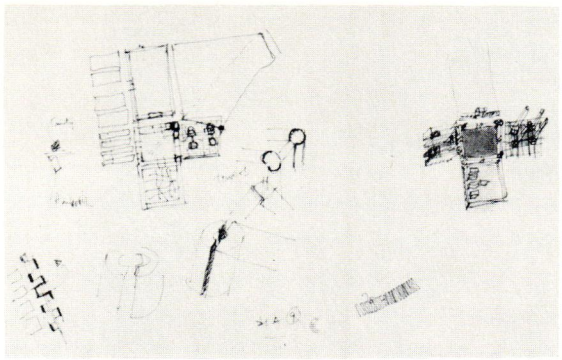
As I show in the axonometric drawings, I put a set of towers in order to create a dialogue with Trinity Church and the Hancock, and with the towers that appear downtown. This becomes a transformation from the old sort of commercial area and the Prudential Center, through this space, into the downtown area. At the same time I maintain a relationship of scale to what is the surrounding area of Back Bay, Bay Village, and Beacon Hill.

The large square, a space which is empty, is really the space where all these intersections come together through a scale which will relate all those different areas. The continuous arcade which surrounds the space is treated in a way which is modified so that on each side, it is dealing with different conditions. It is an alternate arcade – it works as a one-sided arcade to each side, only at the center is it broken. On one axis of the large square the arcade is all the same; there are no doors marked on the outside, because this axis deals with the element of repetition which has to do with the modern Boston, with modern types repeated. Whereas on the other axis, which has to do with old Boston, there is a more symbolic arcade with large gates. There are stairs through those doors so you can cross up and over the street on bridges and go down again. Or if you come via a sidewalk, you can



4

5 Agrest's Design Sketches
6 Agrest's Axonometric: Boston Common at bottom



5

enter straight through those gates.

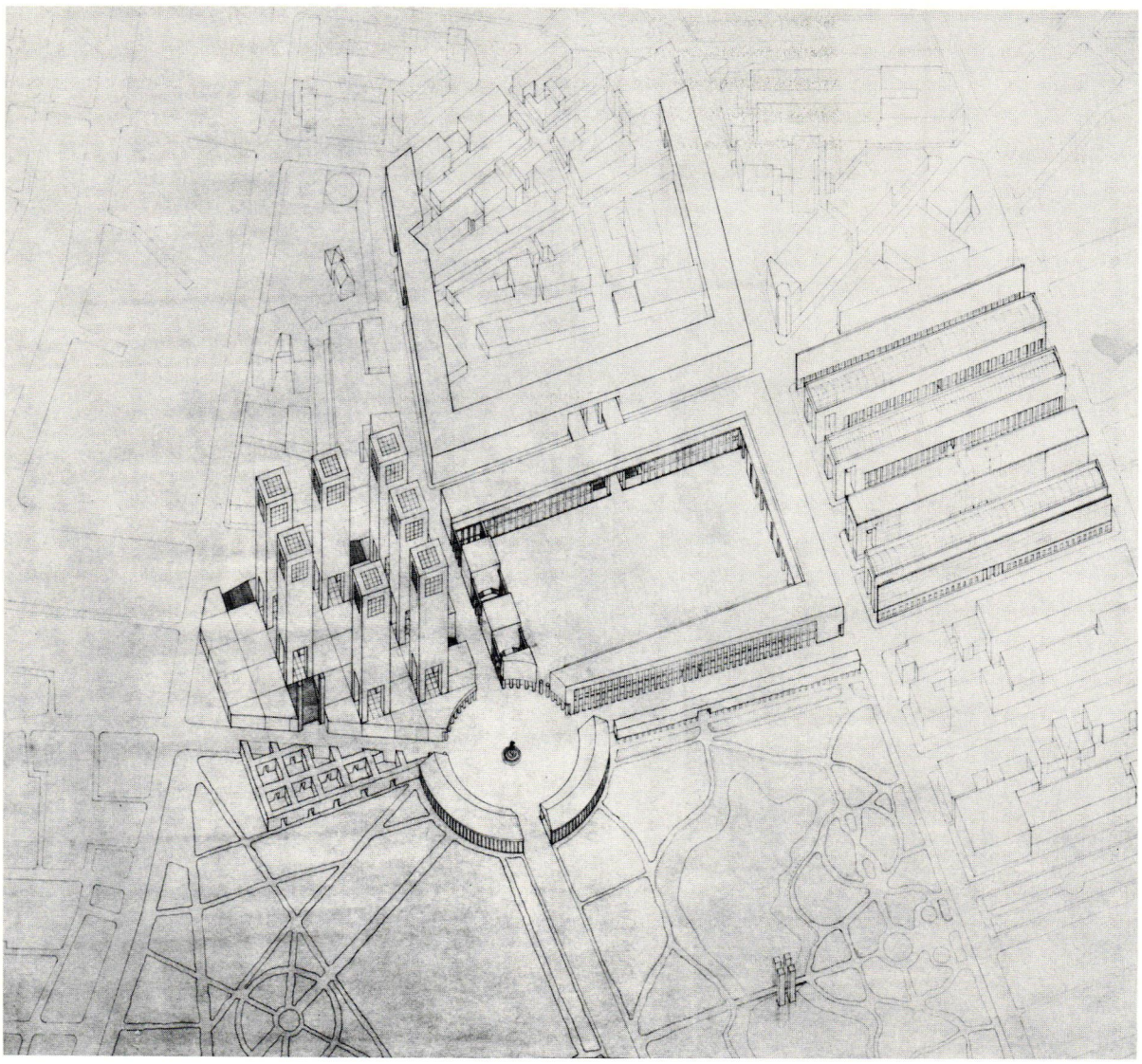
These towers, with elements like a set back that play with a lower scale, create again a set of edges which are penetrated but still define the area. The towers are set on a base two stories high which is all stone to play with the context. The towers themselves are a sort of Citicorp type; they are on high columns so they create a double arcade – one of the megastructure, the big scale, and another lower one.

These strange elements in the circular area are an homage to Boston. This curved element is like the Quincy Market buildings only bent, and the Lincoln statue is now there in the center. So I'm creating a double center, one here in the large square and this other displaced, pointing to the end of Boston.

As you see the sense was really to create a set of urban public spaces, conditions, of different natures – street arcades, squares, doors, plaza, trying to really re-read the city of Boston and transform it, incorporating the elements of modern types.

I think that this is about what I would say – Oh yes, the program – I have so many things that you can really put in anything you want.

If the critics want to know about the program, I'll tell them. Thank you.



6

Comment:

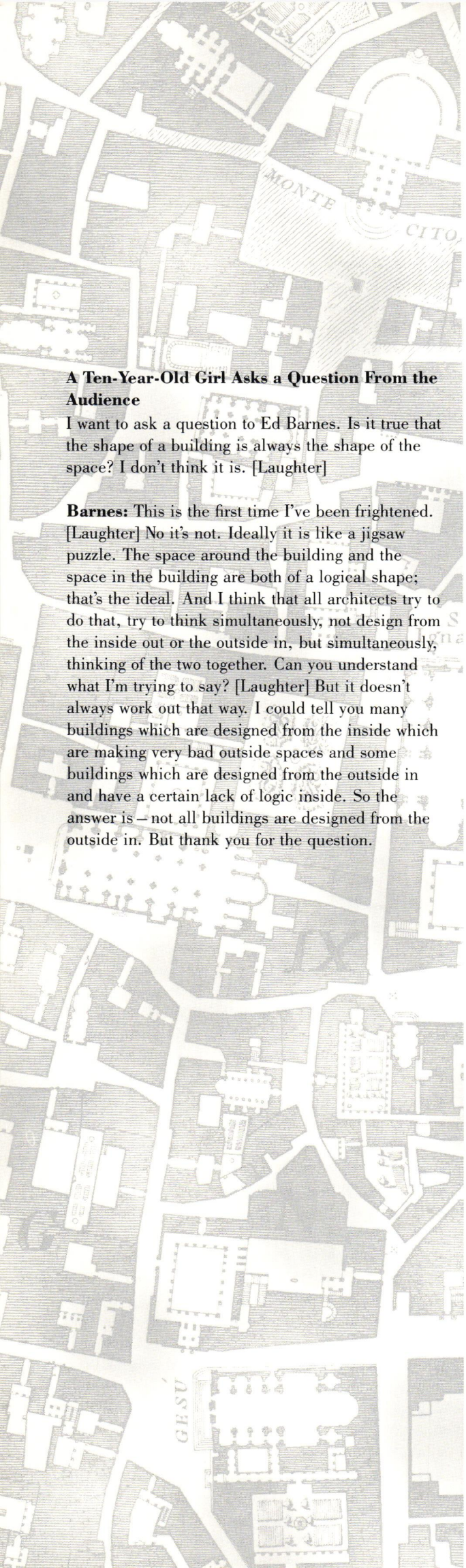
Bacon: . . . I think that Diana did something extremely valuable by presenting this drawing of the structure of the greater part of Boston. She derived fundamental concepts for what she did from the larger picture, and not from a viewpoint of the specific site given. Her response to this greater structure is of course very different from everybody else's. . . .

Slutzky: . . . What I find particularly enchanting about Diana's scheme is that it is, in fact, architectonically, an extremely powerful form which acts as a foil to the park, and as a foil to the residential section. What I find annoying about the scheme is the location of that circle, which somehow diminishes the strong possibilities of making the Boylston section facing the Common a portal to that inner cruciform intersection. I find annoying also that one of her towers actually straddles, what is it, Boylston? She proposes that the northeast tower in fact conclude itself smack in the middle of Boylston. I find that a very curious device – it's something which erodes the idea completely. She had a little sketch which showed four towers instead of eight towers, and avoided that problem; that's probably the scheme I would have chosen to develop. . . .

Agrest: . . . It seems to me that making a criticism of the Modern Movement doesn't necessarily imply to go back to what was before. Everything that has happened including the Modern Movement, is part of our history. And I don't think one can erase it and go back; rather it seems to me that it's a question of establishing a more dialectical relationship . . . between the old and the new, the past and the modern. In my view, to take the historical past means not to mimic or replicate what was done but to learn from some conditions or structural relationships that could be interpreted and transformed. Combining the lessons of the historical past with those of the more recent past which was that of the Modern Movement, one could correct something which in my view was the big problem of the Modern Movement – the dissolution of the urban fabric and the dissolution of public spaces.

One should also consider that there exists now a scale of building that has no precedent. And it seems to me that one should tackle the issues of urban design at the scale with which one has to deal with it. There is an urban tradition, even in this city, of a certain large scale. And that scale is one that I'm interested in because it's a hint of a direction that one could follow. This large scale is similar to that of Haussmann's Paris. And even here in Boston the development of the whole Back Bay area has an enormous scale; there is an enormous amount of repetition. It's one type of block; there is no picturesqueness in that development and yet there's an enormous richness in it, given by an architecture which responds to urban conditions. Another example is that of Place Vendôme which is an enormous space. If you'd seen it in a drawing it would be very disappointing. We would never believe that that space could ever work and yet it does. I think that this kind of scale is one that could be thought of or considered and, I repeat, not mimicked, but taken as a reference, together with other elements, for a possible transformation. I want to make this point clear because it's really where I stand – one can't go back to the past. The past is the past.

Bacon: . . . You can run all these designs through your own mind to see whether they give leeway or space for other creative designers to come in and build on what they start, and carry forward the energy that the designers put there, reinforce it, strengthen it, and make it better. Diana's would present very serious problems in this regard. I think that hers could not be done at all, except with a tremendous clearance of an enormous area at one time . . .



Edward Larrabee Barnes

student team: Paul Couillard
John Reimnitz
Eva Siu
Brooks Washburn

A Ten-Year-Old Girl Asks a Question From the Audience
I want to ask a question to Ed Barnes. Is it true that the shape of a building is always the shape of the space? I don't think it is. [Laughter]

Barnes: This is the first time I've been frightened. [Laughter] No it's not. Ideally it is like a jigsaw puzzle. The space around the building and the space in the building are both of a logical shape; that's the ideal. And I think that all architects try to do that, try to think simultaneously, not design from the inside out or the outside in, but simultaneously, thinking of the two together. Can you understand what I'm trying to say? [Laughter] But it doesn't always work out that way. I could tell you many buildings which are designed from the inside which are making very bad outside spaces and some buildings which are designed from the outside in and have a certain lack of logic inside. So the answer is – not all buildings are designed from the outside in. But thank you for the question.

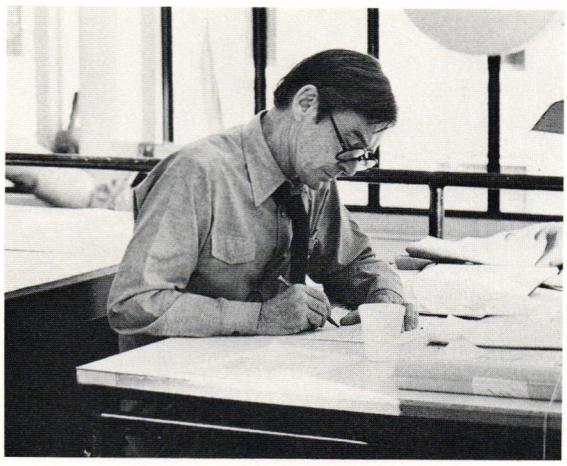
Barnes: I feel very guilty following Diana. She took down the Statler Hotel but I kept the Howard Johnson's. I think this was an extremely difficult site if you took it, as I did, that our job was to weave into the fabric of the city as if you were mending a torn blanket. That weaving of a new form into an old context, interests me very much. I think it's what's badly needed in urban design these days.

I found this site absolutely impossible when we first looked at it. Ed Bacon said it was the first site he'd ever seen in his whole life that he didn't have an immediate preconceived idea of what to do. I had exactly the same feeling. However, let me explain to you what we're doing here.

The space that we were given, I felt, was too large. I compared it with the Boston City Hall space, which I think is too large for use. When a space gets very large it becomes more difficult to define, and it lacks human scale unless you're presenting May Day parades or Lenin's tomb or something like that. But normally, those big spaces are difficult to use. I thought that Boston already has one such space, and that it would be more interesting to break this one down. Therefore it followed that something had to be put in the middle of the site to divide it into smaller areas.

Our job then, as outlined by the program, was to unify three neighborhoods. The three neighborhoods were the business community, a residential community, and the theater district. We were given diagrams showing the three zones impinging on a common space. And the implication was clear that they all should mix in the space, just as Diana showed you. Thinking it over, it seemed to me that one didn't have to take that point of view especially if you wanted to break the spaces down into smaller spaces. You could say, for example, that the residential community would prefer not to have the tourists milling around with them and would like to have a slightly quieter space.

So I have taken the view that it didn't bother me that the parking garage divided the central space and in some way defined its uses. I have kept the existing parking garage and added on to it another building which is a "point of arrival," a bus arrival point. I'll explain later. We came up then with three triangular spaces and the entrance space, all of them relatively tight. The entrance space probably has a fountain



7 Barnes's Plan: business district at left, residential community (Bay Village) at bottom, theater district right, Boston common top

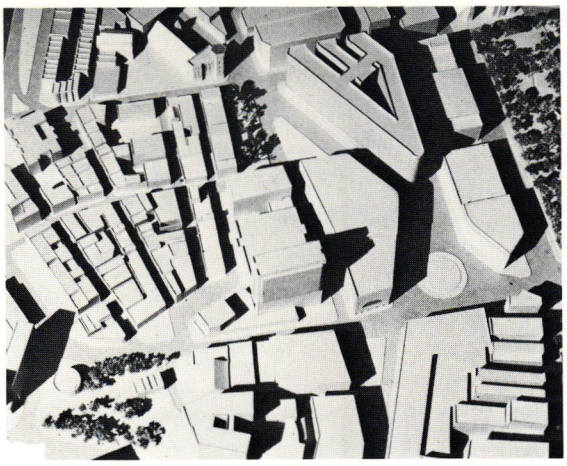
in that center, and a narrow gate to the park. Considering the park facade, I felt that we had a debt to the framing of the park, and didn't see any reason to destroy the park frame. I felt that we should narrowly break through Boylston Street and then open up inside with that first triangular space, an arrival point. Head on is the bus station and an information hall and so on.

Going through the corner of that space you'd enter the next triangular space which is a funnel-shaped arcaded space, arcaded on each side, leading to the theater district. The third space, near the armory, leads into the residential community. And I've added one more housing unit there, which is to mask some very bad fringe conditions, and, set back, so that you'd see that Victorian armory. The scale of the Victorian armory is small and it seemed to me that we should try in the second square to come down to domestic scale at least on that side.

But why these triangles? The city is an intersection at this point of two grids – one, I understand, the Back Bay grid and one generated by an old railway. So you have this slicing of spaces, and a somewhat interesting leakage in these squares, all the spaces seem to leak out the corner, rather a medieval kind of exit, instead of the Renaissance central entrance. I found this rather interesting spatially, that you could put triangular spaces together, maintaining the long Columbus Avenue vista and traditional street pattern. Even though you had divided the site up into three triangles, you still had, at least in your memory, and perhaps in the vistas, an underriding idea for the whole neighborhood – slippage of triangles and entrances from one into the other.

We created the first square, as I've said, by developing an entrance from the park. We kept one of the buildings which had an angle, and angled the edge of another building so that as you approach, you see in. And then in the square there is the existing parking garage and the Howard Johnson's. In adding on to the parking garage, we used soft corners exiting from this square, picking up from the Statler Hotel. We all felt that it was very interesting – the impingement of these rounded surfaces, just at that point. One wall of the entrance square is supposed to be an electric or painted sign. We feel that the colonial park is sufficiently protected with its gentle entrance, so once in the square you'd have a sign which is something like ninety feet long, and could do anything, from the kind of sign you get in baseball parks, to the kind of things that Andy Warhol is doing, or Oldenburg. It could be as wild as one would want it. Essentially what it's doing is announcing what's going on in the

8



9

10

theater district. Like Picadilly Circus, it's supposed to be an exciting announcement as you exit from the bus station and come out. We've put the Playboy Club – that orange strip represents the playboys – looking out through a slit window at the sign.

The second square is arcaded and leads into Tremont Street which is the full theater district. And of course this would have its special character, lights, all the things you'd expect, restaurants, gaiety. While its form is generated from the others, it would be totally different in nature.

The last square is low scale. We have made three of the townhouses, higher, as if the whole facade were crenelated in a change of scale and memory from what you see in the armory. I think that in developing it one could actually make that connection, a housing type which is somehow related to the crenelated form. We put the statue of Lincoln in this square. It is now in a big space out in the open and so lost that we kept trying to find it. So this is a much more friendly atmosphere, in a grove of trees in this domestic part. And the low scale of the housing is giving the armory the best chance to look like a tall building.

The sketches represent our first thought, which was to tear down the Howard Johnson's and the parking garage as programmed, and make an entrance space with a curved wall which went around a corner so that you'd be drawn from that toward the theater district. That central dividing element then would produce a triangular square similar to the one we finally made but at a larger scale.

Having looked at this, I wondered about effort and effect. Effort and effect I think is not just being cost-conscious; effort and effect to me is a very real thing artistically. It is something which is done with a simple gesture instead of a muscular one. I have had my share of attempting Heroic architecture, and that phrase has got to me. I think that the number of half-finished city plazas and the effort it takes to get them finished in American cities, would make you want to think about effort and effect.

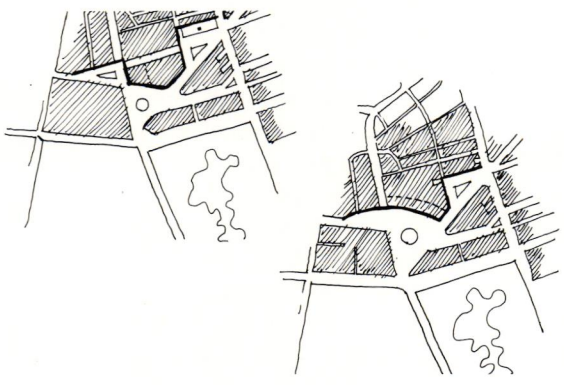
And really when you look at our second proposal where we keep that central dividing building, we don't have to rebuild the hotel, we don't have to build a big sunken parking garage, we can keep the fabric; we accomplish just about everything the first proposal does spatially. As we were walking through those parts of the site to the east which is a sort of bombed-out area, I just got discouraged looking at the grey spaces. You can turn your back on it and just make a frame, but if you're trying to work with

8 Barnes's sketch perspective of square at Armory
9 Barnes's model
10 Barnes's sketch perspective of arcaded square to theater district
11 Barnes's design studies, "Effort and Effect:" muscular gesture and minimal intervention

the buildings that are there, it is quite discouraging to think of tearing them out and then putting it all back. When we got to the other end of the site – that is the site down back of the Statler Hotel – it was a sunny day and the light was hitting all the windows, ricocheting down into the street canyon; it had a great feeling of urbanity, it had a feeling of place. It just seemed as if you really should work with what's there and not destroy it.

We talked this over in the team, and we thought it would be important for this exercise to keep as much as we could.

I think that a point on this site which is important is the traffic flow. A weakness in the program was that we never really were given understanding of that, but my sense is that this could be just as important to Boston as the South Station. It's the major place where people coming by bus are going to step out into the city. The first thing they see is important. It



11

seems to me that the placement of that arrival point, the flow of people, what they see, how they get around and all of that, is a terribly important element. Is it architecture? I think it is. I think that that question of flow and circulation is very much part of architecture.

The last thing I want to say is that the shapes of these buildings are dictated by the spaces. It is perfectly clear that you wouldn't design a bus station the shape we've made it – that something else governed the shape of that building. That it is in fact a continuation of the existing building, that the two together create a form, is the overriding consideration. I don't know whether that's a valid one but I'm interested in what the critics will have to say.

Comment

Barnes: I think that, since I was in school, all architects have become much more sensitive. It would just seem perfectly natural when I was in school just to tear down anything. We really didn't think much of what was next to it. And that was the general architectural attitude. So that I think this new sensitivity makes it possible to weave into an old fabric. However, I don't think it's anonymous or invisible by any means. I think it's an extremely strong – in some ways very strong – understanding that's running through the modern movement.

Goodness knows if you're looking for complexity, change, and contradiction you can find it in the Park Square area – all you need. In the old days we just simply would have wiped it out, bulldozed it. But on the other hand I don't think that weaving is the only thing you do in the city. You do cut vistas and you do, I think in a Beaux Arts way, carve out whole sections of cities. I think you really can't just make those rules. If you're dealing with a Westway project, a highway, something that is clearly a large scale space, with clearly a symbolic use or real use to go with it, you behave one way. If you're dealing in another area, you behave another way. And I think it's the proper attitude to be as sensitive as you can to the particular situation and don't feel that you're being weak if you work with the situation and don't feel that you're clubfooted if you feel you have to clean something up because at times things have to be absolutely clarified.

Vidler: I think two poles of a dilemma which we have here are how can we act – do we act very modestly and very quietly in the way that Ed Barnes is suggesting? Do we stitch together, carefully patching and screening – what Bertolt Brecht would call papering over the cracks – whitewashing the walls, and the settlement still continues? Or do we speak with the languages that we know, producing an unutterable Babel of, I think agreeing with Bob Slutzky, pre-Cubist, pre-Modern, usually kitsch forms? Or do we have some kind of understanding of the past and at the same time faith in our own ability to manipulate our world with certain kinds of strength – not a *macho*, heroic strength – but a certain kind of toughness and a certain kind of rigor? I think that the sketch teams that attempt to propose a strong alternative or strong, powerful vision of space or of typology, are, for all their diffidence, trying to say that, trying towards some new definition, trying not to be bathed either

in nostalgia or in what Nietzsche would call decadence. And I think that without being supermen we can at least try to formulate in the present certain kinds of concepts that are technologically and humanistically proper for the present and also strong for the future without bathing in nostalgic dreams . . .

Moore: I feel as though I'm sitting with two sets of tailors; one says I'm for cutting and the other says I'm for sewing . . .

Slutzky: It takes both to make a suit you know.

Slutzky: . . . I do like Ed Barnes' minimal intervention idea, particularly if we're going to take the other end of the polemical issue. What Ed has done is use a very fine scalpel in shaping what exists, into a much more enchanting space, an urban space. I feel that he paid a lot of attention to the scale of the neighborhood. I think he felt that it had certain innate virtues that were worth preserving. I think that it is to his credit that his scheme is probably the most modest, and probably the most efficient. What I do argue with is that horizontal striped building which faces the large circle, I find it very paltry because I think it could very well have been a major slab condition, containing that large, circular *piazza* and making it a visual tour de force . . .

Charles Moore

student team: Steve Douglas
Michael Harris
Chris Iwerks
Henry Meyerberg

Moore: When I came to do the sketch problem my mind was open, and when I went with my group to the site yesterday morning my mind became a blank. Therefore the scheme that resulted was something that our team worked out together, running frantically through the space wondering what in the world might be done. It really is a daunting, big space, with pretty things like Bay Village seeming very vulnerable near it.

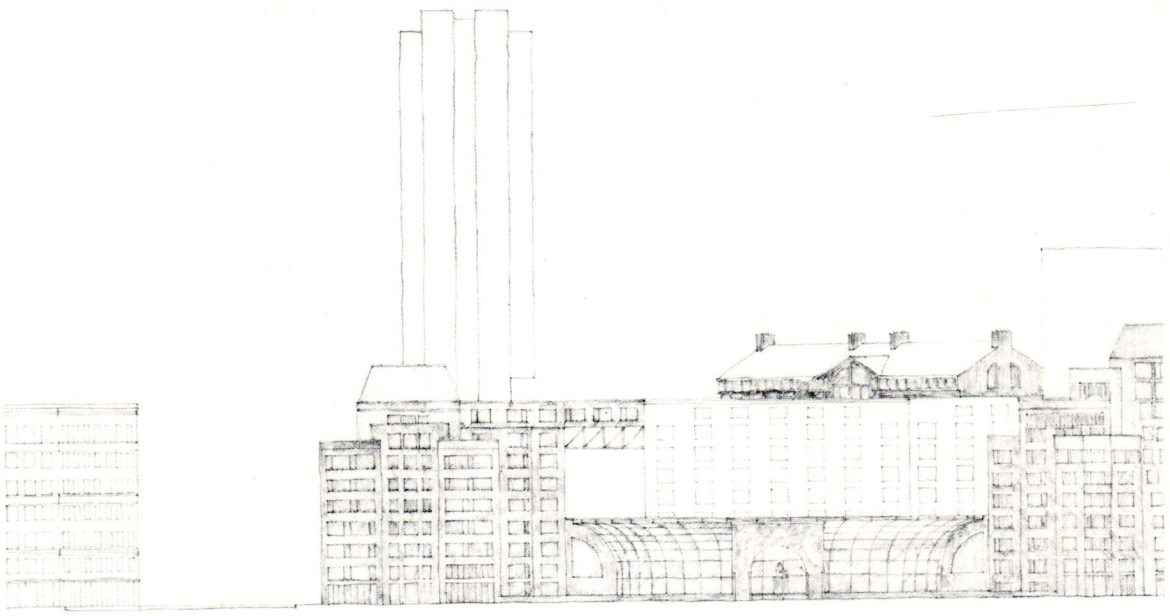
I don't subscribe to the notion that small is beautiful, but I would like to comment on Ed's statements about effort and effect, or as one of my teachers at Princeton put it, "Zee maximum of effect wis zee minimum of means." In response to this we've tried to keep everything that seemed at all plausible to keep, to deal in what David Lewis calls "urban tinkering" to mess with the pieces little by little instead of big by big, to see what could be done.

My prejudices about what it ought to go toward have been formed for some years. I brought Yale students on annual visits to Boston which have included trips to the top of John Hancock tower, from which the view down over Back Bay and the rest of the city seems to me to make it clear, that the small scale stuff that has been able to operate with human intervention piece-by-piece has maintained a liveliness and excitement that few cities have.

And the bigger stuff, however architectonically splendid, has not in any way gotten that liveliness, that inhabitability. Therefore it is part of this beautiful but unreadable scheme [The slides of Mr. Moore's scheme were unfortunately somewhat faint. – ed.], that we should strengthen, give all the help we can, to Bay Village – to extend it, to crawl it up onto the top of the HoJo's parking garage, keeping the swimming pool as best we can, to have more townhouses extend across and onto the top of the big, beautiful, old parking garage which we've kept and on which we've pulled our dwellings to the very edge.

It looked to us being there as though Columbus Avenue didn't really get used very much at all

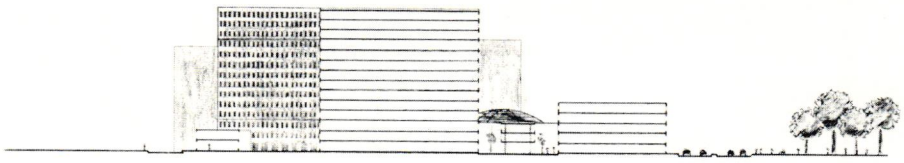
12 Moore's Elevation from Boston Common
13 Moore's Plan

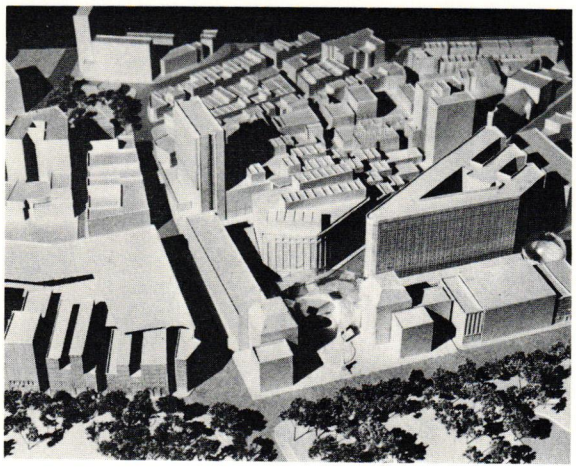


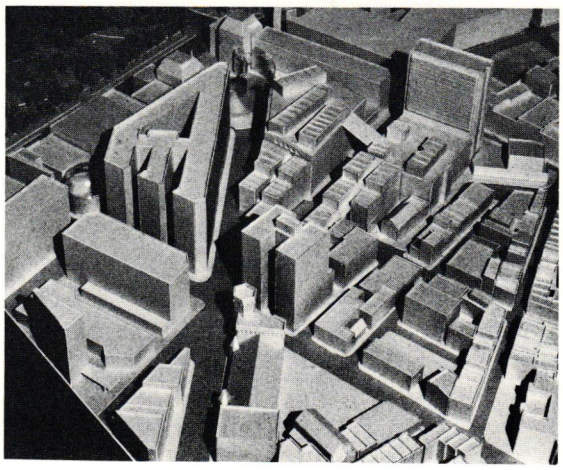
behind the Statler because of the change in traffic direction. It is used there for service and that's about all. So we elected to take through-automobile-traffic out of this rectangle between Charles and Arlington and Boylston and Columbus, and to make this mostly a pedestrian space.

These are very wide streets, this between the Statler and the buildings fronting on the Public Garden. It seemed to us that it would be dandy to extend the arcade building with solid in the middle and glass along the sides up to the level of the top of the public rooms on the Statler, through a sort of "Monticelloid" entrance to a place in front of the parking garage and the Statler where we made a . . . well, we didn't know what to make, but Steven Peterson's crowd next to ours had the Villa Papa Guilio out and we thought that was a very fine thing and that we should probably have one.

So there is a gallery here that tries to do minimum damage to the buildings around, faces out onto a plaza sunken one story below the streets around and with a skating rink like Rockefeller Center. And then sunk another little bit down in order to get under Boylston Street to the Public Garden. This gave us a chance to relocate "Abraham Lincoln







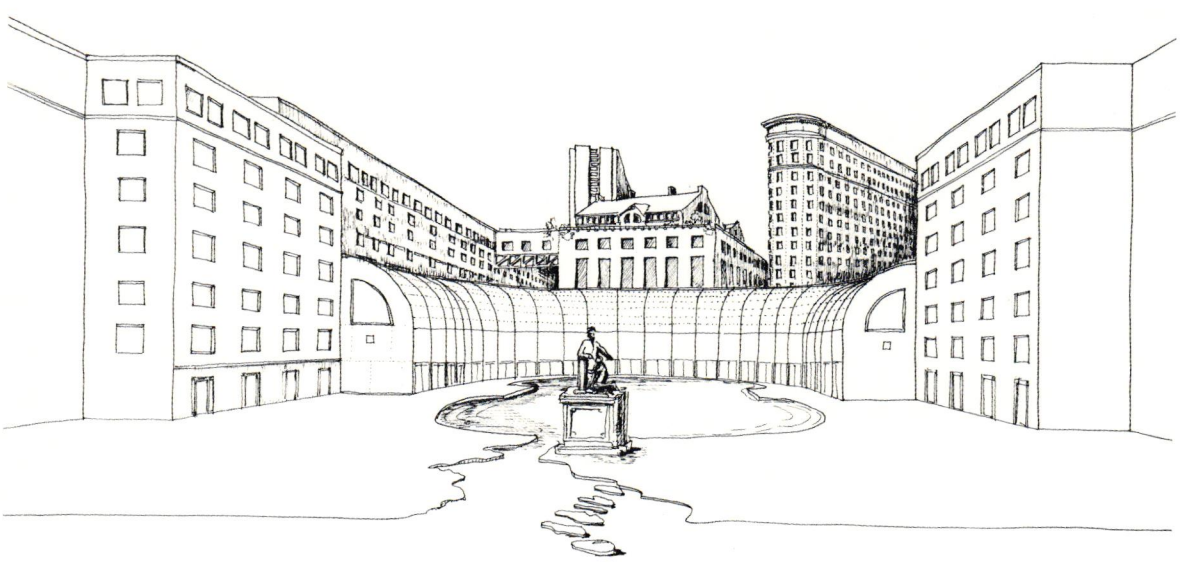
Freeing the Slaves" and we introduced some ice floes while we were at it on which one can make one's way to the freedom of the Public Garden, on this pond under the street, like little Liza fleeing from Simon Legree.

That's about all there is to this scheme actually.

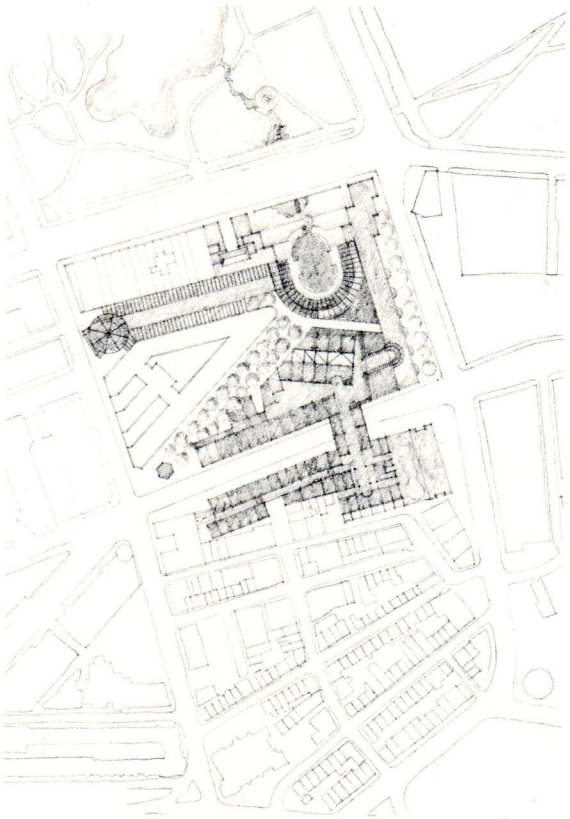
We've drawn the view from the Public Garden into our gallery and sinking space flanked by new buildings. We kept one old one on the corner as Ed Barnes did, and used the Goody Clancy scheme, which is in construction and so seemed realistic to include, and which takes care of all the programmatic requirements; so we didn't have to bother about that. And so I spent almost the entire day in a totally gratuitous exercise trying to make these buildings look as much as possible like the Fisher Towers in Detroit or the Chicago Board of Trade, both of which I admire. Ours are much smaller, in fact invisible on the slide which helps a lot, but if you could see them you would know that they are full of incredible subtleties and modulations.

The existing parking garage, which is really a quite elegant parking garage among parking garages, and should probably be put on the landmark list. On top of it you can see our attempt to extend the scale of the townhouses, not so much to crowd them in on the space but to reinforce the not quite enough that are there in Bay Village now.

The model is meant to show how the townhouses crawl two, four, six, and then eight stories up onto the top of the HoJo garage and the older garage, and get onto this now green street, which used to be Columbus, and which has a glass tower, a sort of Cesar Pelli homage to the armory tower across the way. The same shape exactly but made of glass and not for any reason that we've had time to figure out, in only twelve hours.



14 Moore's Section with garage-top townhouses
15 Moore's Model
16 Moore's Model
17 Moore's Perspective: a view from the Public Garden, with statue of Lincoln and ice floes
18 Moore's Roof Plan



Comment:

Bacon: . . . To take the treatment of Bay Village, Diana put a frame around it which was an interesting concept. It was of course in vivid contrast to Charles Moore's most extraordinary idea, not of putting an edge around it, but of having Bay Village actually extend itself as a positive force, creep up the tops of the buildings around it, and finally overlook the Common.

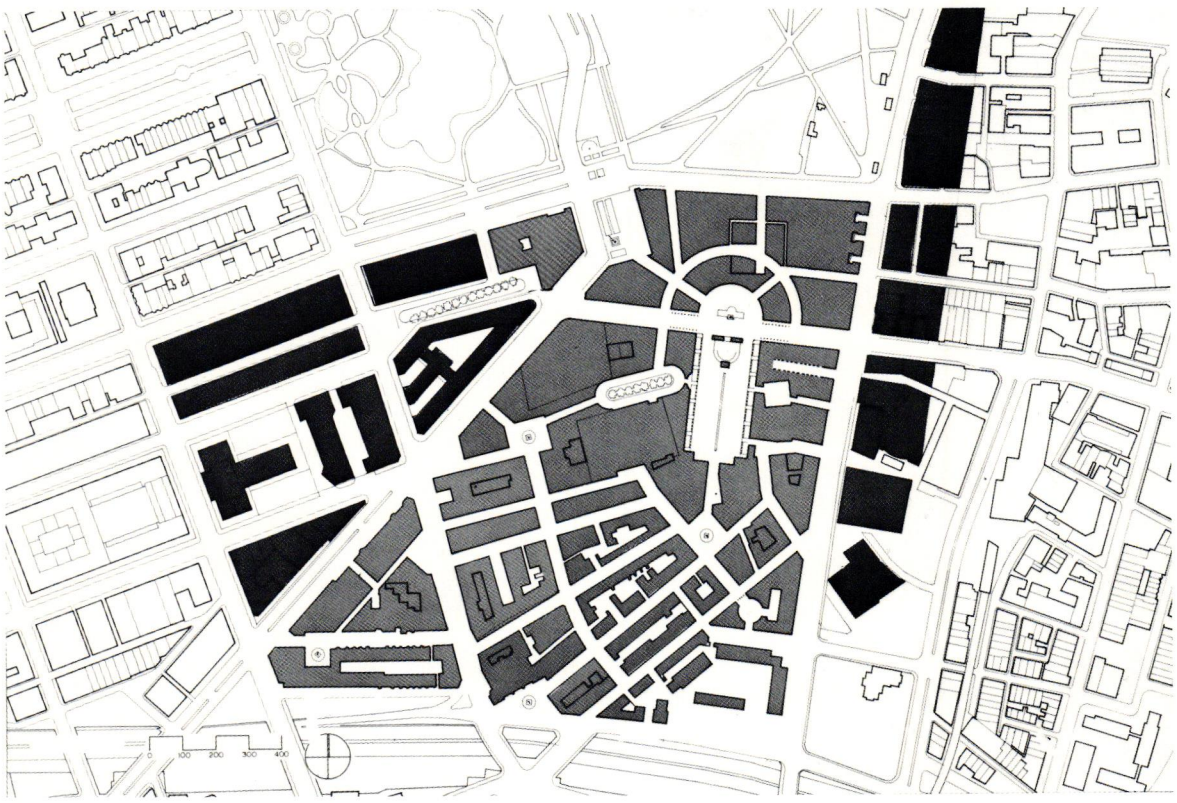
Vidler: . . . Charles Moore's walking cottages are nostalgic dreams – I think that's one of the most critical gestures I've seen Charles Moore do in a long time, placing those little houses on top of the parking lot. I find that a refreshing departure – a kind of critical play in the work of somebody I thought for too long has been attempting to replicate a scale of activity which is just too small. And I am very happy about that.

Slutzky: . . . I am not convinced of the attempt to take something of street texture of the residential area and let it granulate upwards onto larger structures thereby destroying street, maybe picking up the notion of transplant of that kind of housing, but at a tremendous price.

Bacon: . . . I am extremely interested in Charles Moore's idea of the *direct* connection between the arcade building and the Statler Hotel and the extension of this connection up to the beautiful *exedra* opening onto the Common. I do think that his idea there would actually work, and would make the arcade building come alive. It could in fact be an extremely crucial connector with the energy that exists at Bonwit Teller and the Arlington Street station . . .

Steven Peterson

student team: Jack Bouvrie
Ben Kirshimoto
Marlene Lipsick
Bob Miklos



Peterson: It's interesting to go late in the program because I discover that Charles Moore stole part of my scheme and Ed Barnes stole my opening line about weaving the city. Like Ed, I am also going to talk about the urban fabric. I approached the Park Square problem not as one of specific urban architecture for a limited area, but one of general urban design for a whole district. In that sense the premise was not to find a place in the site which required kind of a detailed study which would solve everything or make an impact, but to try and do something with every square inch of the whole area, in terms of what it ought to be under the best circumstances.

I suppose my scheme is attempting to be maximum means to maximum effect. The point was not to depend on one architectural act but to re-engage this whole fabric with an integrated network of spaces. Principally, I tried to establish the whole thing as a district, even though it's made up of housing in one area, the theater district in another, offices and hotels in another – to reinforce all the boundaries and edges and connections to the city as a whole.

The first thing that we did was to create a long

19 Peterson's Plan
20 Peterson's Axonometric
21 Peterson's Axonometric of "Circus Marathonus"

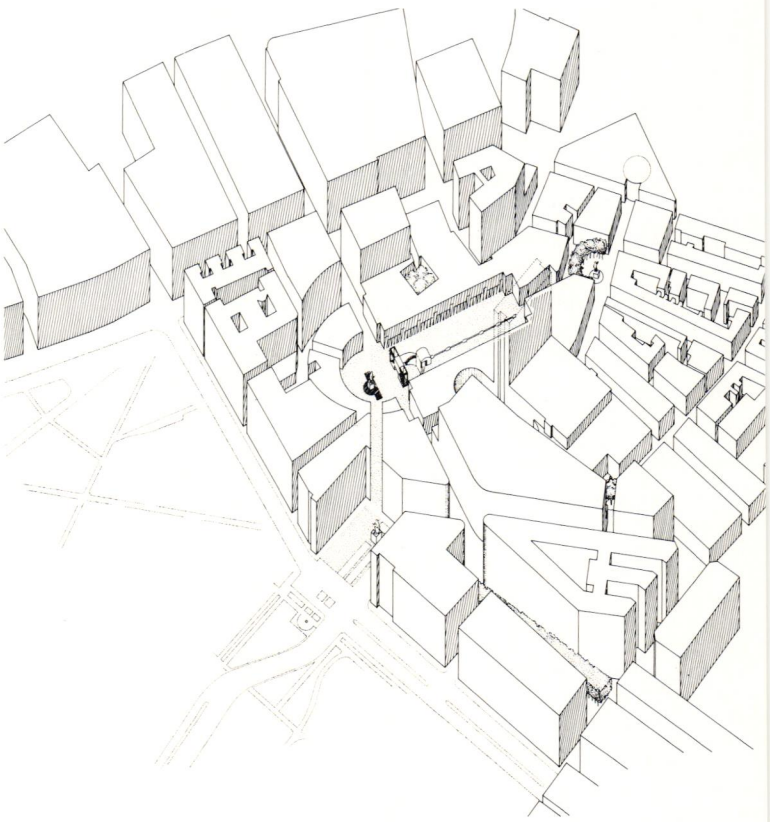
space – the opposite of Charles Moore's exedra – connecting the housing to a public area, and eventually to the park. This space makes an edge between these two conditions, and is itself as the void, the focus.

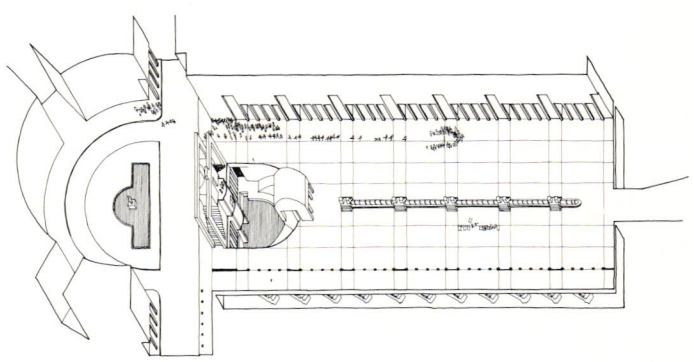
The second thing we did was to move Park Square, make it square and put it on the park. It seemed like the logical thing to do. It then becomes a gateway in the wall of Boylston Street. It's a foyer to the whole district, a transition to that whole diagonal of Columbus Avenue.

The next move was a general one. We took that square as a type of urban space – an enclosed one with trees in it – and reestablished it at a smaller scale in several places. Just as we put the "Lincoln Freeing the Slaves" statue in the new Park Square, we put an appropriately smaller version into each one of these small squares, so that, as you wandered through, you would keep coming on this statue in different sizes and orientations. You could start to call the whole district "Park Square." We thought it needed physical identity in order to be unified in this way.

In the major commercial part of the district we did something that I guess Charles Moore and Ed Barnes did – we added onto the parking garage. Incidently, we kept everything – the Howard Johnson's, the parking garage, even the Playboy Club still stays where it is – we only removed a piece of one block and a parking structure which sat in this area. So we added onto the parking garage to intensify the structure and definition of the one, main space.

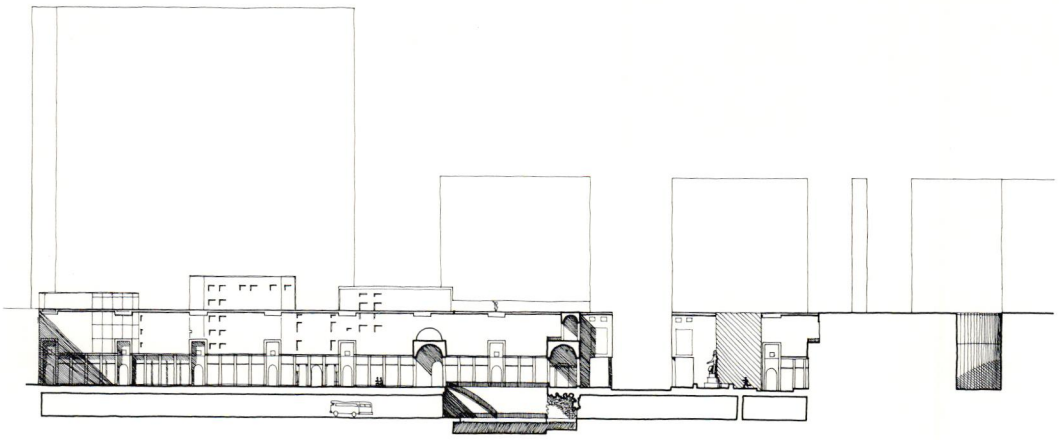
Once we created this long, main space as a kind of a center for this district, there was some question as to what it could be for Boston in general. It occurred to us that we could make it the concluding space for the Boston Marathon, and that its shape as a circus was conducive to that. So that developed as an idea – I think you can see in our drawing there's a whole bunch of people running in at the top of a stadium. They come down Boylston Street, run into Park Square, pass the statue of "Lincoln Freeing the Slaves," run down the diagonal into the *exedra*, around the *exedra* and up into the space. Once they conclude the race, which is at the far end of the circus, on the other side of the *spina*, there are





blankets and beds and ambulances to take care of them. Then up on top of this memorial is the place where the winner receives the trophy and everyone cheers. In the perspective view, the space is rather abstractly drawn, but it's intended as an arcaded and public place, where lots of people can stand in the arcade to watch the events that take place.

To meet the functional requirement that we move the bus station, it occurred to us that the dimension of this space was just about the same as the Port Authority Bus Station in New York, and in fact

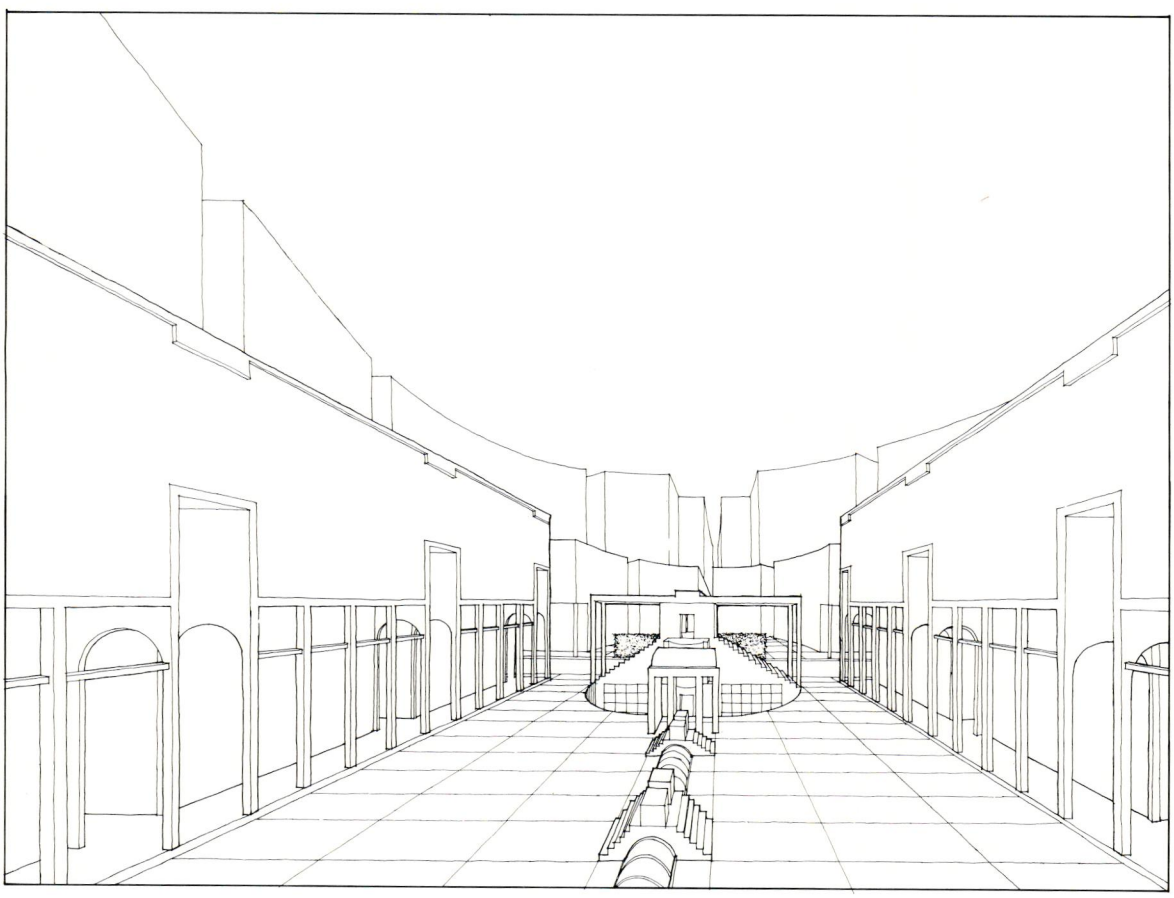


22

its shape is the same. So we put the bus station underneath the circus and developed this little bit of the Villa Giulia as a grotto entrance to the bus station. What happens is that you drive into the bus station underneath this building. The buses drive around underground around the outside with complete flexibility – you can see the tail ends of the buses in the cutaway section. At the bottom of the grotto is the bus terminal itself, and you walk out of the bus terminal to get to your bus along the line of the *spina* which is skylit.

In order to get across the skylight, on the level above, we built some steps, and a couple of little boxes in which the running shows of past winners of the Marathon would be displayed as a memorial.

After struggling with this one main space, we found that a kind of key to the solution was, in fact, to develop two spaces. The space of Park Square seemed to work best when it didn't try to intersect directly with the main space. We developed another intersection to relieve Park Square of some traffic. Park Square could then become, in fact, a very simple intersection solving only one problem – the intersection of two streets, Boylston and Columbus. We struggled hard over the proportions of the square, so that although we were making a space we were not depending on it to operate as a traffic island. So the traffic can come into Park Square, go along one side of the square, and arrive at the garden in a somewhat modified way. The center of the square can, in fact, be occupied by people. To make that happen, to make a modern space with traffic in it and also allow people to occupy the center is, believe me, a real accomplishment.



23

22 Peterson's Section through circus, with groto entrance to bus station
23 Peterson's Perspective of circus

We did not allow one important block on Boylston Street to be a simple rectangular block, but built it conforming to the diagonal. Here we repeated the round corner of the Statler, creating a kind of entrance into the long space next to the Statler which really seemed to be an extension of the existing arcade building. The long row of trees, set diagonally into the space, is meant to show that.

The circus itself was designed not to have any cars at all, which meant that we needed access to the Statler Hilton, a parking garage, and a new hotel. So we made this curved space as a turnaround, drop-off, or cul-de-sac – a connecting ring road giving access to the shops, theaters, and then everything off this elongated treed space, from which could be either a pedestrian walkway up to the housing square or possibly an arcade. In this piece of the circus, it was envisioned that there would be cars, and it was meant to serve the purpose of the taxi stand that seems to now exist on Park Square. In fact this area could operate as a foyer for the theater district; people could come out of the theater, come here and find a taxi, and it would generate that kind of public activity.

Many connections of the existing blocks were left as they were – the theaters retained. We kept certain alleys and added to them others in order to integrate buildings – to create an intimate block network of descending scale that finally reaches to the park. The section also shows that we were not making an architectural solution, so much as an urban design solution.

Finally, the arcade in the perspective is drawn in a rather rigorous, rhythmic manner. The idea was that this surface was made not as an architectural design but as a kind of instituted zoning idea. Anybody could build up to this surface – as long as they put an arcade of some kind in there and approximately every fifty feet put a taller one, and as long as they be required to have some little protuberance at fifty feet which becomes an ornamental cornice. And then the tops of the buildings beyond could go up or down below that height. In fact there could be a window wall above the arcade – any number of window patterns, and so on. The idea was that the space would become instituted by a kind of zoning envelope which would then get filled in.

Comment:

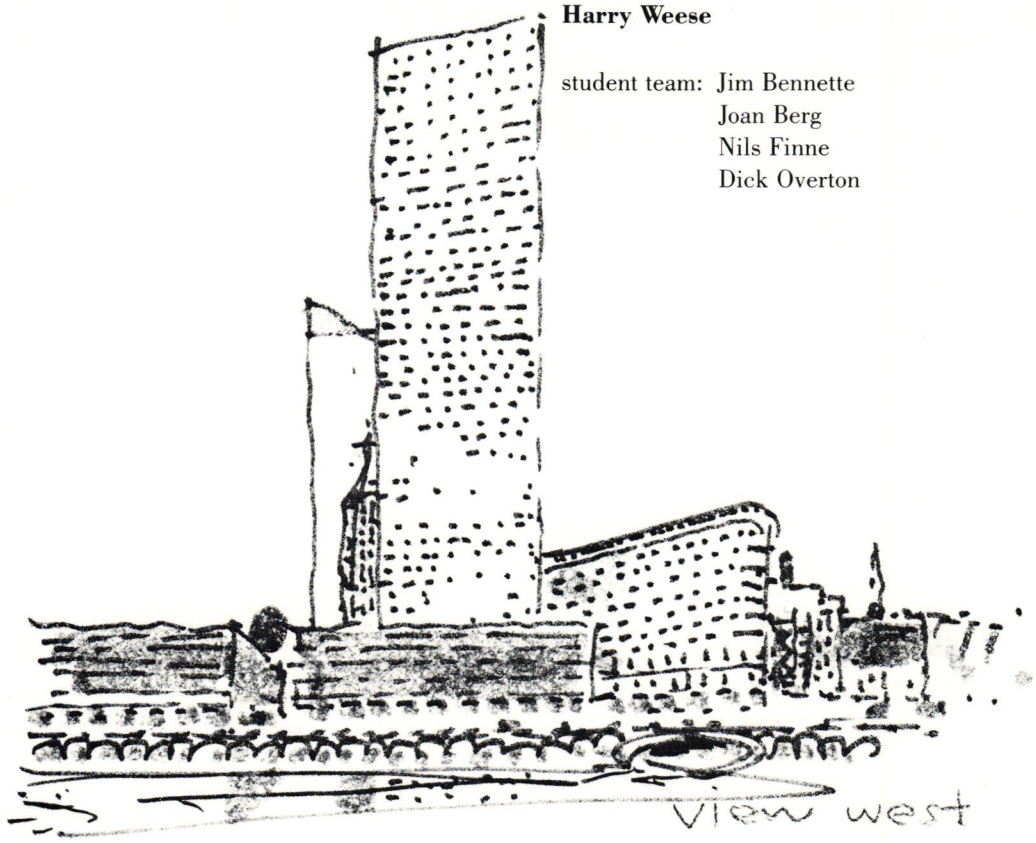
Slutzky: . . . I argue with this scheme's frenetic, almost Roman scale interweaving of street patterns into exedra forms, *piazzas* of varying sizes, alleyways, and all the rest. I think it's a very expert handling of these elements, but I'm not sure it's appropriate for the district, nor do I think he's accomplished the clarification of the site as three sections meeting in this knuckle . . .

Peterson: . . . for me the clearest issue is the question of what is the medium of the city. The whole subject is not terribly arcane but quite simple. It is a question of space . . . The Modern Movement destroyed space, I think if you want to get precise and not just talk about the style of the movement, of Post-Modernism – one of the things that the Modern Movement advocated was a uniform, ubiquitous space – a kind of anti-space with things standing around in it. I think that the medium of urbanism is space of a different kind. A space made is a square; a space made is a street – simple things but they're so hard to build, so hard to do, and we've completely lost the skills to manipulate and make space. Ed Barnes saying that his buildings were shaped to make space, that I think is the essence of the problem. It was certainly my approach; although it may look like Rome, the point wasn't that it looked like Rome but that it looked like a series of linked spaces in a woven network which would build up to some kind of urbanism.

Bacon: Steven Peterson's concept of total fabric is very beautiful and, I must say here – because, after all, Harvard was the place where only recently it was very improper to make any historical references—that meeting the Villa Giulia twice in this distinguished hall is a great joy. Peterson's idea of the network was, I think, very beautiful, and I also liked very much – even though he slightly overdid it – the notion of the counterpoint of the little squares and the reverberation of the Lincoln statues. But I'm holding myself back – I did very seriously object to his protuberance opposing the Statler Hotel, which destroyed the integrity of the end of this old flatiron building. I think that you should either tear the damn thing down or respect it. By creating that protuberance in order to maintain the continuity of the angular street going into your square Park Square, you very seriously, in my opinion, interfered with the right to space of the Park Square Building.

Harry Weese

student team: Jim Bennette
Joan Berg
Nils Finne
Dick Overton



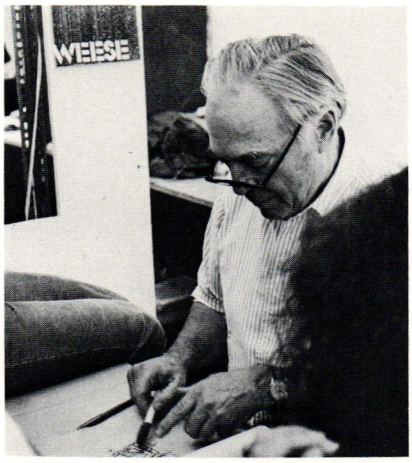
24

Weese: First let me say that I perceived Park Square as something between the Government Center/Quincy Market harbor development, at one end, and the Prudential/Christian Science Center at the other end. Park Square is a beautiful vacuum; it's been kept that way by the presence of buses. I don't mean to say the people who ride buses, but the very presence of the animal itself and its implications for destruction of passenger railroad business, airplanes, and so on. Buses are the most blighting influence that any city every had. In Chicago we see fit to hide them under Wacker Drive, Burnham's contribution to getting buses unseen into the heart of the downtown business district.

Boston has a marvelous commuter network, particularly a transit network which is very convenient to Park Square. Park Square then could be a new kind of place – a place for people tired of going down to Quincy Market to buy knick-knacks.

The first thing we attempted was to direct the flow of traffic into the area. I took the view that we could use that simplistic knowledge of how traffic works to change the traffic network. It's quite clear that the Public Garden is a rotary, and the Common is a rotary, and they work like two gears meshed to come back on Park Street. We added another rotary linked to one of the others, creating one-way pairs of high effectiveness.

We had, then, movement into Park Square. Breaking this movement around a new kind of place – a *piazza* that's sunk a half level or a little bit more – we created a stage surrounded by retail, where you could have everything happen from model boat sailing to olympic swimming or balloon ascensions. The pool we've proposed could be drained – the water is quite shallow – to uncover a hard surface, granite for instance. What we had in mind was



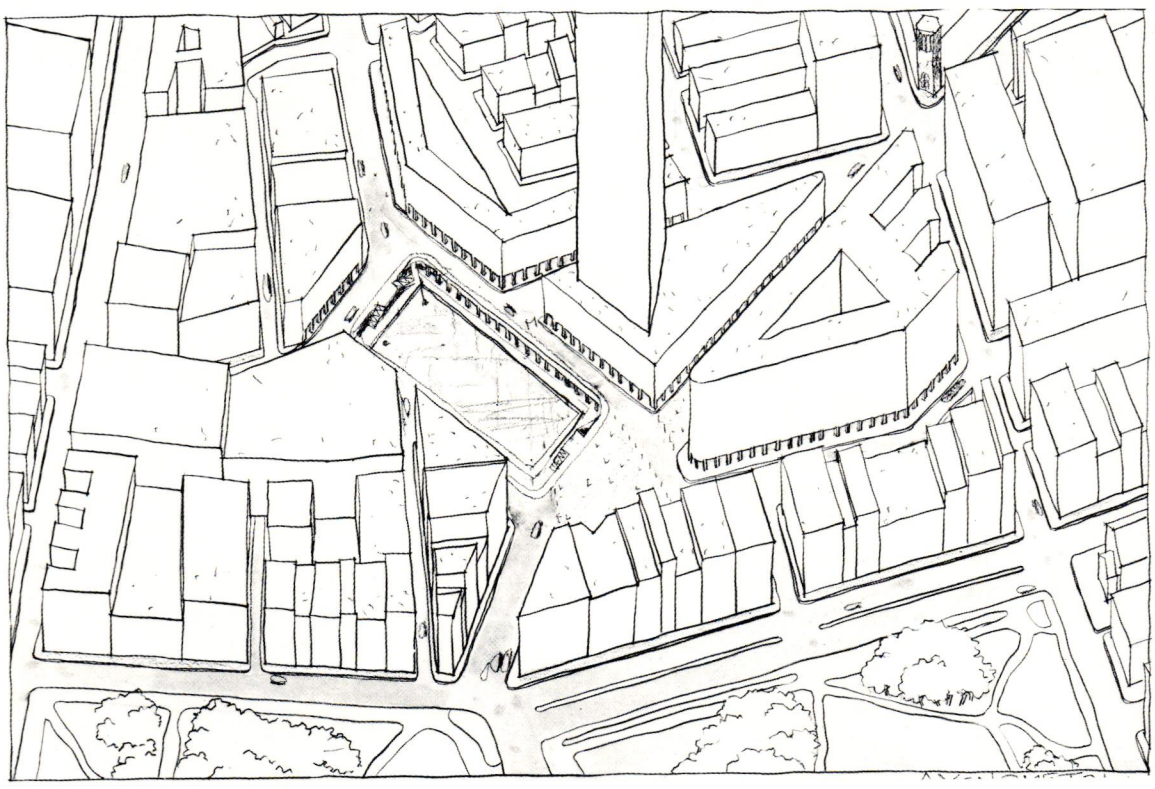
24 Weese's Design Sketch of triangular tower
25 Weese's Axonometric: tower podium and sunken square, Boston Common at bottom

something quite different from that moonscape in the middle of Copley Square, which is programmed so that you can't do anything but bump your shins, lean against cold stone, and admire things you wish weren't there. Our plaza is not this. Sunken and surrounded by retail with lots of parking available beneath, our plaza becomes a stage where anything can happen. Around the plaza, pedestrian zones are set off from vehicular zones by bollards. We believe that cars should be allowed to enter these zones at times so the bollards are spaced so that cars can drive through.

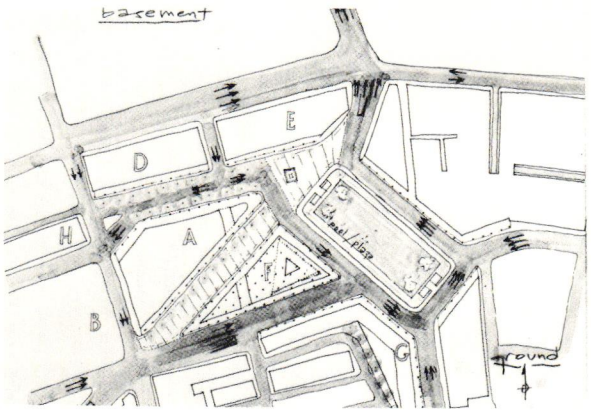
We surrounded the plaza with various buildings, some old ones sawed off a little bit, some new ones with cornices to match the old. The new buildings all have punched windows, because that's the wave of the future – thanks to the Arabs. We had a little debate in our team of Jim, Joan, Dick, and Nils, about whether to take down the Howard Johnson's or paint it orange. We decided to take it down because we thought it was a dog and we think that Boston needs another fine hotel. Another thing we thought was that the Statler would make a marvelous residential hotel – it certainly is a strange mix of things as it is. I don't mean geriatric center, a marvelous residential hotel would get people downtown where proximity is the important advantage. And the scale of the Statler is right for Park Square – it's a small scale. So we change the Statler Hotel into a residential hotel. We take Howard Johnson out and build a new Statler – what's wrong with the name Statler, just because Sheraton took it over.

But in order to be a place with the identity of some of the other areas of Boston, Park Square is lacking; it's in the shadow of the tallest building in Boston. We thought that our creation of something alive, around the clock, and representing the ordinary life of people – opposing those institutions consecrated to the fear of death – would be an important change in the Boston skyline. So our building is higher than the Prudential and Hancock.

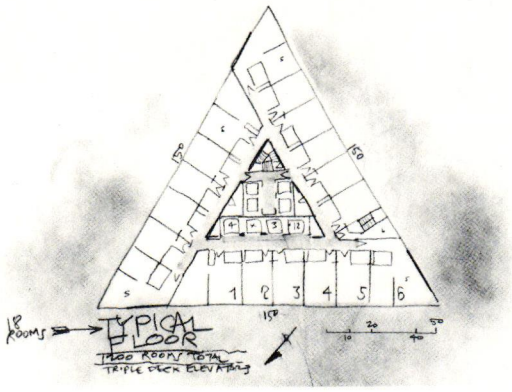
In form our building is an equilateral triangle set back comfortably on a podium. That's the way hotels are; they have to have podia because that's where the functions like the ballroom, meeting rooms, restaurants and so on are. We've totally arcaded this podium, as we've arcaded all the buildings in the area of the big square, and the shops around the



25



26



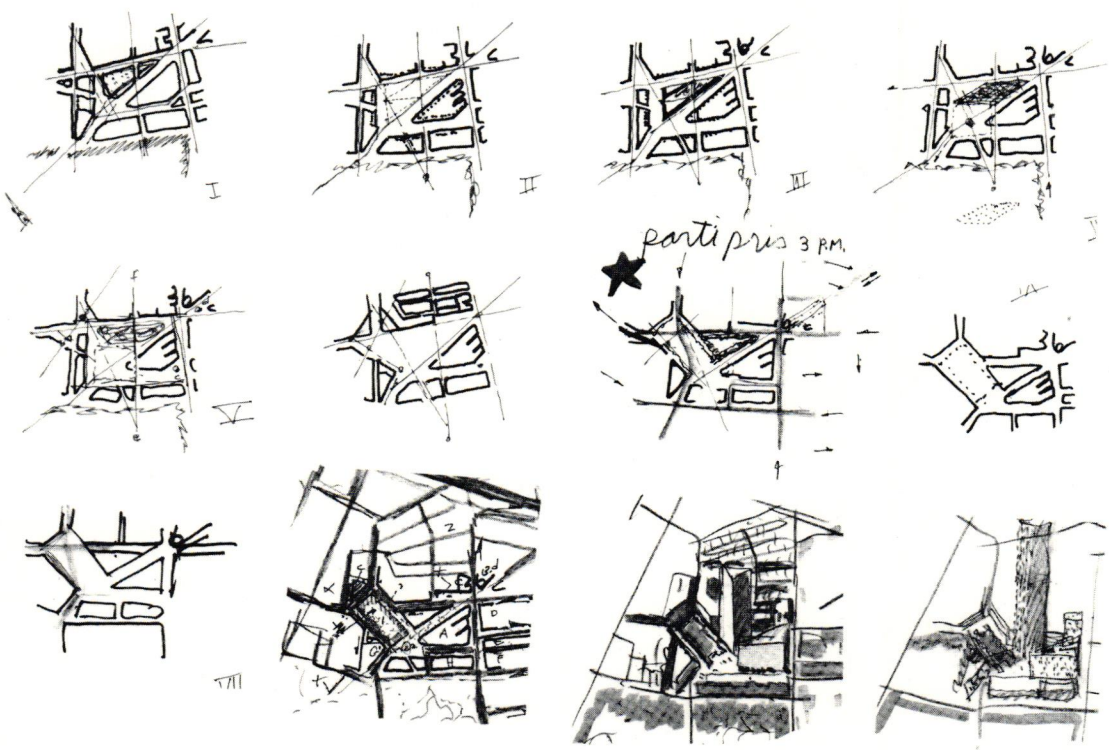
square itself. The triangular tower is a slipformed tube that has round windows – round because they permit sweeping views from full height right down to your ankles, and wide to the sides, and you don't lose all that energy in the corners. Also round cuts are structurally most efficient, and if you're going to go 750 feet, you've got to consider them.

As for the rest of the site, we do some infilling and leave the rest alone. The few new buildings we leave to other architects, with a limit on cornice height and the requirement that the walls be bearing. We turned Lincoln around; he's facing south this time. We brought Bay Village up to the edge of the square in the form of *maisonettes* repeating the housing pattern.

The series of site plan sketches show how we got to our solution. In the first one we started drawing influence lines. The rest are sort of a ouija board dialogue between Jim, Joan, Dick, Nils, and I. I kept them from getting into any serious arguments by accepting all of their ideas. And of course there was always one that knocked another out so we went tooling along with these Ed Bacon kind of diagrams – Ed Bacon is the straightest shooter I know; he can see all the way through Rome. We finally came to one – "Three p.m. – Parti Prix." The next are traffic diagrams. The new square got skewed, because why not have a place, like in any European city, that's important and memorable because it's skewed. We soon decided that we didn't need that traffic there, and then we suddenly got this idea that we should build a hotel, and that it should be higher than any insurance company – particularly one that's had so much trouble with all of its buildings both in Chicago and Boston.

In the larger scale sketches we then developed our proposal. First we examined the garage with its bus tunnel entrance. The bus station we hoped could be relocated away from Park Square, but it was in the program. We also provided the required Playboy Club – I sometimes wish I weren't an adult when I see things that are advertised for us. We studied the existing street pattern, and changed it slightly in order to accommodate our hotel and piazza. Finally, to prove we could go higher than the Hancock, we drew a 75-story hotel floor plan, showing eighteen rooms per floor, and four triple-deck elevators. Thank you very much.

27



Comment:

Weese: I'd be the last one to put anybody in the air on purpose but let's remember this; there are going to be buildings built tall in this country because of the nature of the real estate process. And we better accept this. And I also know this; that you don't have to look up. If you put your cornice lines in the right places, anybody on the sidewalk won't see that tall building. You'll see it from a distance, as a part of a climax forest.

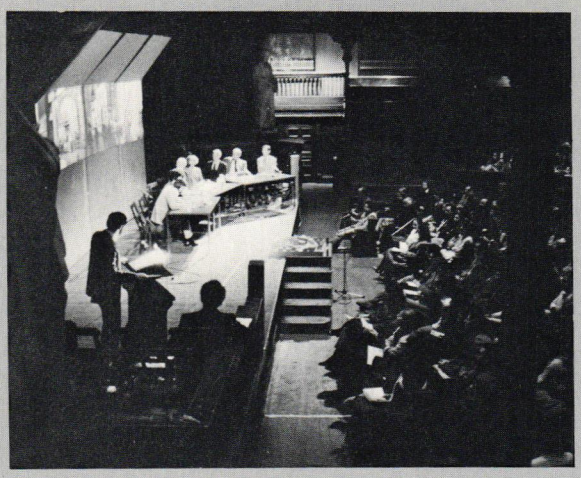
That hotel is not a dwelling for the richest people to look down on us all. That is a public place. A hotel is a small city in itself. Talk about scale. You could look at any hotel and it has every part of a city. If you surround that excrescence, whatever shape it might be, with low scale – by that I mean seven stories for any proper European city—you are playing a game where you have gradations of scale. And when you build St. Mark's Square for whatever the purpose – and that sunken plaza's not as big as St. Mark's Square by half – you build a place where people can celebrate.

Bacon: Speaking a little bit as a developer, I agree with another of Harry Weese's concepts – that in addition to eliminating the negative aspect of the buses, you must also add an enormously potent, positive, new, element which somehow symbolizes and activates the new energy which would be there. Although this element doesn't necessarily have to be taller than the Hancock Building, its existence is very important. And I think Weese's tower was very successful.

Slutzky: I find that the triangular tower in Harry Weese's scheme is most disappointing – instead of indicating the possibility of a giant deflecting plane within a complex urban space, it in fact retreats upon itself and becomes more of a park obelisk which in no way solves the problem of connection between the lower levels of Boston, the existing archeological level, and the level of this new super block. As a matter of fact, the triangular plan, as well developed as it is, neglects entirely the notion that one can in fact propose a huge structure which would give a new perspective to the city of Boston but in a very small intervention to the existing pattern of life that happens on the street level. I feel that these proposals still need to be discussed in our present society. I don't think we can retreat to what I consider to be rhetorical historicism but instead understand that the new technology can provide very marvelous urban experiences that one could not have envisioned prior to the twenties and thirties.

Barnes: I think that one of the big problems in cities is this leaping change of scale. There is a place in New York where you can see Trinity Church in the Wall Street canyon and then, bam, the World Trade Center which is a triple shift in scale. I rather thought this project in further development would be a real study in change of scale just to get up to the top of the Statler Hotel let alone leaping up to a super scale like John Hancock but I personally think that's a very interesting problem. The change of scale is to me just as interesting a texture with which to work. Mixed scales are to me far more challenging.

26 Weese's Design Sketches
27 Weese's "Parti" Development Sketches



Edmund Bacon

Bacon: I think the *Harvard Architecture Review* has a very good sense of history. They made it clear that they feel that the architectural profession has come to a point where it's time to have a new spirit abroad. I think that's why they organized this particular event. I walked through the drafting room last night and I looked at the drawings I saw on the tables. I was looking for that new spirit. It seems to me that if it really were abroad, it should be reflected in the work of you students who are related to the future. I did not always find it present in what I saw. Some of it was a continuation of mechanical repetition of industrialized units, and some of it was usual brown box models opened up to expose a bit of space frame. But here and there there was that spirit.

I talked last night with students about what the nature of that new spirit ought to be, now that it's decided that modern architecture is dead. And naturally we talked about Phillip Johnson and his Bell Telephone Building. I think many of us and perhaps most of the students are really not satisfied with the idea of Phillip Johnson's telephone building really indicating the way to go.

So the thing which hit me so hard at this extraordinary experience the *Harvard Architecture Review* provided for us, is that I really feel that these particular three or four hours here might be a truly historical moment. These people, who came and did this extraordinary thing – gave you a *tremendous* insight into a new direction for architecture, that will, by God, absorb every ounce of every bit of energy for the rest of your life, and thank God it's arrived!

The one thing it seems to me I might do a little bit is to go back over what you have experienced with these people. At least I can point out that they didn't always agree with each other. For example, Ed Barnes said that the City Hall Plaza was too big to start with and therefore you should reduce spaces; Diana I think made a little bit of a bigger space than was there before. I think that Diana did something extremely valuable by presenting this drawing of the structure of the greater part of Boston. She derived the fundamental concepts for what she did from the larger picture, and not from a viewpoint of the specific site given. Her response to this greater structure is of course very different from everybody else's. She spoke about the importance of edges.

While I think that perhaps everybody else felt that the edge that was already there between the structures, and the Common and Public Garden was a perfectly good edge, Diana saw fit to make her own edge. I have the feeling that everybody else, Diana, actually felt in their own guts as you did; that everything they did should be in relation to the larger structure of Boston, and I hope so. But I think they really responded in a somewhat different way.

To take the treatment of Bay Village – you, Diana, put a frame around it which was an interesting concept. It was of course in vivid contrast to Charles Moore's most extraordinary idea, not of putting an edge around it, but of having Bay Village actually extend itself as a positive force, creep up the tops of the buildings around it, and finally overlook the Common.

An additional comment, Diana – I had real trouble with the idea that the mall building, loving it as you do, would be better with three more. I can't quite see that, I'm sorry.

I think that Ed Barnes's sensitivity to the connection with the theater district was very extraordinary. He brought the feeling of the theater district through his very, very simple triangular arcade into the essential center of his design, where it connected with the Common and Public Garden, and where it was symbolized and intensified by the marvelous signs which gave it a complete kind of animation so the whole volume of space that he created there was completely animated. At first I disliked very much his widening of the lower section by the little park but then it really does seem that it would probably work, and it would really give a nice setting for the armory and, with landscaping, the integrity of the little triangle could probably be retained.

When I walked around this morning, I was struck not only with the idea of the connection with the theater district, which I think, Ed, you did so extremely well, but also with the idea that there was a great deal of energy to be drawn upon at the Arlington Street subway station, and at Bonwit Teller and the other really very good retail on that block of Boylston Street. I was later extremely interested in Charles Moore's idea of the *direct* connection between the arcade building and the Statler Hotel and the extension of this connection up

to the beautiful exedra opening onto the Common. I do think that his idea there would actually work, and would make the arcade building come alive. It could in fact be an extremely crucial connector with this energy I've said exists at the Bonwit Teller and the Arlington Street station.

Steven Peterson's concept of total fabric is very beautiful and, I must say here – because after all Harvard was the place where only recently it was very improper to make any historical references – that meeting the Villa Guilia twice in this distinguished hall is a great joy. Peterson's idea of the network was, I think, very beautiful, and I also liked very much – even though he slightly overdid it – the notion of the counterpoint of the little squares and the reverberation of the Lincoln statues. But I'm holding myself back – I did very seriously object to his protuberance opposing the Statler Hotel, which destroyed the integrity of the end of this old flatiron building. I think that you should either tear the damn thing down or respect it. By creating that protuberance in order to maintain the continuity of the angular street going into your square Park Square, you very seriously, in my opinion, interfered with the right to space of the Park Square Building.

Harry Weese saw, number one, the fact that buses were the basic cause of the blight. I think that was extremely perceptive. I think his concept of putting them underground and getting rid of them is a very wonderful idea, as is having them flow into a great lower space which could be a wonderful reception. Speaking a little bit as a developer I agree with another of Harry Weese's concepts – that in addition to eliminating the negative aspect of the buses, you must also add an enormously potent, positive, new, element which somehow symbolizes and activates the new energy which would be there. Although this element doesn't necessarily have to be taller than the Hancock Building, its existence is very important. And I think Weese's tower was very successful.

I am interested to note the degree of generosity urban designers give to other architects and other developers who will come along and build part of what they've designed – because you each know darn well that you can't build a whole city yourself. So the way in which this thing fits into the actual process of city building is crucial. You can run all these designs through your own mind to see whether they give leeway or space for other creative designers to come in and build on what they start, and carry forward the energy that the designers put there, reinforce it, strengthen it, and make it better. Diana's would present very serious problems in this regard. I think that hers could not be done at all, except with a tremendous clearance of an enormous area at one time. And then you get into the question of whether the city isn't really built as some of you said, piece by piece, almost organically, and whether these designs correspond to this way of doing things.

I think that the whole series of points of view put forth by each designer gives different possibilities in every regard. Finally, I do simply want to say that I feel, myself, very indebted to the *Harvard Architecture Review* for having caused me to be here and hear what these five, remarkable people have presented. I do feel, *Architecture Review*, that you have fulfilled what I think is one of your basic objectives – to make a very important turning point in architectural and, perhaps, in American urban history.

Slutzky: First of all I might say that I'm a little puzzled as to why I was invited, being a painter, not an urban planner, and my painting reflecting a concern for form in a way that puts me way out in left field relative to nearly all the schemes here today. Also, I have a bit of a credibility problem concerning this exercise. I assumed it was simply a twelve hour, fresh, almost Beaux Arts sketch problem, a day problem. I'm astounded by the sophistication of the production of the five teams, and it's to their credit that they got that kind of detailed information and really sophisticated thinking concerning city planning ideas. On the other hand, I question each of the participants in their public avowal that they had no preconceptions. I could hardly believe that there weren't preconceptions operative here in the last day or so.

I wonder where some of the issues that I thought were part of the problem disappeared, too. It's a very difficult site; we all agree to that. It's a site that seemingly involves itself in three kinds of textures of that part of town, with a major characteristic, the Common and Garden/Boylston Street interface. To me parks of that magnitude of importance warrant a certain kind of respect relative to the vistas one would perceive from the park side. So we're really dealing with a portal condition from the park into the site itself. Of course there's an equally difficult problem of the south entry. I think many of the participants focused their energy instead on the sections that were contingent or contiguous to the park, and let their solutions bleed out into the residential areas. There's also a very difficult east-west connector problem which poses itself in plan and section relative to the theater and commercial districts.

Another thing I perceived in looking at the site was a possible shearing problem. That is to say that the Garden and the Common do some very funny things to each other, relative to that street which slices between them. It seemed as though Boylston was trying to firm up that shear but didn't succeed in doing so. Vehicular traffic seemed to be another very big problem. It invaded the site in almost a random way, causing eddies of confusion of feet and wheels; I think this is a very important problem for all of the participants to have involved themselves with.

Before I continue with some random observations about the five schemes, I should remark that I find it

sometimes puzzling to judge a problem where the site supposedly has certain firm conditions, and then the rug is pulled out from underneath me, when some of the schemes go beyond the site restrictions. Now, I'm not against that if this poses a polemical debate about the nature of the site versus what could in fact be built. But unfortunately I don't quite sense the urgency of this polemic, except perhaps in Diana Agrest's scheme, which does pretty much wipe out the givens for some formal conclusive statement about tying those three issues together in the site itself.

What I find particularly enchanting about Diana's scheme is that it is, in fact, architectonically, an extremely powerful form which acts as a foil to the park, and as a foil to the residential section. What I find annoying about the scheme is the location of that circle, which somehow diminishes the strong possibilities of making the Boylston section facing the Common a portal to that inner cruciform intersection. I find annoying also that one of your towers actually straddles, what is it, Boylston Street? You propose that the northeast tower in fact conclude itself smack in the middle of Boylston. I find that a very curious device – it's something which erodes the idea completely. You had a little sketch which showed four towers instead of eight towers, and avoided that problem; that's probably the scheme I would have chosen to develop.

I do like Ed Barnes' minimal intervention idea, particularly if we're going to take the other end of the polemical issue. What Ed has done is use a very fine scalpel in shaping what exists into a much more enchanting space, an urban space. I feel that he paid a lot of attention to the scale of the neighborhood. I think he felt that it had certain innate virtues that were worth preserving. I think that it is to his credit that his scheme is probably the most modest, and probably the most efficient. What I do argue with is that orange horizontal striped building which faces the large circle, I find it very paltry because I think it could very well have been a major slab condition, containing that large, circular piazza and making it a visual tour de force.

As far as Charles Moore's scheme is concerned, I'm enchanted by the inventiveness. I think probably along with Diana's there seems to be an indulgence in play which I find very attractive. What I don't understand is the disparity between the drawings of the various vistas that one would supposedly see and what, in fact, one would see. Neither am I convinced of the attempt to take something of street texture of the residential area and let it granulate upwards onto larger structures thereby destroying street, maybe picking up the notion of transplant of that kind of housing, but at a tremendous price.

Steve Peterson's scheme is, of course, I think probably of all the schemes the most developed – I mean Steve's scheme is the one that really taxed the credibility as far as the twelve hour situation is concerned. I argue with its frenetic, almost Roman scale interweaving of street patterns into *exedra* forms, *piazzas* of varying sizes, alleyways, and all the rest. I think it's a very expert handling of these elements, but I'm not sure it's appropriate for that district, nor do I think he's accomplished the clarification of the site as three sections meeting in this knuckle.

As for Harry Weese's scheme, I'm not sure I can really relate too strongly to it. I think when I first saw the drawings I was impressed by his concern for vehicular traffic patterns, Chicago pragmatist that he is. I thought his would be a scheme that in its final conclusion ably coped with it. But, now I think I was wrong. The scheme in fact makes for a nearly impossible vehicular condition relative to pedestrians. I will cut this short because I'd like to continue this debate with the designers.

Vidler: I was very hesitant to accept the invitation to come here for two reasons. One, because there were announced five architects and as you might imagine my domestic considerations in New York and Princeton have made me hesitate to be criticizing five architects. Secondly, because I wrote a little piece some of you might have been reading recently on the three typologies of modern architecture. And I was very nervous about how to fit five architects into three typologies.

However, I thought it would be useful to identify the three typologies of which I continuously speak nowadays, and to neatly classify and put in boxes the five architects that we've seen this afternoon. When I talk of the three typologies of modern architecture I speak of course of architecture and not of urbanism. I speak of the way the eighteenth century said, in default of a god and default of a higher and harmonic order on which to base its imitative principles of architecture, that we should therefore imitate the principles of nature. For many years and continuously through the nineteenth century this principle of nature, this principle of organicism changing of course as natural science itself changed, was appealed to as the imitative principle of architecture.

Side by side with that there was a second typology, which appealed to a new nature that was being produced by the machine, the industrial nature. The typology of the machine I think reigns consistently side by side with the natural principle throughout the Modern Movement, and produces all those objects which we're now in the process of criticizing.

And then I would point to the emergence of something I think the *Harvard Architecture Review* has also noticed. There is emerging what I characterize as a third typology, a third way of understanding or making a paradigm about structure and form in order to make an architecture of some validity. And that is an architecture that turns not to nature or the machine but to the city fabric itself, both the traditional city and the existing city in the present. It does so in order to in one way produce an archeology of form, an archeology based on city fabric – the third typology of the city.

Of course these typologies of architecture apply as well to urban planning. In the eighteenth century the Enlightenment looked to the cities which had built up heterogeneously throughout the middle ages and the previous eras and said, they're jungles, forests, they're untamed and they need taming. And the Abbé Logier, the man who had developed the principle of the primitive hut, said that we should look on the city as a forest and we should go into it like a garden, cutting and pruning. And a very famous architect at the end of the eighteenth century began to draw drawings of Paris cut through as if the city fabric of Paris was just like a forest. A city was just like a garden, a wild garden, and the alleys and the cuts through it, the boulevards which met in various intersecting points, were the Enlightenment way of opening up the untamable jungle to light and air.

Then in those spaces in the nineteenth century, those hermetic machines of public institution, be they museums, art galleries, schools, asylums, or prisons, were inserted. And then gradually through the modern movement we began to lose all sense of the city fabric itself as a forest which had to be tamed. And we erased the city fabric itself in favor of the real forest or the real park and we were left with those hermetic machines and institutions without any fabric at all, but with merely a continuous green swath. Then Team Ten in the fifties tried to humanize this vision with a little sociology and anthropology, but succeeded only in reproducing very similar formal paradigms for the way in which the city, and specifically the center of the city on which they were concentrating, should be redeveloped. Thus we got this paradigm of an open center with objects and monuments standing within it, sometimes that open center trying to be green.

Over the last fifteen or twenty years there has been a tremendously strong reaction against both those paradigms – the paradigm of a city fabric that you cut through like making war, as Haussmann made war on Paris by cutting through the boulevards and thereby made war on some of its society as well, and the paradigm of the flat green and the objects. We've had, on the one hand, rationalists, like Aldo Rossi, saying we should re-incorporate our monuments, our architectural elements, our city typologies, within a city, a city which is a traditional city and a present city, and romantics like the townscape theorists in England and Colin Rowe coming from England, who would dissolve the monuments again into a collage of fabrics of different kinds. Both rationalists and romantics attempting to reinstate where the Modern Movement had erased the city, and in the process return to typologies of a pre-industrial age.

In the five schemes we have here I think the various heritages are mixed in varying degrees. At one extreme is Diana Agrest who attempts to produce out of her understanding of traditional typologies, new sets of clear and distinct forms, each of which is a sign of a particular memory of a particular kind of urban living, a kind of memory machine for Boston.

Ed Barnes who very carefully attempts – and I like very much his metaphor because I work very much with metaphors as a critic – the idea of stitching together a fabric, weaving together and restitching things which had been broken, come undone. But he does this very much in the modest eighteenth-century tradition of what was called embellishment.

Charles Moore both evoked nineteenth-century typologies in these great and grand arcades and the typologies of traditional cities, typologies of hill towns as the small houses mounted the roofs of the rest of the city.

Steve Peterson made out of Boston a field for the display of spatial elements taken from ancient and traditional cities, many of which we could immediately identify with in history.

And Harry Weese took very much the line of the townscape tradition in England in the fifties and sixties, placing bollards at strategic points, attempting to ameliorate at a rather small scale the landscape across which the pedestrian walks.

All these forms of understanding cities have emerged in the last ten, fifteen, twenty years. And all of them are in one way or another very strongly critical of the Modern Movement and I'd like very much in the discussion to ask the question of each of these designs, and then their designers, how much indeed they feel they have been able to break from that incredibly powerful tradition of traditions, the Modern Movement.

Just to finish, I was musing about what it might be if, as Victor Hugo said in the nineteenth century that architecture had been killed by the book, if today urbanism has been killed by the movie. I was musing on what one might call these schemes if they happened to be movies. Of course for Diana Agrest it has to be "Type Wars." For Ed Barnes, of course, it has to be "Son of Hero," and for Charles Moore it has to be "The Day the Townhouses Crawled." Steve Peterson is offering us "Rome – Sequel to Boston" and Harry Weese can be nothing else but "Towering Triangle." Thank you.

28 Le Corbusier's "natural man"
29 Le Corbusier's Perspective of Ville Radicuse
30 Le Corbusier's Plan Voisin

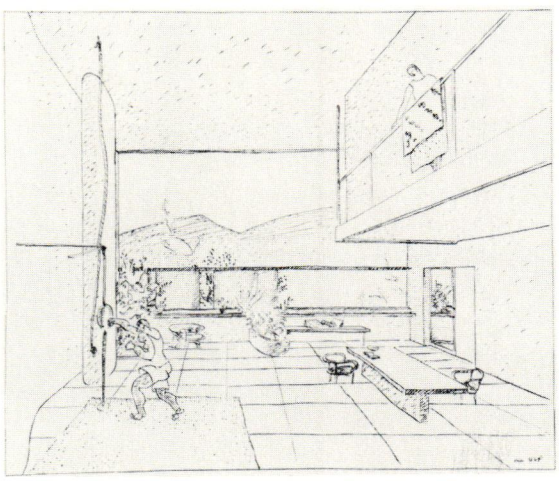
Postscript

The symposium transcript is by itself a valuable document in the theory and practice of urban architecture. But with the advantage of hindsight and several months of consideration, we, as editors of the *Review*, must add what is our evaluation of these ideas, how they appear in the context of the history of architecture, and why we who participated in the symposium felt it to be a unique event, perhaps of some importance to the future of urban architecture in America.

The symposium organizers purposely assembled a disparate group of designers and critics, each of them representing theoretical and formal stances as far apart as possible. We expected that these opposed viewpoints would lead to a series of sketch solutions so conflicting and diverse as to produce a graphic and verbal confrontation tending to uphold or discredit various strategies of urban design. Surprisingly though, when faced with the complexity of the Park Square area, conservative and radical designers alike, were forced to critically re-examine long standing preconceptions.

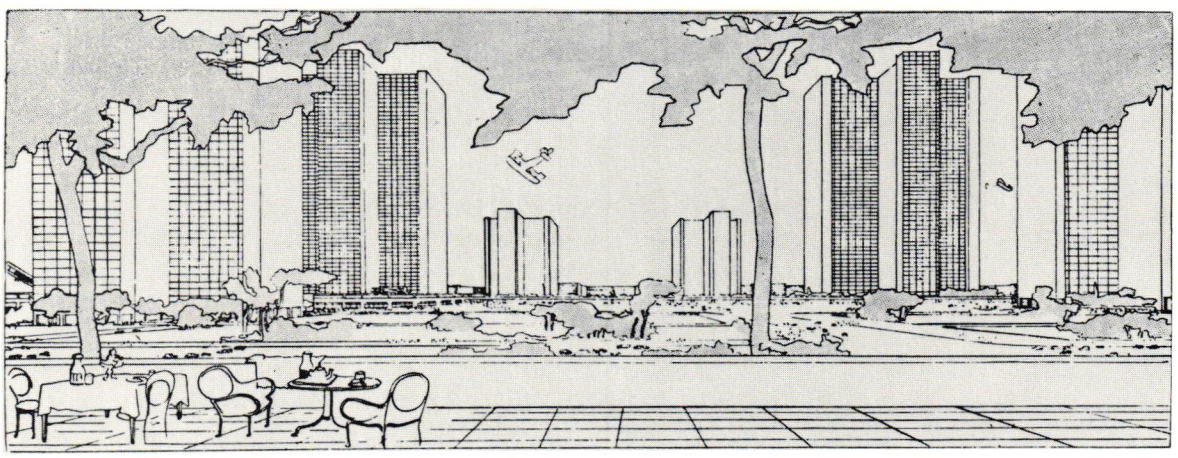
As a result, solutions based upon the accepted canons of the International Style were found to be no longer useful. In this the five solutions were thematically similar however different they were in form. All five designers displayed their interest in values other than those which have impelled urban architecture for the last sixty years. *This indicates not the beginning of a revolution in designers' attitudes toward the city, but rather how widespread is a change that has already occurred.*

The projects imply a critique of International Style urbanism in two specific ways – by reaffirming the balance between urban space and buildings, and by reintroducing history as an architectural resource. One act rejects the object fixation of the International Style, and the other rejects its anti-historical bias. Examination of each of these themes will reveal them to be the two important messages of the symposium.

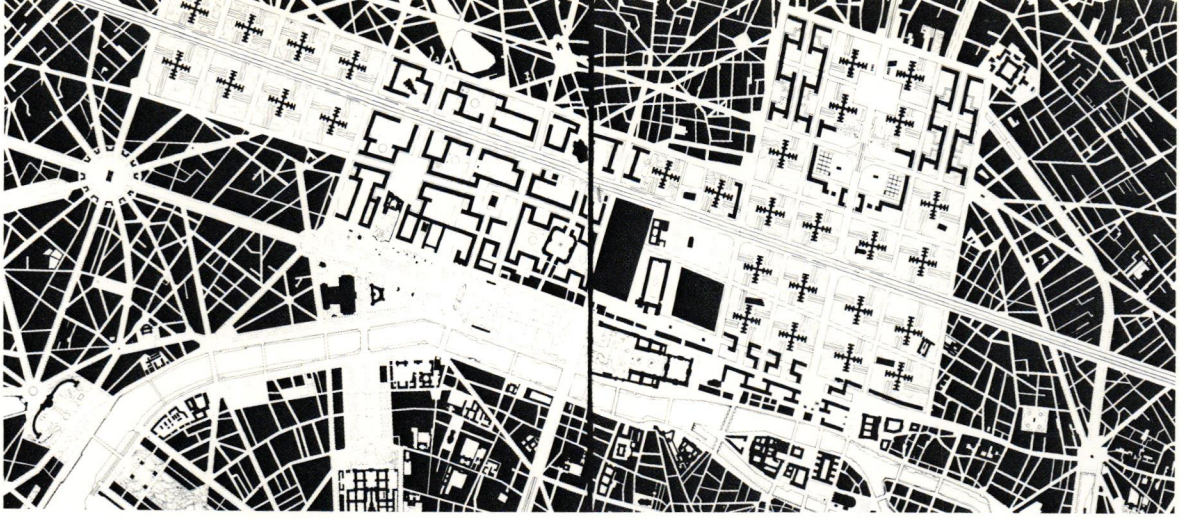


28

Le Corbusier's vision of a utopian city as a fraternity of skyscrapers set in a continuous garden, postulated an elusive type of "object building" that simultaneously asserted itself and disappeared behind picturesque masses of trees. The belief that man, occupying such a landscape free from the oppression of the traditional city, would achieve his greatest nobility, originates in Rousseau's Enlightenment philosophy and, more remotely, in



29



30

Platonic visions of Arcadia. The archetypal noble savage is recognizable, drinking wine and lifting barbells, in Le Corbusier's own drawings of the Ville Radieuse. The inclusion of such figures may be ironic wit, but in deadpan earnest is Le Corbusier's revolutionary proposition that buildings as objects should be placed on a neutral green expanse, or an infinite Cartesian grid. Equal at every point, the environment denies the hierarchy of places, and so is the expression of an egalitarian social utopia. It was assumed that by eliminating hierarchical differentiation in man's physical surroundings, political and social equality must follow.

Le Corbusier's Plan Voisin is the clearest statement of these aspirations. It has come to be also the most graphic illustration of the deficiencies of such design. The theoretical city, far more homogeneous than the Parisian Quartier it proposed to eradicate, established homogeneity achieved in the name of equality as a formula for modern urban design.

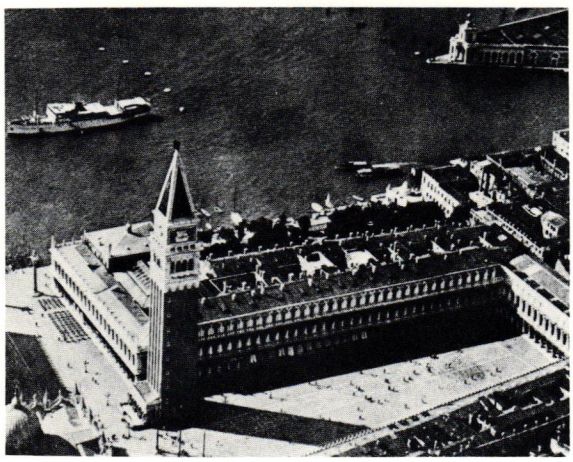
Lately architects have begun to consider that with this approach we suffer from a tyranny of the general over the specific. They ask, "What is the advantage, where is the excitement, in a city that is everywhere the same?" They struggle to reinstate civic identity, yet find it a difficult task, bereft of an appreciation for the importance of hierarchy in real cities. The task is made doubly difficult by their rejection of the elements with which hierarchy is achieved — delimited primary space and its contrasting supportive urban texture. Limitless neutral space, idealized by the International Stylists, and easily adopted as a theoretical model by our frontier culture, appears at last to have outlived its usefulness. With the demoralizing blandness of our present cities all too clear evidence of our past mistakes, designers have begun to assert a new value — that of the essential balance between space and built form.

Nowhere is this fact so apparent as in the five schemes for Park Square. Though they differ widely in form and feeling, the schemes are strikingly similar in this regard. Their designers have deliberately attended to both space and built form. They have elevated the voids of the city to an appropriate equality with its solid matrix, and in so doing, asserted the primacy of some areas over others.

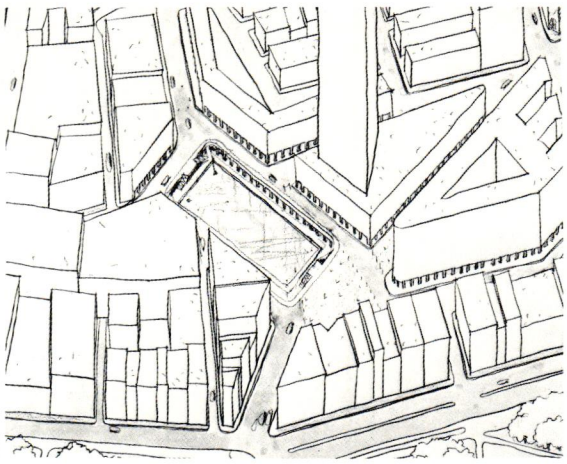
Steven Peterson and his team exuberantly overuse this kind of place-making, perhaps to make the point by exaggeration. While all of the schemes show an almost joyous rediscovery of the use of enclosed space, it seems that the Peterson and Barnes teams most singularly develop the idea of outdoor space as the public rooms of the city. The Agrest and Moore teams tend to focus more on the various building types used to define this outdoor space. But in all of the schemes, including Weese's, the aim seems to have been to give character to an area of the city by establishing a hierarchy of buildings and spaces.

Peterson's and Barnes's sketches promote a view of the city as a clay-like mass, out of which the voids of the public spaces can be carved. In Peterson's case, this was certainly the operating premise, though in general the "clay city" notion may have greater applicability in European cities where the surrounding texture is more uniform. Barnes uses the "clay city" idea only in direct response to the unique characteristics of Park Square. This is consistent with his call during the discussion for a situational approach to the design of cities, one that encourages the use of many techniques, depending on the specific design problem.

The Moore and Agrest designs, in contrast to the carved quality of Barnes's and Peterson's, could be characterized as aggregated schemes. But unlike the Modern Movement's grouping of objects, they aggregate discrete spaces as well as buildings. In Moore's project there remain some structures that, clay-like, fill up the interstices between his gallerias and the existing ragged edges of Park Square. Also his townhouses have a viscous quality flowing up and over those garages. But unlike the "clay city" schemes, his buildings and spaces are more assertive as discrete events. Agrest's scheme has no clay-like quality at all. She achieves a texture through the regular aggregation of objects and spaces, so her buildings become both object and texture simultaneously.



31



32

Surprisingly, the scheme which most clearly expresses the idea of balance of space and building is Harry Weese's tall towered scheme which at first appears so retrograde. For Weese proposes a seventy-story object and places it next to an enclosed public space of the same gargantuan scale. He also submerged the tower's base in an elaborately proposed city fabric when he could as easily have torn the existing city down and set his object on a clear field. The obvious comparison is with the Piazza San Marco in Venice, where the *piazza* and *campanile* are perfectly balanced. Insistent on the complementary power of defined urban space, Weese shows that object buildings are not in themselves in conflict with successful urban design.

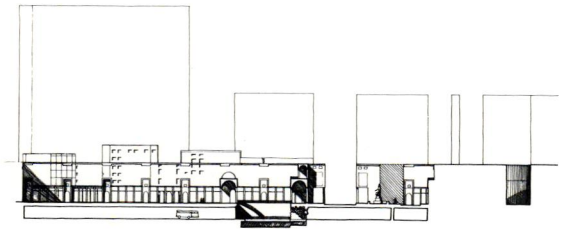
This re-establishment of a balance between texture and open space or between object and void in urban design is the first of the two major ideas shared by all five designs. Having described this at some length, we can use Steven Peterson's scheme to introduce the second important attribute shared by the proposals.

Peterson's direct reuse of the forms of the Villa Papa Guilia to create an urban square and a fitting finish for the Boston Marathon shows an unabashed delight in mining the history of architecture for ideas and a return to the use of ironic quotation and wit in architecture. A similar appreciation for history and wit can be discerned in the other proposals. The schemes variously recall medieval squares, Piazza San Marco, nineteenth-century gallerias and Italian hill towns, and in the case of Diana Agrest, the architecture of Boston.

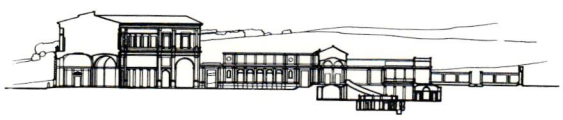
The five designers clearly avowed their use of history as a source, without the defensiveness that would necessarily have accompanied statements of that sort fifteen years ago. The frank use of history represents a decisive change of attitude.

> *In architecture, [the International Stylists'] moralizing fixation on utility and industrial technique led to an anti-historical bias the consequences of which have yet to be fully understood, although they are all too painfully obvious wherever modern architecture has dealt with the urban environment. The modern movement has prided itself on its 'urbanism,' but to be anti-historical is to be anti-urban.*
> — Arthur Drexler, *The Architecture of the Ecole des Beaux Arts*

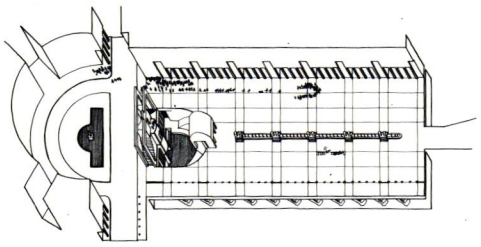
The architects of the Modern Movement believed that the retarding influence of historical stylism and tradition was preventing the achievement of their rationalist utopia. So they imagined an architecture which ignored and obliterated the physical presence of the history of architecture, and by implication postulated the eventual end of the historical process itself. This anti-historicism is a common theme in most nineteenth- and twentieth-century utopian thought. It exists both in the Christian millenial dream of the Second Coming, and in social Marxist ideology as the eventual withering away of institutions of government after the achievement of a proletarian revolution. In *Vers Une Architecture* and his other books Le Corbusier overlaid both these sources with the conviction that social utopia can actually be achieved through "good design." Drexler has pointed out the futility of architects trying to exempt themselves from the historical process, but

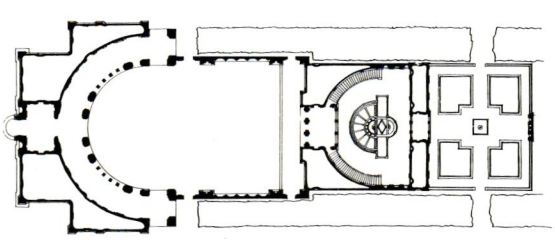


33 ▼ 35 ▼



34 ▲ 36 ▼





31 Piazza San Marco, Venice
32 Weese's Piazza for Parl Square
33 Peterson's "Circus Marathonus" for Park Square, Section
34 Section of Villa Papa Giulia, Vignola
35 Axonometric view of "Circus Marathonus"
36 Plan of Villa Papa Giulia
37 Galleria Mazzini, Genoa
38 Moore's Exedra for Park Square
39 Villa Barbaro Nymphaeum, Palladio

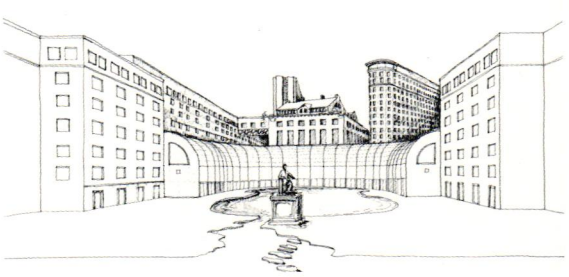
the idealistic and liberal, progressive tone of twentieth-century culture has given these ideas a power that is out of all proportion with any possibility of their actualization. They have had a lasting and pernicious influence on modern architecture that we have found extremely difficult to shake.

Partly in reaction to past anti-historicism has been the introduction of historical reference into buildings controversially termed "Post-Modern." Without discrediting this development, we believe that the technique of historical recall and quotation is even more appropriate and useful on an urban scale, and that this is demonstrated by all five of the sketch proposals for Park Square.

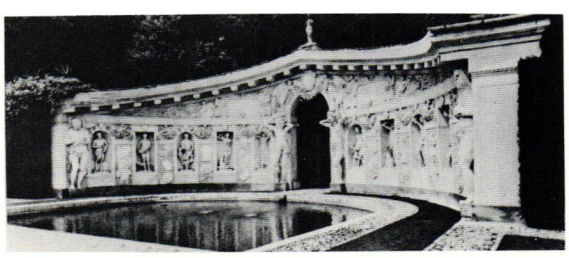
Interestingly, Charles Moore has explicitly applied the principle of historical reference in a built project. It is not surprising that his Park Square scheme relates strongly to his recently completed Piazza d'Italia in New Orleans. Both exhibit the same attitudes toward the use of historic forms and details. In his sketch solution Moore again wittily juxtaposes historic set pieces – *exedras*, gallerias, and metaphorical ice floes – and initiates a dialogue between the general forms of the city and the more specific events that occur within it. Implied is a new conception of urbanism that allows the specific experience to assert itself, completely unlike the urban strategy of the International Style, in which the general idea was so dominant that the specific humane experiences of smaller scale were unexpressed.

Diana Agrest was the most clear of all of the designers about the use of historical recall and

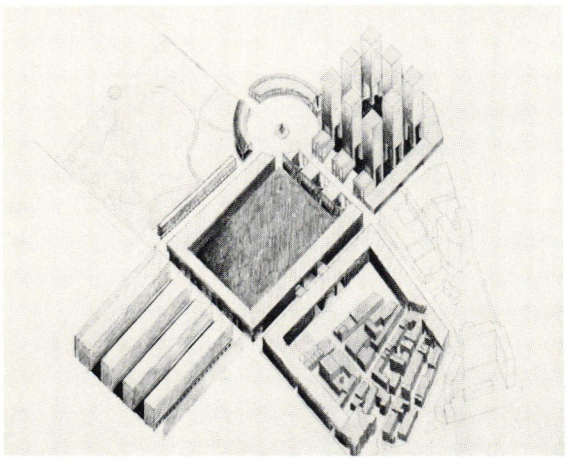
37



38

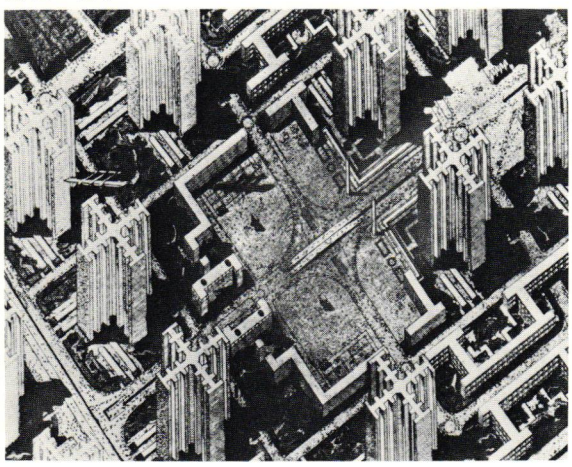


39



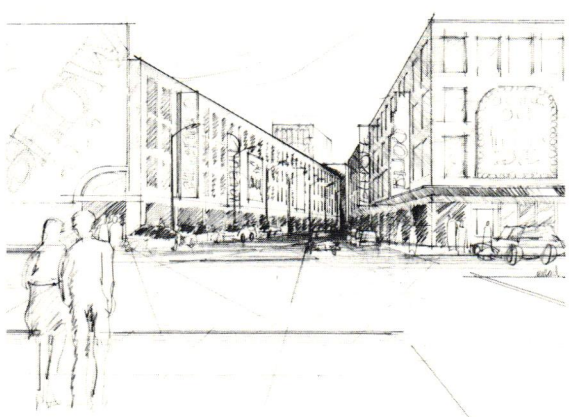
40 Agrest's Axonometric of Park Square
41 Plan Voisin, Le Corbusier
42 Barnes's Square, Theater District, Park Square
43 Piazza Vecchio, Bergamo
44 Barnes's Design Sketch, "a medieval kind of exit, instead of the Renaissance central entrance"
45 Plan of squares in San Gimignano
46 Interlocking squares in the medieval town of Todi

40▲ 41▼



delimited public space. While her poetic comments and drawings seem to ally her with the other designers on these points, a closer examination of her scheme sets her apart.

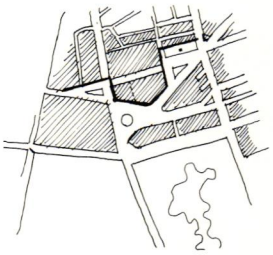
Faced with their desire to include in the city selected historic references, four of the designers follow the obvious strategy of selecting among those buildings and spaces which already exist in Park Square. Agrest, on the other hand, postulates the leveling of Park Square, and the complete rebuilding of a new urban order on a vast scale. In this she comes close to the urban renewal bias of the 1960s. Her design is curiously reminiscent of Le Corbusier's image of the Plan Voisin. She does state that in using history as a vehicle for urban design one must potentially use all of history, and not exclude any part of it, and so justifies her recall of the Modern Movement as well as more remote periods. But although she first appears to critique the International Style urban design, her design, in the end, mimics it. She beautifully recalls some of the forms of Modern architecture, while unnecessarily recalling its destructive urban philosophy. The scheme is another version of urban utopia, removed only one step from the Ville Radieuse by replacing the aesthetic of the machine with an aesthetic of history. This perhaps explains its somewhat dry and distant character when compared with the other schemes.



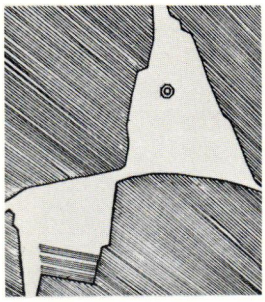
42 ▲ 43 ▼

In light of the failure of past utopian urban strategies, it might be apparent that the city does not evolve as a linear progression toward any one ideal. If the destructive history of International Style urbanism has anything to teach us it is this – that the city evolves through a process of dialectic between fragments of architectural utopias that somehow get built, and the random occurrences that form the matrix of a living city.

What is needed in urban architecture is some process that allows these different visions of utopia to exist side by side, a process that relies on texture for transitions between these parts. Ed Barnes evokes this process when he speaks about "weaving together the torn fabric of the city as if one were mending a torn blanket."



44

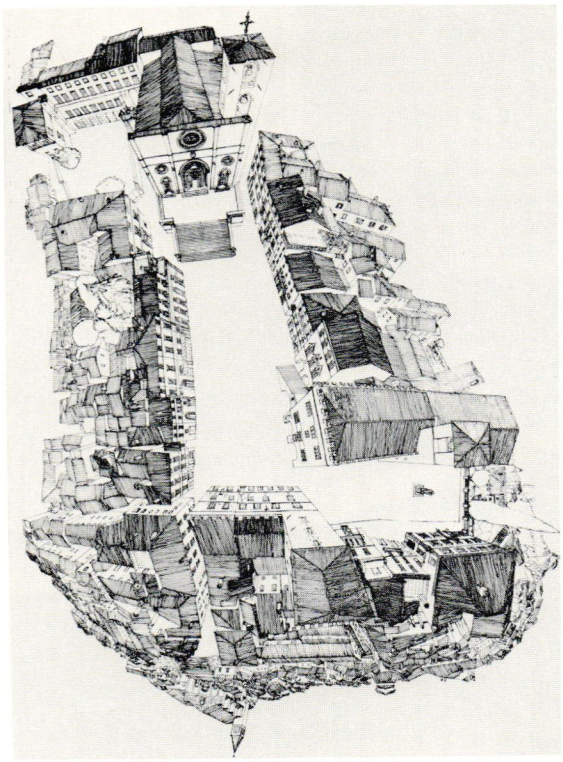


45

All five of the symposium designers have reached a new design strategy consistent with this view of urban architecture. This new strategy enabled them to weave together urban fragments into a whole, giving new character and coherence to a blighted area of Boston. These designers clearly have a deeper understanding of the essential meaning of the city for the human community than did the International Stylists.

The city is the net result of many interests, each trying to build their own dreams. The ability to provide for the co-existence of many conflicting utopias, to reconcile and unify them, and to allow none to dominate, makes the real city the only possible built expression of the democratic aspirations of man. New strategies for designing cities must allow this natural process to continue to occur.

— Daniel S Bernstein
Ellen A Watts



46

The *Review* wishes to thank the many GSD students who contributed their time and effort toward making this event possible, and especially:

Ellen Watts, Co-chairman
Daniel Bernstein, Co-chairman
Pat Sapinsly
Debbie Shapiro
Richard Rosen
Reed Rubey, Photography
Nat Hoyt, Graphics
Jeff Berg, Sound and Lighting
Tom Farrell
Anne Lewis
Jimmy Smith

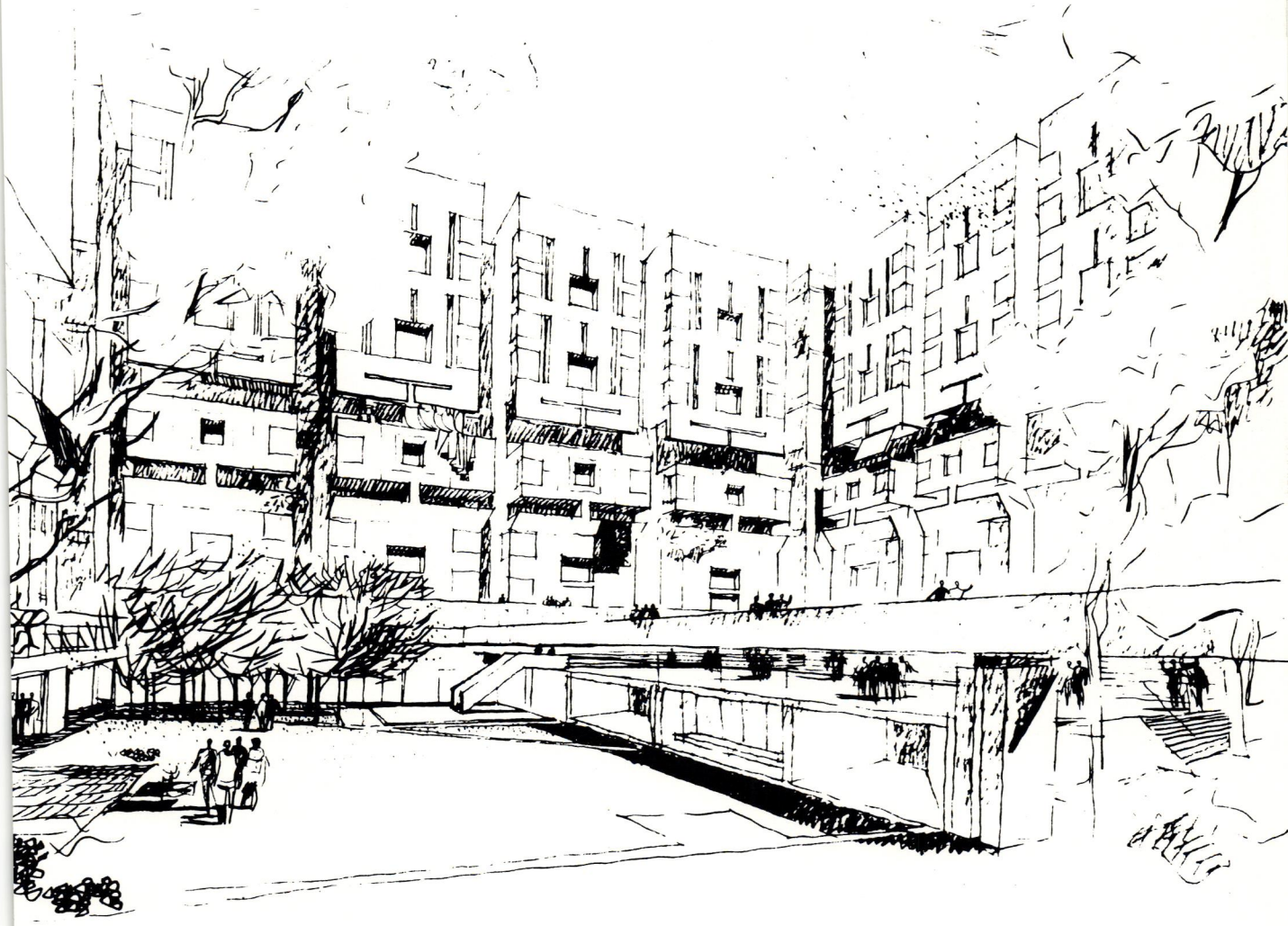
The *Review* is also grateful for the help given us by the following persons and organizations:

Larry Yont
The Harvest Restaurant
Color Tech
Stones Reprographics
Nimrod Press
Typo Tech
All Hours Professional Typing Service
Harvard Audio/Visual Services

The authors wish to acknowledge their debt to *Collage City* by Fred Koetter and Colin Rowe for many of the ideas presented here.

Building Documentation:

International House
Westlake Park
Romaldo Giurgola, FAIA

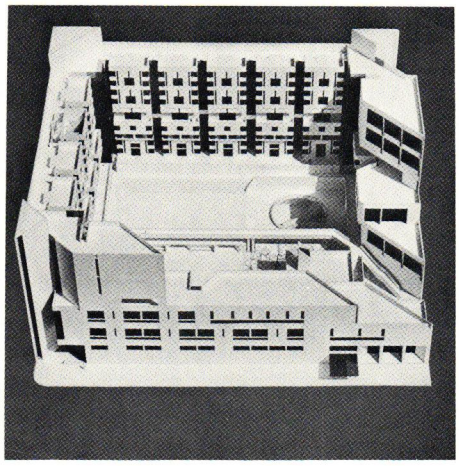


1 Times Square Plaza with new building at left, Westlake Park, Seattle, Washington
2 Courtyard, International House, Philadelphia, Pennsylvania

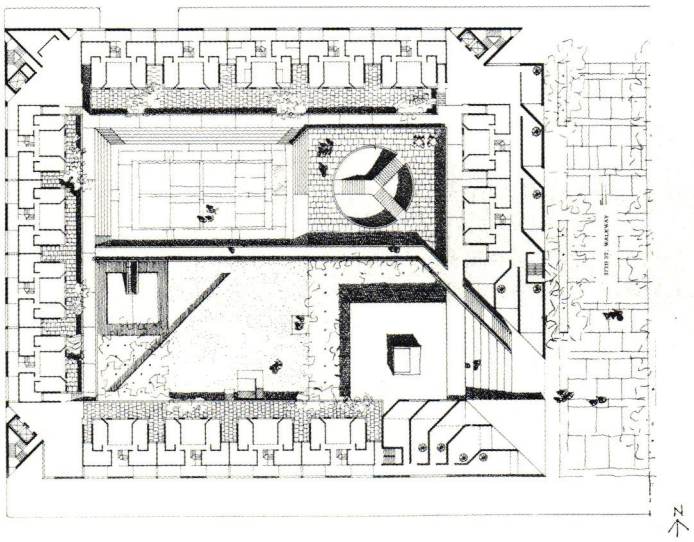
The Harvard Architecture Review, Volume 2, Spring 1981,
0194-3650/81/010162-14 $3.00/0. © 1981 by Romaldo Giurgola.

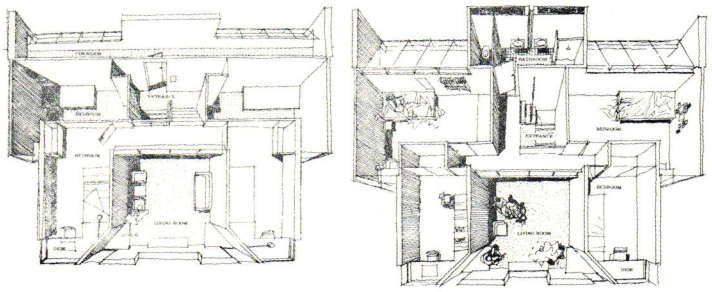
International House

Competition
Philadelphia, Pennsylvania
Submission 1965



3





4

This proposal is divided into six houses placed at the perimeter of the site, leaving a sheltered open courtyard for outdoor activities. The courtyard is developed in various levels with hard and soft paving materials, walled spaces, open spaces, and planting areas, accommodating differing activities from the ceremonial to the conversational, from the active to the passive.

The main entrance to the project is located at the corner formed by the intersection of a pedestrian walkway serving the university and a main street. The scale of the single-story gateway building is gradually increased from the entrance point in a series of one-and two-story steps to reach the final height of the project at the rear of the site. This permits a maximum of southeast to southwest sunlight to enter the courtyard.

Each of the six houses for 72 students is divided into suites for eight sharing a common living room and bathroom. The eight bedrooms are arranged on two floors surrounding a double-height living room. All living spaces face into the courtyard.

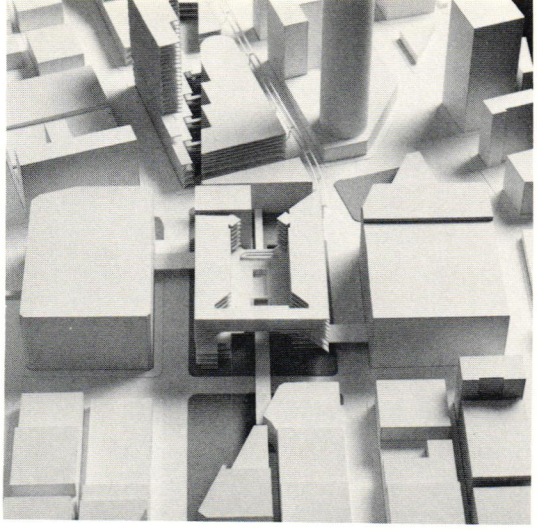
Horizontal access to the suites is through single-loaded corridors located along the exterior walls of the complex. Vertical access occurs at the corners which are fragmented to reveal the depth of building and views of the courtyard at the place of transition from horizontal to vertical movement. The communal functions serving the residences are located at the intermediate level which divides the scale of the walls surrounding the courtyard and begins to articulate the individuality of the six houses within the larger complex. The identity of each suite is further articulated on the facades in the expression of the double-height living rooms around which the bedrooms are clustered. This grouping is repeated horizontally and vertically on the interior and exterior facades to demonstrate both the autonomy of the suites and the hierarchical nature of the suite, the house, and the project.

Area: 155,000 Square Feet
Cost: $3,981,000 General Construction

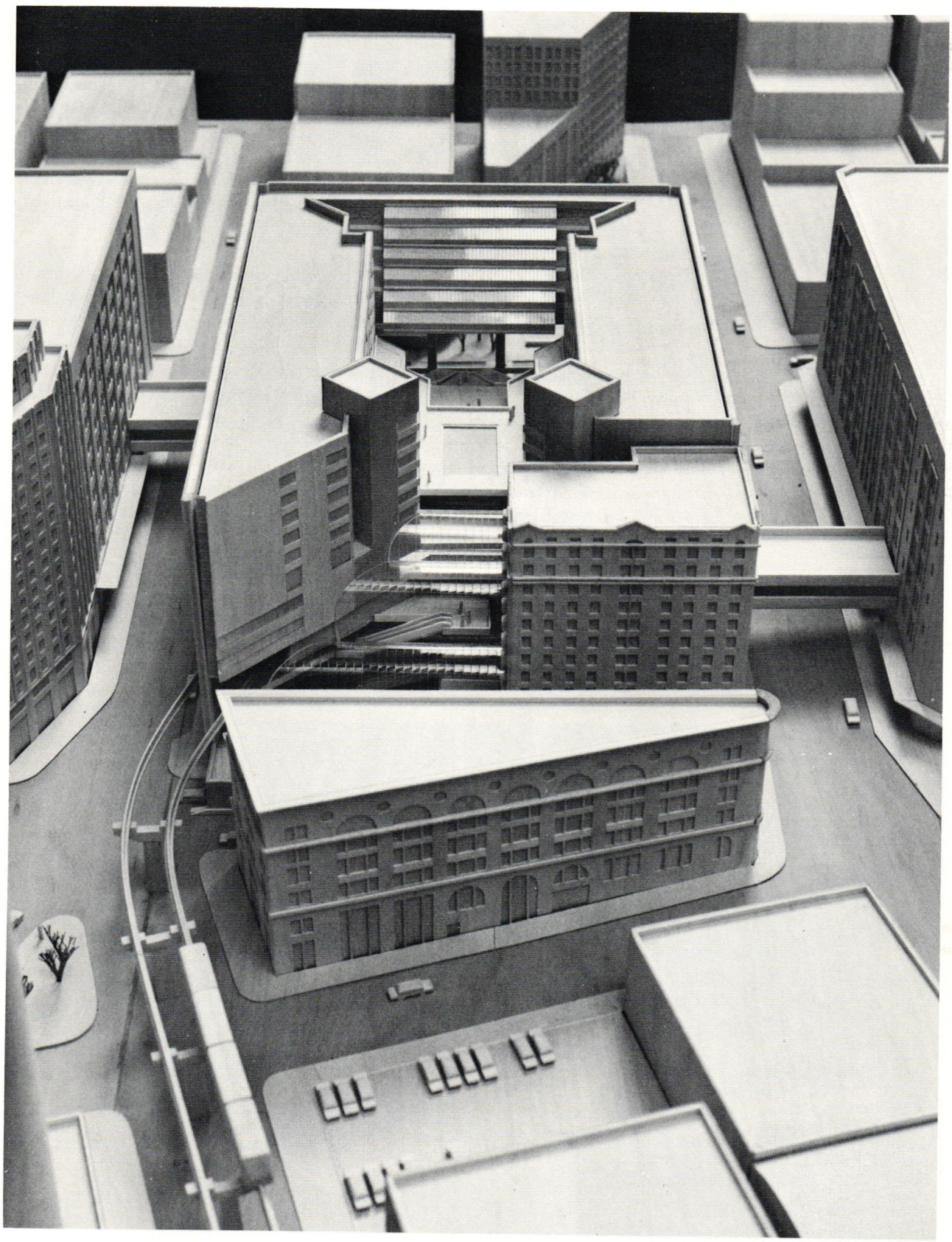
3 Project model
4 Project and unit plans
5 Site concept model, Westlake Park, Seattle, Washington
6 Project model looking south

Westlake Park

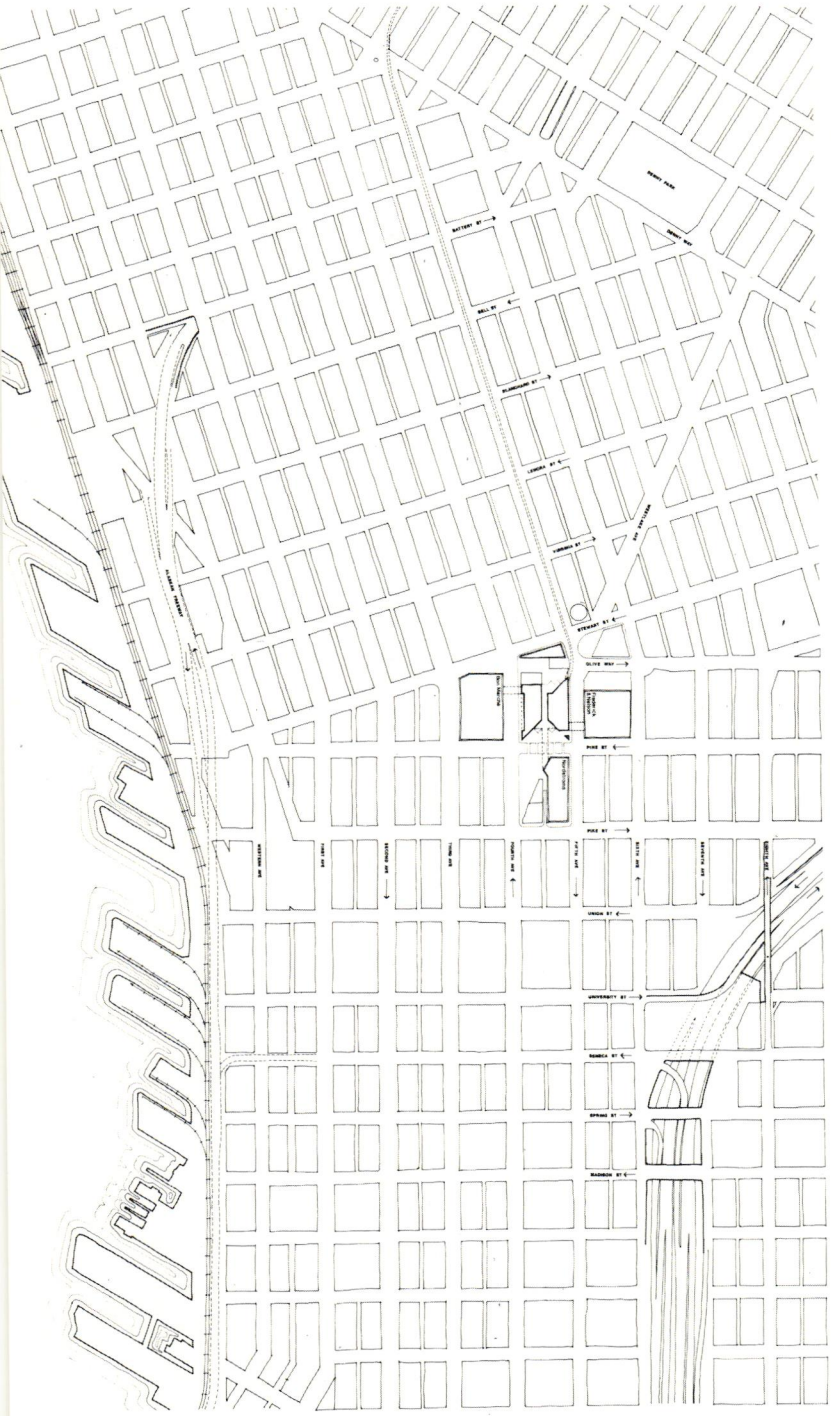
Hotel/Retail/Parking Complex (Scheme 1)
Mondev International Limited
Seattle, Washington
Completion 1982



5



6

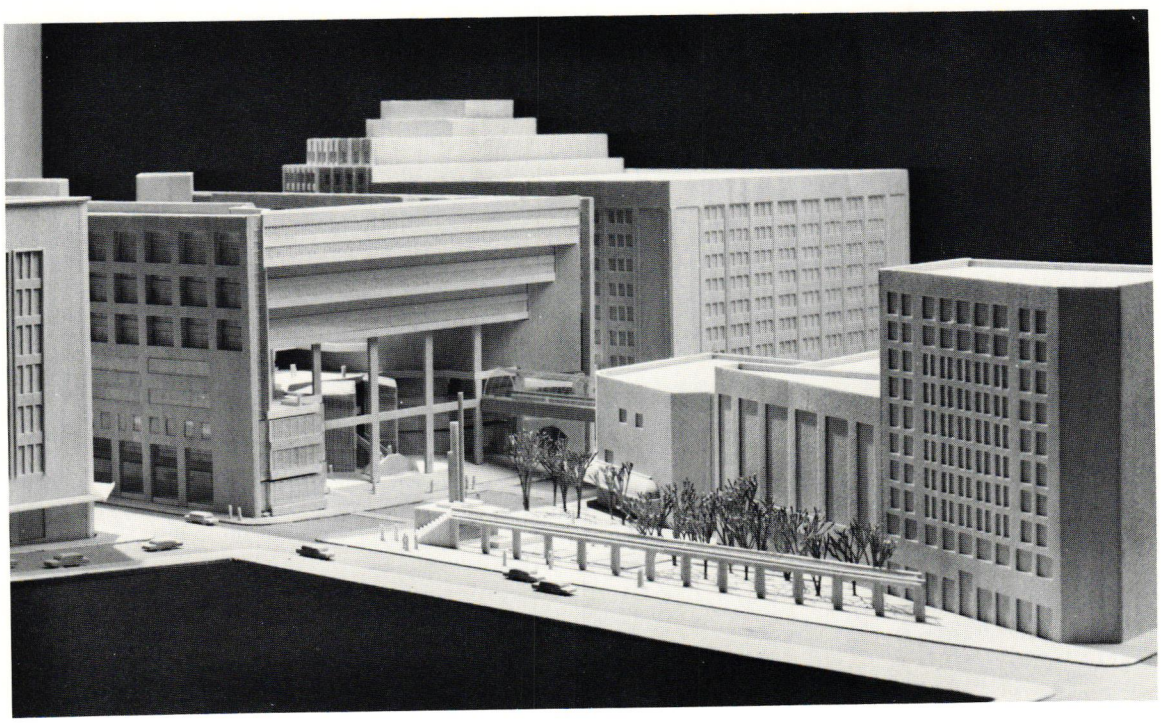


8

The Westlake Park project is a joint public and private development at the heart of Seattle's retail core. The site, surrounded by the city's three major department stores, also contains the terminal of the monorail which connects the Seattle Fairgrounds, now used as a cultural center, to the downtown area. Due to an existing street and the alignment of the monorail cutting diagonally across the site, a unified development of this area has proven to be impossible without city participation.

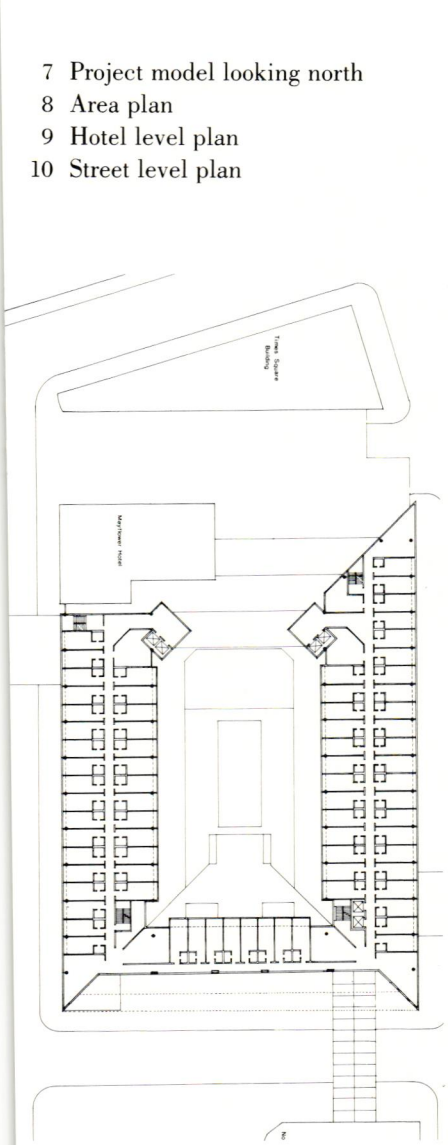
This project takes the concept of a city recreational space and extends it from a proposed park into an itinerary of green waiting and relaxing areas, through an enclosed shopping arcade, into an open plaza tying the adjacent properties into an urban whole. The terminus for the monorail and three levels of shopping surround this continually open mall, with parking underground for 300 cars. Topping off this structure is a low rise 300-room hotel built around a series of gardens and pools that have been planned to attract not only the weekday commercial traveler but weekend vacation business as well.

Project Area: 900,000 Square Feet
Cost: $50,000,000 Estimated Construction

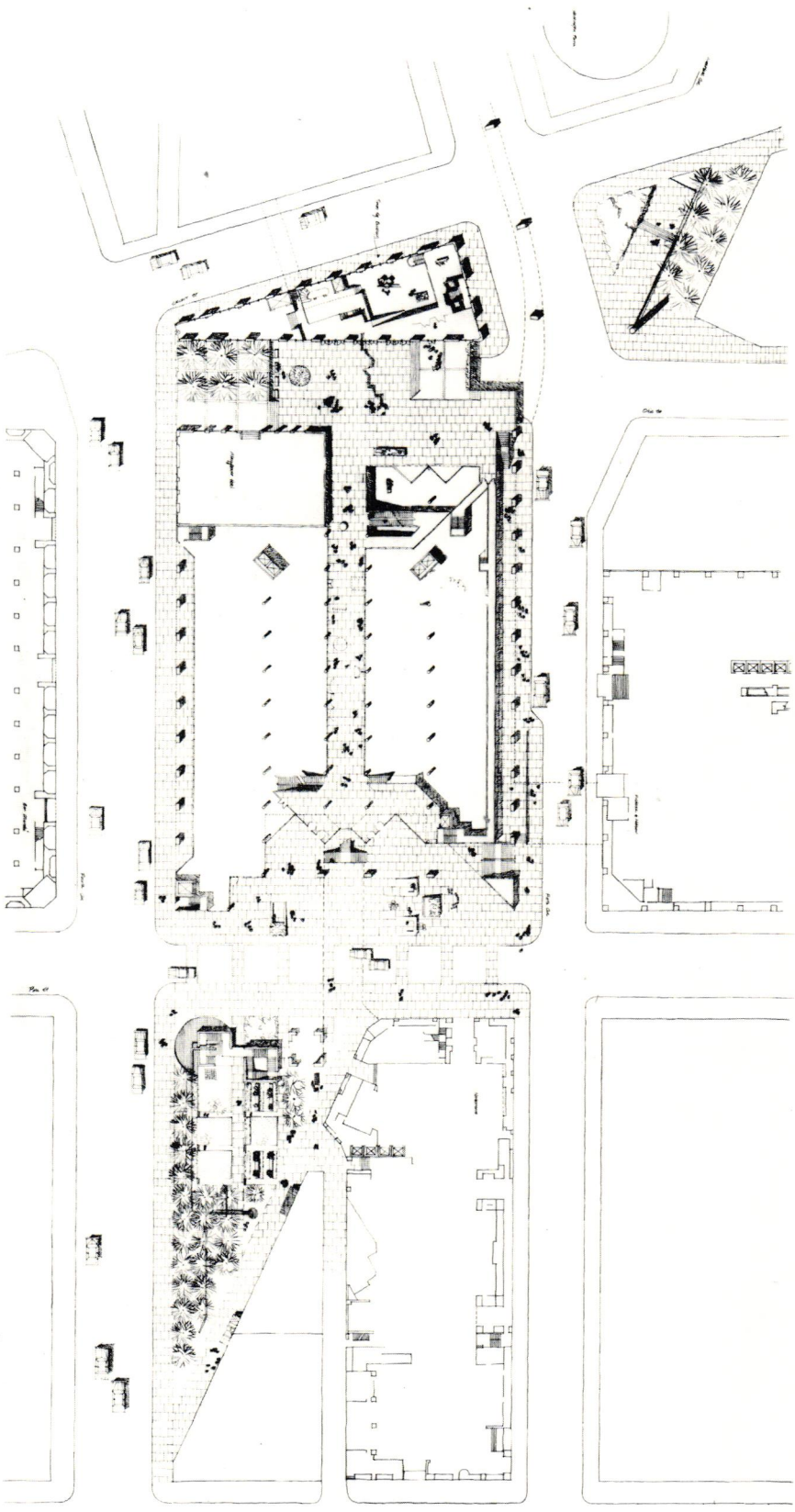


7

7 Project model looking north
8 Area plan
9 Hotel level plan
10 Street level plan

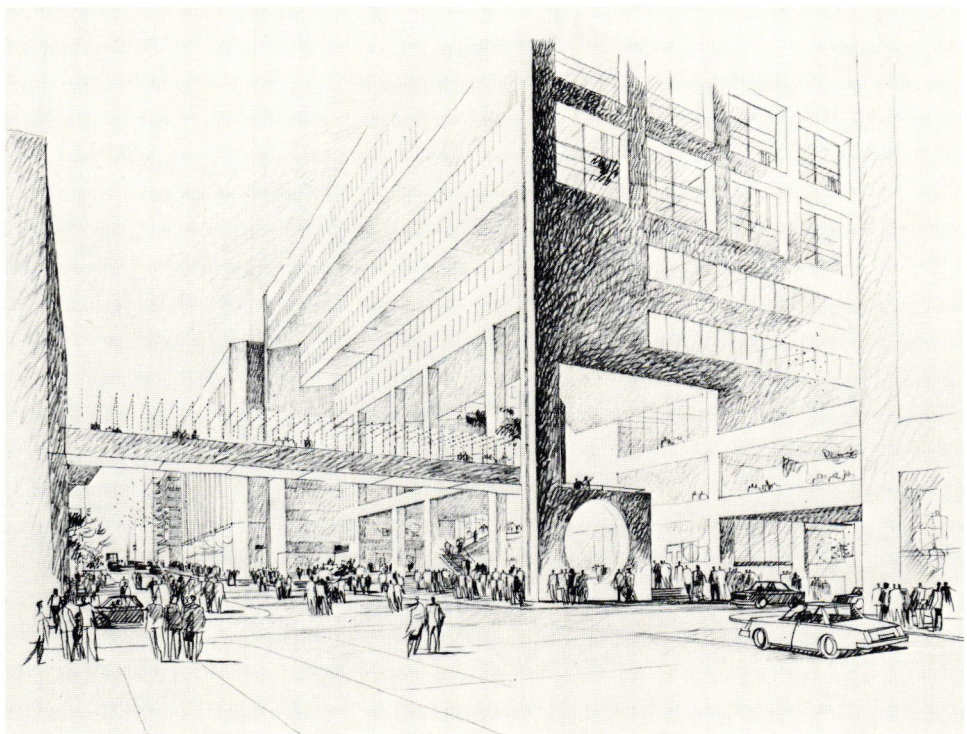


9

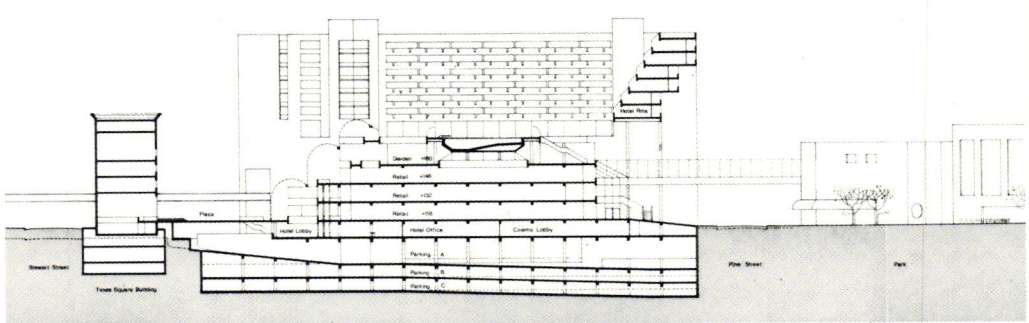


10

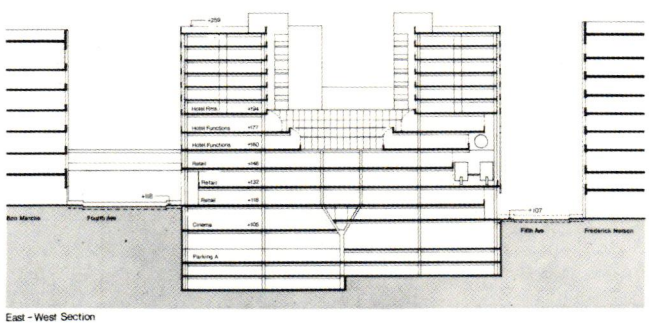
11 South entrance
12 North-south, east-west sections
13 Times Square Plaza and new building
14 North, south elevations including adjacent buildings



11

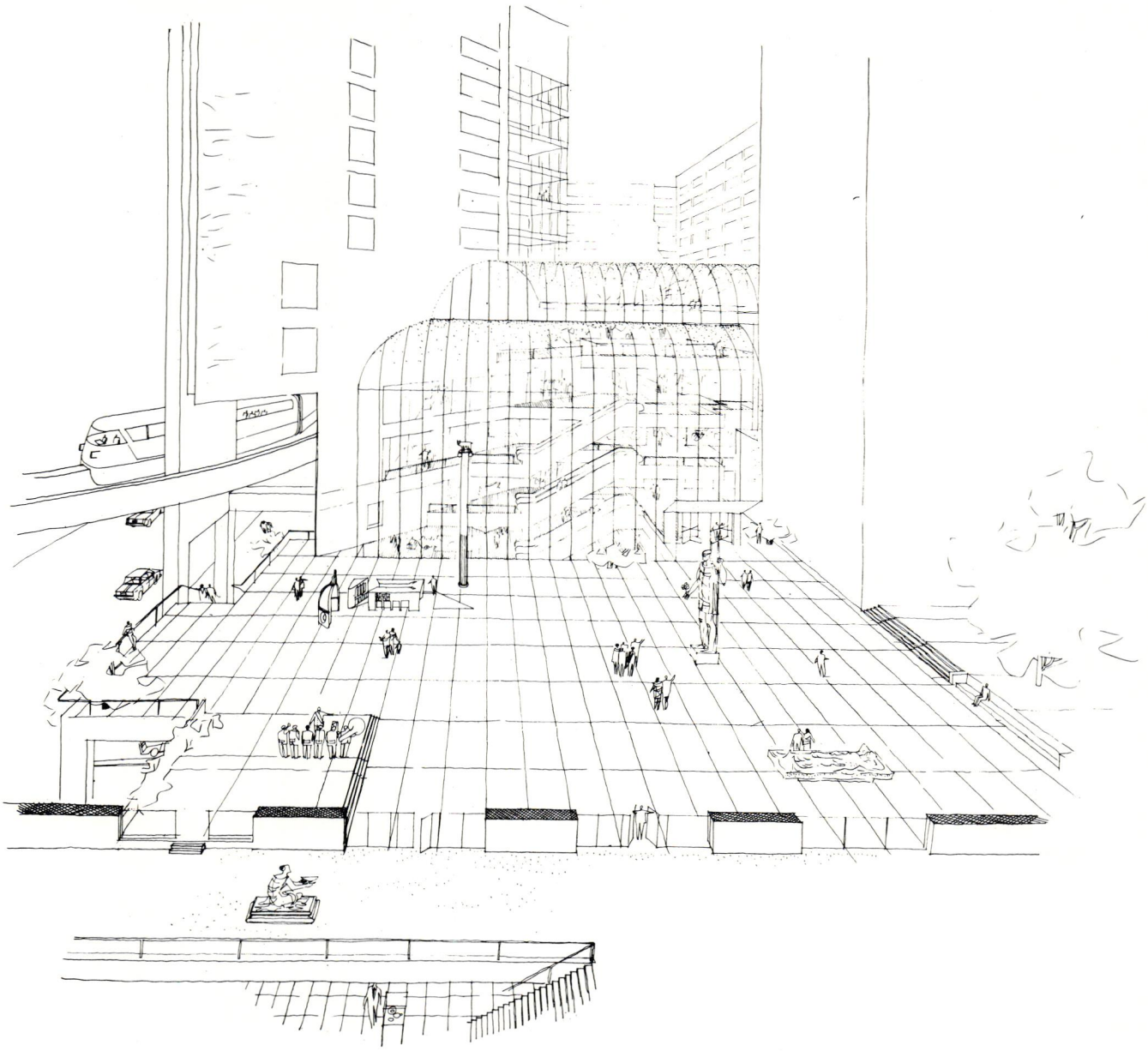


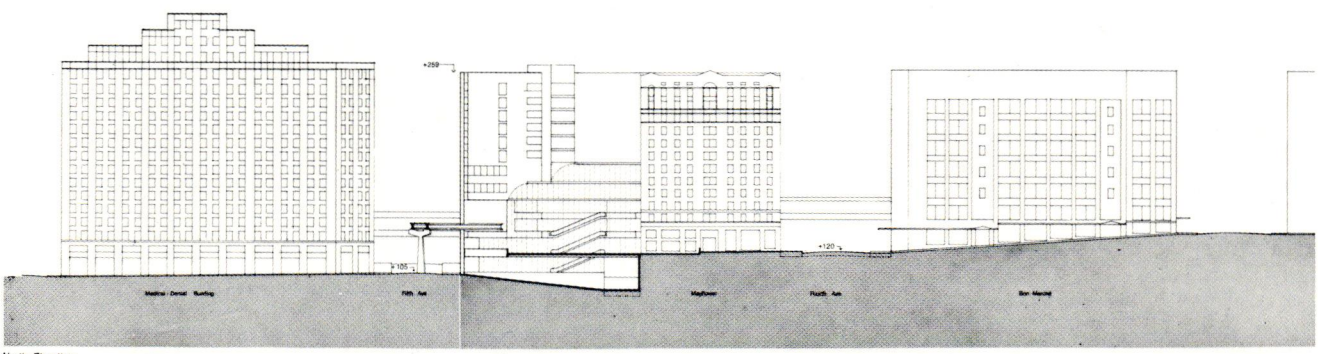
North-South Section



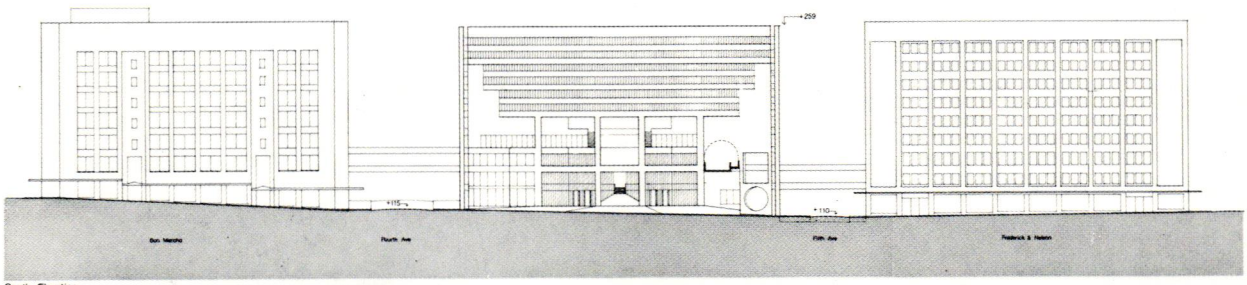
12

East - West Section





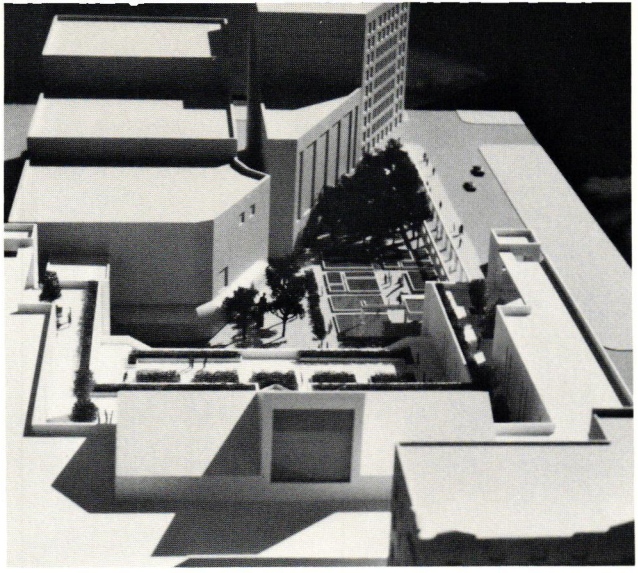
North Elevation



South Elevation

Westlake Park

Museum/Retail/Parking Complex (Scheme 2)
Mondev International Limited
Seattle, Washington
Completion 1983



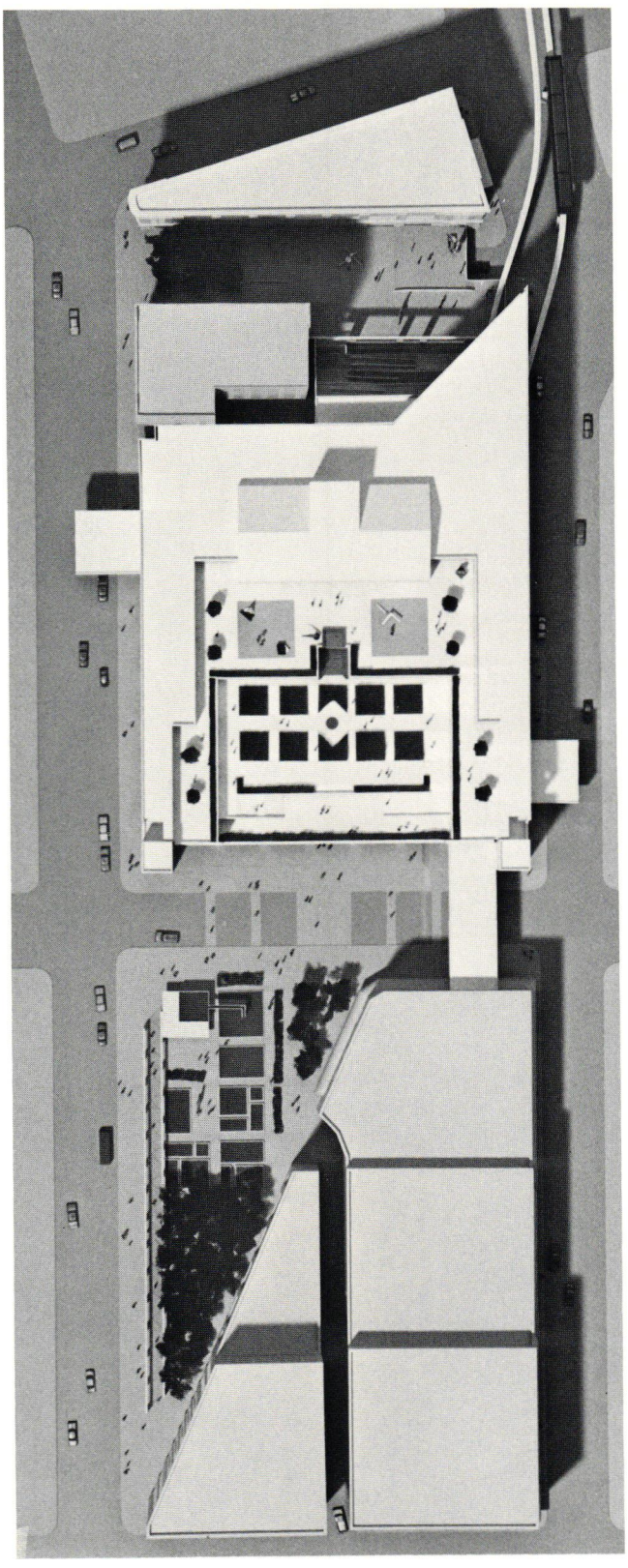
15

This project is again a joint public and private development in downtown Seattle containing new facilities for the Seattle Art Museum. The site is surrounded by three department stores and contains the terminal of the monorail to the Seattle Fairgrounds. Constructed on the site will be a 300-car underground public parking garage, a new monorail terminal, four levels of shops, restaurants, and cinemas with access bridges to the department stores, and the Art Museum on two upper levels.

The north end of each shopping level is reserved for auxiliary museum facilities, including a bookstore and gift shop, which identify the route up to the museum entrance. This entry overlooks a sculpture plaza and the historic Times Square Building beyond, which will be renovated as part of the project to include museum offices, restoration facilities, and storage for museum collections.

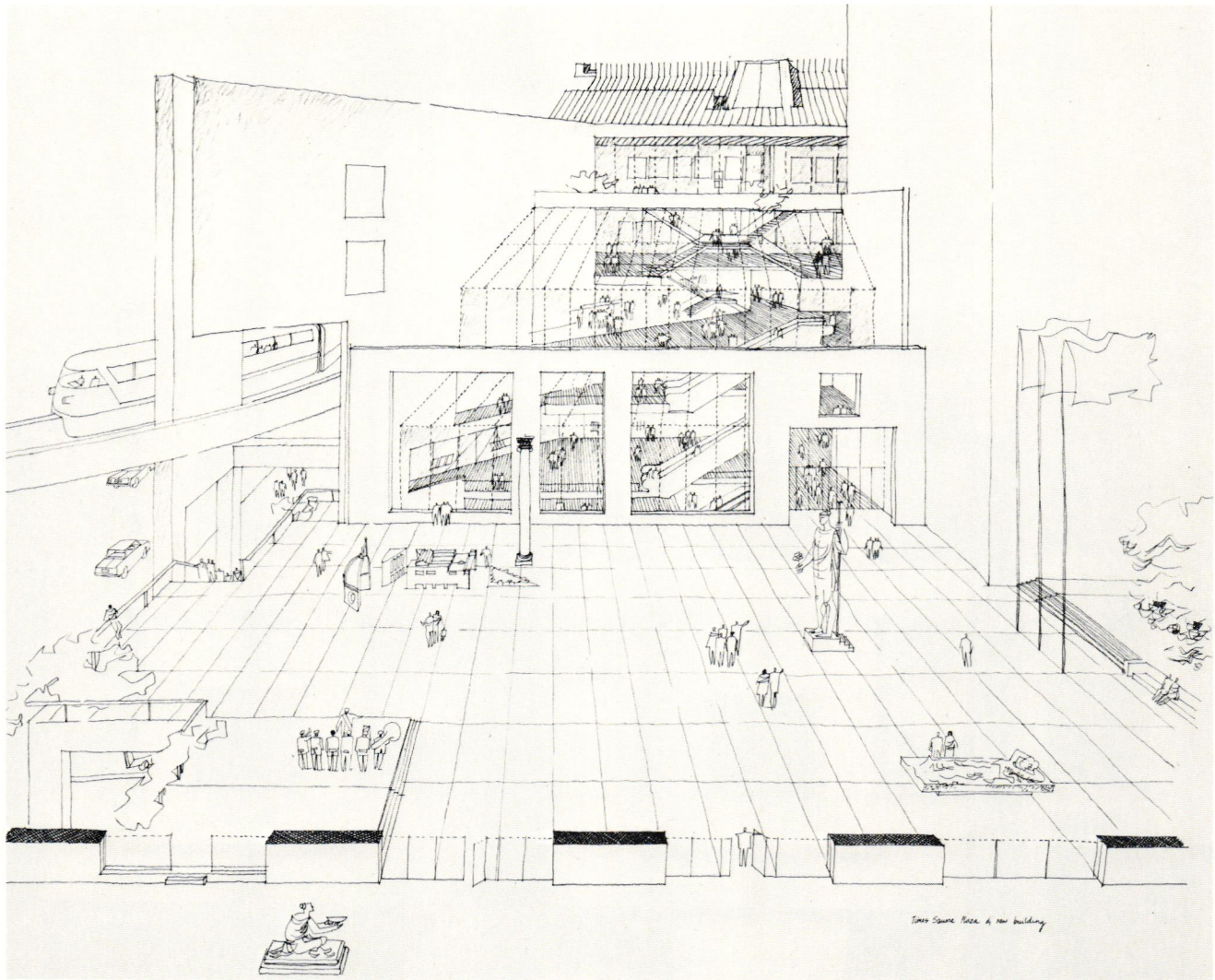
At the south end of the building landscaped roof terraces step down toward a triangular urban park. The two lower terraces are accessible to the public, while the top sculpture terrace is reserved for museum visitors.

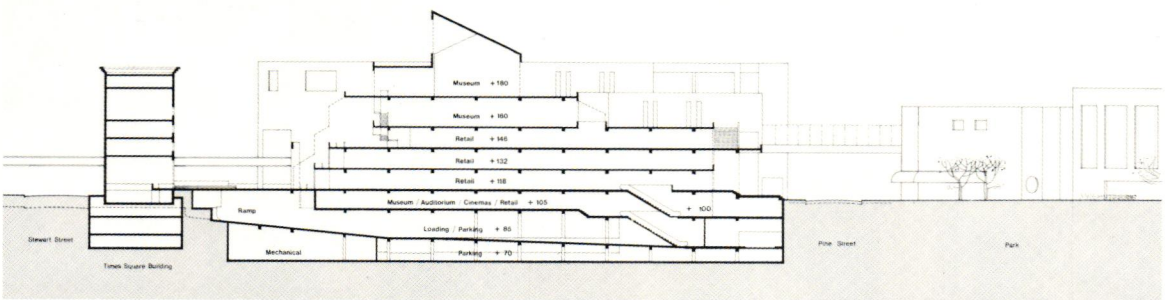
Area: 185,000 Square Feet Museum
186,000 Square Feet Retail
115,000 Square Feet Parking
Cost: $40,000,000 Estimated Construction

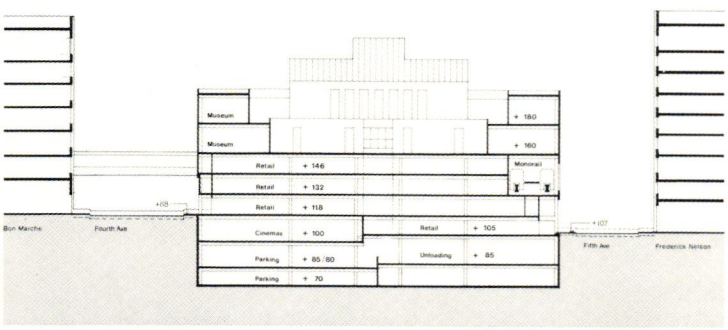


16

15 Project model looking south over roof terraces and south plaza
16 Project model
17 Times Square Plaza and new building
18 North-south, east-west sections





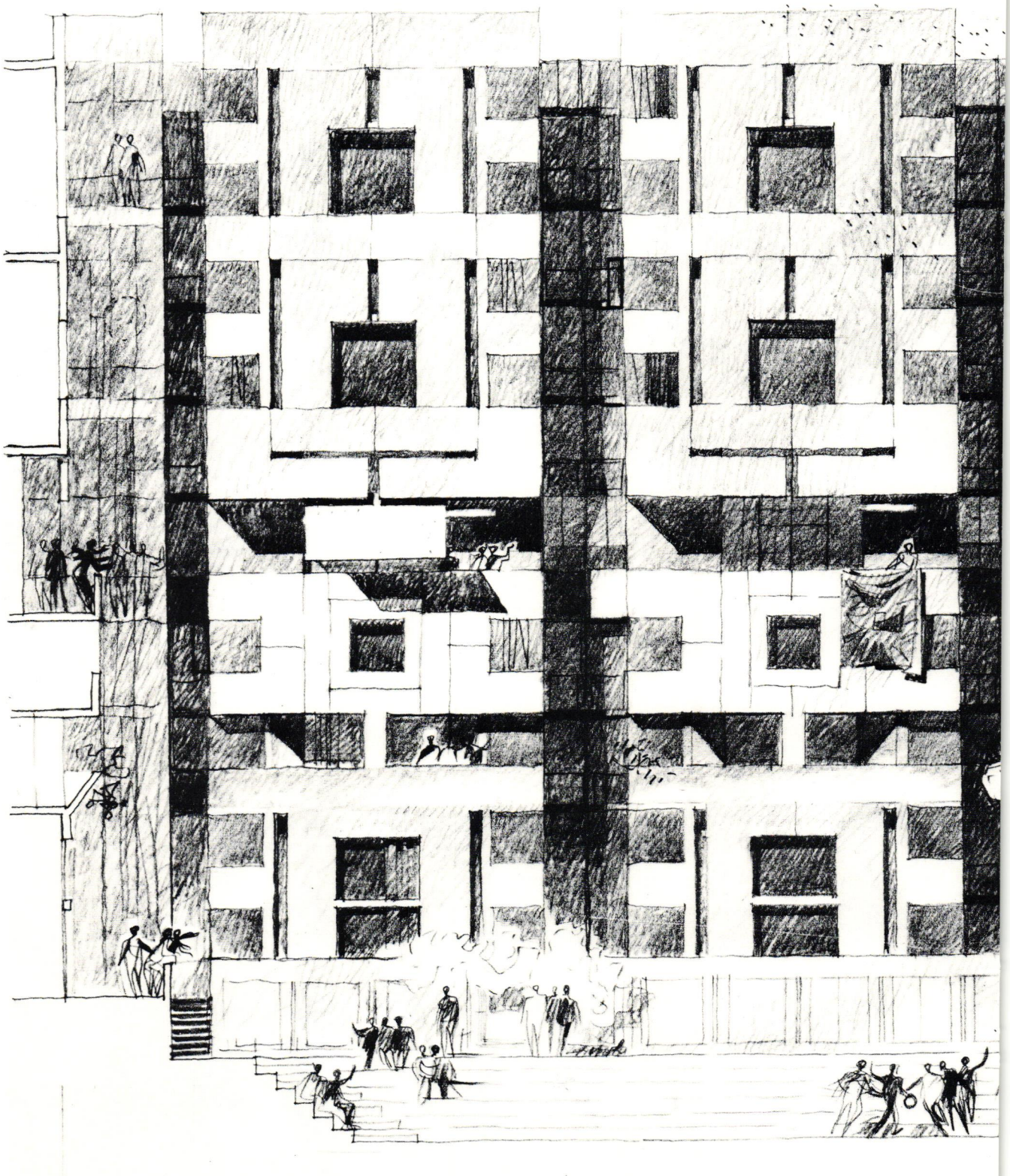


East – West Section

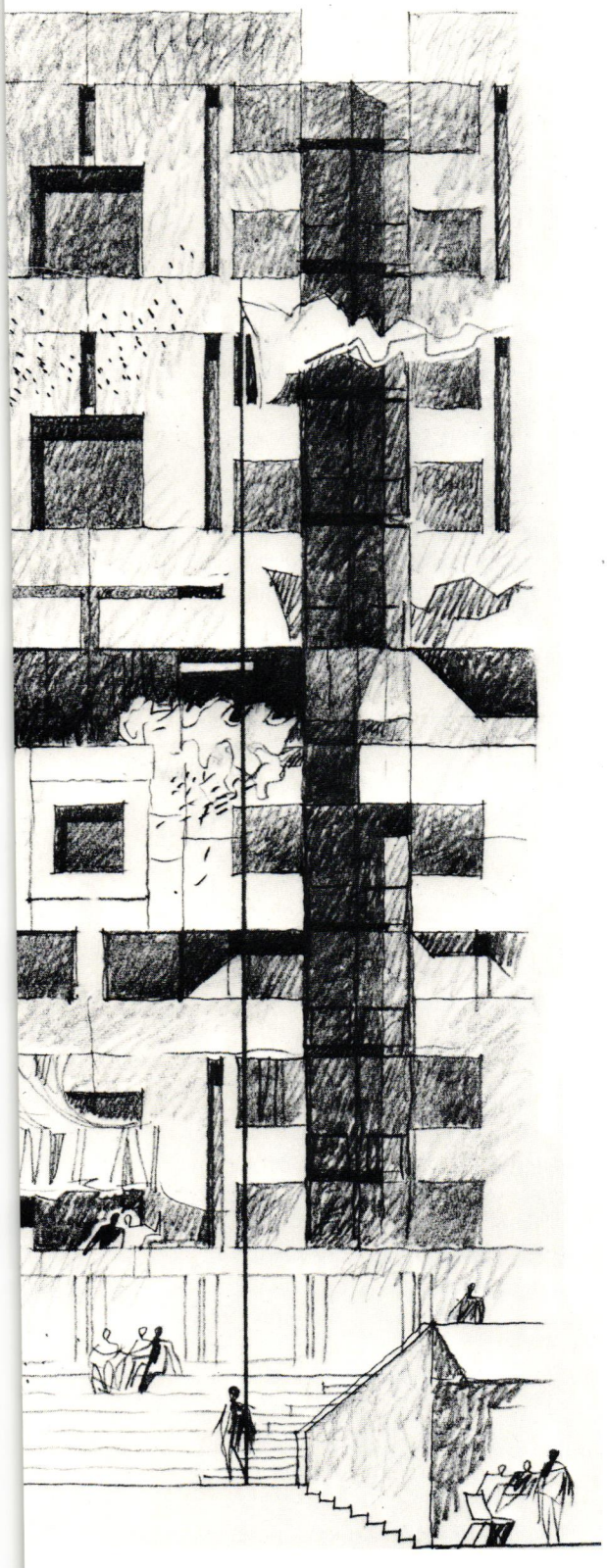
Sections

Notes on Buildings and Their Parts

Romaldo Giurgola, FAIA
January 1979



19 Courtyard elevation, International House Competition, Philadelphia, Pennsylvania, 1965



Throughout history there have been few fundamental approaches to the construction of a shelter. Walls enclose and support, while columns limit and support; the two systems combine in a variety of ways. In architecture they are able to produce a sense of finite or infinite environment, to convey aspects of private or associated human conditions. Historically, a few general building forms expressed those fundamental approaches: early Mediterranean houses, temples, vaulted spaces, Renaissance palaces, and recently modern structures characterized by technological innovations. All of these buildings appear to us now in their ultimate synthetic form. However, those syntheses, those unified expressions, were reached through the most attentive elaboration of the parts, an elaboration of those constituent elements which in architecture retain a structural and functional integrity of their own. This integrity of individual elements is commonly exhibited all around us; a column is a single, complete, self-sufficient element of a structural system in the same way that a room is an autonomous part of the composition of a building. Similarly a window is a precise portion of a masonry system which allows air and light to come into a room, while a staircase is an exact and perhaps the most efficient instrument in a building to resolve a difference in level. At the extreme, a self-sufficient building complex in a city is a single, identifiable element of an urban fabric. In architecture these constituent parts are all given measure by the nature of their functions and meaning; they are elements which in their multiplicity progressively establish a comprehensible whole.

From the extant ruins of early Christian churches and the rhythmical sequence of Gothic spaces to the gradual movement through history toward a comprehensive, modulated entity as seen in Brunelleschi's St. Lorenzo, the first move in architecture has always been toward an accurate assessment of the elements upon which the whole depends. In historical terms, whenever an effort toward a synthesis was made a priori, according to a predetermined image of totality as a pure exercise in aesthetics, the results in architectural terms were mere schematized solutions. In these cases, it often became impossible to detect a measure of the human use of spaces, or to attain an understanding of the complexities and synthesis of the whole. Thus what we shall call the concept of "parts" must be recognized as a crucial step in architecture. Parts

represent the present, that which is tangible, directly perceivable, and "real" in metaphorical terms. In architecture the whole of a complex represents a total image more than the sum of the parts. It is an image toward which an architect works within the framework of a concept. Like all images, however, it is elusive and only *possible*, an image that should never be attempted in deterministic fashion but rather expected or almost *hoped for* through an intelligent elaboration of the parts.

The two buildings presented here, although designed twelve years apart, were conceived with this notion in mind: even though in each case the plan form may appear deterministic because of the simple central element of the court, in effect, those plans are made of self-sufficient units which form aggregates of rooms; these aggregates repeat themselves as they are needed and the buildings are interrupted when the requirement for space is exhausted. The International House is made of residential towers set side by side, as townhouses are. The apartments are close to the entrance where the court is open to the street. In Seattle, on the other hand, the nature of the program suggests a continuous flow between the two elements represented by the shopping levels and the hotel. Although these elements are themselves distinct entities, they merge into the large central court, which also terraces above the public loggia into Pine Street. The latest program which substituted a museum for the hotel did not challenge the same attitude; assembling the constructive elements of the museum around the terraces actually accentuated them.

When the sense of parts is considered on a grander scale, larger portions of buildings and their juxtapositions can be used incrementally to develop a sense of the whole. This was the intention in relating the large court of the International House with the street and the purpose of the diagonal walls on the north side of the Westlake project. In the latter case, the intent was twofold: to accommodate the entry of the monorail into the complex and to give a view of Westlake Avenue and Lake Union in the background from the escalator and the top rooms of the museum.

In architecture, elements of sufficient functional or structural integrity are immediately perceivable at the level of the senses, as they reflect in a direct way the uses, scope, and human measure of the building. They become the very substance of an expressive language, and are the immediate vocabulary of an expression whose renovation occurs throughout time to indicate the transition of habits, tastes, and perceptions of the world in general. The notion of space in architecture, however, has been the subject of much slower changes over the centuries; this is true because space reflects an ideology whose resolution is much less susceptible to the alternatives of immediate experience. For example, for hundreds of years a column or a window maintained the same connotations, yet they received an infinite number of interpretations. Thus it seems that it is in the parts that one must search for those modulations of language in architecture which must always develop within a conceptual inquiry into the nature of a project. Where this understanding is lacking, the architectural language will remain little more than a manufactured style.

Important also to note is the fact that the concept of parts and elements in architecture may be directly applied to the design of the planes and surfaces of buildings, altering and enriching them. This is often of greater relevance than the abstract preoccupation with spatial matters. In fact it is through an intentional emphasis upon these elements and their scale that the distance between planes and surfaces may be sensed, and that the gradual developing of space in true architectural terms may be detected. The classic examples of this technique are the Florentine churches of Brunelleschi, which even now remain the canons of such calibrated descriptions resolved into formulated space. Thus a morphology of forms may be generated by the related succession of architectural elements; these elements, through their independence and their interdependence, may develop into "ornament," a legitimate architectural experience which can forever translate existential meaning into form. For if architecture is to be both image and concrete event, it must rely on "signs" of lasting significance.

The programs that generate buildings today involve a variety of operations within them, so that rather than a self-contained, fixed entity of "building type," we should talk of "fragments"; we should speak of programs for life which need a place in which to evolve. The inner structure of a building fragment will be as valid and will extend as far as its

program extends, its geometry gradually becoming involved with programs and elements of other sites. It will be part of a continuum of diversified expressions as posed by different intentions, programs, and designs. For example, the geometry of the diagonal that often appears in this architecture should be viewed as an instrument that functions visually both from within and without; it should allow one building form to become dependent upon others, yet without losing its integrity.

All of these principles lead to the possibility of perceiving our environment as enriched by our ability to abstract and generalize. From this perception, our awareness of architecture as an artistic experience grows as an interrelated sequence of elements, as architecture of connections, or better still, as an *itinerary* which reflects new-found sensitivities to our society. In art, these sensitivities have not always had their true being in tension and directions. But often in architecture, as in the other arts, the mere contemplation of simple and seemingly irrelevant aspects of life, such as the virtuosity of a gesture or the comfort of a condition, is of enormous human significance. In the project for the International House, a student could move daily from the intimacy of a room where the space has a particularly individual, existential meaning to places where larger gatherings occur. At first, he would encounter a few people in a meeting room, then the scattered crowd of a court, and finally a larger meeting in an auditorium of the campus or an intense assembly for a seminar. In addition, he would experience the dining hall, the shaded walks on campus, the sports arena, and the library with its cubicles or reading carrels. The awareness of a building as an entity is not a necessary condition for the appreciation of its architecture; but the sequence of those instances that unfold under an itinerary – however amusing, emotive, theatrical, or intimate in individual terms – is always meaningful.

It is this intention in design that brings International House and the Westlake Park project buildings close to each other. Both are urban structures and each partakes of all the minute instances of which its site is already made, while establishing a new presence. Both buildings are made to encourage the flow of people through a number of itineraries and a chance of movement: from the glazed balcony corridor to the vertical movement of the residential units and from there to the court in the International House. Instead of a single monumental mall in the Westlake project there are a number of one-story passages, simple to relate to, which crisscross to connect department stores, open spaces, and the monorail station. In fact, all the open spaces are accessible from the street and are to be used as public gardens.

In all of these instances, architectural forms depend on the definition of an itinerary; they are forms bound to complex conditions rather than generalized assumptions, and composed in such a way that they allow a continuity between episodes and fragments. They come into being as a result of the intention that one who walks through them should feel, as in a poem or in music, as if one is in the midst of an endless environment.

Project Documentation:

The Atheneum, New Harmony, Indiana
Manchester Civic Center, Manchester, New Hampshire
Richard Meier, Architect

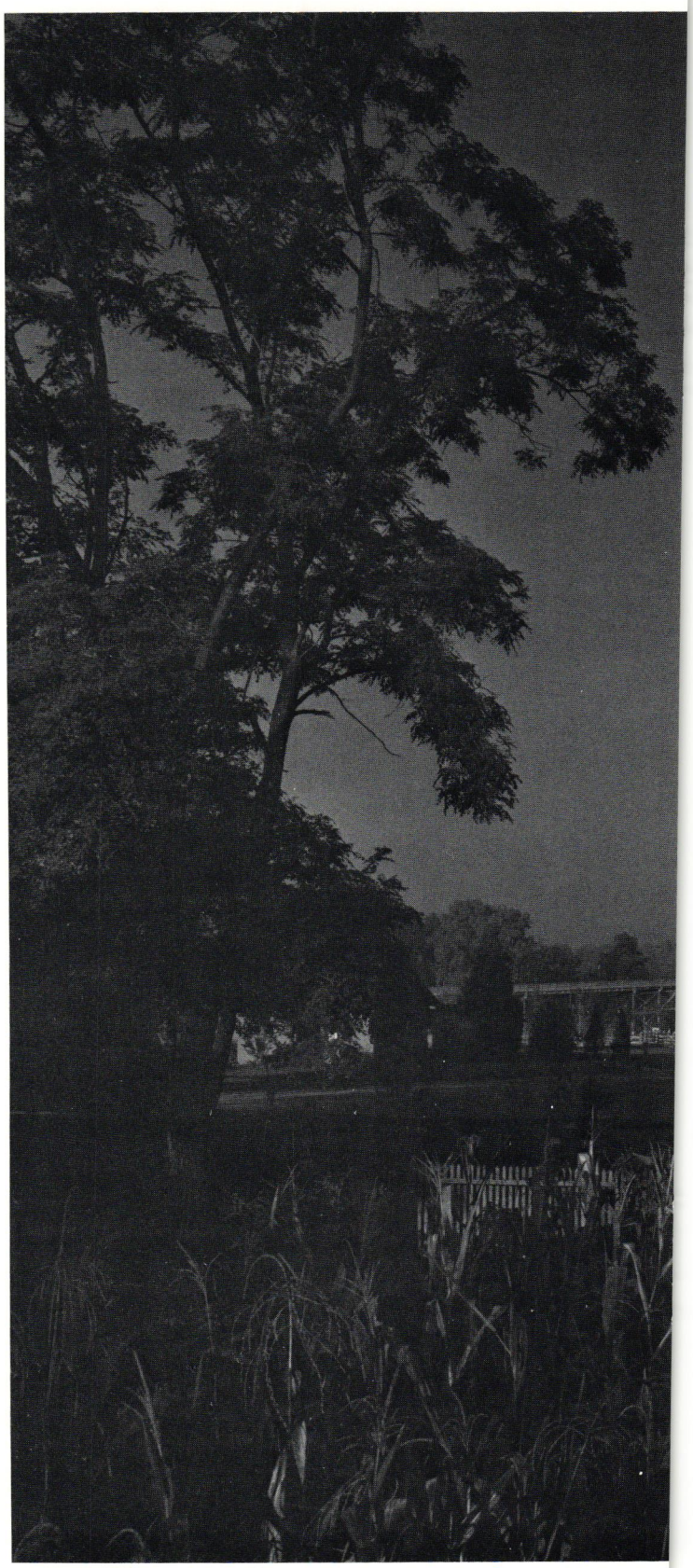
Comments by Richard Meier

The layering of time, of epochs, is the dimension that lends the urban condition its textural richness and concomitant spatial resonance. We assign value to the qualities of scale, spatial coherence and visual interest of former times that make the promenade, the leisurely stroll, something enjoyable and peculiar to the experience of the street in a lively urban milieu.

In America, a tradition of revering history's physical manifestation, as contained within a city, has not been consistently established. Recent history reveals the American city as an entity in a state of perpetual crisis. That quality of textural and spatial simultaneity, seen as an historical continuum, and the linear demands of a society enamored of speed and convenience, a society in which architecture is seen as a commodity, subject to both the caprice of the market and to corporate ego, are in grave conflict.

As an architect I believe that the city has to be dealt with as any other work of architecture, in terms of architectural ideas, in terms of the making of space, both public, private, and the spaces between. But unlike projects of lesser scale and complexity, any given urban situation has particular confinements, rigid spatial as well as temporal contexts. Under other circumstances the architect bears history with him; in the city it is a given, a veritable confrontation. The city forces an historical, spatial dialogue. A productive dialogue assumes both speaking and listening. The archetypal city provides both structure and selective incident; the architect's choice then becomes either to agree, to support the structure and enhance the incident, or to take exception and set up a new reverberant order. Each of these responses must still hinge most irrevocably on both the immediate and the general context.

The dialogue in any case must be a balanced one. Underlying all consideration of context is my firm belief in the architect's speaking part of the dialogue. The art of architecture always relies on the architect fundamentally as an artist. One must never relinquish that which he or she brings to a project. To quote Robert Owen of New Harmony, Indiana: "To the genius of the architect, in each case, it must

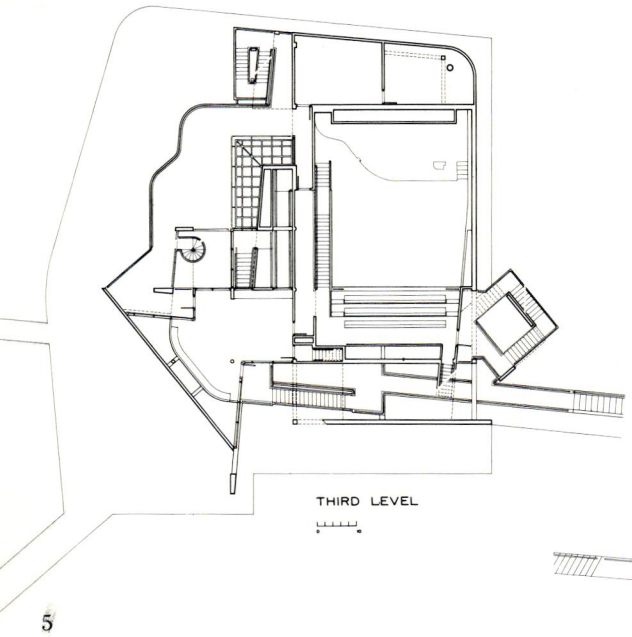


Ezra Stoller © ESTO

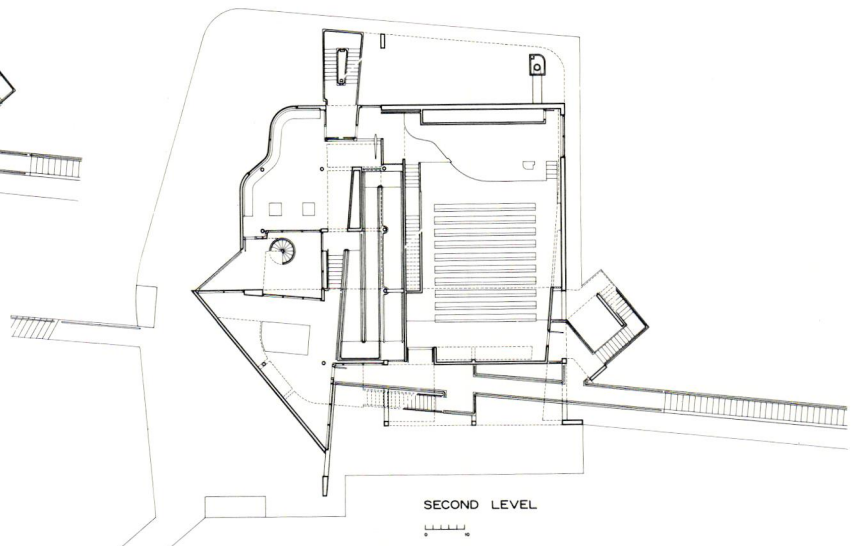
The Harvard Architecture Review, Volume 2, Spring 1981, 0194-3650/81/010176-12 $3.00/0. © 1981 by Richard Meier.

1 The Atheneum, New Harmony, Indiana

2 Sketch site plan
3 Ground level plan
4 Second level plan
5 Third level plan

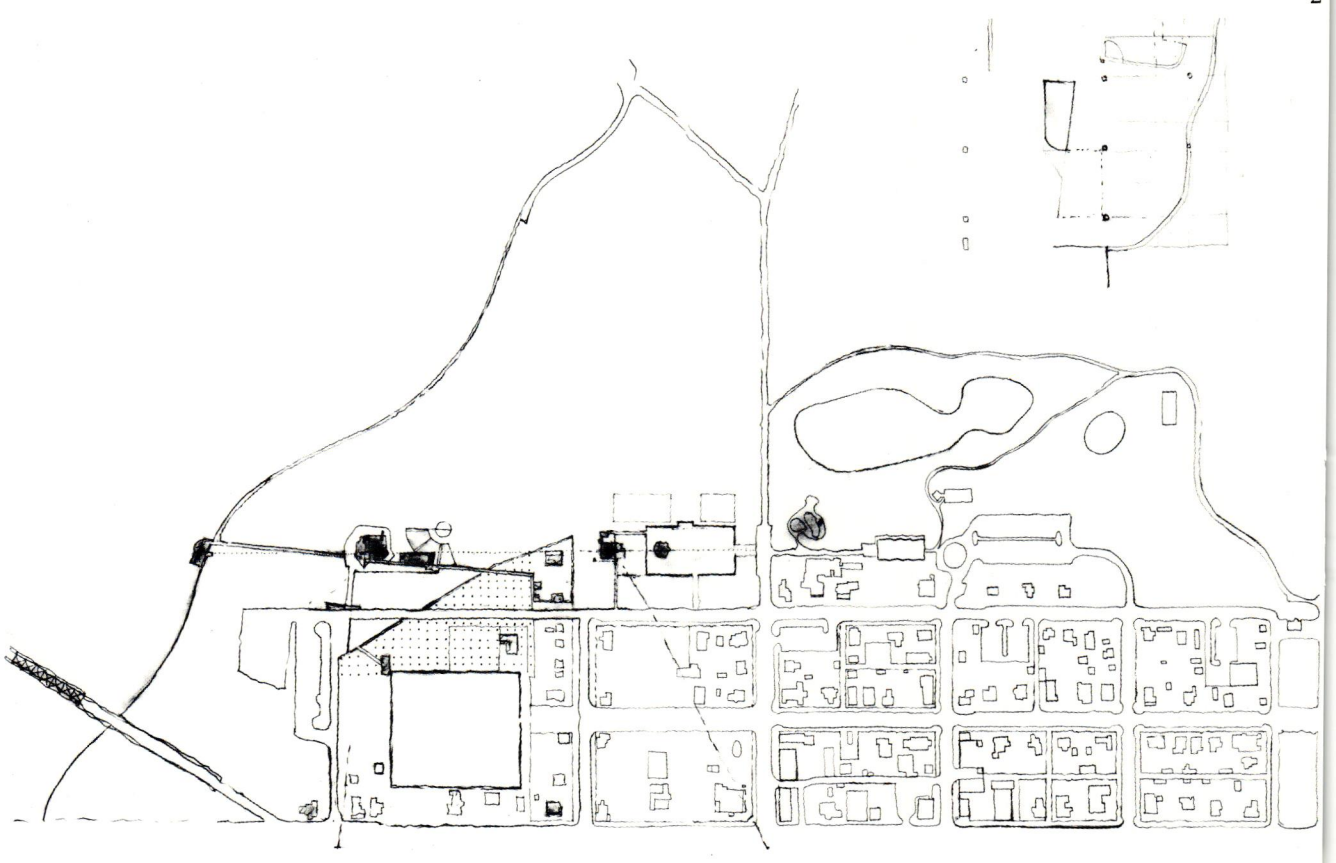


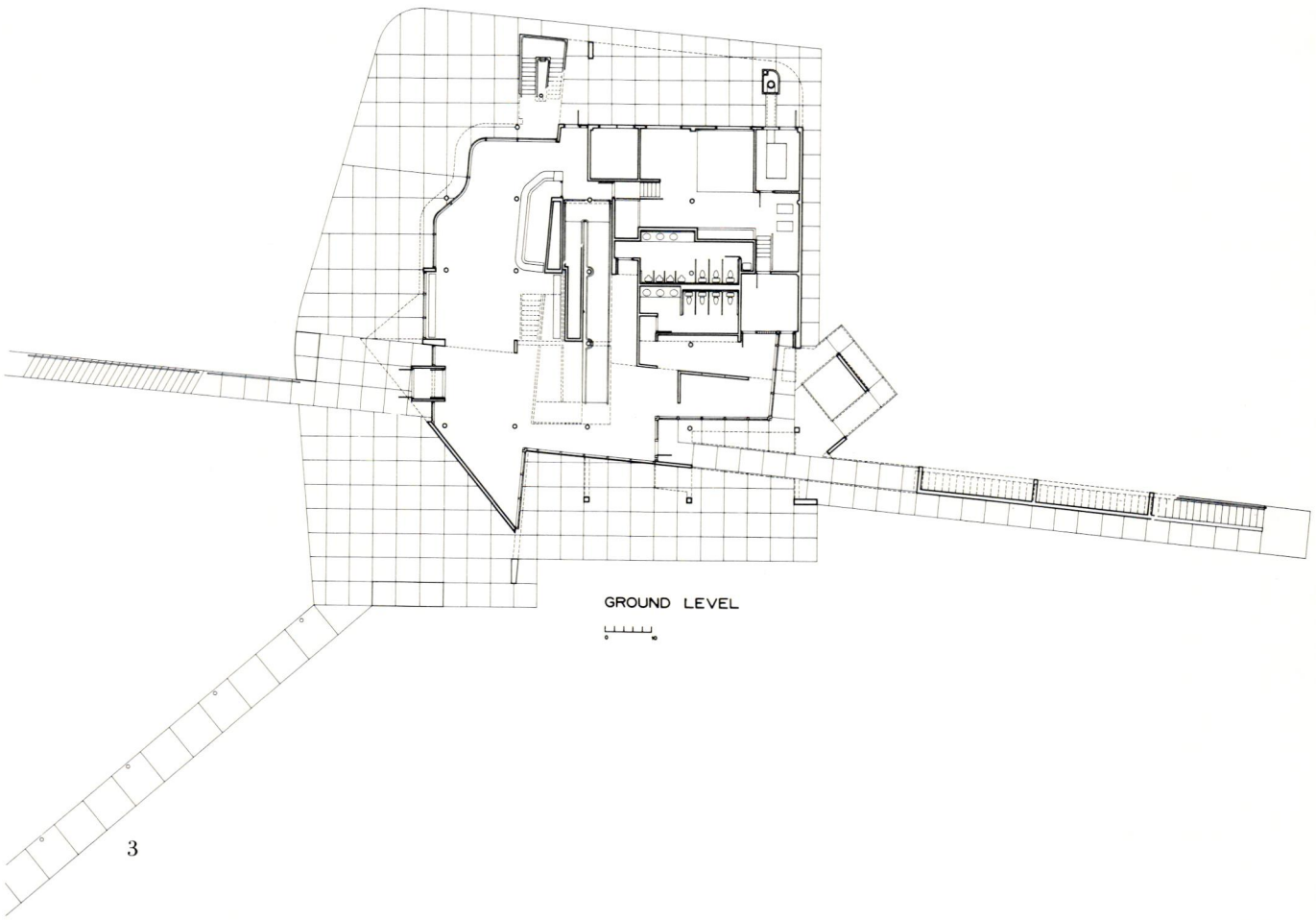
5



4

2





3

be left, to determine the exact line of demarcation between intemperate license and barren servility."

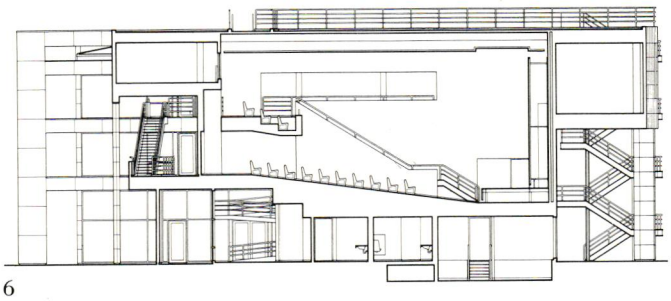
In this essay I examine two projects in urban contexts whose relationships to time and to history are radically different: the Atheneum, a visitors' center for New Harmony, Indiana, and a new plan for downtown Manchester, New Hampshire. They represent in my work the two fundamental figure/ground, object/texture approaches.

In certain ways a strict comparison of these two projects seems dubious. To characterize New Harmony, Indiana, as a typical urban setting would be more than specious. The value then of the discussion lies in the more general treatment of the two circumstances as representative of a classic twentieth-century American condition at different scales. Essentially the comparison deals with the idea of town, with that scale at which life and movement are organized largely along a single main street. In this way similar considerations emerge, despite the disparity of actual scale and density between the two projects. In both cases the resulting architecture is fundamentally urban in conception.

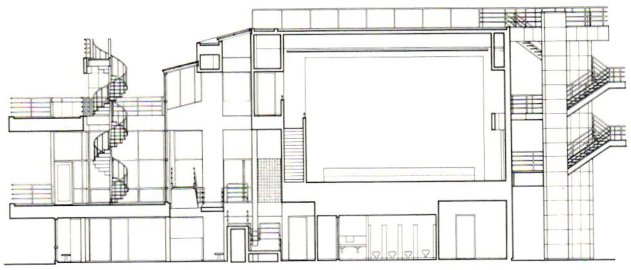
The Atheneum

New Harmony, Indiana, was the site of two extraordinary adventures. Only an exceptional singleness of purpose united the groups who settled successively on the fertile bank of the Wabash River. The first established its new society on religious grounds. The second, a much more widely influential and significant group, were theoretical practitioners; theirs was an enunciation of social theories with actual experiments.

The Rappites, or Harmonists, were pilgrims, a fervent, religious people whose exodus at the turn of the nineteenth century from Wurtenburg, Germany, was the first leg of a much longer journey back to the promised land. They thought of "Harmonie" as a stop on their way to Jerusalem for the second coming of Christ, which they believed was to happen within their lifetimes. Their stay in Indiana was to provide them with the appropriate means with which to make the second part of their pilgrimage. Hard work, an austere and pious life style and total devotion to their patriarch leader George Rapp, combined with the extraordinary business acumen of the second in command, Frederick Rapp, made this



6



7

isolated settlement one of the most lucrative ventures of its time. After nearly ten years of peaceful production, the elder Rapp felt that a certain restless discontent was brewing among his believers. He decided that the vigorous forging of a new settlement in another wilderness would again capture and revitalize their wills and spirits. It was agreed that they would move to Pennsylvania where the markets for their goods were close at hand.

They sold Harmonie to Robert Owen of New Lanark, Scotland. It was his dream to found a new and perfect society based on absolute equality which was in turn based on the principle of universal education.

With a man named William Maclure, Owen gathered a distinguished coterie of educators from around the world. They assembled in Philadelphia and traveled to their ready-made community on a flatboat whose precious cargo was dubbed "the boat load of knowledge." This utopian community thrived for a time but ultimately proved a financial failure. Nonetheless many of the ideas that had their inception and actualization in the midst of this extraordinary experiment had a life and force of their own. They included women's suffrage, as well as one of the first free public school systems, the first free public library, the first kindergarten, and the first trade school in the United States. These ideals which have re-emerged, some even in our own time, mark the Owenite adventure as one of the richest and most significant in the history of the United States. Ultimately Owen's vision of a "center of light" in the "trackless wilds" was indeed a reality.

Today the town of New Harmony is largely static, frozen in time. A small community lives a quiet life around and about the modest landmarks of bold enterprise. The value of New Harmony is in its past; its future lies in the exploitation of that failed yet admirable age. In the present the experience is one of being an onlooker, not a participant. Its history keeps you at arm's length. It is literally *city as museum*: a poignant ensemble of habitations and objects whose ideological contours are gently blurred by time. The town's relationship to the visitor seems clear and unambiguous and yet remains enigmatic and difficult to understand. It evokes the feeling of being both near and far.

The Atheneum, in its role as a visitor orientation center, had to be at once part of the town and separate from it. It had to relate both to New Harmony's spiritual ancestors and to its modern students. It had to be a threshold through which one passes in preparation and anticipation.

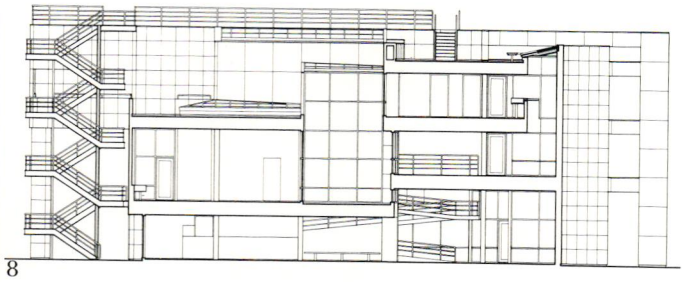
The Atheneum is, among other things, an object. The site is on the edge of town in a field, along the banks of the river. In spring, the field floods and the building, built on a podium of earth, floats above the water; a porcelain-paneled boat of knowledge docking on New Harmony's shore, emblematic of the physically isolated, intellectually connected Owenites.

The Atheneum is not like what surrounds it. It addresses spirit, not literal substance. In terms of the town itself the intention is preservation, not renewal as we will see is the case of Manchester. New Harmony is a *set piece*. The twentieth century is an intruder. Therefore, the Atheneum does not intrude; it stands apart.

The Atheneum is, however, very much a part of a physical continuum; it is the beginning and propelling force of that continuum. It is both a distillation and extension of a path that ultimately leads to and anticipates the main street, the heart of the urban historical experience. The Atheneum is the incident outside of the structure in which the structure is reflected and reinterpreted.

The idea of *architectural promenade* and of historical path, both fundamentally urban experiences, are the basis upon which the Atheneum is conceived. Because the town can and will be understood on many different levels, the building contains and suggests many and varied alternatives. In one sense it is the town's symbolic and actual link with the water, the outside world. The primary and most dramatic beginning is thus at the water's edge. After a brief boat trip, the visitor sets foot on a path that leads up through the field to the Atheneum, to the portal. The water route joins its landed counterpart coming from the parking lot when one reaches the podium. Upon arrival the visitor is confronted with the portal, a three-story plane set at a forty-degree angle from the predominant orthogonal grid, and is drawn into the whole by this device, at once a foil to and an

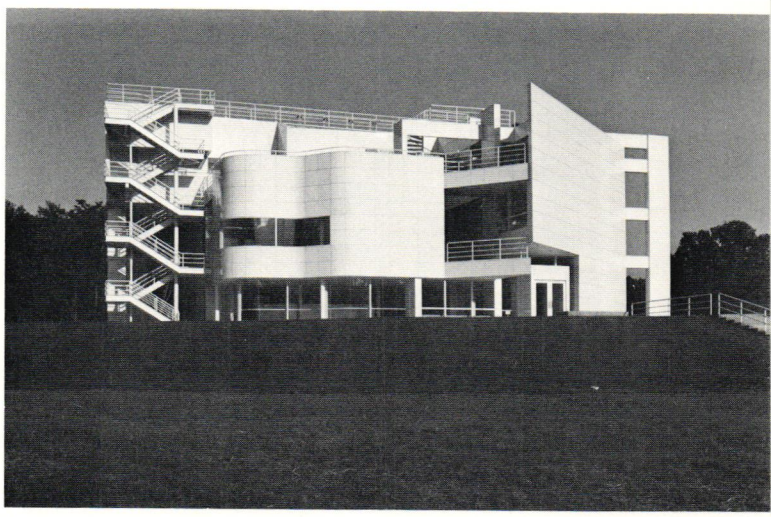
6–8 Building sections
9 West elevation, facing Wabash River



8

indication of the architectural complexity behind. The entry box, then, like a small compression chamber, regains its orthogonal orientation and acts to propel one past the adjacent pockets of space to the foot of the ramp.

Circulation is the spatial protagonist of this building and the ramp is its most vital element. As the ramp winds upward, it turns from the orthogonal to a five-degree, diagonal grid and begins to set the entire building in motion. The shift is resonant throughout, but the ramp is the element that resolves both grids in plan and section at the space where everything comes together to obtain sharp definition in a flood of light from above. The ramp arrives on the second level at a transition space which refers one both back to the entry and out to the landscape. It allows one to go up to a more intimate, top-lit model exhibition along the inside of the forty-degree wall or to the lounge which with its flowing wall, becomes a contemplation of the river.

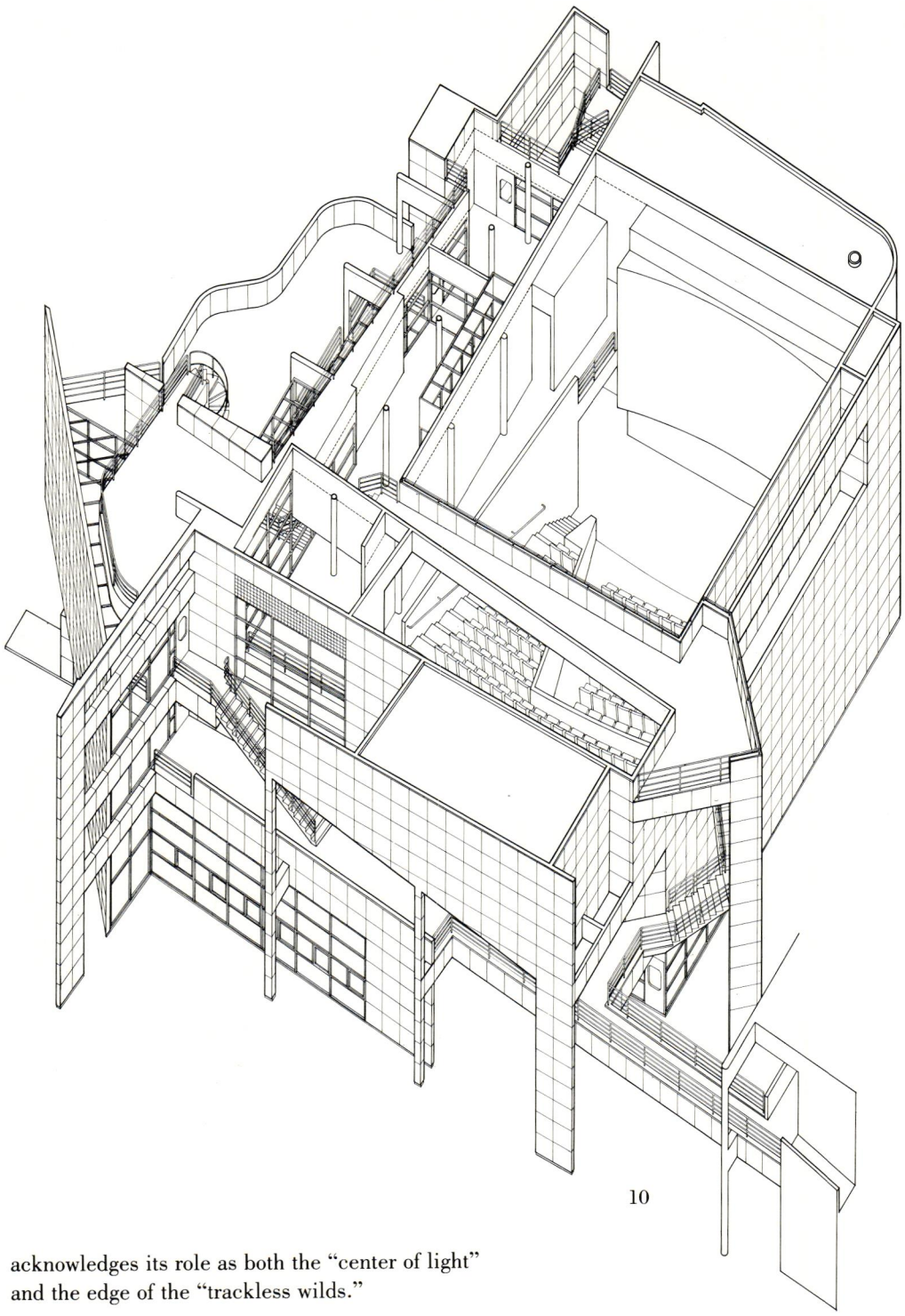


Evelyn Hoffer

9

The building contains many itineraries; paths of spatial and historical exploration. Throughout the building, spaces are held by taut, opaque membranes, pierced by voids, modulated with light, set in movement by shifting planes and changing ceiling and floor heights. The geometric device of overlaid grids induces a compression of spaces at certain points within the building. When the outside ramp extending along the south elevation approaches the interior ramp at a perpendicular, the five-degree shift makes itself particularly felt.

From the model room out onto the roof, across the river terrace – the building continually refers to and refracts the landscape. Up again and across a bridge, the visitor sees the town in a panoramic view, as if from the prow of a ship. This small roof terrace is both culmination and anticipation. Like a widow's walk, it holds vigil over the town, while it reinforces the literal as well as the ideological axis that joins the Harmonist log cabins, the Pottery Shed, the Roofless Church, and the Paul Tillich Gardens. Its forty-degree diagonal is the sole reverberation of the entry wall. The long step ramp is from this standpoint the final propulsion, a single manifestation of the idea of the building being in a dynamic relationship with the town. The five-degree shift, the forty-degree diagonal and the thrust of the ramp are all part of the way in which the building



10

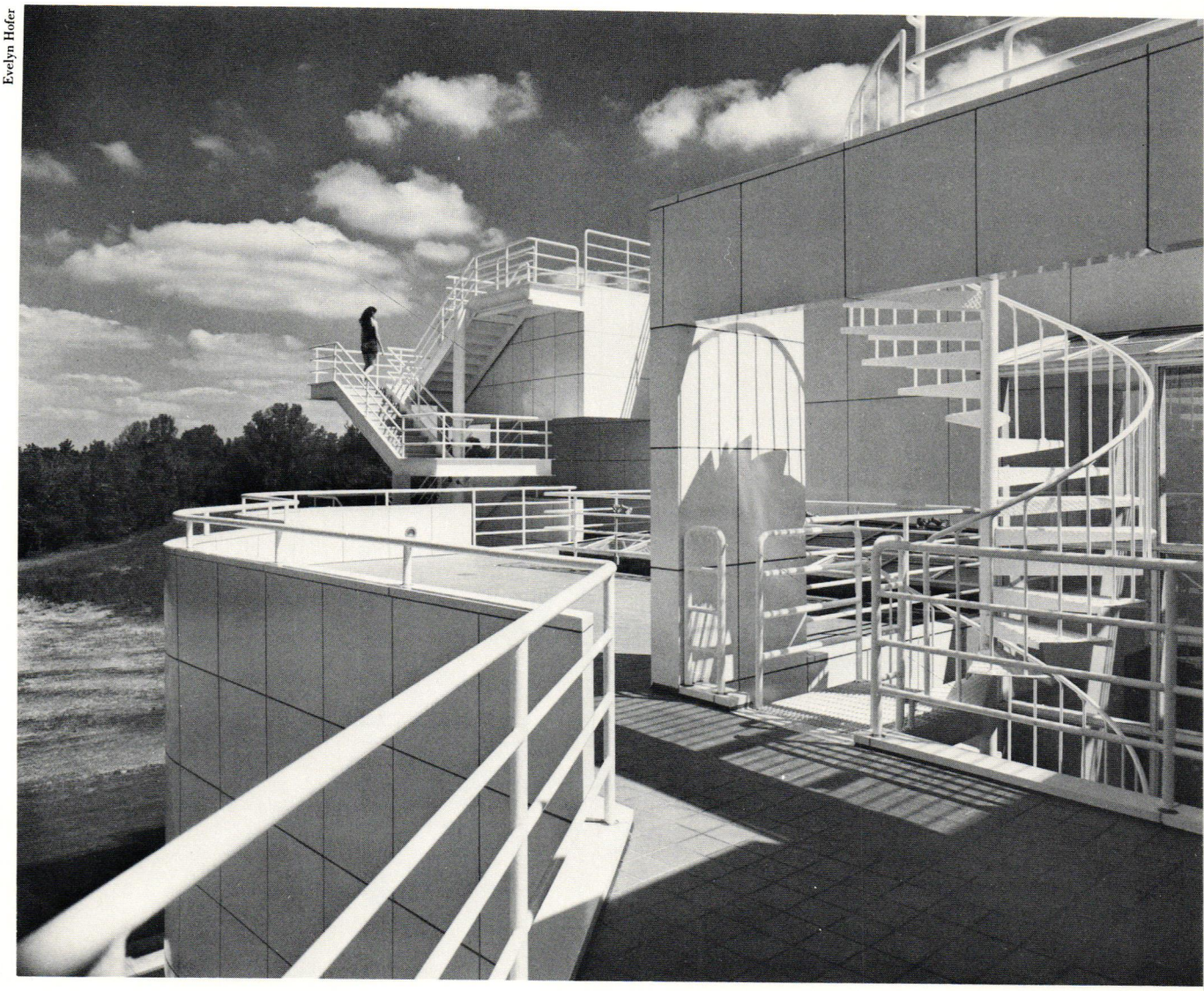
acknowledges its role as both the "center of light" and the edge of the "trackless wilds."

The enclosure of the Atheneum also refers to aspects of the surrounding landscape. The building in this sense is a vessel. At each point of stasis views are framed, and thus an attitude is expressed about what is seen. The curved riverside wall evokes an image of *river* while its ribbon window slices the view in such a way that the perceived river becomes more like this image. The cut-away, low portion of the north side welcomes the fields, and the curved corner suggests their gentle continuity. On the west the scale changes to that of the stand of giant oaks. The woods are a second, more remote wall in relation to the almost windowless elevation.

The street elevation on the south is the most active. (This is a reversal of my customary expression of public and private domains. But the Atheneum is a *public* building with hardly a corner that is not experienced.) This public facade is the sum and expression of the sense of movement and dynamism that is intended to pervade the whole.

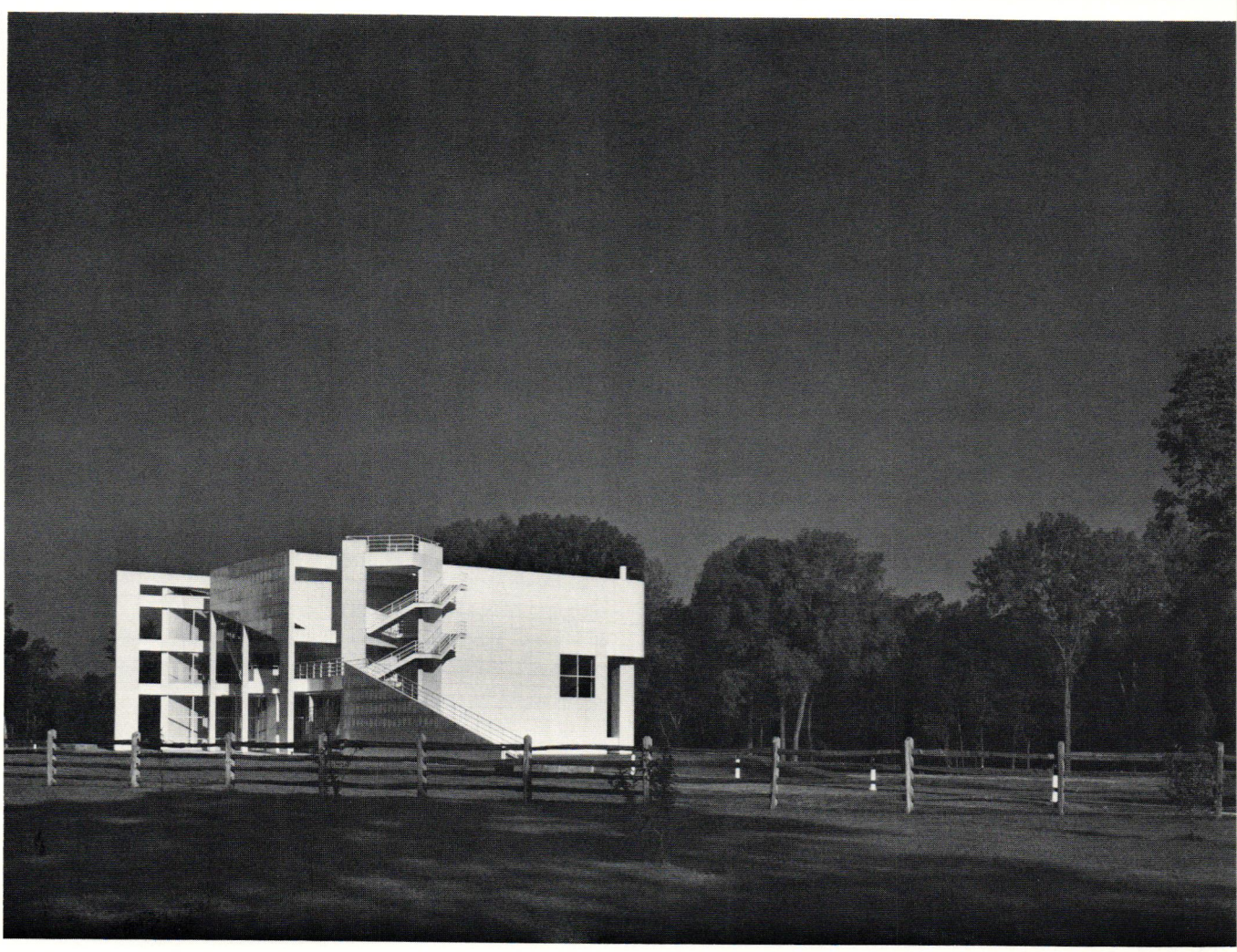
10 Building axonometric
11 Roof terraces
12 View from street

Evelyn Hofer

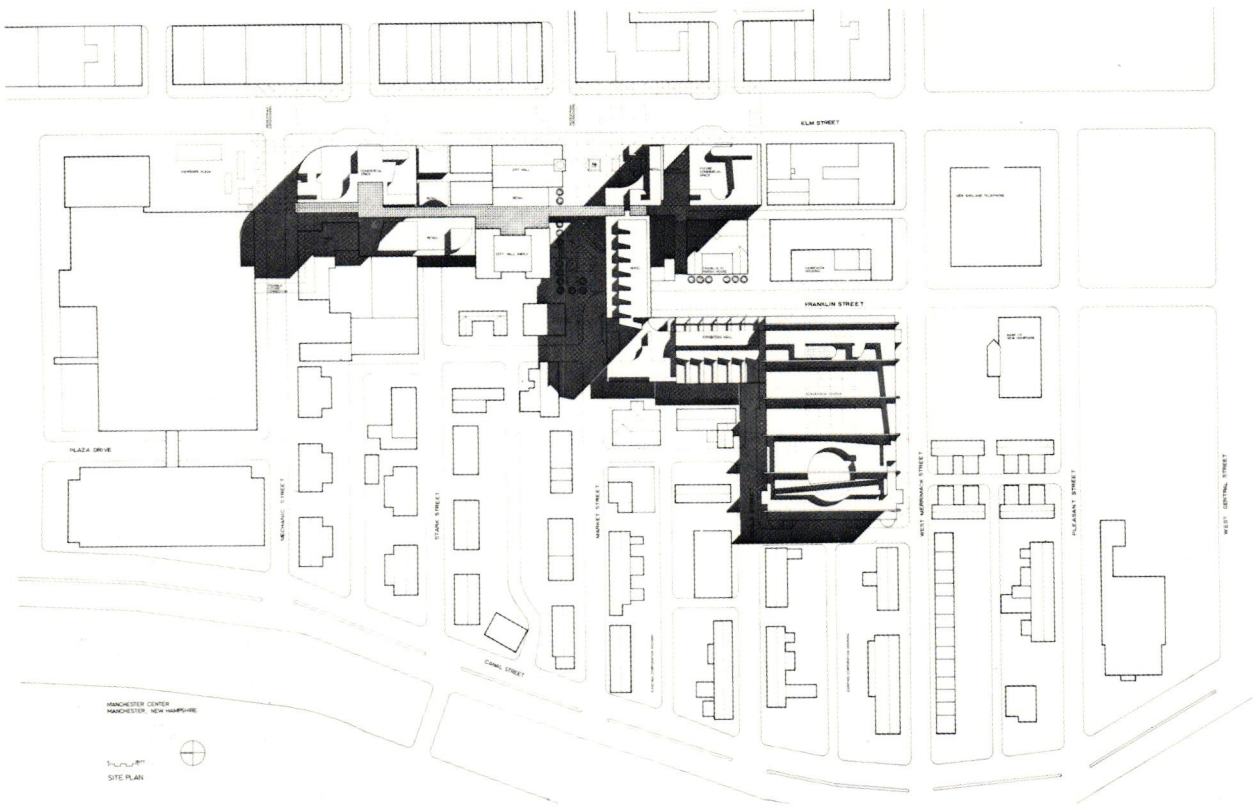


11

Ezra Stoller © ESTO



12



13

Manchester Civic Center

The type of infusion New Harmony required is in some ways the reverse of the measures necessary in the revivification of Manchester. New Harmony's town fabric is whole and intact. A new and separate event was in order. In Manchester the structure was failing and the existing architectural events were lost in the general decay. The new was called upon to play a reiterative, supportive role, reinforcing and to a much more limited extent, redefining what existed.

Manchester, whose nineteenth century was as culturally, and economically rich as any city of comparable scale, is decayed and decaying from within. The main avenue is Elm Street, and its only marginal life depends on a dying business community. After five in the afternoon, at the close of the business day, the office workers flee the center city, leaving the streets deserted and desolate. Deterioration of the tax base and, subsequently, that of the basic life-support systems – public transportation, efficient accommodation of automobiles, and an active retail network – have drained the life from midtown Manchester. The public realm, the heart of the town, has been suburbanized, transported and transformed into a point along a line into a completely controlled interior street in the middle of a vast sea of parking, reached from a convenient highway exit. Shopping, entertainment, simple gathering all happen in the malls.

The task at hand was to bring back to Elm Street the life and vitality which once existed there. In doing this it became necessary to acknowledge an emerging pattern in the growth of Manchester and that the town's survival depended on more than that simple linear development. The open sites with which we had to work were, for the most part, not on the main street, but had to influence that artery by their physical relationship to it.

In a sense the new plan for Manchester learns from its nemesis. We borrowed what is most effective about the traditional developers' techniques in making two dynamic "magnets," the draws at either end of a mall. A new convention hall is the main attraction to the south, and a pair of high rise office towers, one existing, the other new, are the magnets

3 Site plan, Manchester Civic Center, Manchester, New Hampshire
4 Model, at street level

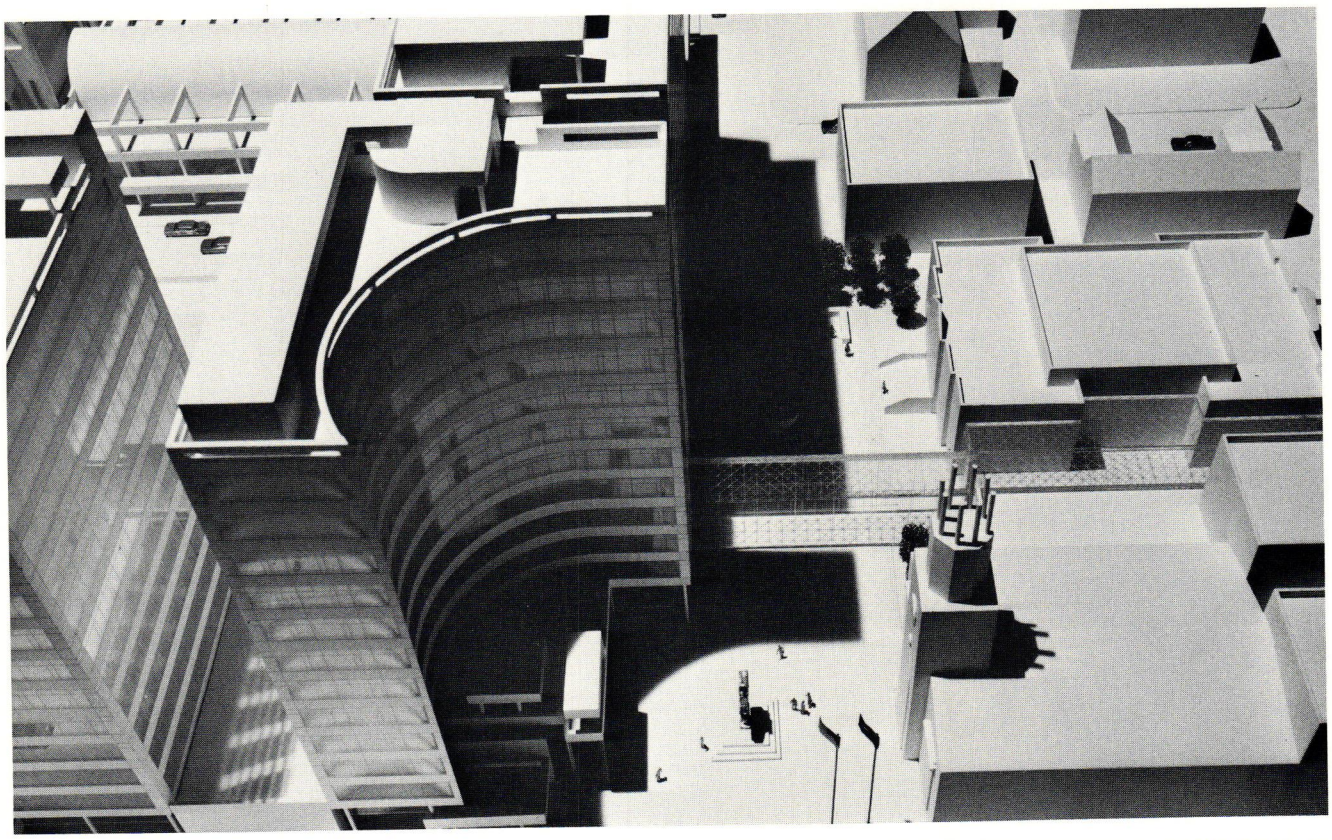
at the north end. The heart of the plan then becomes a new linear development that parallels the main street. A thick zone is created in which selective, yet aggressive, connections are made to Elm Street, sustaining and reinforcing the formal qualities of this activity center. The glass-covered arcade which forms the life-line of the project is intended to be an artery of support for Elm Street, an alternate route that would bolster and help feed the pedestrian flow.

Essentially this "mall" is conceived of as an *urban weave*, incorporating the old and the new, the pedestrian and the automobile. We instigated a few careful modifications to the orthogonal street pattern that allow the basic grid to remain intact. In this way cars and people, each accommodated at the appropriate scale, co-exist in carefully designated territories.

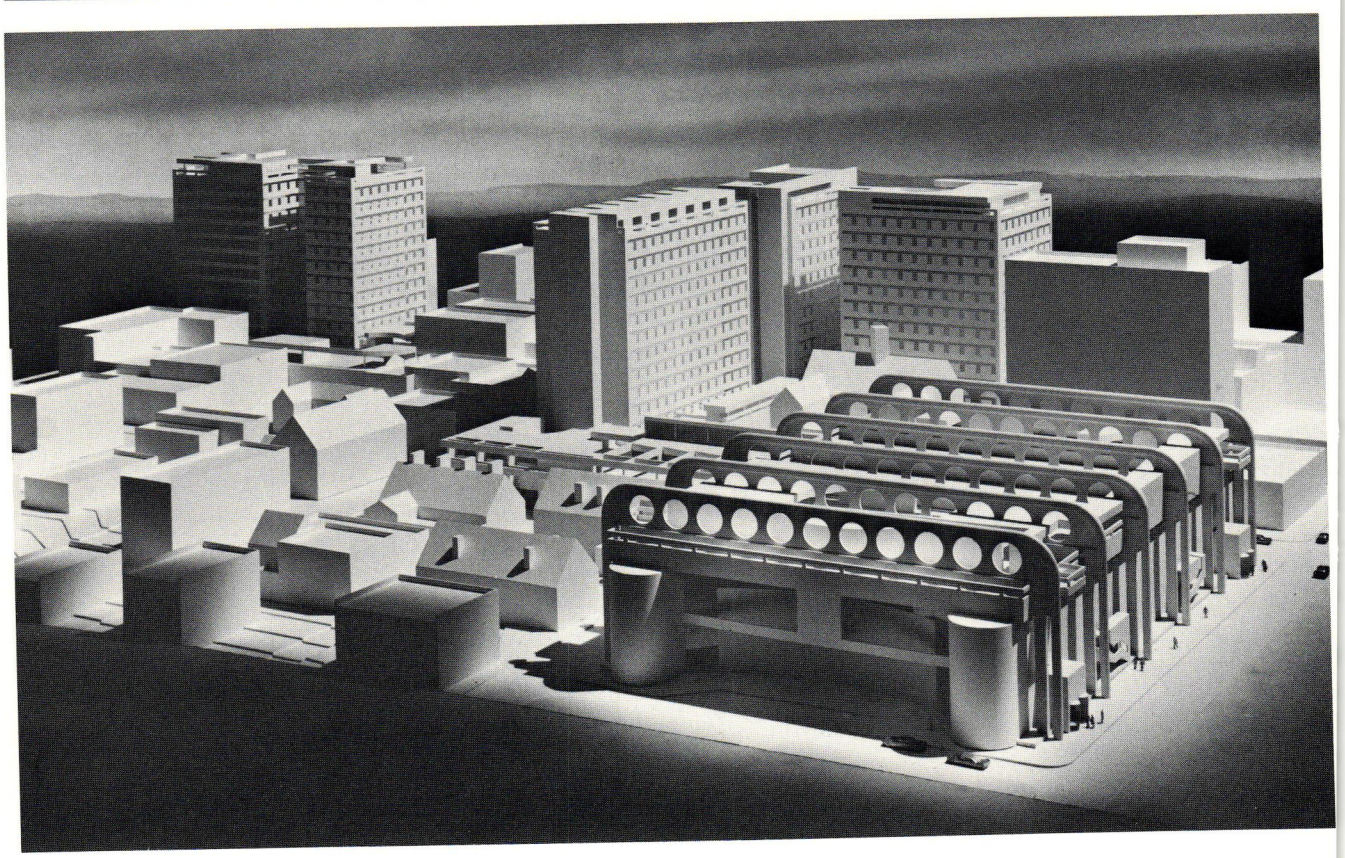
In formal terms the bulk of the development can be seen as a kind of *assertive poché* that takes its cues from both the existing town grid and that which is special in the historical landscape; gestures are made in selective instances and in a highly controlled way. The organization is strictly hierarchic so that the most important existing event, the City Hall, is the occasion at which we deviate most from what is given. The system of *poché* is carved out; a space is made that designates an intersection between streets as well as epochs. Here is a manifestation of the private realm acknowledging, indeed reinforcing, the public. It is the private ground making the public figure. The issue is that of foreground and background: One must make most aspects of an urban field background or *poché* in order to allow the significant spaces to become foreground.

This is the urban dialogue, the dialogue between fabric and incident, between public and private, between history and the moment that makes the present and future life of the city. That dialogue exists for me at every scale and it is at the heart of the notion of promenade. All my work is, in this sense, an investigation into the interchange between the public and private realms. These two projects carry my studies in the making of paths a step further, treating the interfaces between the two realms according to varying conceptions but primarily as architectural promenade.

15

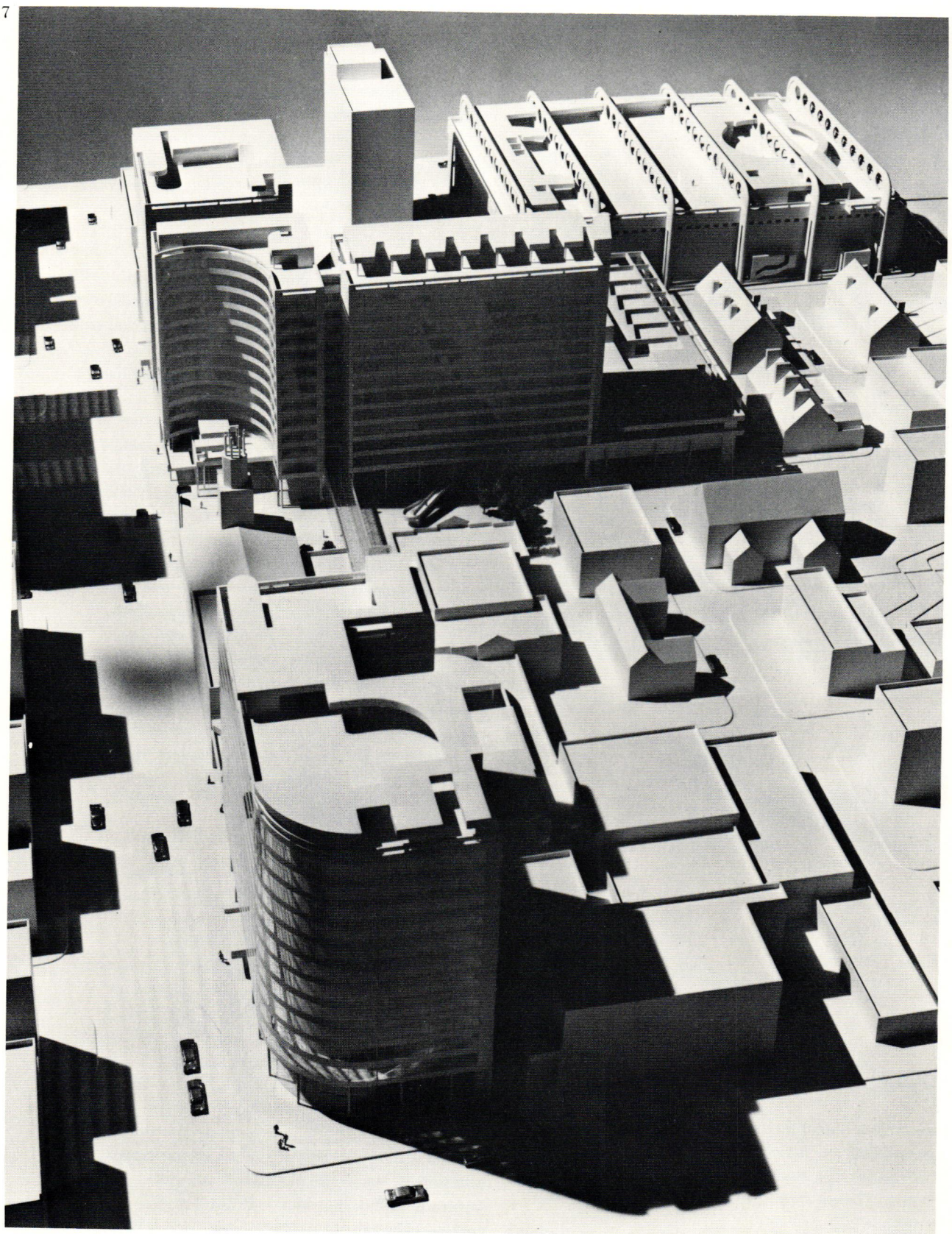


16



15 City Hall, looking west
16 Model, looking northeast from convention center
17 Model, looking south into area surrounding City Hall

17



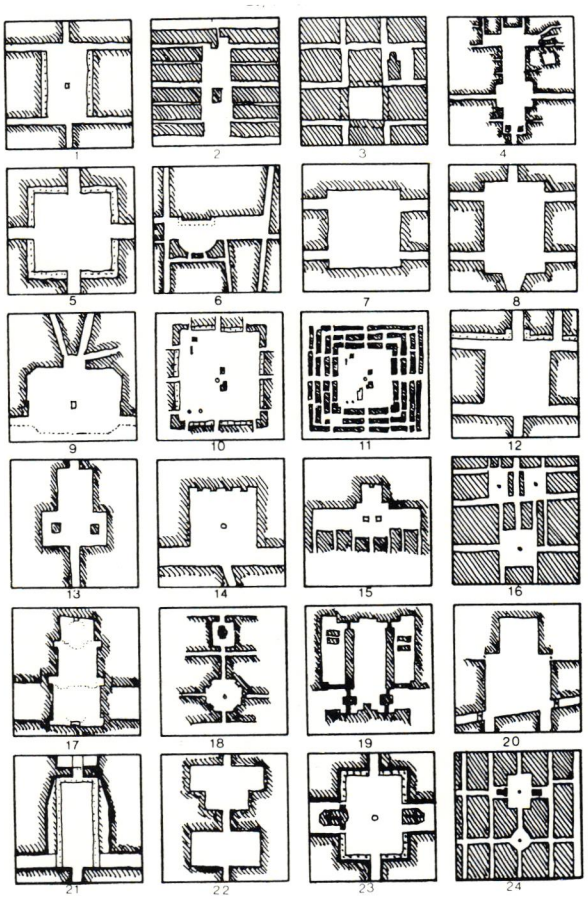
Book Review

Rob Krier
Urban Space (*Stadtraum*)

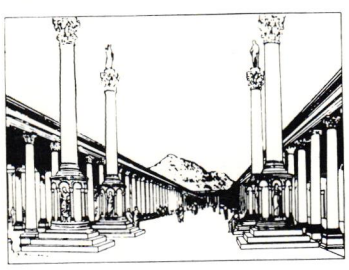
Rizzoli International Publications, Inc., New York, 1979.

First published in German in 1975.

1



2



3

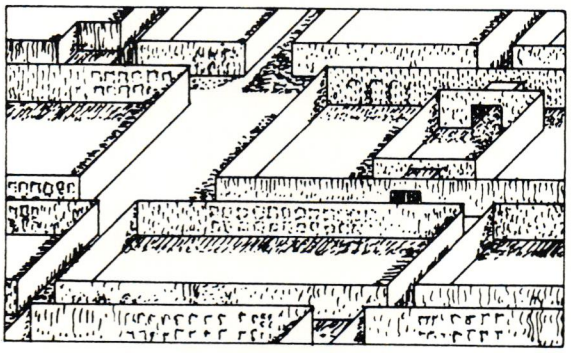
1 Rob Krier's diagrams of squares with orthogonal plans
2 Reconstruction of the main street of Ephesus, second century, B.C.
3 Perspective of a street in the proposed town center of Stuttgart/Leinfelden. 1971 competition entry by Rob Krier and AIC

Most serious recent work on urban architecture distinguishes itself by an attitude of respect and appreciation for the city that is and that has been. This work exhibits a heightened awareness of the importance of the integrity of the urban fabric and of the resonance of each work of urban architecture, whatever the scale. Architects now realize that the legacy of the architecture of cities carries a time-tested validity and richness that is hazardous to ignore.

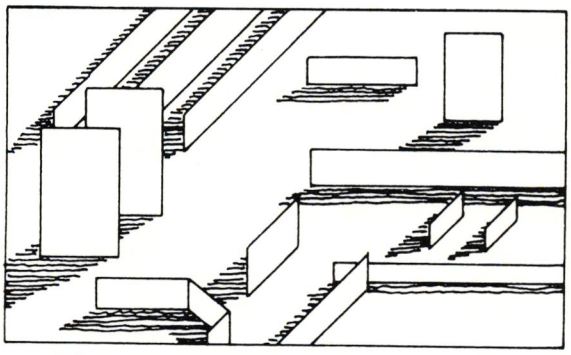
As is the case in architecture generally, many of these notions are posed in opposition to the Modern Movement's attitude toward the city, characterized as acontextual and ahistorical. Modern architects planned and built for the city of the future and had little use for the contemporary city and its antecedents. We now hold a much more positive view of those old cities and scorn the Modernists' blindness to their virtues, though we are perhaps equally blind to the virtues of our own culture and its recent past. One danger of the current reaction, with its welcome respect for context and history, is that it often denies the legitimacy of utopian thought – the respect not only for what is and has been, but for that which might have been and might yet be. Rob Krier focuses *Urban Space* on many of these current concerns but avoids this last shortcoming. Krier makes an important contribution to the ongoing reevaluation and interpretation of traditional urban architecture and proposes an ideal version of both the city and its architecture that is firmly rooted in the city's history and its extant fabric.

The main thesis of the book is quite simple and powerful: that there are only two types of urban space, the *street* and the *square*. These are analogous to the corridor and the room of architecture and are always understood to be clearly and legibly defined spaces. They may assume an unlimited variety of configurations in plan and section and may be regular or irregular, but they are always recognizable as contained space.

Krier claims that this universal definition is supported by a careful study of cities in history. He illustrates the concept (and the variety contained within it) by numerous plans, sections and perspectives that represent both theoretical constructs and historical examples drawn from



4 "Traditional spatial arrangement of cities"



5 "The modern city"

primarily European sources. In so doing, he portrays the city as the metaphorical model and source for architectural form, what Anthony Vidler has called the "third typology."[1] Krier's argument is, however, neither poetic nor arcanely philosophic; instead it is justified on pragmatic grounds: this way of making urban space has been perfected through the millenia of mankind's urban experience. People themselves have not radically changed in recent times; thus the accumulated wisdom and intrinsic fitness in traditional urban form should not lightly be dismissed. For instance,

> . . . *as long as man needs two arms and two legs, the scale of his body must be the measure of size for all building. That concerns not only staircases and ceiling height, but also the design of public space in the urban context.*[2]

Explicitly rejected is the notion that technological changes justify fundamental changes in urban space. For Krier, the most important urban experience is that of the pedestrian; modern means of transportation (the train and the car) need to be accommodated and even exploited in the city, but should not be allowed to destroy the enjoyment of the city and its spaces by people on foot.

As Krier sees it, cohesive urban space has been lost in the city-building of the twentieth century. He cites Fischer von Erlach's imaginative views of both historic and exotic places, in which buildings of considerable architectural interest are scattered about in the landscape, and projects by Boullée and Durand as early examples of a quest for the perfection of building types without reference to any urban setting. More recently, the Weissenhof *Siedlung* of 1927 in Stuttgart demonstrated a remarkable unity in its architecture, but lacked any concept of urban space. *Zeilenbau* and Le Corbusier's *Unités d'Habitation* were promoted as rational solutions to such simplistic, quantifiable criteria as sunshine and ground coverage, but again emphasized buildings as functional or sculptural objects and did not seek to create contained urban space. Krier surveys these and other influential modern urban projects and proclamations, too numerous to mention here, with an eye toward the concept of urban space in each. Such a concept is usually missing; whatever else is a determinant of these projects, defined urban space generally is not. And when urban space is lacking, Krier feels, cities are greatly impoverished.

Urban Space was written with the clear aim of influencing the practice of urban architecture. What this practice might be is illustrated in the stimulating projects that the architect Krier, who is clearly more comfortable using his pen to draw than to write, proposes for the reconstruction of Stuttgart's old city. Krier and his students[3] restore to the city a rich, continuous spatial fabric of streets and squares by proposing new building that is founded in the physical history of each particular place.

Krier first identifies those areas where Stuttgart's spatial continuity is broken. The physical history of each place is then documented, along with its present condition. Often these are places where heavy traffic demand has produced very wide roads and intersections; in other cases empty sites remain where buildings that were destroyed during the war were not replaced. New buildings and spaces are then designed, very often on air rights above the roads, so that they establish the continuity of the pedestrian-scaled spatial network. A wide variety of new streets and squares results. Most rely for precedent on the historical design of the particular place; others are based in the broader history of urban space. The whole is a substantial transformation of Stuttgart's existing spatial structure. By adhering unfailingly to the principle of clearly defined urban space, Krier and his students create a degree of spatial definition and interplay that exceeds that of their empirical model, the city.

Krier states that he has collected his historical material "in the hope of encouraging [students] to delve more deeply into our architectural heritage."[4] But the reader who delves into *America's* architectural heritage is likely to find, as does Peter Smithson in this volume and elsewhere, that primacy is granted to clearly defined buildings, not

[1] Anthony Vidler, "The Third Typology," *Oppositions* 7, Winter 1976, pp. 1–4

[2] *Urban Space*, p. 62

[3] The projects illustrated include a number done under Rob Krier's direction by students at the University of Stuttgart between 1973 and 1974.

[4] *Urban Space*, p. 62

6 a – c

spaces. "Space, the American Mediator," is not enclosed *space*, but open "interval" or "distancing" between buildings.[5] Furthermore, most of our urban fabric has been built during the time of Krier's "Erosion of Urban Space,"[6] and our extensive suburbs and many cities are almost entirely dependent on the automobile, while Krier's urban realm is that of the pedestrian. In short, our culture seems to be rather different from the European culture on which Krier's work is based. What then do we Americans make of this book?

Despite the overall structural dissimilarity of American cities to those that serve as Krier's models, there are many *urban spaces* in America, particularly in older, pre-automotive cities. Even where freestanding buildings are the rule, particularly again in older cities and towns, the concepts of *street* and *square* often apply. Definition of street space is provided by uniform setbacks and similarity of mass and is often strengthened by stately rows of street trees. A special spatial event, such as a courthouse square or town common, often occurs near the center of town. Furthermore, the European architectural tradition is largely our own, however differently we have chosen to adapt it. Insights provided into that heritage also illuminate ours.

The lessons drawn by Krier are particularly useful in America's many dense urban situations. These more dense urban places, where civilized life is sometimes possible without daily use of a car, are becoming increasingly valued by Americans. New developments, however, generally continue to depend totally on the automobile and thus lack a cohesive spatial network negotiable by a person on foot; they are usually isolated from other developments except via the automobile. (This could be considered the principal distinction between suburban and urban places.) It is not clear that this is a necessary or desirable state of affairs, though it may be deeply engrained.

Rob Krier's brother, Léon, with Maurice Culot, holds little hope for Americans.

> *A street is a street, and one lives there in a certain way. . . . television and the automobile . . . have already succeeded in changing the physical qualities of American man. . . . We must forcefully reject the American city and become savagely European.*[7]

It should be noted, however, that Rob Krier does not seem to share the clearly conceived radical ideological viewpoint of his brother. While the concern for traditional urban space is held in common and many examples of Léon's work appear in this book, Rob Krier seems much more accommodating and pragmatic in his view of modern society. Léon Krier's vision of the future city is tightly interwoven with a transformed social order, including a non-industrial means of production, without which he feels a viable culture and architecture cannot be restored. Rob Krier, on the other hand, seeks to "avoid visualising the town according to narrow ideological prejudice, whether this is of a socio-political or technical nature. . . . No precise planning solutions exist for a given social order."[8]

Perhaps even in America Rob Krier's observations about urban space can be applied with beneficial effect. Primarily, they encourage us to recognize and value the *spatial* resources of our existing cities and towns. But these lessons might also be applied to newer development. To be sure, Krier overstates his position at times; for example, he rather casually extends the concept of defined space to green space and in the process dismisses the whole tradition of the Romantic English landscape that is so much a part of our tradition. And his spaces are very tightly defined in geometrical, regular forms (though his text allows for greater irregularity). But the overstatements do not obviate the validity of the argument's thrust. Krier recognizes the appeal of a freestanding house as a building type, but maintains that an assemblage of freestanding buildings does not make a city. Perhaps the most important lesson to be learned from Rob Krier is his insistence on the cohesiveness of the city and its public realm. A city's architecture can and should be greater than the sum of the buildings that make it up. It is the

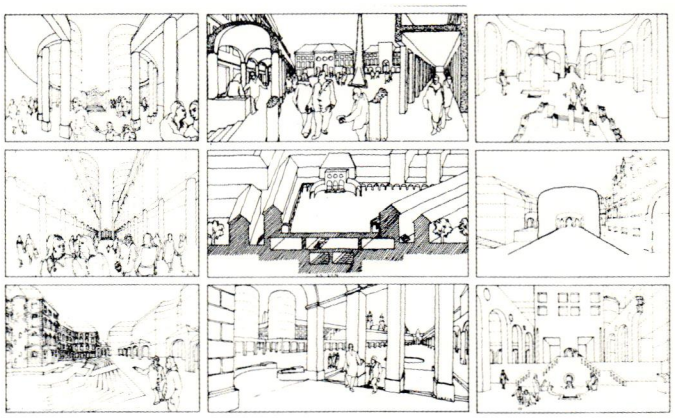
[5] Peter Smithson, "Space Is the American Mediator, or The Blocks of Ithaca: a Speculation," *The Harvard Architecture Review*, Volume 2

[6] Krier's second chapter is entitled "The Erosion of Urban Space in 20th Century Town Planning."

[7] Maurice Culot and Léon Krier, "The Only Path for Architecture," *Oppositions* 14, Fall 1978, pp. 42–43

[8] *Urban Space*, pp. 83–84

6 Project for the Charlottenplatz/Schlossplatz in Stuttgart by Rob Krier, 1973
a Plan of area in 1855
b Plan, 1972
c Aerial photo, 1969
d Proposed plan
e Sketches of project

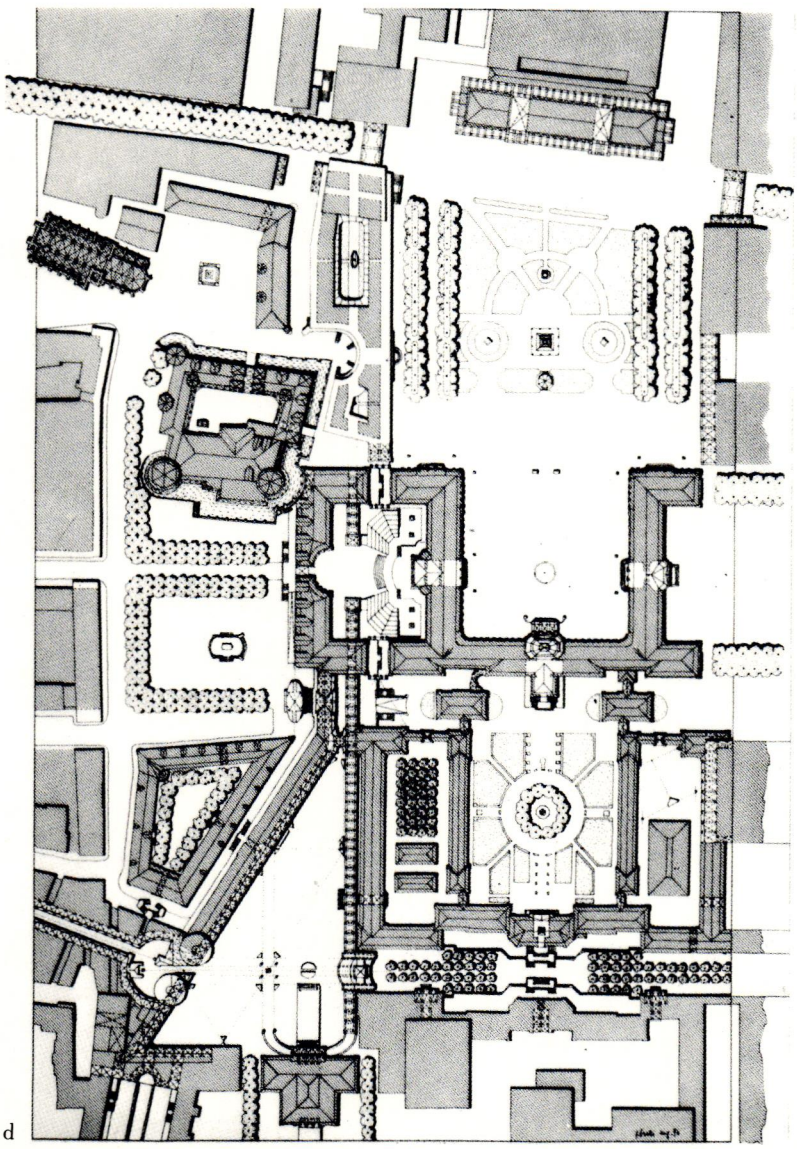


6 e

simple concept of traditional urban space, of streets and squares united in a continuous, varied and comprehensible network, that provides the key to this greater unity.

It is admittedly difficult to see *how* we can transform our sometimes sprawling, aspatial and auto-biased cities so that they offer this enriched spatial experience for people on foot. America's desire to do so is, of course, the vital first cause of such a transformation, and, while this desire seems to be growing, it is still very limited. But given the desire, Krier's historically sensitive, incremental and evolutionary approach of filling *voids* to create *space* offers a model for future action; the older parts of our cities and such spatially coherent precincts that exist within the automotive network offer a starting point. Krier's proposals do require some cultural translation – an American is bound to feel somewhat claustrophobic in Krier's tightly defined spaces, while he in turn probably suffers disquieting agoraphobia in Ithaca. Yet, despite the cultural obstacles to the direct application of its thesis to contemporary America, the book is stimulating reading for those concerned about our cities' architecture and urban space. For it encourages us to reevaluate what our cities are and what they have been, while it challenges us with a positive vision of what they might yet become.

– David A Drews



6 d

Notes on Contributors

Stanford Anderson
Stanford Anderson was trained as an architect at the University of California, Berkeley, and as an art historian at Columbia University. He received a Fulbright Scholarship to the Technische Hochschule in Munich and also received fellowships from the American Council of Learned Societies, the Graham Foundation, and the John Simon Guggenheim Foundation. Mr. Anderson has contributed numerous articles to international architectural publications and has edited the 1978 book *On Streets* and the 1969 work *Planning for Diversity and Choice: Possible Futures and Their Relations to the Man-Controlled Environment*. He is currently Professor of History and Architecture at the Massachusetts Institute of Technology, where he has directed the PhD program since 1975, and is Visiting Professor of the Architectural Association, London. He also maintains a private architectural practice and serves as a Commissioner of the Boston Landmarks Commission.

Brent C Brolin
Brent C Brolin received his degree in architecture from Yale University and was awarded the American Institute of Architects Medal for Excellence in Design upon graduation. Mr. Brolin collaborated for eight years with John Zeisel, a professional practice that linked design and research to meet users' needs. Brolin/Zeisel's largest project was a suburban development for millworkers in Spartanburg, South Carolina. Mr. Brolin has taught at Pratt Institute, the Cooper Hewitt Museum, and Yale's Department of City Planning and has lectured across the country. In addition to his architectural practice, he has published extensively. His 1976 work, *The Failure of Modern Architecture*, is in its third edition and two volumes, *A Handbook of Architectural Ornament* and *Architectural Ornament*, are forthcoming.

Romaldo Giurgola
Romaldo Giurgola, who was trained in architecture at the University of Rome and at Columbia University, has been associated with Mitchell/Giurgola Architects since 1958. He has taught at Columbia University for the past fourteen years, first as Chairman of the Department of Architecture and presently as the Ware Professor of Architecture. Among his professional activities, Mr. Giurgola has served as a design consultant for the Philadelphia City Planning Commission and as a member of the Architectural Review Board for the Charles Center-Inner Harbor of Baltimore. He is an Institute Member of the American Academy and Institute of Arts and Letters and is a member of the College of Fellows of the American Institute of Architects.

Paul Groth
Paul Groth, urban and cultural geographer, is presently a PhD student at the Department of Geography of the University of California, Berkeley, and a lecturer in the College of Environmental Design. He has also taught at the North Dakota State University in Fargo, where he studied architecture, and at the New Jersey Institute of Technology in Newark. Mr. Groth lives on a mini-grid street in Oakland, California.

David Handlin
David Handlin was educated at Harvard College, where he received the Bowdoin Prize and the Frank Knox Fellowship, at the Slade School of Fine Arts of London University, and at the Harvard Graduate School of Design. He is author of *The American Home* (1979), *A Concise History of American Architecture* (forthcoming), and a wide range of articles on architecture and the city that have appeared in international journals. From 1973 to 1978 Mr. Handlin was a lecturer in the Department of Architecture, University of Cambridge and is currently Associate Professor of Architecture at Harvard. He maintains a private practice in architecture and has received a Citation from *Progressive Architecture* (1981).

Randolph Langenbach
Randolph Langenbach studied architecture at the Harvard Graduate School of Design and architectural conservation at the Institute of Advanced Architectural Studies in York, England. His documentary study of industrial cities spans a twelve-year period and has been supported by several grants from the National Endowments for the Arts and Humanities. Since the early 1970s he has been a planning consultant for the Lowell National Park. He is co-author with Tamara K. Hareven of *Amoskeag: Life and Work in An American Factory City* and is currently preparing a book, *Corporation City*, on the architecture and planning of New England mill towns. His article includes material from this work. In addition, Mr. Langenbach has a 1981 Indo-American Fellowship for research and documentary photography in India.

Richard Meier

Richard Meier received his architectural training at Cornell University. In private practice since 1963, he has received numerous awards for his work, including five National Honor Awards from the American Institute of Architects and a 1979 *Progressive Architecture* award for the Atheneum in New Harmony, Indiana. In Spring 1980 he won an international competition for a new Museum for Decorative Arts in Frankfurt, West Germany. His architecture projects, furniture, paintings, and drawings have been published and exhibited internationally. Mr. Meier taught architecture at Cooper Union from 1964 to 1973; subsequently, he has taught at Yale University and is presently Eliot Noyes Visiting Critic in Architecture at Harvard University. He became a Fellow of the American Institute of Architects in 1976 and in 1980 received a Medal of Honor from its New York chapter.

William L Rawn, III

William L Rawn, III received his architecture training at the Massachusetts Institute of Technology, where he was awarded the Chamberlain Prize for achievement in design. His article is based on his graduate thesis, "The Asymmetrical Spine: A Generator of Design." As a student, Mr. Rawn studied with Giancarlo de Carlo in Urbino, Italy, and practiced with Martorell, Bohigas & Mackay in Barcelona. Before entering architecture school, he practiced law in Washington, D.C., and was Assistant Chancellor for Physical Planning and Community Affairs at the University of Massachusetts, Boston. He is currently an architect with Davis, Brody and Associates.

Jon Michael Schwarting

Jon Michael Schwarting received his architecture degrees from Cornell University and has been awarded a Museum of Modern Art Fellowship, the Prix de Rome, and a grant from the National Endowment for the Arts. His present architectural practice is Design Collaborative, a partnership with Piero Sartogo; earlier, he maintained a private practice and was an associate with Richard Meier. In addition to his practice, Mr. Schwarting teaches both at Cooper Union and at Columbia University. His articles have been published by *Progressive Architecture*, *Precis*, and the *Cornell Architectural Journal*.

Peter Smithson

Peter Smithson was educated at the School of Architecture, University of Durham, Newcastle-upon-Tyne and at the Royal Academy Schools, London. In partnership with Alison M. Smithson since 1950, he is well known both for his projects and for his participation in Team 10. His continuing interest in urban planning has been expressed in his competition entries, planning proposals for English and German cities, and essays. His publications include *Urban Structuring* (1967), *Ordinariness and Light* (1970), *Bath, Walks Within The Walls* (1971) and *Without Rhetoric: An Architectural Aesthetic* (1973).

Roy Strickland
James Sanders

Roy Strickland studied architecture at the Massachusetts Institute of Technology, and James Sanders was trained at Columbia University. Fellow undergraduates at Columbia College, they have collaborated on a number of projects. They have worked for the New York City Landmarks Preservation Commission, developing and implementing projects in urban design and community preservation and producing an exhibition "Three Buildings" at City University of New York. This article is adapted from a book they are preparing with support from the Grunsfeld Foundation and the National Endowment for the Arts. Strickland and Sanders are presently planning a related exhibition, sponsored by the New York State Council on the Arts, scheduled to open in September 1981.

Credits

Anderson 2: From *Design of Cities* by Edmund N. Bacon, Copyright © 1967, 1974 by Edmund N. Bacon, reprinted by permission of Viking Penguin Inc.

Brolin Courtesy of the author

Giurgola 2, 4, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19: Mitchell/Giurgola Architects, New York, New York; 3, 5, 6, 7 : Rollin R. LaFrance; 1, 16: Sharp Freeman, Photographer

Groth 1, 2, 4, 6, 7, 14: Courtesy of the author; 3: This figure is reprinted from *Building the Unfinished: Architecture and Human Action*, Sage Library of Social Research, Vol. 53, by Lars Lerup, © 1977, p. 94, by permission of the Publisher, Sage Publications, Inc. (Beverly Hills/London; 5: Department of Special Collections and Archives, King Library-North, University of Kentucky; 8: Mariana Griswold Van Rensselaer, *H. H. Richardson*, Prairie School Press, 711 South Dearborn, Chicago, Illinois, 60605; 9: Camille Dry's *Pictorial St. Louis*, 1875; 10: Oregon Historical Society, Portland, Oregon; 11, 12, 13: John P. Hallihan, "Transit Facilities of Cities," in Austen F. Macdonald, editor, *Planning for City Traffic*, special number of the *Annals of the American Academy of Political and Social Science*, Vol.133, 1927

Handlin 1, 2: A. W. N. Pugin, *Contrasts*, (London, 1836); 3, 4, 6, 11, 12, 13, 14, 15, 18: Courtesy City Club of Chicago; 5: Reprinted from *The American Journal of Sociology*, 1911, *The Housing Problem in Chicago: Volume III*, "The Twenty-Ninth Ward Back of the Yard," by Sophonsiba Breckinridge and Edith Abbott by permission of The University of Chicago Press; 7: Camillo Sitte, *Der Stadtebau*, (Vienna: Technische Hochschule, Institut fur Stadtebau, Raumplanung und Raumordnung, 1909); 8, 9, 10: Daniel Burnham and Edward Bennett, *Plan of Chicago*, (Chicago: The Commercial Club, 1909); 16, 17: Courtesy of Architectural Record; 19: Courtesy of University of California, Santa Barbara Art Museum; 20, 21, 22, 23, 24, 25: Reprinted from *City Residential Land Development* edited by Alfred B. Yeomans by permission of The University of Chicago Press

Krier Illustrations from Rob Krier, *Urban Space*, published by Academy Editions, London and Rizzoli International Publications, New York

Langenbach 1, 2, 3, 7, 8, 9, 10, 12, 14, 15, 16, 22, 25, 30, 34, 35: Courtesy of the author; 4, 23: Proprietors of Locks and Canals; 5, 28: Courtesy of John Coolidge; 6: Manchester Historic Association; 11: Lowell City Library; 13: University of Lowell Library; 17, 24, 27: Merrimack Valley Textile Museum; 18: Baker Library, Harvard Business School; 19: Massachusetts State Library; 20: Lewiston Public Library; 21: Maine Historical Society; 29: Courtesy of Cynthia Zaitzevski; 33: Society for the Preservation of New England Antiquities

Meier 1, 12: Ezra Stoller © ESTO; 2, 3, 4, 5, 6, 7, 8, 10, 13, 14, 15, 17: Richard Meier & Associates, Architects; 9, 11: Evelyn Hofer; 16: Photograph – Louis Checkman

Rawn Courtesy of the author

Sanders and Strickland 1: William E. Sauro/NYT Pictures; 2: Charles Jencks, *Modern Movements in Architecture*, (Garden City, N.Y.: Anchor Press/Doubleday, 1973); 3: Le Corbusier, *My Work*, (London: Architectural Press, 1960); 4, 17: Ernest Flagg, "The Planning of Apartment Houses and Tenements," in *The Architectural Review*, (New York, 1902); 5: "Paul Lawrence Dunbar Apartments," in *Architecture*, (New York: Scribner's, January 1929); 6, 7, 12, 13, 15, 16, 18, 19, 20, 21, 22, 23, 24: New York City Housing Authority Photographic Unit; 8: "House of William Ladd, Cedarhurst, L.I., N.Y.," in *The American Architect: The Architectural Review*, (New York, October 21, 1921); 9: Horace Ginsbern Associates; 10: From *Towards New Towns for America* by Clarence S. Stein, © 1966 by Litton Educational Publishing, Inc. Reprinted by permission of Van Nostrand Reinhold Company; 11: Reprinted from the May 1938 issue of *Pencil Points*, copyright 1938, Reinhold Publishing; 14: Courtesy of James Sanders

Schwarting 1a, 1b, 1c, 1e, 1f, 2c, 2d, 3b: Mario Morini, *Atlante: Di Storia Dell' Urbanistica*, (Milano: Casa Editrice Libraria Ulrico Hoepli, 1963); 1d: A. E. J. Morris, *History of Urban Form: Prehistory to the Renaissance*, (New York: John Wiley and Sons), 1972; 1g, 7a, 7b, 8b, 8c, 8d, 8f, 8g, 13a, 15a: From *Design of Cities* by Edmund N. Bacon, copyright © 1967, 1974 by Edmund N. Bacon, reprinted by permission of Viking Penguin Inc.; 1h, 2a, 3a, 3c, 3e, 12b, 12d: Paul Zucker, *Town and Square: From the Agora to the Village Green*, (New York: Columbia University Press, 1959); 1i: Allen Greenberg, "Lutyens' Architecture Restudied," *Perspecta 12, The Yale Architectural Journal*, 1969; 2b: Camillo Sitte, translated by G. R. Collins and C. C. Collins, *City Planning According to Artistic Principles* (New York: Random House, Inc., 1965), all rights reserved; 3b, 3d, 3f, 4a, 8a, 9, 10, 11a, 13b, 13c, 13d, 15b, 17c, 17d, 20: Courtesy of the author; 4b, 8e, 8h: Sigfried Giedion, *Space, Time and Architecture: The Growth of a New Tradition*, (Cambridge, Massachusetts: Harvard University Press, 1956); 5a, 12a, 14a: J. Quentin Hughes and Norbert Lynton, *Simpson's History of Architectural Development, Vol. IV: Renaissance Architecture*, (New York: David McKay Company, Inc. 1962); 5b, 6a: Severio Muratori, Renato Bollati, Guido Marinucci, *Studi per una Operante: Storia Urbana di Roma*, (Rome: Consiglio Nazionale delle Ricerche, 1963); 6b: Photograph by courtesy of Electra Editrice, Milano; 11b, 11c, 11d, 11g, 11h, 11i: Paul Letarouilly, *Edifices du Rome Moderne*, (Paris: Didot, 1840); 11e, 11f, 12c, 14b(i), 0: Giovanni Battista Nolli, 1748; 14b(ii): Postcard of Santa Agnese in Piazza Navona, Rome; 16a: Michael Dennis and Klaus Hertig, *Urban Precedents*, (New York: Jaap Rietman, 1974); 16b: Heinrich Wolfflin, *Renaissance und Barock*, (Munich: F. Bruckmann K. G. Verlag, 1926); 17a: R. E. Wycherley, *How the Greeks Built Cities*, (New York: St. Martin's Press); 17b: Anton Schroll & Co., Vienna, from the book *Romische Veduten* by Hermann Egger, 1932; 18, 21a, 21b: From *The Radiant City* by Le Corbusier, translated by Pamela Knight, Translation copyright © 1967 by Grossman Publishers, Inc. Reprinted by permission of Viking Penguin Inc.; 19: Ludwig Mies Van der Rohe and Arthur Drexler, *The Masters of World Architecture Series*, (New York: George Braziller, 1960); 22a, 22b: Reprinted from *The Architecture of Erik Gunnar Asplund*, by Stuart Wrede by permission of The MIT Press, Cambridge, Massachusetts

Smithson 1, 3, 5, 6, 8, 14: Courtesy of the author; 2: Cornell University; 4: Reprinted by Arno Press Inc., 1968; 7: R. Willis and J. Willis Clark, *The Architectural History of the University of Cambridge*, 1886; 9: Courtesy of Virginia State Library, Richmond, Virginia; 10a, 10b: Ludwig Mies Van Der Rohe, *Project: Illinois Institute of Technology, Chicago, 1939. Preliminary Scheme*. Photographs courtesy of The Museum of Modern Art, New York; 11: *California Arts and Architecture*, May 1949; 12: *Architectural Forum*, November 1949; 13: *Architectural Forum*, November 1952; 15: Michael Hickok; 16: Lee Jablin; 17: George Heller; 18: Andrea Palladio, *The Four Books of Architecture* (New York: Dover Publications, 1965); 19: James Lehto; 20: Edgar Kaufmann, editor, *The Rise of an American Architecture*, © 1970 by The Metropolitan Museum of Art, in *King's Views of New York* (New York, 1911); 21: Otakar Dvorak; 22 Paul Cravit; 23: Thomas Holtz

Symposium 28: With permission of Architectural Publishers Artemis, Zurich; 29, 41: © SPADEM, Paris/VAGA, New York 1981 30: Stuart Cohen and Steven Hurtt; 31, 43, 45: Paul Zucker, *Town and Square: From the Agora to the Village Green*, (New York: Columbia University Press, 1959); 34, 36: Illustrations from *Italian Gardens of the Renaissance* by J. C. Shepherd and G. A. Jellicoe, published by Academy Editions, London; 39: Photograp by Diego Birelli by courtesy of Electra Editrice, Milano; 46 c: From *Design of Cities* by Edmund N. Bacon, copyright 1967, 197 by Edmund N. Bacon, reprinted by permission of Viking Pengui Inc.