ORGANIC URBAN DEVELOPMENT

PROBLEMS OF DEVELOPMENT
FOR MIXED USE URBAN AREAS 3 - 6 STORIES HIGH

Ph.D
QUALIFYING EXAMINATION
UNIVERSITY OF CALIFORNIA-BERKELEY
DEPARTMENT OF ARCHITECTURE
MARCH 1982

HANS JOACHIM NEIS

Ph.D. Qualifying Examination
for Hans Joachim Neis
Winter 1982

In partial fulfillment of the requirements for the qualifying examination, your committee asks you to respond in writing to the following question:

> In your work you are interested in what one might describe as "organic" development in urban areas. Today's urban development is, for a variety of reasons, not usually organic in this sense. What are the most important seven to ten problems which would have to be overcome, in order to rearrange the modern process of urban development, in such a way as to produce an organic structure in the city. Answer the question with special reference to high density, mixed use situations.

In addition to answering the above main question, we ask you to preface your paper, with a brief general definition of "organic urban development", to help us with the main topic. This definition need not be longer than one page, and it is understood that it is not the main focus of your paper, nor of the questions that will be asked of you at the orals.

Ph.D. QUALIFYING EXAMINATION

COMMITTEE

PROFESSORS:

SARA ISHIKAWA, CHAIR

CHRISTOPHER ALEXANDER
TONY DUBOVSKY
DONALD APPLEYARD
MICHAEL TEITZ

PREFACE

My interest in what may be called 'organic urban structure' and 'organic urban development' basically has two sources.

The first source are travel experiences in different parts of the world, where I culd visit quite astonishing places, towns like Gardhaia in the desert of Algeria, or Lamu at the Kenyan border to Somalia, or larger places, like the cities of Guilin and Changsha in China, or more well-known places like the inner city of Vienna, Rome around Piazza Navona and Pantheon, the old parts of Nurnberg and Bamberg in Germany, even parts of Paris, London, Frankfurt, and San Francisco. I also had the chance to study some hilltowns in Istria/Yugoslavia, in depth, finding very interesting facts about the structure and development of these towns. What all these places have in common is a particular quality, a feeling of coherency and organicness, which we seem to be no longer able to achieve in modern urban development. But the thought does not leave you that it still should be possible, with modern means, today.

The second source is an experiment, conducted under Professor Alexander at U.C. Berkeley, where we actively tried to establish an 'organic approach' to urban design, feasible for today. Here we made the attempt to construct a theory and a procedure which would bring back a quality of 'organicness' to the city of today.

This approach needs further work in different aspects and

area, in particular, in the area of urban planning. It is the further elaboration of this approach, which is the main goal of my work.[1]

Example of an 'Organic Urban Structure', a Mixed Use Urban Area around the Pantheon in Rome. Nolli Map of 1748.

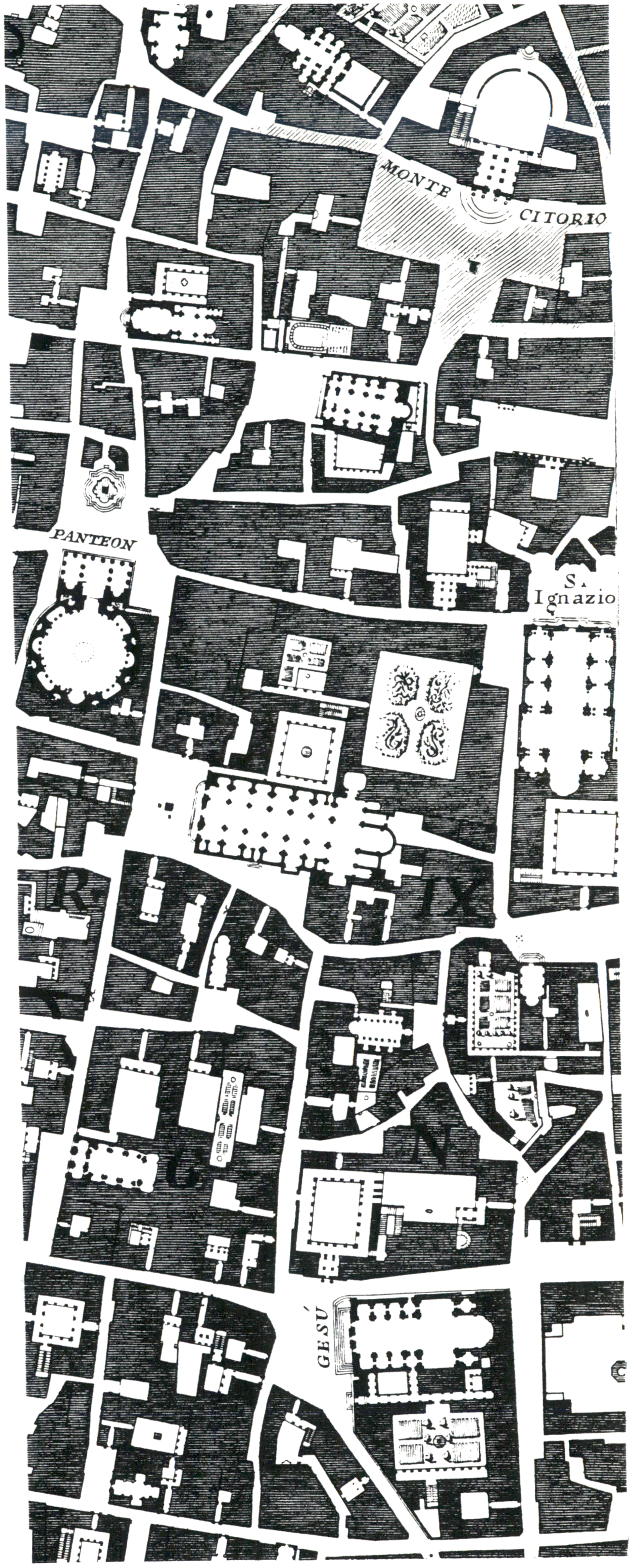


TABLE OF CONTENTS

10. FINAL OBSERVATIONS

FOOTNOTES

BIBLIOGRAPHY

APPENDICES

1.

ORGANIC URBAN DEVELOPMENT - DISCUSSION OF TERM AND A DEFINITION

The term 'organic urban development' is most closely related to a branch of urban theory which may be called 'organic urban theory'.[2] 'Organic urban theory' is a branch of 'normative urban theory's including a) cosmological theories, b) the city as a machine theories, and c) organic urban theories. 'Normative urban theories' are distinguished from two other major types of theories, that is, a) planning or decision-making theories and b) functional theories, by their "generalizable connections between human values and settlement forms" (Lynch, 1981, p. 37) as well as their generalizable connections between human values and the process which governs urban growth.

In order to give a definition of the term 'organic urban development' we will follow Ackhoff's model of two types of definition: conceptual and operational (Ackhoff, 1962, pp. 141-145). According to Ackhoff, the conceptual type of definition relates the concept being defined to one or more other concepts and, generally, takes a form similar to that of a dictionary. Operational definitions, on the other hand, relate a concept to what would be observed, if certain operations are performed under specified conditions or specified objects.

Conceptual definitions tell the investigator what to think about a concept, and operational definitions tell him what to do about answering questions about the concept, or more specifically, in the case of the environmental designer or architect, how to apply the concept.

Conceptual Definition

> The term 'organic urban development' is based on the concept of 'a growing whole', and starts from the idea, that all of urban development - that is all planning, urban design, layout of buildings, and even building construction, can be done under the impulse of the concept of 'a growing whole' and its method which is called the 'centering process' (Alexander, 1980), and that this concept enbodies all that is important about the nature and wholeness of space. 'Organic urban development' can refer to the growth of a city or town as a whole, or can refer to particular areas of a city or a town.

The term 'whole or 'organic whole' can be traced back to the critics and philosophers of ancient Greece, who have regarded natural organisms as offering perfect models of that harmonious balance and proportion between the parts of a design which is synonymous with the classical idea of beauty. While Aristotle in the 'Metaphysics' distinguishes between 'aggregates' and 'wholes', Augustinus later on, adds the idea of 'variety in unity', which when done right, achieves a unified whole. (cited in Osborne, 1970, p. 286)

Were the classics more 'concerned' with the wholeness of forms, the rise of modern biology in the eighteenth and nineteenth centuries and its first full statement by E.

Haeckel and Herbert Spencer in the nineteenth century gave emphasis to the dynamic aspect of the organism. Homeostasis, (that is internal adjustments tends to bring the organism to a state of balance whenever disturbed,) self-regulation as well as self-organisation are important concepts in biology.

The application of these findings in biology to the understanding of human settlements brought new insights and a new impetus to 'organic urban theory'. It was in the twentieth century that the image of biological organism was applied to the understanding of settlements as well as to the design of cities by people like P. Geddes, L. Mumford, E. Howard, and Reichow.[3]

However, fewer settlements have been built according to organic urban theories than according to most other types of theories. There are probably two main reasons for this. First of all, a city is not an organism in a strict biological sense, and secondly, emphasis was too often placed on copying organic forms.

For the understanding of the term 'organic urban development' we therefore cannot restrict a conceptual definition to purely scientific biological terms. As Steadman points out, the organic analogy to design (and urban development) is much older and has much wider connotation than the more recent analogy of biology, including for example aesthetic conerns, while the biological analogy, is stricty concerned with scientific terms (Steadman, 1979, pp. 7-9).

It was with the development of 'modern structuralism' that a wider understanding of the term 'wholeness' was possible, and the term 'growing whole' could be established, for as Piaget points out "the notion of structure is comprised of three key ideas: the idea of wholeness, the idea of transformation, and the idea of self-regulation" (Piaget, 1970, p. 5), in addition, and that is important for a wider understanding of the terms discussed here, structuralism is by definition inter-disciplinary.

It is in this context that we have to understand the recent work of C. Alexander, who is establishing the notion of a 'growing whole' in the field of design, as well as the notion of the 'centering process' which we roughly may understand as the fundamental way or approach of achieving a growing whole.

For Alexander, the term 'growing whole' is neither restricted to 'biological theory' nor to 'organic theory' in the classical sense. For him it is a fundamental term of his design theory. Alexander's idea of a 'growing whole' is related to physics as well as cosmology (A New Cosmology, Alexander, 1981) to gestalt psychology as well as to geometry (Human Geometry, Alexander, 1980) and the nature of space, it also well related to patterns, which are derived from functional arguments (A Pattern Language, Alexander et al, 1977). This understanding of a 'growing whole' in design encompasses much more than what has up to now been understood

as 'organic design theory' or more specifically related to our theme, 'organic urban theory'.

Building on these findings we can say that the notions of a 'growing whole' and the 'centering process', can give new insights, not only to design theory in general, but also to 'organic urban theory' and more specifically 'organic urban development'.

'Organic urban development', then, is based on the concept of a 'growing whole' and starts from the idea that all of urban development - that is all planning, urban design, layout of buildings, as well as building construction is being done under the impulse of the idea of a growing whole, and its basic method the 'centering process'. (See as well Appendix A: 'The Idea of a Growing Whole'.)

Operational Rules

Operational definitions of 'organic urban development', so far have been developed on the level of urban design, layout of buildings, and to a certain degree on the level of construction (Alexander, et al., 1981). No operational definitions have been accomplished so far on the level of urban planning. Operational definitions are given in the following systems of rules:

- Urban Piecemeal Growth
- Emerging Large Urban Structures
- Urban Rules - The Creation of Positive Urban Space
- Centering and Urban Growth
- Rules for the layout of Large Buildings

- Rules for Construction

Since these operational rules have been worked out before and are not the main topic of this paper, but are necessary prerequisites for what follows, I will present them as appendices. Therefore see Appendix B) 'The Development Occurs Piecemeal', Appendix C) 'The Process is Guided by a System of Emerging Wholes, Appendix D) 'The Creation of Positive Urban Space', and Appendix E) 'Centering and Urban Growth'. For the sake of brevity I will not give appendices for the last two systems of rules, which are concerned with architectural design and construction.

2.

WHY 'ORGANIC' URBAN DEVELOPMENT

Today's urban development is, for a variety of reasons, not usually organic in the sense described before. There must be good reasons for this[4]. Why then, do we need a new 'organic urban development approach'?

First of all, there has been a growing awareness in the last 10-15 years that our cities are being destroyed by modern urban growth (i.e., Jacobs, 1961; Alexander, 1966; Durth, 1977). Books, Journals, Newspapers are full of critique of modern architecture, urban design, and maybe less so, planning. In particular, what is being built, does not seem to please anybody anymore.

> 'It is a common feeling that most urban places are less than satisfactory - uncomfortably, ugly, or even dull, as if they were measured on some absolute scale. Only fragments of the settled world are generally excepted from this dismal view: an affluent suburb, a fine park, historic town, the vital center of some great city, an old farming region.'(Kevin Lynch, 1981, p. 1)

Secondly, although we can find a growing critical awareness, and even many attempts to change the situation in the small (i.e. Woonstraaten in Holland), no basic attempt has been undertaken so far to provide for an alternative rationale and a theory which may change the situation.

It is hoped that the idea of 'a growing whole' and 'the centering process' as an alternative rationale can help to

throw new light on organic urban theory and practice, and that a new 'organic urban development approach' can be developed, which is capable of generating human cities, and urban environments with feeling and heart.

3.

EXAMPLES OF ORGANIC URBAN DEVELOPMENT

Examples where the organic urban development approach, in the sense defined above, is explicitly applied, are limited in number, mainly, because we are dealing here with the construction of a new theory. Examples where this approach seems to have been at work in a more unconscious way, (unconscious with regard to explicit theory) are easier to find in the history of the development of individual cities and towns.

Examples, where this process has been, or is being explicity applied:

1. The San Francisco Waterfront Project - a Simulation of the Development of a High Density Urban Area (Alexander et al., 1981)
2. The Israel Project - The Development of a Little Town (Alexander and Center for Environmental Structure, 1980)

The first example is a simulation, an experiment, where many operational rules were being tested to see the kinds of results which such an approach could yield. The second project is, momentarily, in the process of implementation, so that we cannot refer to results. Here, I will confine myself to the discussion of some operational rules and of the results of the first example, the San Francisco Waterfront.

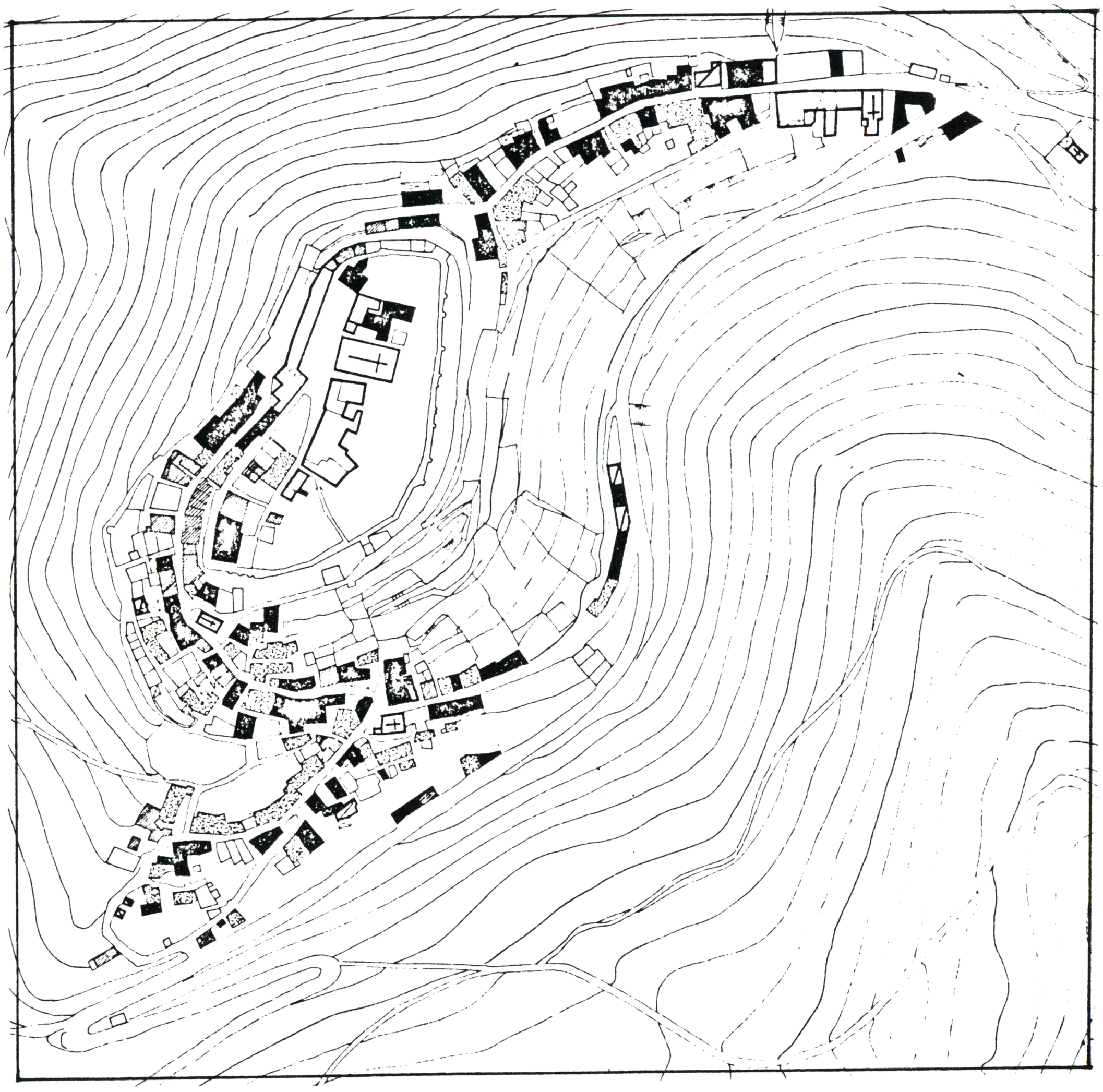
Historical examples, where this process seems to have been at work, may be found many if studied carefully.

Here I have to limit myself to some aspects of an example which I happened to study in detail

3. Motovun - The Development of a Hilltown in Istria/Yugoslavia. (Funke, Heinrich, Neis, 1974).

Example 1

Motovun - The Development of a Hilltown in Istria/Yugoslavia



Architects and urban designers are quite familiar with diagrams of urban expansion over time, like the one, presented here of the hilltown Motovun. What is less known are the laws which govern the internal growth of the form. At the example of this town I want to illustrate, one particular rule which in the 'organic urban development' concept has been defined as an operational rule, namely, 'structuring whole or the emergence of large urban structures'.

certainly, it takes / topos into account

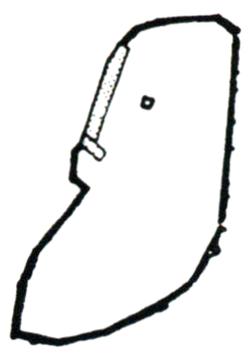
When we look at a more detailed map of Motovun or look at a photo, we can feel what we may call an 'organicness'. Now what is being claimed here is that this feeling of organicness is not a vague feeling or an analogy with biological forms, it is in fact an accurate feeling of a structural feature which old towns like Motovun had and still have. Motovun grew as a whole, existed as a whole, and grew under its own laws of wholeness.

s.a. Alberti Palladio

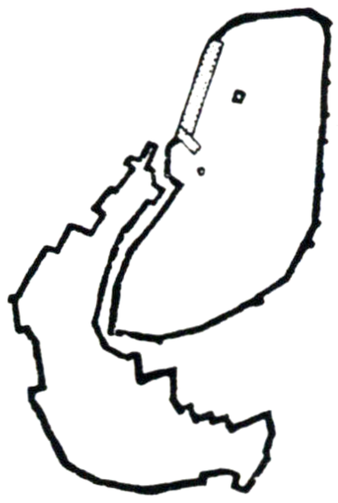
A detailed structural analysis of Motovun has shown particularly interesting results with regard to 'structuring wholes'. In fact, it was possible to identify large town structures according to their historical growth. It was even more interesting to find out that, wherever two or more large townstructures overlap, something special; functionally and spatially, happened. There was a gateway, the open court seat, a small square with a fountain, a church, a square with large public stairs, all of them at these particular overlapping areas of large townstructures.

Motovun - The Development of a Hilltown in Istria/Yugoslavia

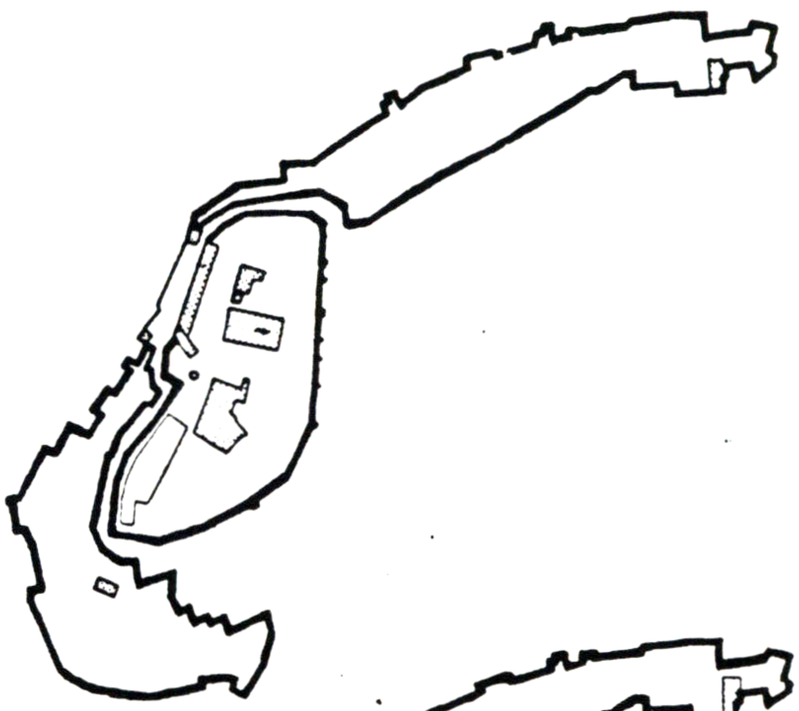
13. JAHRHUNDERT



14.-15. JAHRHUNDERT



16.-17. JAHRHUNDERT



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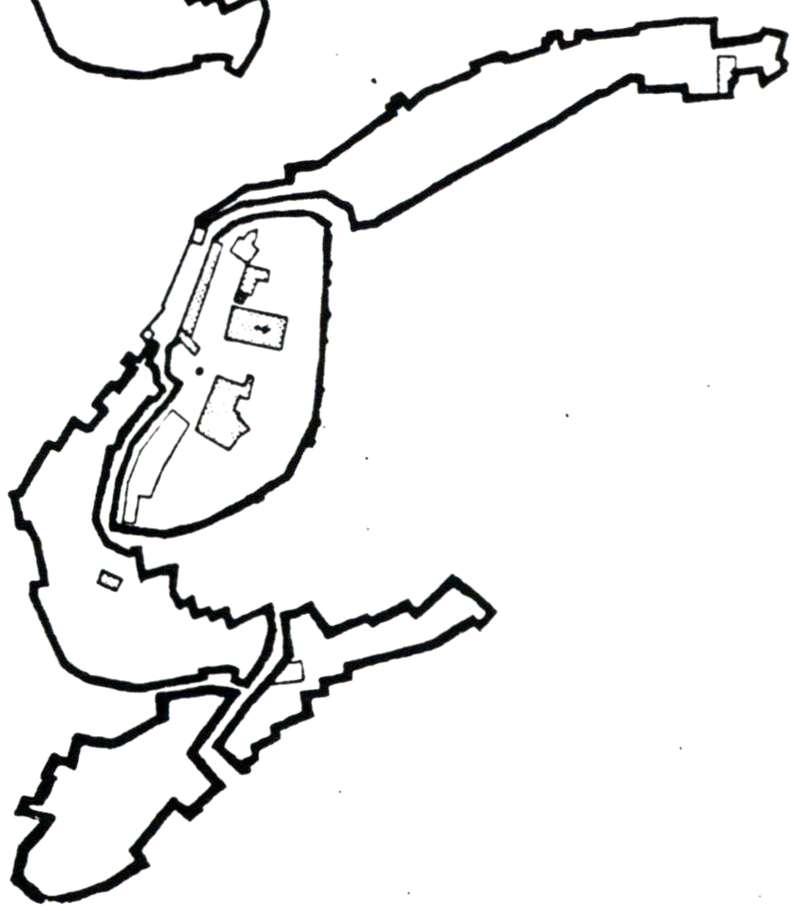
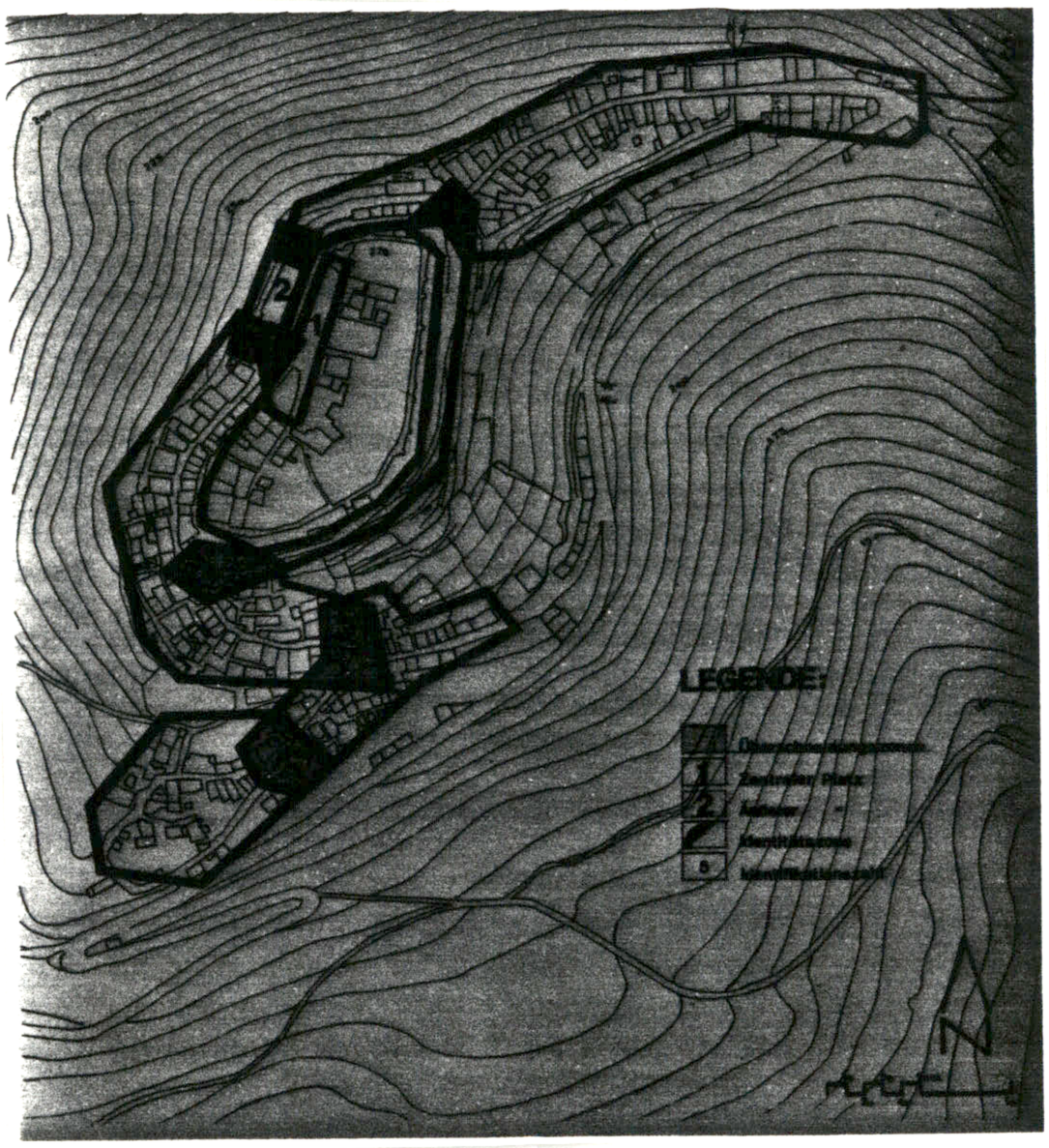
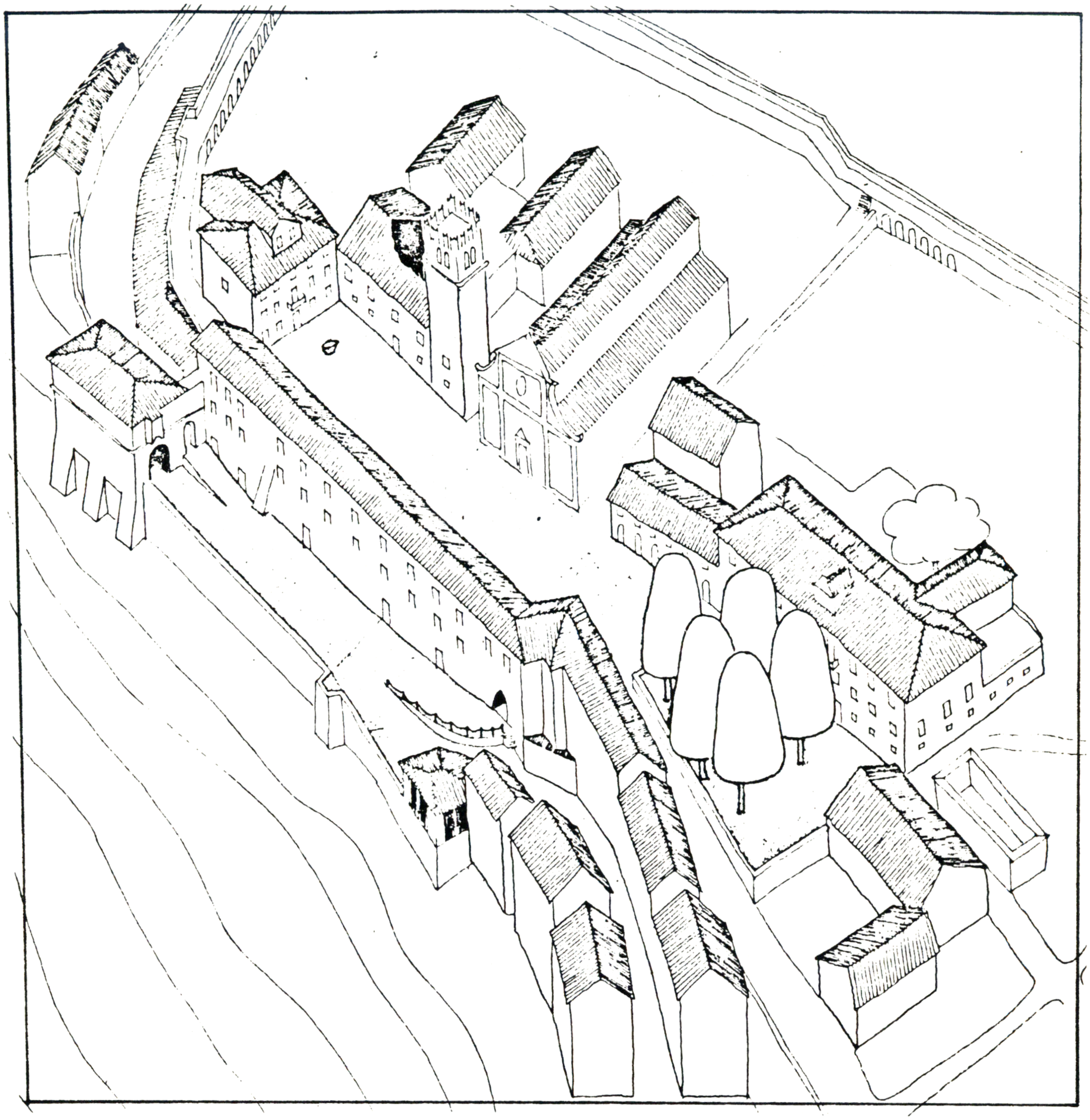


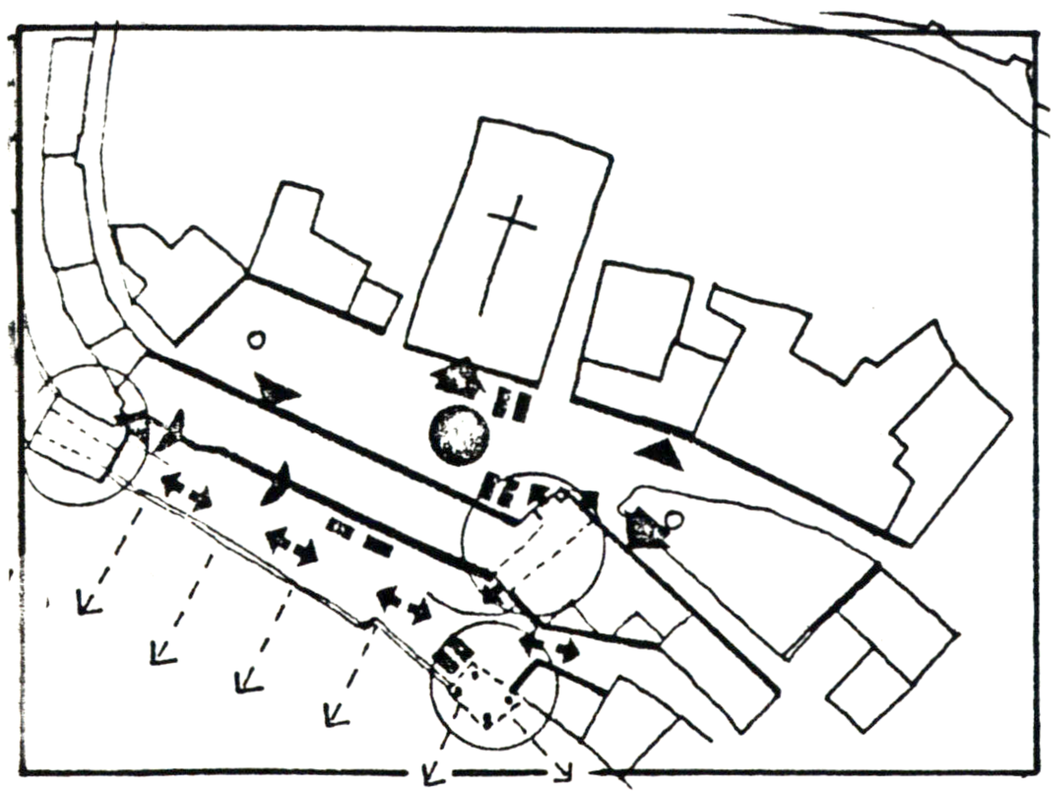
Probably the most interesting result was that the whole town grew over centuries in this particular way, by piecemeal growth and by the emergence of large townstructures.

how do you know?

MOTOVUN STRUCTURE PLAN







Structural Analysis of Central Area of Motovun - Four Specific Larger Townstructures Overcap in Three, Functionally and Spatially, Particular Points (see circles)

Example 2

The San Francisco Waterfront Project

The second example I want to talk about briefly, is 'The San Francisco Waterfront Project', the simulation of the development of a high density mixed use urban area.

In this experimental project, we tried to define a kind of organic urban process, based on the idea of a 'a growing whole' and the principles, or system of rules, described before.

For the simulation a set of assumptions was made with regard to location and size of area, time for development, distribution of sizes of projects, distribution of uses, land tenure, and finally administrative procedure (for a detailed list of assumptions see Appendix F)'Basic Assumptions').

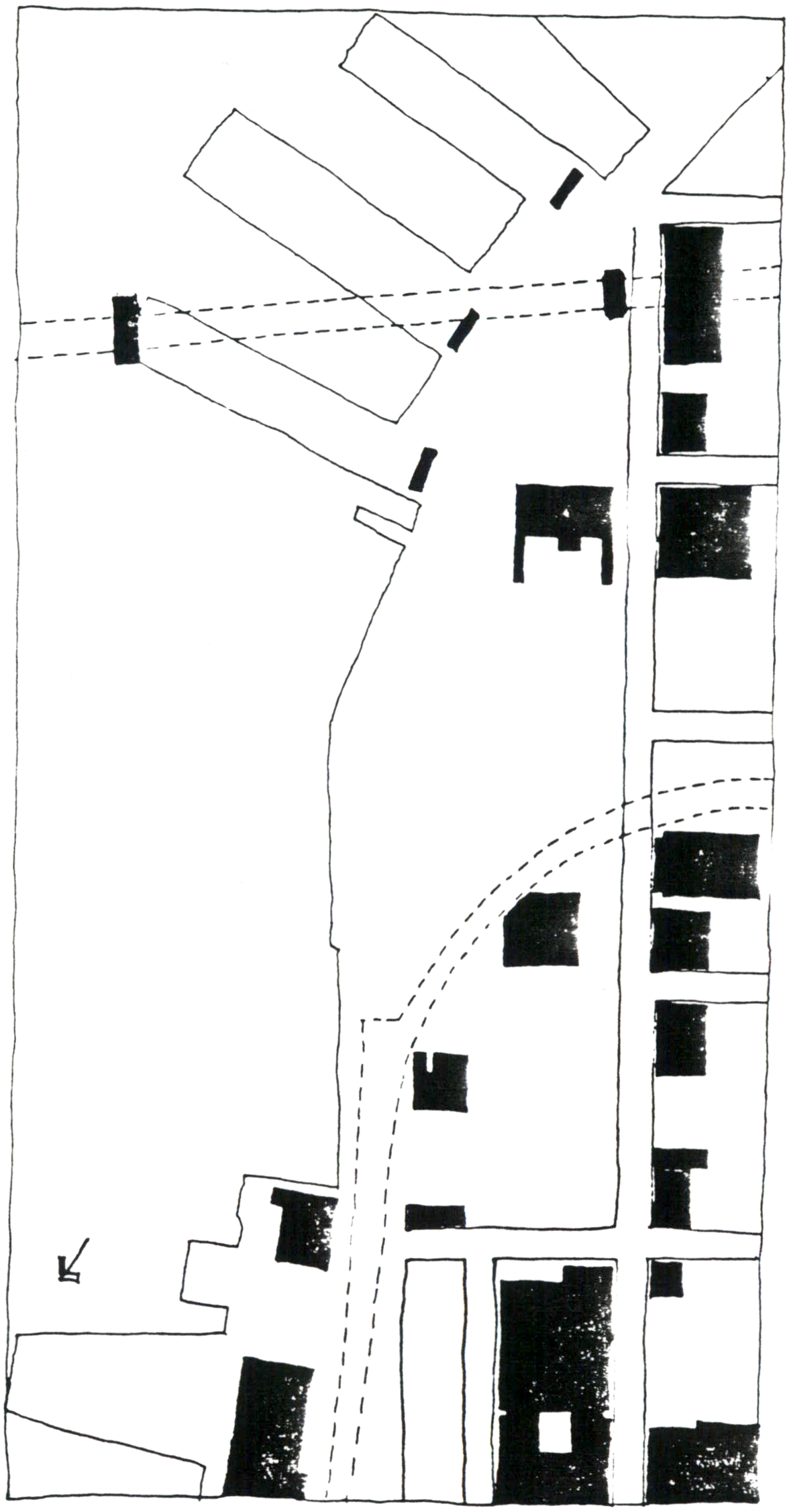
Although in this experiment all the major principles, systems of rules, and individual operational rules were at work, I will limit myself to a short presentation of the application of two systems of rules, that is, "Piecemeal Urban Growth' and 'Structuring Wholes'.

In order to attribute wholeness to the urban structure, it is important that growth happens piecemeal, step by step, by the individual acts of building. However, in a piecemeal form of growth, each individual act of building has to contribute to the creation of a larger urban structure. During the project, it was the need to create coherent, integral and whole urban structure that guided the introduction and the specific location and shaping of each individual act.

In order to get a better understanding I will go through a rough sequence of growth of the area, showing the piecemeal growth of project increments and the emergence of larger urban structures parallel, on different plans, in stages.

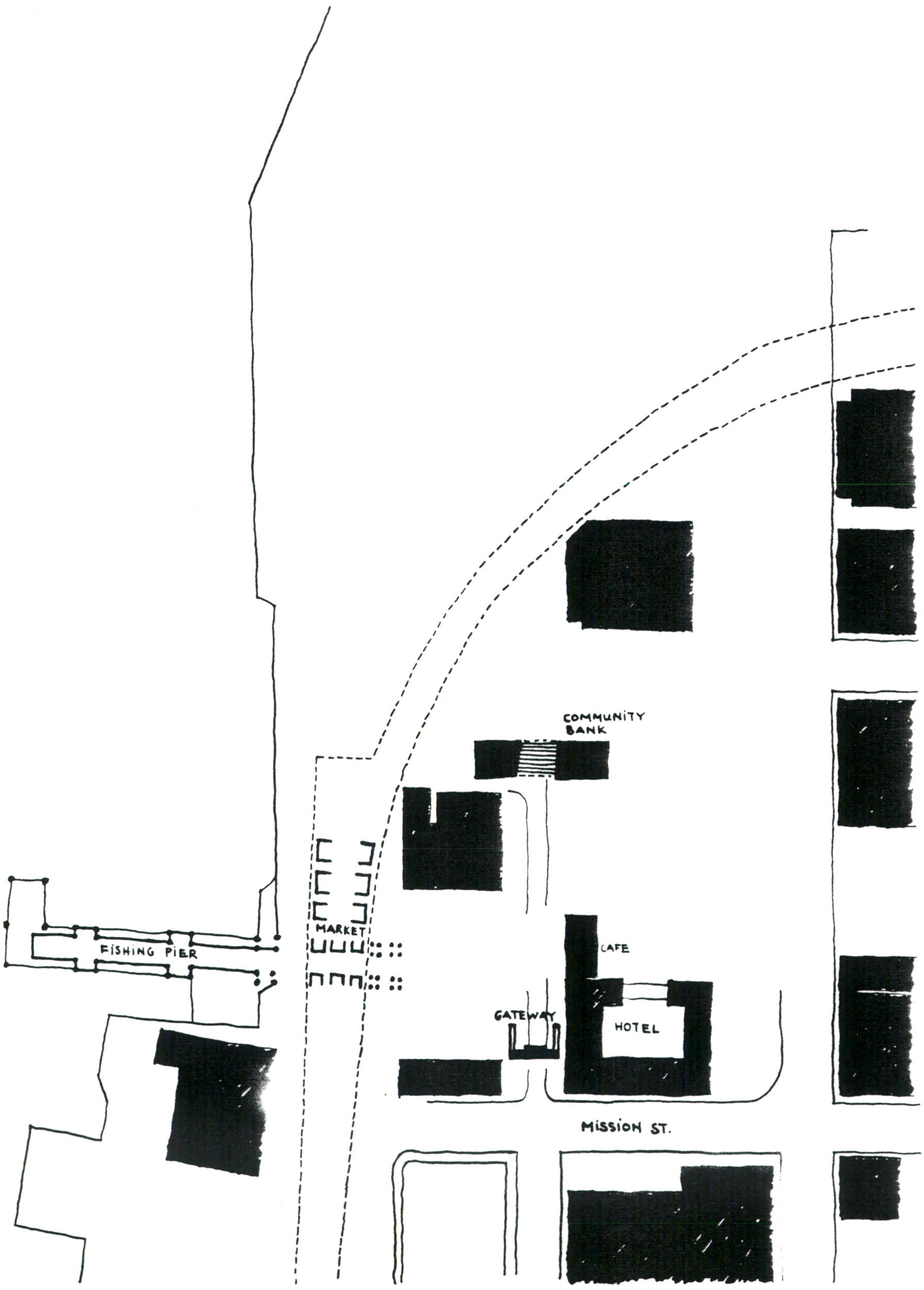
A difference to the example of the Istrian hilltown is that for Motovun we can only see the growth of large urban structures, while here we can see how, actually, each individual act of construction contributes to the formation of these large urban structures.

THE SITE AT THE BEGINNING OF DEVELOPMENT



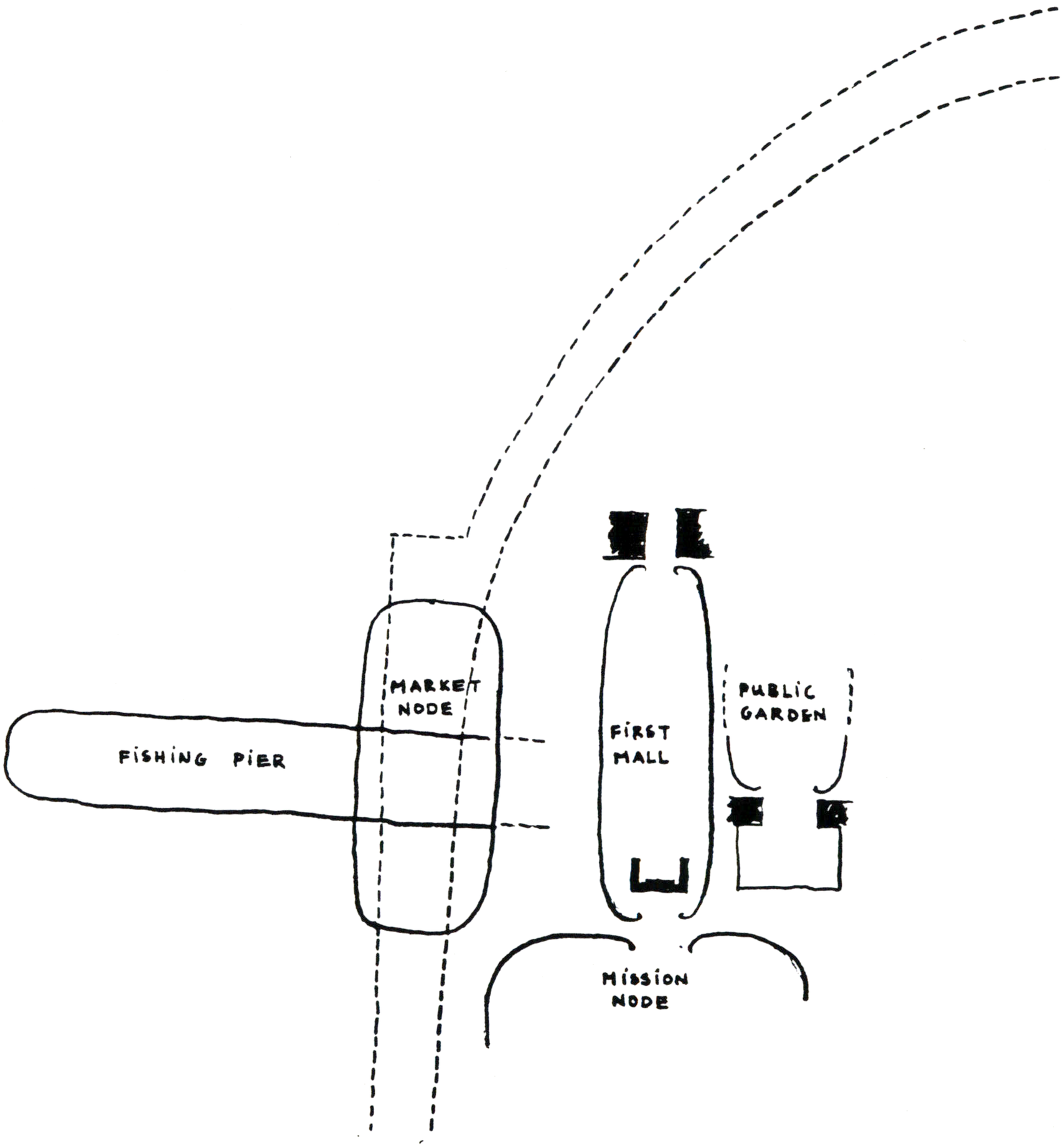
STAGE 1

Piecemeal Urban Growth by Individual Buildings

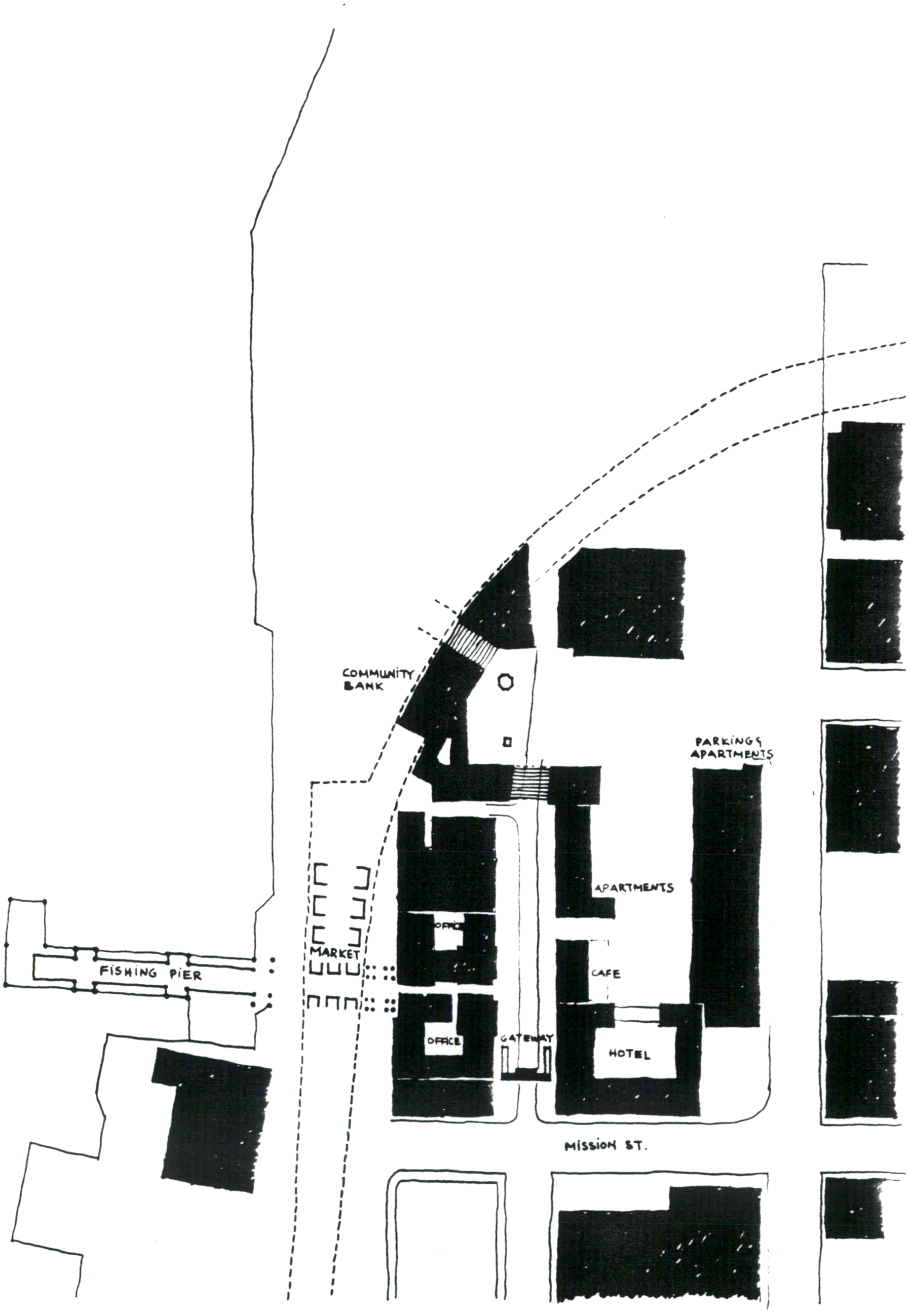


STAGE 1

The Gradually Emerging Larger Urban Structures Generated by Buildings in a Piecemeal Urban Growth Process



STAGE 2


COMMUNITY BANK
PARKING & APARTMENTS
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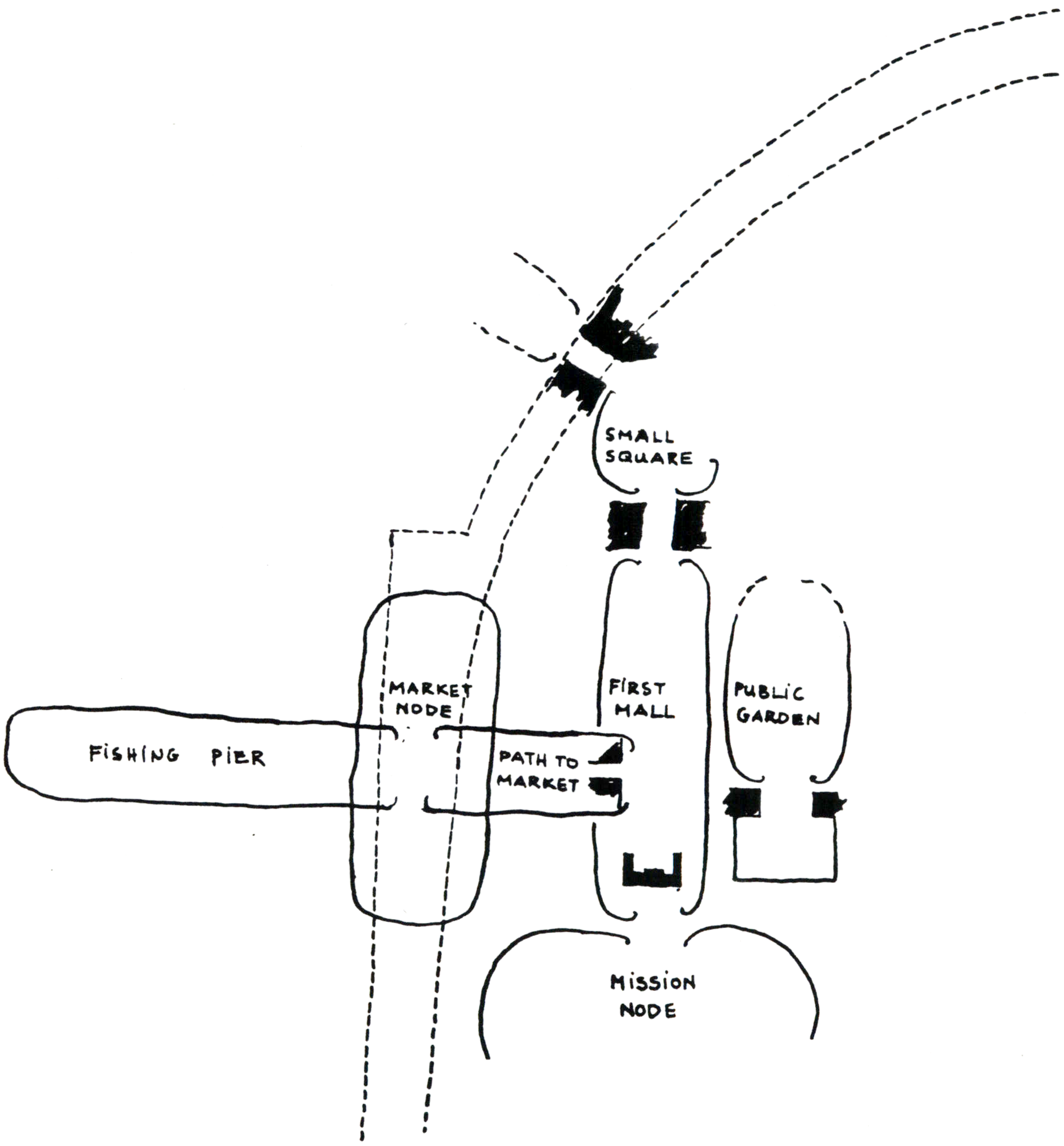
MISSION ST.

STAGE 2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FIRST
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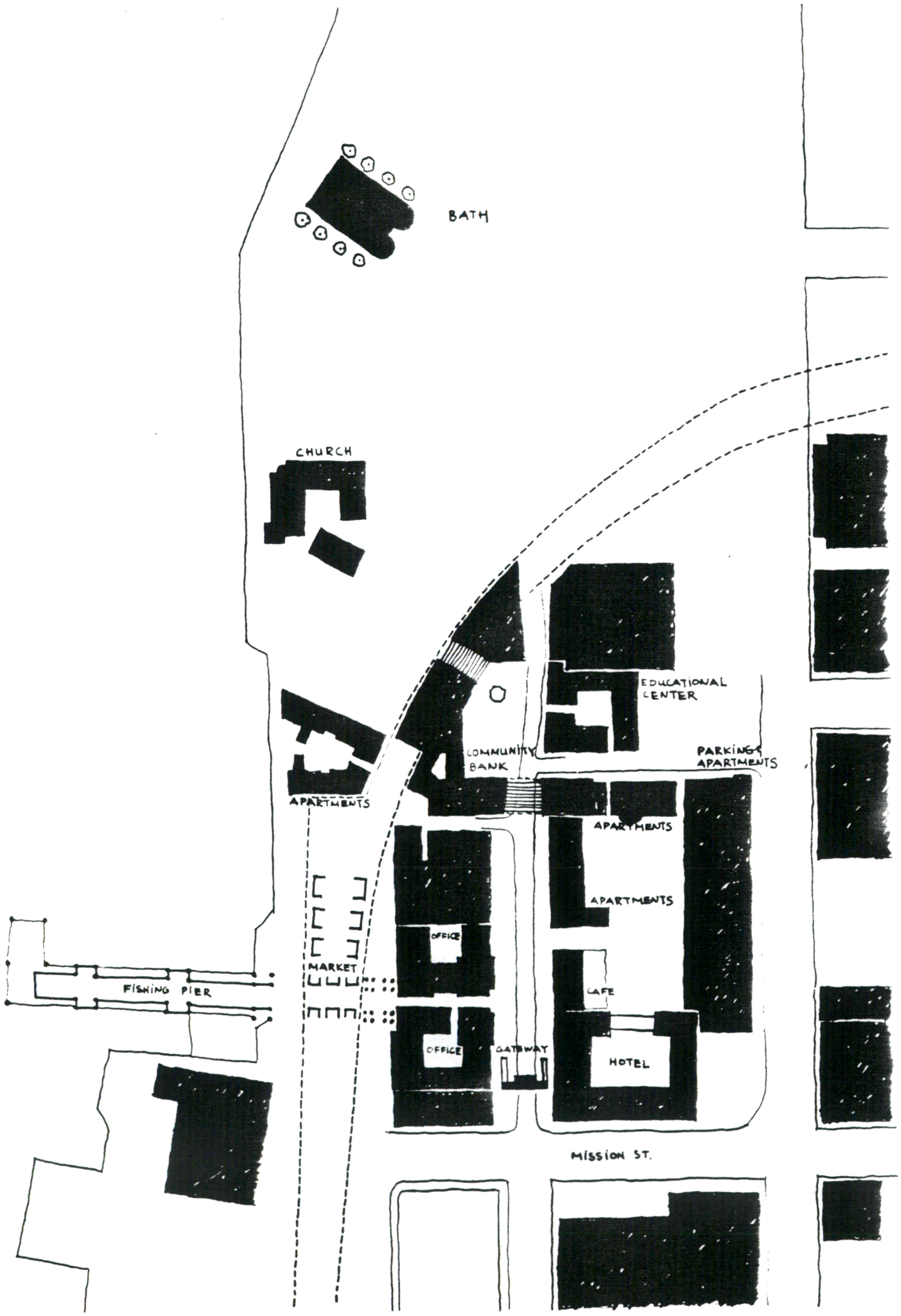
PATH TO
MARKET
MISSION
NODE

STAGE 3


BATH
CHURCH
EDUCATIONAL CENTER
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PARKING APARTMENTS
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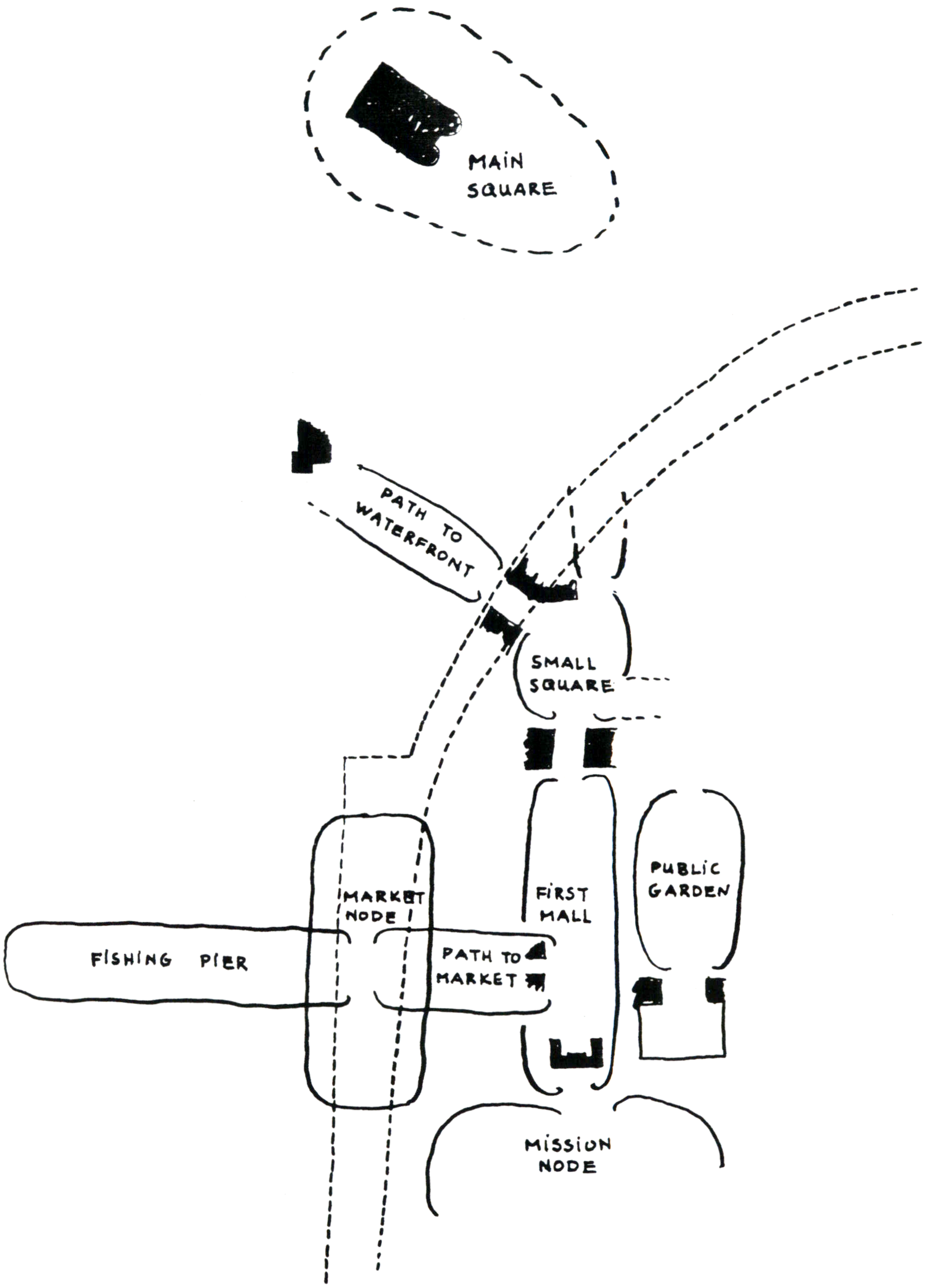
STAGE 3


MAIN SQUARE
PATH TO WATERFRONT
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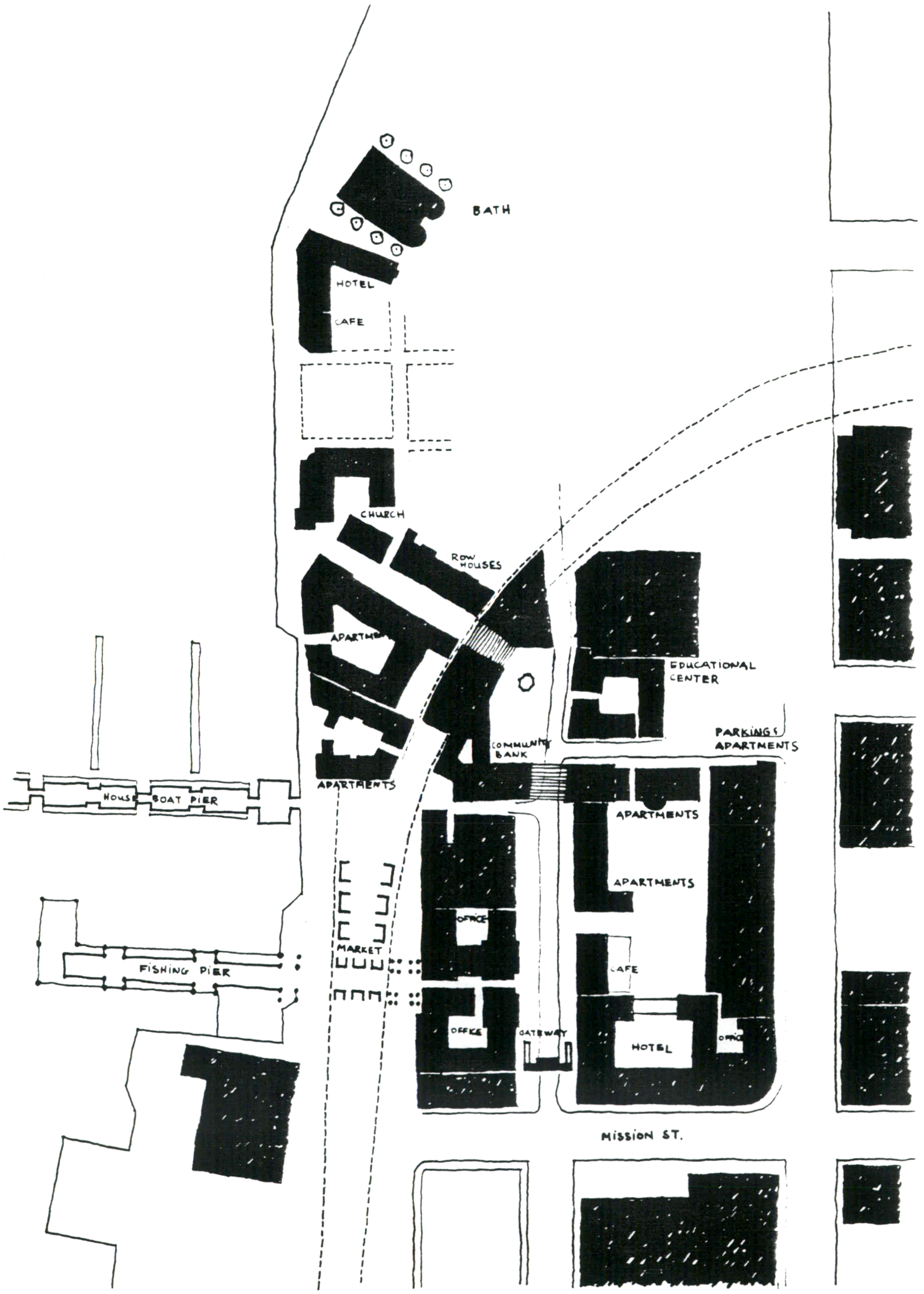
PATH TO MARKET
MISSION NODE

STAGE 4


BATH
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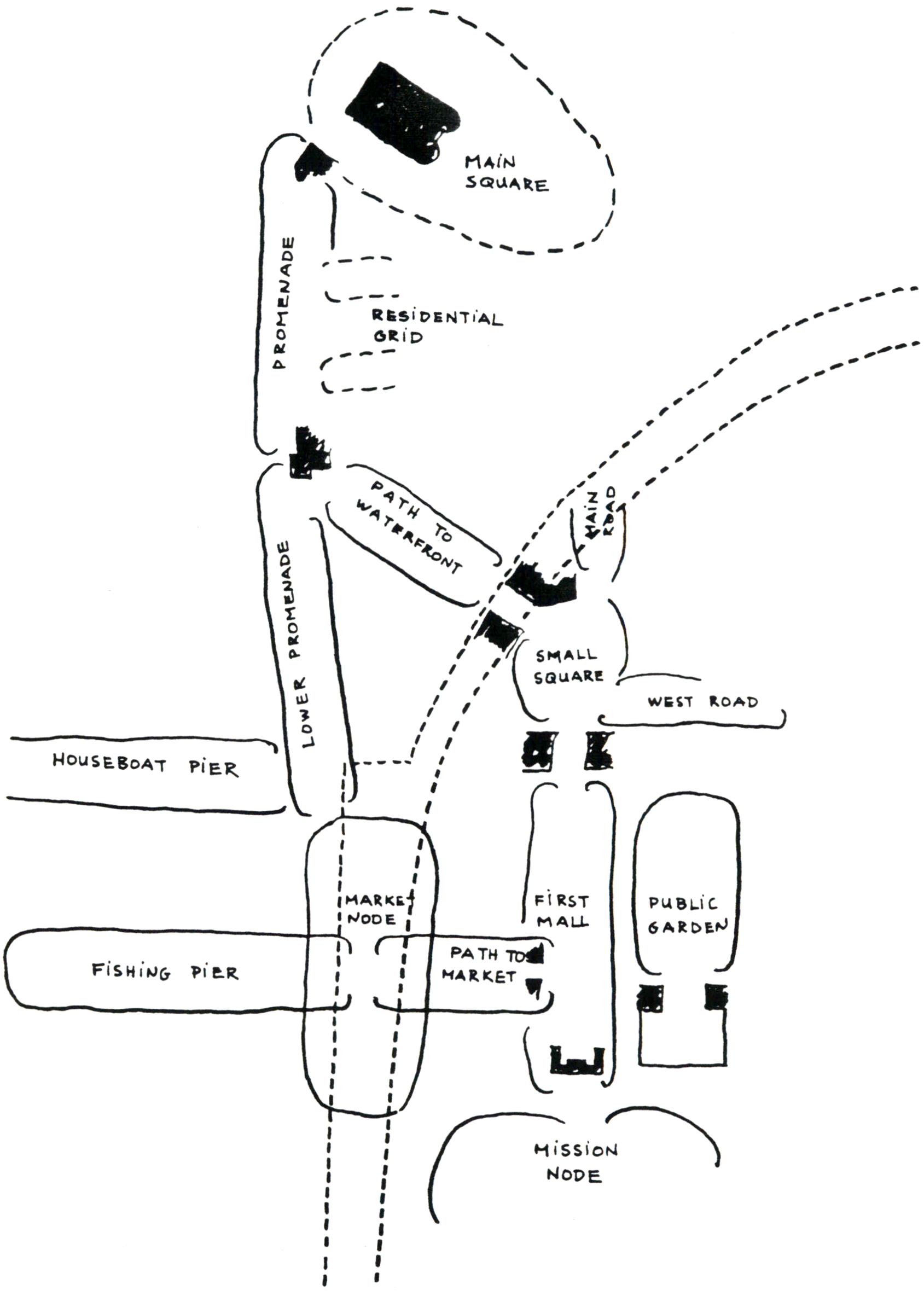
STAGE 4


MAIN SQUARE
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LOWER PROMENADE
SMALL SQUARE
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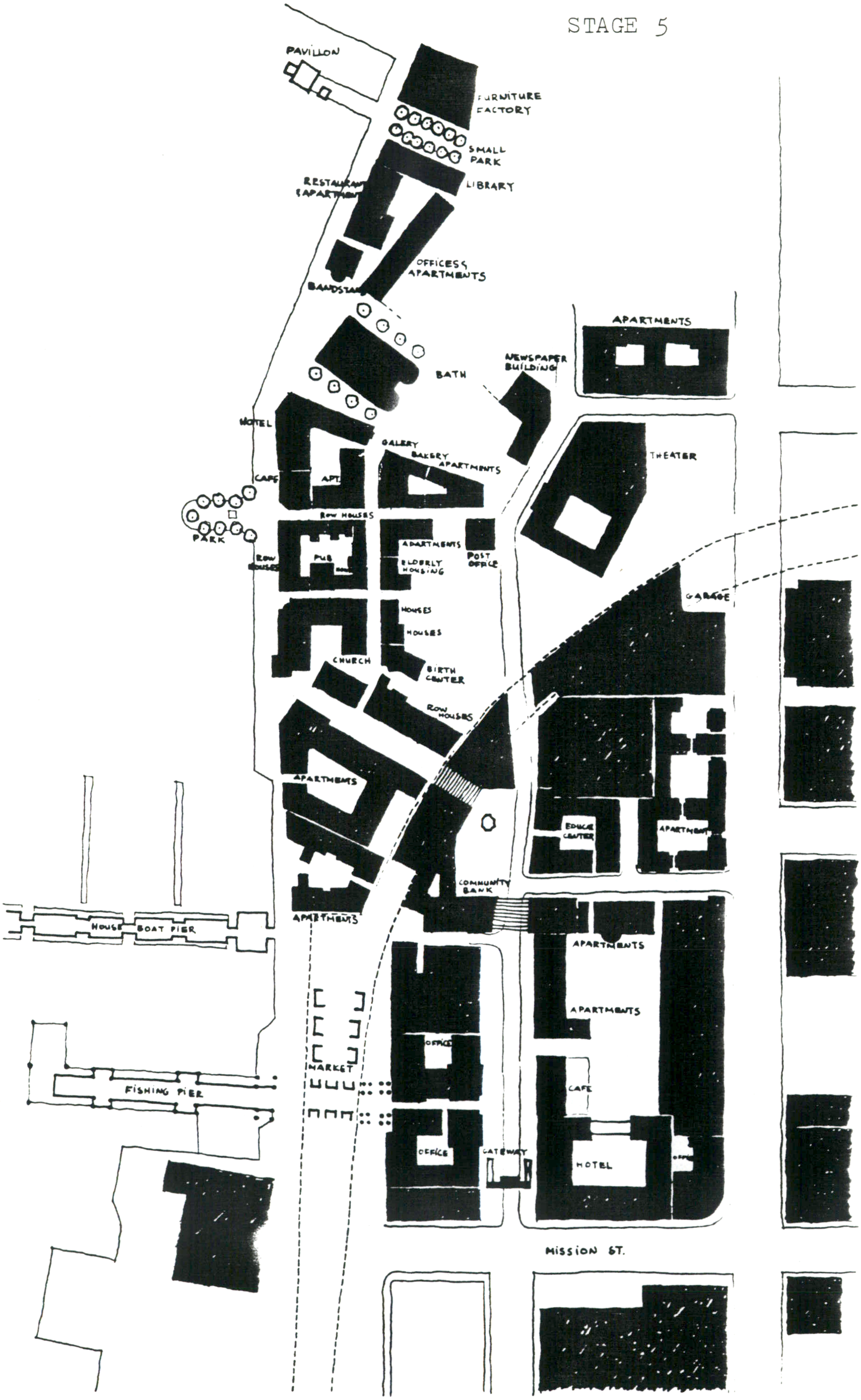
FISHING PIER
PATH TO MARKET
MISSION NODE

STAGE 5


PAVILLON
FURNITURE FACTORY
SMALL PARK
LIBRARY
OFFICES, APARTMENTS
APARTMENTS
NEWSPAPER BUILDING
BATH
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GALERY
BAKERY
APARTMENTS
THEATER
CAFE
APT
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APARTMENTS
ELDERLY HOUSING
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CHURCH
BIRTH CENTER
ROW HOUSES
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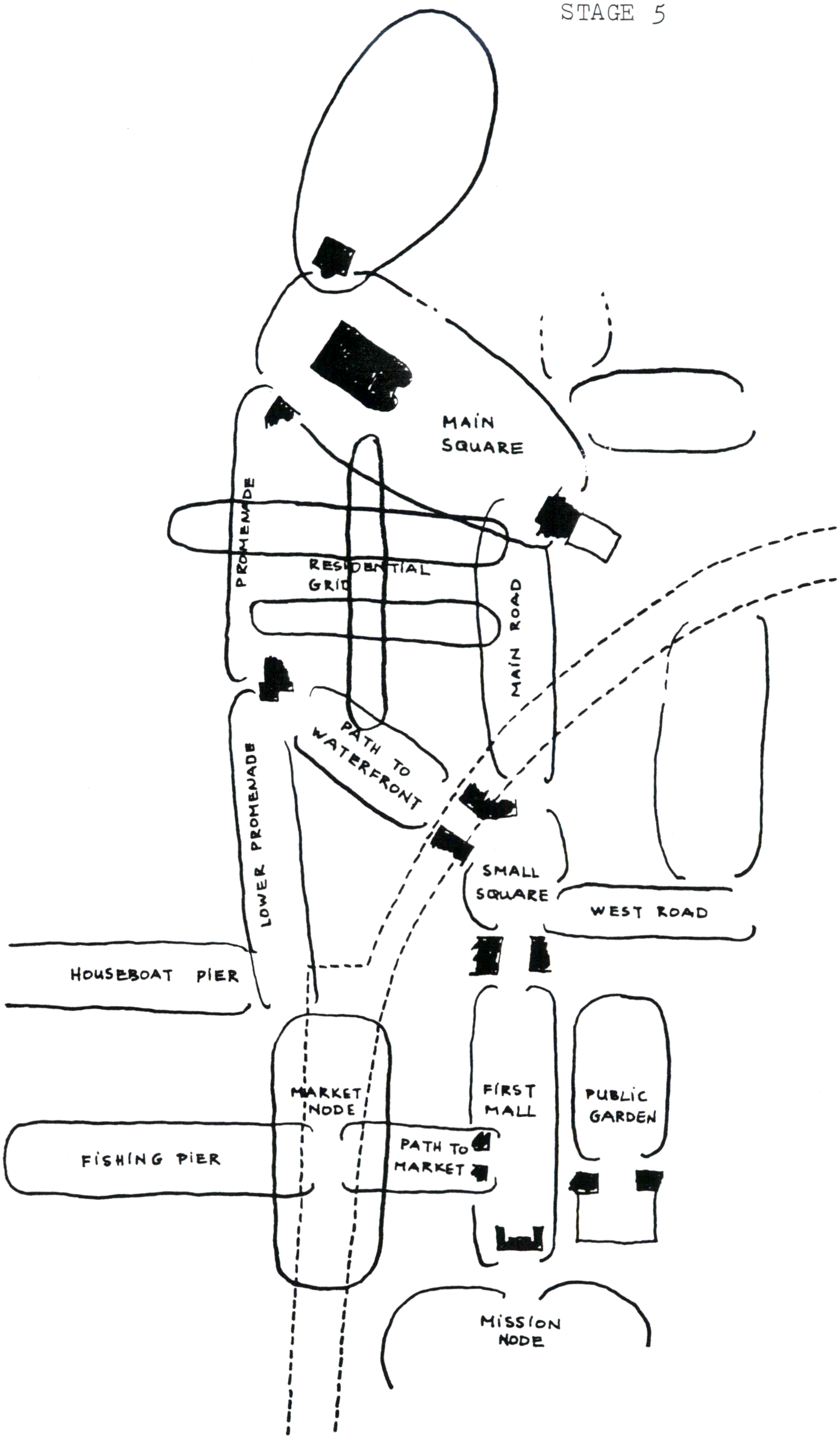
STAGE 5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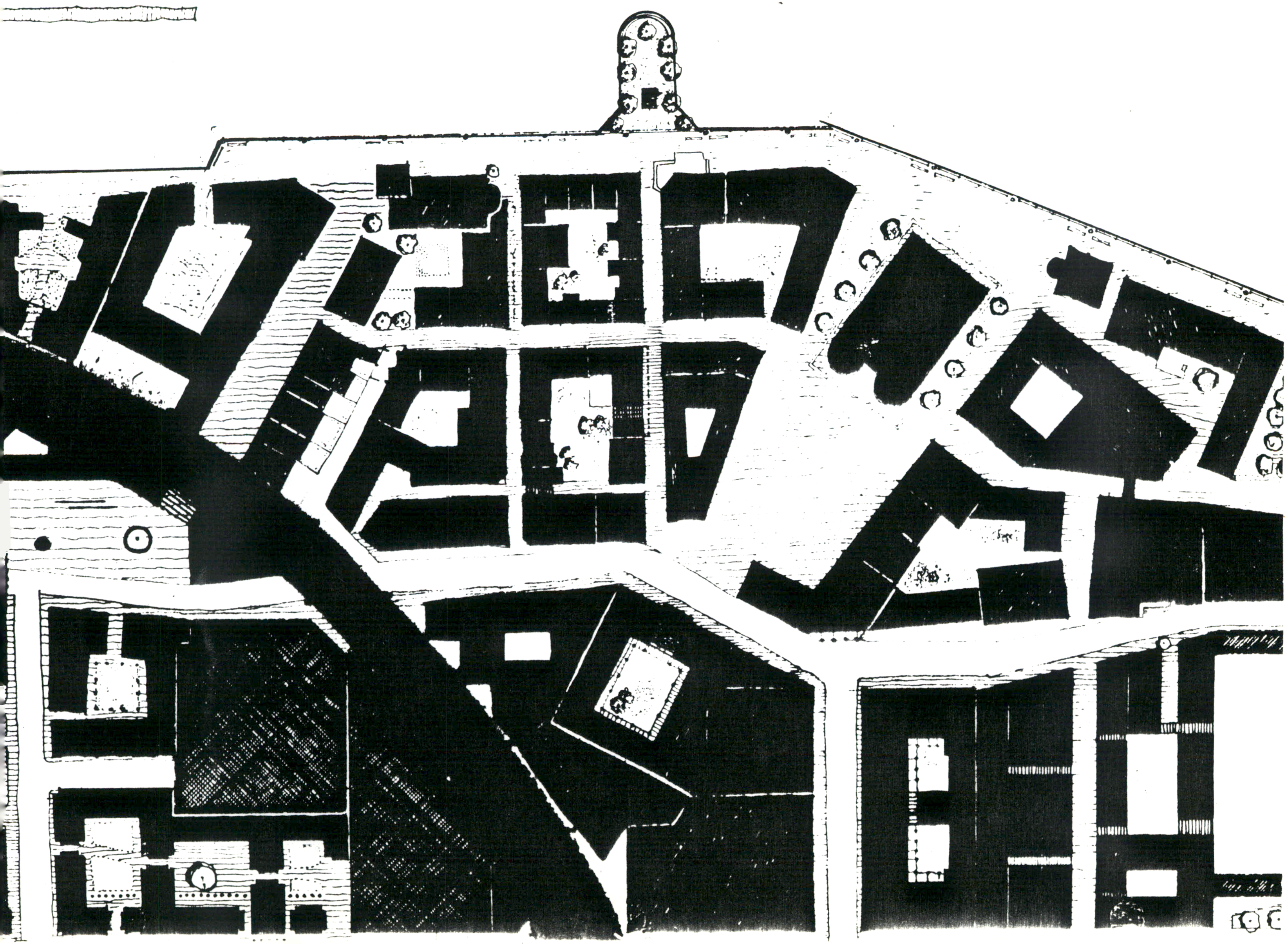
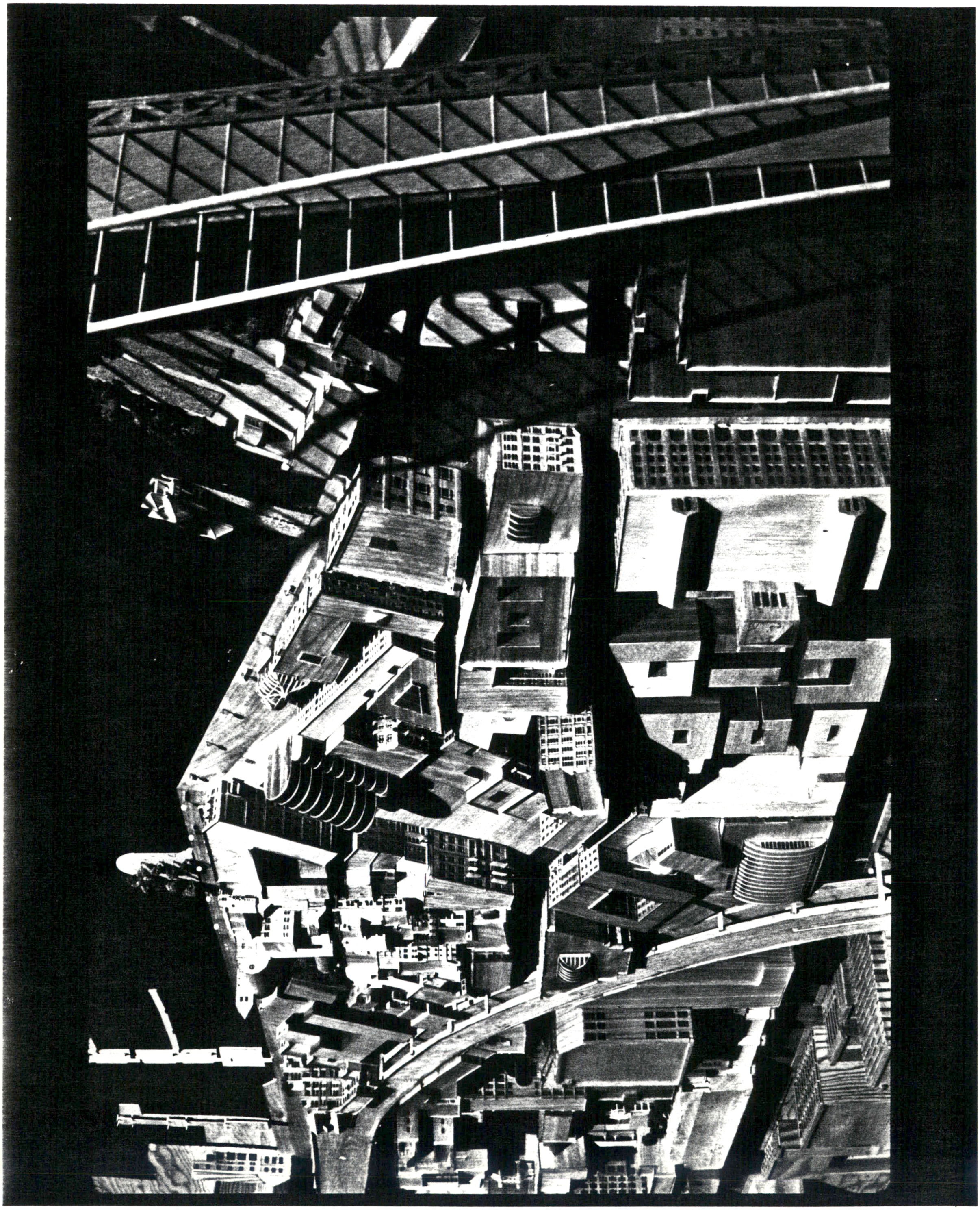




4.

DISCUSSION OF RESULTS, OPEN QUESTIONS, AND THE NEED FOR FURTHER ELABORATION OF THIS APPROACH

For the discussion of results and open questions I will confine myself to the theory and experiment presented in 'A New Theory of Urban Design' (Alexander et al, 1981), because first, here the theory seems to be furthest developed with regard to urban development, secondly, the experiment shows definite results, and third, we are dealing here with a mixed use urban area.

As a general evaluation, in terms of what has been accomplished, we may say that the theory of 'organic urban development' together with its application in the 'San Francisco Waterfront Experiment' is mainly developed on the level of urban design, and less worked out on the level of layout of urban buildings as well as their construction. What is missing altogether is the component of urban planning.

With regard to the assumption set up for the experiment, we may say that they were slightly ideal, in particular the assumption of land being owned by one entity, which actually was not the case in the real area. Therefore, a very important open question is how this approach would work, or could work, given other sets of assumptions for different urban contexts.

With regard to responses I want to quote a planning

official from San Francisco who said that "this is the total opposite of how planning and urban design has been taught and done in the last 20-30 years."

Since, in this paper we are mainly concerned with problems, we can summarize some of the results by asking, which problems actually have been solved by the so far developed theory and the experiment.

Some major problems which have been solved:

1. Probably one of the major problems which have been solved is to demonstrate how the dynamic aspect of the physical growth of an urban area can be included in urban design and urban development in a coherent manner. This has been achieved by the operational rules of

   - urban piecemeal growth
   - emerging large urban structures
   - the centering process in urban design, and
   - urban rules.

2. Another basic problem which has been solved is by showing a way how to create 'positive urban space' in the process of incremental growth, an element which is only too often forgotten in modern urban design. This is being achieved by

   - urban rules, and
   - centering process in urban design

3. On the level of urban development and planning, the experiment has shown that it is possible to develop a large urban area on undivided land and distribute land

according to projects, that is, land is not sub-divided into individual lots before building takes place, but after building is being started.

For the further development of this theory as well as its application three major components have to be considered.

1. <u>The so far developed 'Organic Urban Development' theory</u>
2. <u>Characteristics of different urban contexts expressed as sets of assumptions</u>
3. <u>Problems which can occur between 1 and 2</u>

<u>To 1)</u> The 'organic urban development' approach so far established on an operational level can be understood as one version of an urban process which is capable of generating good urban structures. This theory is by far not complete, but it is an explicity normative approach from where one can start further investigation.

There seem to be three major areas in which the 'organic urban development' can be further developed.

a) By basic research of the fundaments it is based upon. This requires more basic research of 'wholeness', 'growing whole' and the 'centering process' for different levels of scale and for different modalities.

b) By further research of the components which have not been elaborated yet. This includes, particularly, the component of urban planning

c) By investigating the flexibility of the so far developed system, or expressed differently by the

elaboration of different versions of the same fundamental process, given different sets of assumptions.

To 2) Characteristics of a city or of particular urban areas, expressed as a set of assumptions, are important because they provide the specified conditions under which the operations of the organic urban development approach have to be performed. We can set up the characteristics very close to reality including a wide variety of modalities, or we can set up the characteristics in a way which seems to be promising for yielding good results. Therefore, there are basically two possiblities with regard to this research component:

a) The critical approach. Here the investigation including existing social, economic, and political conditions may show, for fundamental reasons, that the 'organic urban development' approach cannot work in a basic way, or expressed positively fundamental changes in the existing social, economic, and political structure may be necessary so that the 'organic urban development' approach can work.

b) The practical approach. Here it is assumed that in a basic way the 'organic urban development' approahc can work, but particular problems of existing conditions for different urban contexts need to be solved, so that implementation can take place.

Practically speaking, for the future development of the 'organic urban development' approach, it seems to be advisable to first, concentrate on a set of characteristics, which seem to yield good results, second, to feed in new assumptions,

when they seem to be reconcilable with the basic approach, and third, to investigate into specific difficult characteristics as problems which need solutions before they can be included in a list of assumptions.

To 3) The areas in which the 'organic urban development' approach needs further research may be grouped into the following problem areas:

1. Problems with regard to the organic approach. These are basic problems concerning the priorities of an 'organic urban development' theory, that is, problems with regard to its intellectual validity.

2. Problems with regard to existing conditions. These are problems concerning the possibilities of an 'organic urban development' practice, which may be difficult because of existing conditions.

3. Problems with regard to application. These are problems of more practical nature, which have not been solved by the so far developed system.

   a) Problems with regard to urban development (planning, urban design, architecture)

   b) Problems with regard to the flexibility of the system developed so far.

5.

A FIRST LIST OF PROBLEMS - TYPES OF PROBLEMS

A) PROBLEMS WITH REGARD TO THE ORGANIC APPROACH

B) PROBLEMS WITH REGARD TO EXISTING CONDITIONS

C) PROBLEMS WITH REGARD TO APPLICATION

At this point I want to present a first list of problems according to the classification of types of problem areas. This procedure seems to be necessary in order to establish, first or all, the level or levels of problems I will be dealing with in my further work, and second, in order to establish the 7-10 most important problems which have to be overcome so that the 'organic urban development' approach can work.

A) Problems with Regard to the Organic Approach

1. The fundamental notions of 'a growing whole' and 'the centering process' are still incompletely defined. How then is it possible to try to construct a whole theory and model of 'organic urban development' on such still incompletely defined terms?

2. Basic research in other fields hints to the notion of 'a growing whole' a for example in theoretical physics (David Bohm, 1981). Science, however, did not reach the state yet to fully understand the growth of form[5],and consequently the concept of 'a growing whole'. Do we have to wait until their notion is fully understood and can be explained scientifically, or do we have the right in the field of design and planning to start an investigation from terms which derive from our own field?

3. Is it possible to define a step by step procedure according to a growing whole from the smallest entity to the largest of an urban area? For example, a house has a different structure of order in contrast to a neighborhood, or in contrast to a city. Or a leaf has a different structure compared to a tree, or a tree compared to a forest.

4. A basic problem we are facing is explained in the question, whether all components of urban development as well as their particular elements have to be immanent parts of the growing whole process or could they as well be regarded and, consequently, treated as external conditions? For example, does financing of the development of an

what do you mean?

urban area has to be done according to a growing whole or can it follow its own laws?

B) Problems with Regard to Existing Conditions

1. The market is in many respects not in consonance with the urban development procedure proposed here. Can the market create a growing whole? How can market processes and the process of urban development proposed here work together, where can't they work together?[6]

what do you mean?

2. A more critical problem is, whether the pure profit motive is capable of creating a growing whole? Even real estate developers, probably will not answer this question with a straight yes. The pure profit motive, mostly, creates urban areas, buildings and places which are neither whole in themselves nor do they contribute to the creation of positive and centered urban space.

3. In contrast, when we think about a society where the profit motive is not a dominant factor, but a central attitude is to plan everything ahead of time, as a totality. Can such an attitude and planning procedure create a growing whole?

4. Not only has building construction become very expensive but the cost of money itself has become so expensive that the pay back on the interest rate exceeds by far the real cost of the building. This may cause problems for 'urban piecemeal growth' and 'structuring wholes'. or: it's actually good for piecemeal growth.

5. Land taxation according to market values may make it very difficult to build mixed use urban areas, 3-6 stories height, because much higher buildings, or building with particular uses yielding higher profit margins may be more profitable to be built in particular locations, like for example the S.F.-waterfront area directly adjacent to downtown.[7]

C) Problems With Regard To Application

a) Problems with regard to urban development (urban design, planning, architecture, construction).

1. Zoning.

In a zoning code the determination of use, bulk, height, etc. give a sort of basic definite character to an area which has been zoned. However, certain elements in the zoning code make it difficult for the centering process to work properly. In

Zonig afterward or in concurrence

particular, setback lines quite often do not permit the creation of positive urban space.

2. Subdivision Of Land.

The existing subdivision of land with many owners make it difficult for:

- piecemeal growth,
- the creation of structuring wholes,
- the creation of positive urban space,
- the allocation of the 'right' uses at the right places in the process of growth.

3. Technical Requirements.

Technical requirements, i.e. for street building and infrastructure may make it difficult for piecemeal growth and structuring wholes to work. This is so because the construction of streets and infrastucture in current practice always precedes the construction of buildings.

4. Master Planning With Fixed Forms.

Master planning with fixed forms, where everything is planned ahead of actual construction, represents the total opposite to piecemeal growth and structuring wholes.

outside Investment

5. Too Much Financing From Outside.

Too much financing for buildings from outside the area, which is not attached to the reality of the place will result, mostly, in buildings which are put up for the purpose of profit; and this results more often than not, in dead and lifeless places, and has a negative effect on the quality of the area. what is, when the area has to be developed from scratch?

6. User Involvement.

If the real users of the area are not involved in the development process, the area finally will be less lifely, will have no real history, will be less real.

7. One Developer.

If the whole area is being developed by one agent, i.e. a developer, whereby financing as well as construction is in one hand, experience shows that the place will be lifeless. In this case it will be very difficult to permit for piecemeal growth and structuring wholes.

8. Many Developers.

If the place will be developed by many developers (architects, contractors), it will be very

difficult to create a coherent entity without a common language (pattern language, gestalt guidelines, construction rules, etc.).

9. Building Proposal And Approval.

What procedure for building proposal and building approval would be the best for the creation of good buildings and the creation of good urban space?

10. Design And Construction Decisions.

If all the Design and Construction decisions are primarily made on paper and will be executed solely according to paper and not on the site, the result will be a 'paper urban area'.

11. Style. this question might be obsolet.

In what style should we actually build? According to what principles should the outside appearance of buildings be shaped?

12. Placement Of Functions.

In the process of 'organic urban development' (example S.F.-waterfront) it is implied, somehow, that not only the 'right' building shapes and spaces are being placed each time but, in fact, the right functions are being placed each time as well.

How do you know

However, this has not been made very explicit. How could this work practically?

13. Role of Architect.

What, actually, is the role of architects in the process of 'organic urban development'?

does it need redefinition?

14. Participation in the Construction of Large Buildings.

How far can users be involved not only in the design of large scale buildings but as well in the actual construction?

b) Problems with regard to the Flexibility of the so far Developed System.

1. Do the operational systems of rules 'piecemeal urban growth' and 'structuring wholes' imply that the actual physical growth of an undeveloped urban area always has to start from one point, as is the case in the example of the San Francisco Waterfront Project; or can an urban area start to develop from two opposite points, slowly growing to each other; or can an area even develop from several points, slowly merging into each other?

2. Is it possible that a 'structure plan' of large urban structures is being defined ahead of the actual development? For example, given the physical 'structure plan' of the Yerba Buena Center in San Francisco (Jacobs, et. al. 1980) can 'piecemeal urban growth' and 'structuring wholes' still work?

3. In fact, do 'piecemeal urban growth' and 'structuring wholes' permit that development of an urban area including construction takes place all at once, in other words, growth is primarily not horizontal, but vertical?

Formulation ?

6.

METHODOLOGICAL CONSIDERATIONS

Having set up this (not complete) first list of problems, classified according to different types of problem areas, I can see two ways of answering the main question, that is to present the seven to ten problems which would have to be overcome, in order to rearrange the modern process of urban development in such a way as to produce an organic structure in the city.

- The first possibility for answering the question is to try to find out the most important problems for each problem area, employing particular selection criteria or appropriate argumentation.

- The second possibility consists of an investigation of the problems of one particular problem area, again, employing particular selection criteria and using appropriate argumentation.

For answering the main question I will use the second way, and here, specifically, I will investigate problems of problem area C) 'Problems with regard to application, that is, problems which have not been solved by the so far developed approach.' I will do this for the following reasons:

- First of all, the organic urban development theory is not complete on this level, and needs further elaboration, specifically, for the area of urban development and planning.
- Second, the main question is being asked for a particular urban situation, that is, for high density mixed use situation.

Furthermore, I will limit the problem to Ca) Problems with regard to urban development, and I will leave out Cb) Problems with regard to the flexibility of so far developed system, since the flexibility of the system will, in part, be tested by problems of category Ca.

7.

A SET OF ASSUMPTIONS FOR MIXED USE URBAN AREAS DEFINITION OF A CLASS OF CASES

The setting up of conditions for mixed use urban areas as a set of assumptions will not be done with reference to one particular, case but rather with reference to a class of cases. This is being done in order to cover a range of cases. Later on in the work it may prove more useful and necessary to set up conditions for particular cases with particular assumptions. For the sake of argumentation I will more often refer to the American example than to others.

Mixed use urban areas do not seem to be a very common case in the United States cities in contrast, for example, to European cities where one still can find large numbers of this kind, particularly in older areas. American cities seem to be more characterized by segregation of people and uses. However, the assumption that different uses should strictly be separated has come more and more into question (Kriken, 1979, p. 379).

In American cities in particular, high rise mixed projects seem to be a new urban phenomenon, combining sometimes shopping, housing, office space as well as parking.

Here, however, we are more interested in what may be called a more horizontal distribution of mixed uses in an urban area. Urban areas where an 'integration of activity'

takes place seem to be preferred by Appleyard and Jacobs "The best urban places have some mixtures of uses." (Appleyard, Jacobs, 1980, p. 18).

Mixed Uses: Include at least two, and up to all five of the following uses.

- commercial
- housing
- offices
- public and communal facilities
- light industries

For mixed use urban areas, density is important, density of people and buildings will bring life to an area. Density may be defined in different ways. Here, we will define density in terms of building height and land coverage.

Density: 3-6 stories height (70-80%),
1-9 stories height (20-30%),

Land coverage of buildings: 30-60%,

where are these data from?

Period of Development: 5-15 years

Size of Urban Area: About 2-6 blocks
or 4-10 ha

Location: - Secondary centers in metropolian areas,

or large cities

- Areas in between centers in metropolitan areas, or large cities
- Centers in smaller cities

Existing Areas as Examples

Berkeley: Area around Telegraph and Durant

Frankfurt: Area around Leipziger Strasser, Bockenheim

SF: Area around Mission

Nairobi: Area East of Center

Kisumu: Old City Centre

Rome: Area around Pantheon

Areas for Development (mostly secondary centers)

Abuja, Nigeria

Dodma, Tanzania

Kisumu, Kenya

Algiers, Algeria

Guasare, Venezuela

Land

For the condition of land we can assume three logical possibilities:

1) Land is owned by one agent and action is taken by one agent for development.

2) An area is identified by a planning authority for development. Ownership of the land is by several different people. Attitude for development is from a partnership point of view and people will act according to particular rules defined by them.

3) Some planning authority identifies an area for development. The area is owned by several different people. No attempt is made to organize action from a partnership point of view.

8.

CRITERIA FOR THE SELECTION OF PROBLEMS

Given the three major working ares of this investigation, first, the major components of 'organic urban development', second, the main characteristics for a class of cases of mixed use urban areas, and third, a first list of problems categorized according to types of problem areas, the seven to ten problems have to be selected or found out, which would have to be overcome in order to rearrange the modern process of urban development. For methodological reasons I decided to investigate problems of one problem area 'problems with regard to application, that is, problems which have not been solved by the so far developed approach'. (However, it may very well be that particular problems of other types of problem areas are equally important.)

In order to make progress we have to employ some criteria, which help to find and select the seven to ten problems. Three criteria are proposed here for the selection of these problems:

1. Problems have to relate to our main theme in a particular way, that is for example, they should relate to high density mixed use urban situations.

I still have grappled with this.

2. It has to be clear what problem, actually is being solved. This criterium is important for the precise formulation of a problem.

3. The problem, actually, should be solvable, not only on an intellectual level but as well on a practical level.

Let us illustrate the use of these criteria at a specific example. When we take 'the pure profit motive' as a serious problem, where experience shows, that the buildings and urban places produced by this motive, are, mostly, neither of good quality themselves nor do they contribute to the creation of positive and centered urban space. This problem fulfills our first criteria - it is a problem in mixed use urban areas. It even fulfills the second requirement, but it probably can not fulfill the third criterium, since I may not be able to get any practical handle on solving this problem. In a case like this, there are basically two possibilities; either the problem is not formulated right for getting hold of it, so it can fulfill requirement 3, or, it is simply not solvable on a practical level. In what follows I will try to fulfill these three criteria for the finding, selection and formulation of the seven to ten problems.

9.

THE SEVEN TO TEN IMPORTANT PROBLEMS FOR ORGANIC URBAN DEVELOPMENT IN MIXED USE URBAN AREAS

1. Land -- Subdivision of Land
2. Financing of Different Projects
3. Too High Financing From Outside
4. One Developer Versus Many Developers
5. User Involvement
6. Construction System, Construction Industry, Construction Procedure
7. Planning Procedure

Format for Presentation of Problems

For the presentation of the problems I will try to apply the following format:

1. A general formulation of the problem,
2. Detailed explanation of the problem using difficult problem cases, examples, and illustrations,
3. In cases, where possible, I will make suggestions for solutions, mainly in the form of questions.

PROBLEM 1

LAND -- SUBDIVISION OF LAND

According to the three possible conditions of land, given above, in a set of assumptions,

a) land is not subdivided but owned by one entity, and is being developed by one agent;

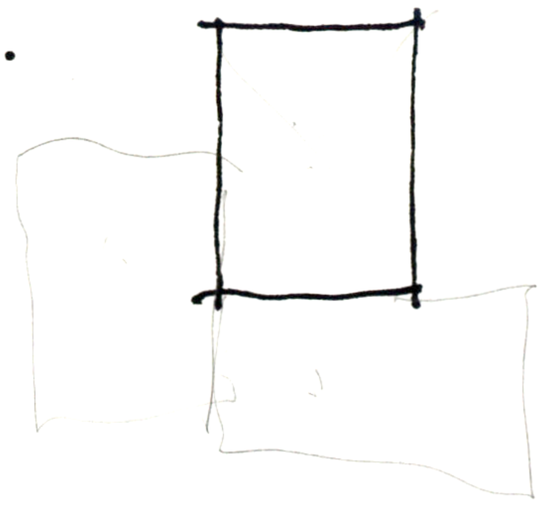
b) land is subdivided and owned by different people and with a common purpose for development, and;

c) land is subdivided and owned by different people, but no common purpose for development exists,

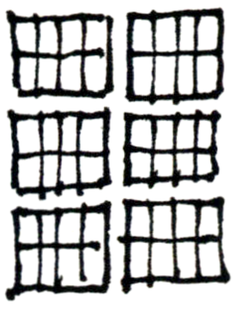
it is basically in the case c), which at the same time is a very common case for urban redevelopment (in the U.S.) where a basic problem occurs. Here, the existing subdivision of land in an area which is about to undergo development, with many owners and no common purpose for development, make it very difficult for the following features to happen:

- 'piecemeal growth',
- 'structuring larger urban wholes',
- 'the creation of positive urban space',
- 'the allocation of the 'right' uses at the 'right' places in the process of growth'.

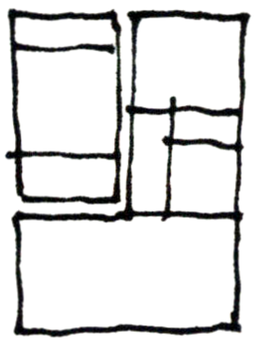
There may be many possible cases of existing subdivision of land. Three typical cases are the following:

1. 

Land is owned by one entity, no subdivision of land exists.
Case: Urban Redevelopment
Case: New Development

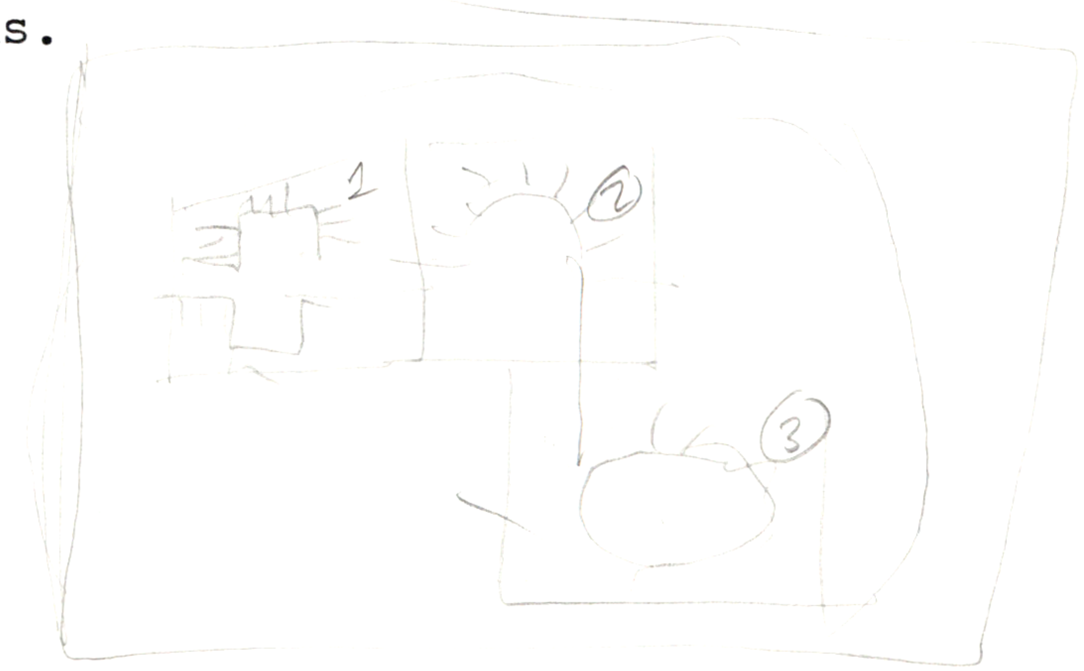
2. 

Land is owned by different people, subdivision of land exists, mostly combined with existing street pattern.
Case: Urban Redevelopment

3. 

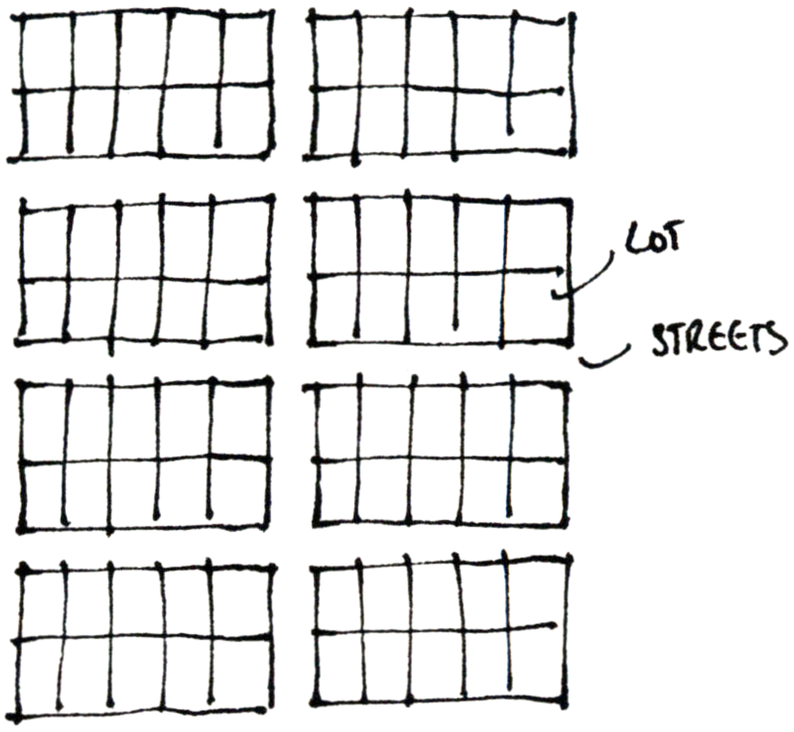
Land is owned by different people, subdivision of land exists, limited street pattern exists.
Case: New Development

In the S.F. Waterfront Project we have shown how case 1 can work without posing a real problem for our process. We are therefore mainly interested in case 2 and 3 which seem to cause problems.



Case 2

If an urban area is designated for redevelopment, but no changes in the subdivision of land can be made, how then can the 'organic urban development' process work?



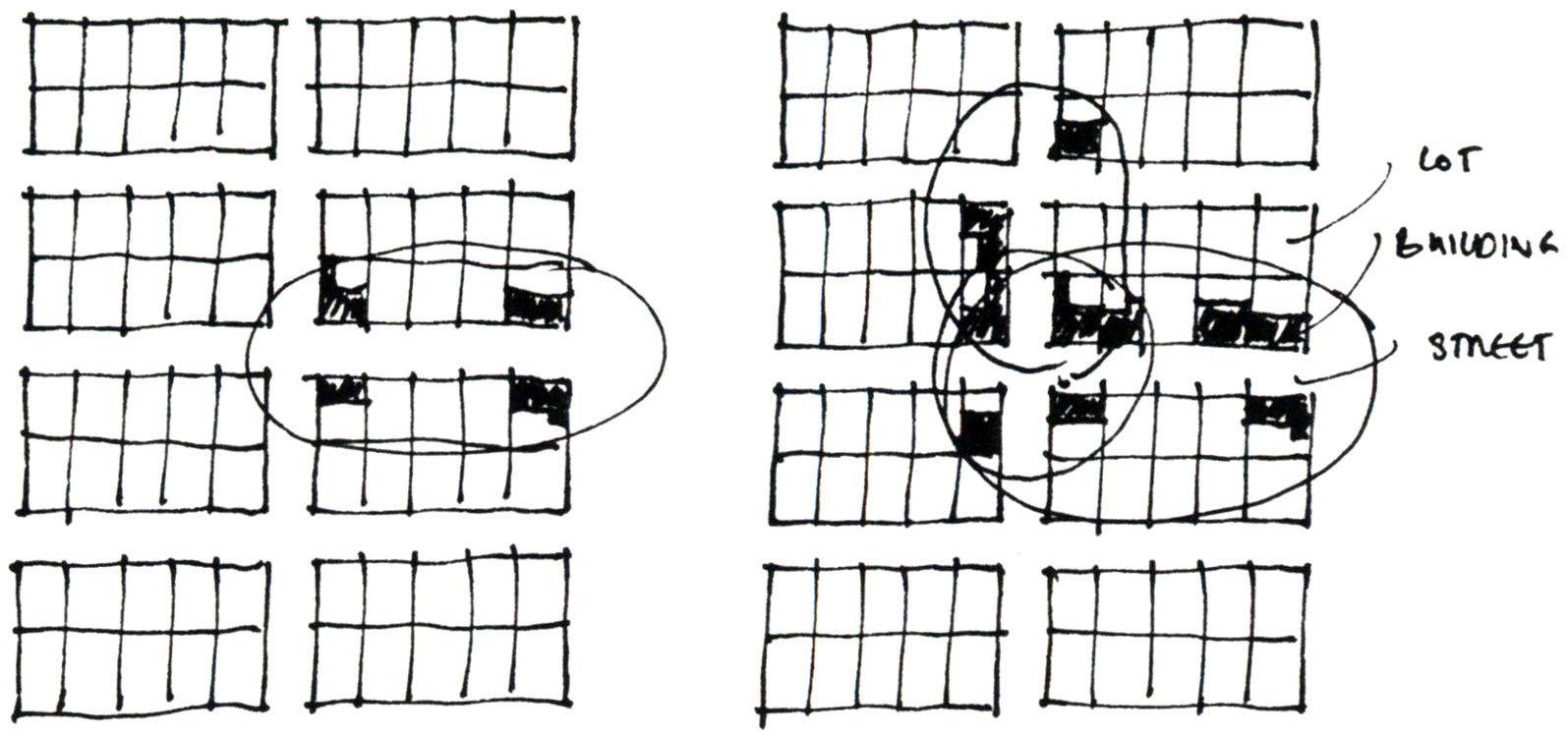
In fact, existing subdivision of land in urban areas usually goes along with existing streets. So, if we cannot change the subdivision of land, we hardly will be able to change the street pattern for reasons of access.

Here, it seems to make little sense to apply 'urban piecemeal growth' and 'structuring wholes' because the area is already highly structured and, basically, one could build in all lots at the same time.

Stage 1

Stage 2

trial stage?



The 'organic urban process' could work in such a case (see illustration), but one obviously asks, why should somebody wait with design ad construction until 'piecemeal growth' and 'structuring wholes' would reach that particular lot? It may happen in five years.

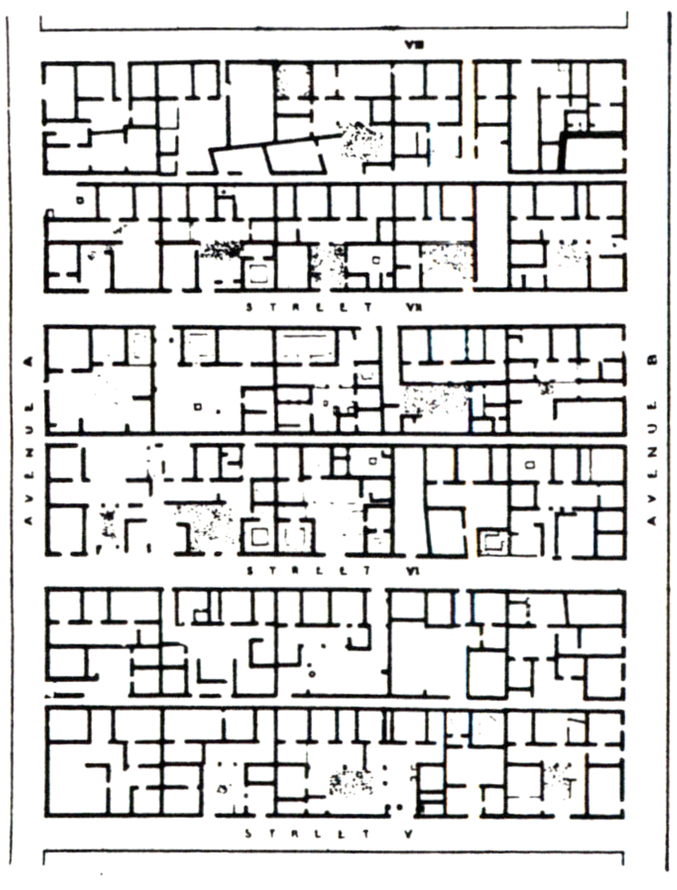
A possible solution to this problem lies in the flexibility of the approach itself. Since large urban structures as well as the size of individual projects are highly predetermined here, we have to work in a slightly different way; that is we have to work with the following

components:

- a 'pattern language for the determination of large urban structures'
- 'centering process'
- 'rules for the layout of large buildings'
- 'rules for construction'
  - 'construction system, procedure'
  - 'rules for facade'

Still, the problem remains, if all of construction can take place at the same time, or if some sort of 'structuring wholes' can take place here in stages.

To develop such a rigid grid system in a way that a 'whole' could be achieved, is suggested by the historical examples of Olynth and Pompeji.



OLYNTH

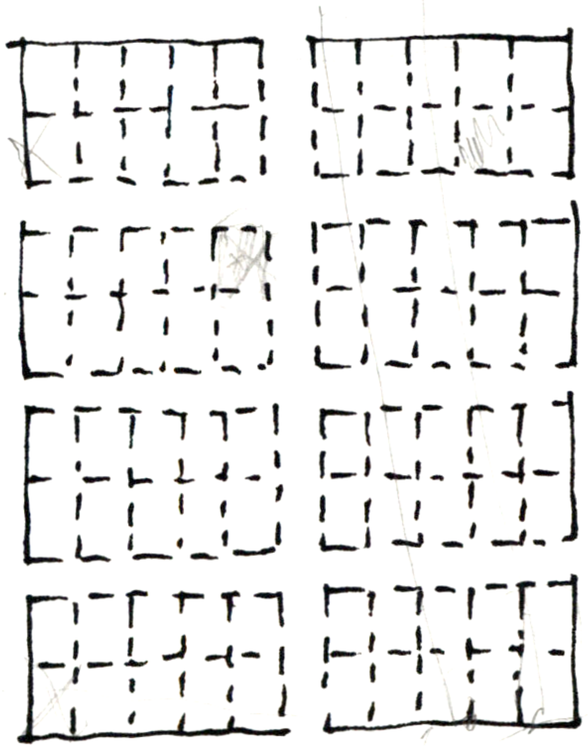
Centers?

A Possibility

Now, if we change the rules of the game in such a way that every landowner keeps the right on private property in the area, but resubdivision of land happens in the process of growth, we have totally new possibilities. Land is still owned privately, but the owners leave the exact location up to the urban development process. It may be even possible to provide for different sizes of land appropriate for different sizes of projects, there may be room for some public space, and streets do not necessarily have to follow the old location either.

Such a proposal, first of all, requires a common purpose for development by the owners of the area.

s. Spille : Wider planen mit



OWNERSHIP OF LAND BUT NOT OF LOCATION

OWNERSHIP OF LAND AND LOCATION ACCORDING TO URBAN GROWTH PROCESS

PROBLEM 2

FINANCING OF DIFFERENT PROJECTS

For the financing of different projects we basically have to face two problems. First of all, there is the question how different projects are being financed. There are different types of financing for different types of projects. Here we have to ask, which types of financing can go together with what kind of projects, where are problems? The second question is concerned with the financing priority and financing securities of particular projects which play key roles in the process of 'the emergence of large urban structures.'

Both problems are basically concerned with financing of projects, so that 'organic urban development' can work. Although a detailed investigation into different types of financing for different types of projects may be necessary, here we want to break down this aspect into two components:

a) full financing with full construction completion

b) half financing with half construction completion.

For the first category we have the following problem. In the process of 'organic urban development' of the kind applied in the San Francisco Waterfront Project it is implied; somehow, that not only the 'right' building shapes and spaces are being placed each time but, in fact, as well the right functions are being placed each time. However, it has not

made explicit how such a procedure would work. (In fact, this is a particular problem by itself.) Concerning the financing of different projects we have several problem cases according to this assumption.

Problem Case 1

In problem case 1 several different developers, with different financing, different functions, and different building shapes want to build at the same location. The following situation can occur (here with regard to financing and function only).

a) the function is 'right' but the financing is only half

b) financing is full but the function is not right

c) both financing is full and the function is 'right'

'right'

We could make the problem more complicated by introducing the ??? building shape as a third factor, but I think the problem becomes clear with only two factors.

Basically, here, we have problems in situations 1 and 2. Our normal reaction would be to say that, a project which guarantees full financing should be preferred to a project which cannot guarantee full financing, even if the function is not quite right. However, we can ask, if the principle of 'a growing whole' is being applied to the growth of an urban area, why should not it be applied to the growth of an individual building? When we apply the principle, we may say the following:

Way.

> If a project has the 'right' function for a particular place but cannot fully be financed, one still could give this project priority in contrast to a project where full financing is guaranteed but the function is not 'right'. (The second project may have to find another location, at a later stage.)

Problem Case 2

There may be particular places where nobody wants to build at all, because the site is too bad and the costs for design and construction would be too high. In this case we have neither a project nor financing. In such cases it could very well be that special fundings or other types of incentives should be provided, so that somebody is willing to build there.

Problem Case 3

A third problem may be that particular locations ask for special projects in terms of function and shape, which no private investor is normally interested in to build. Let's assume that some person without money has found a good solution for a particular difficult situation, for example a bandstand at an important corner of a square. Now, the question is who is going to finance such a project?

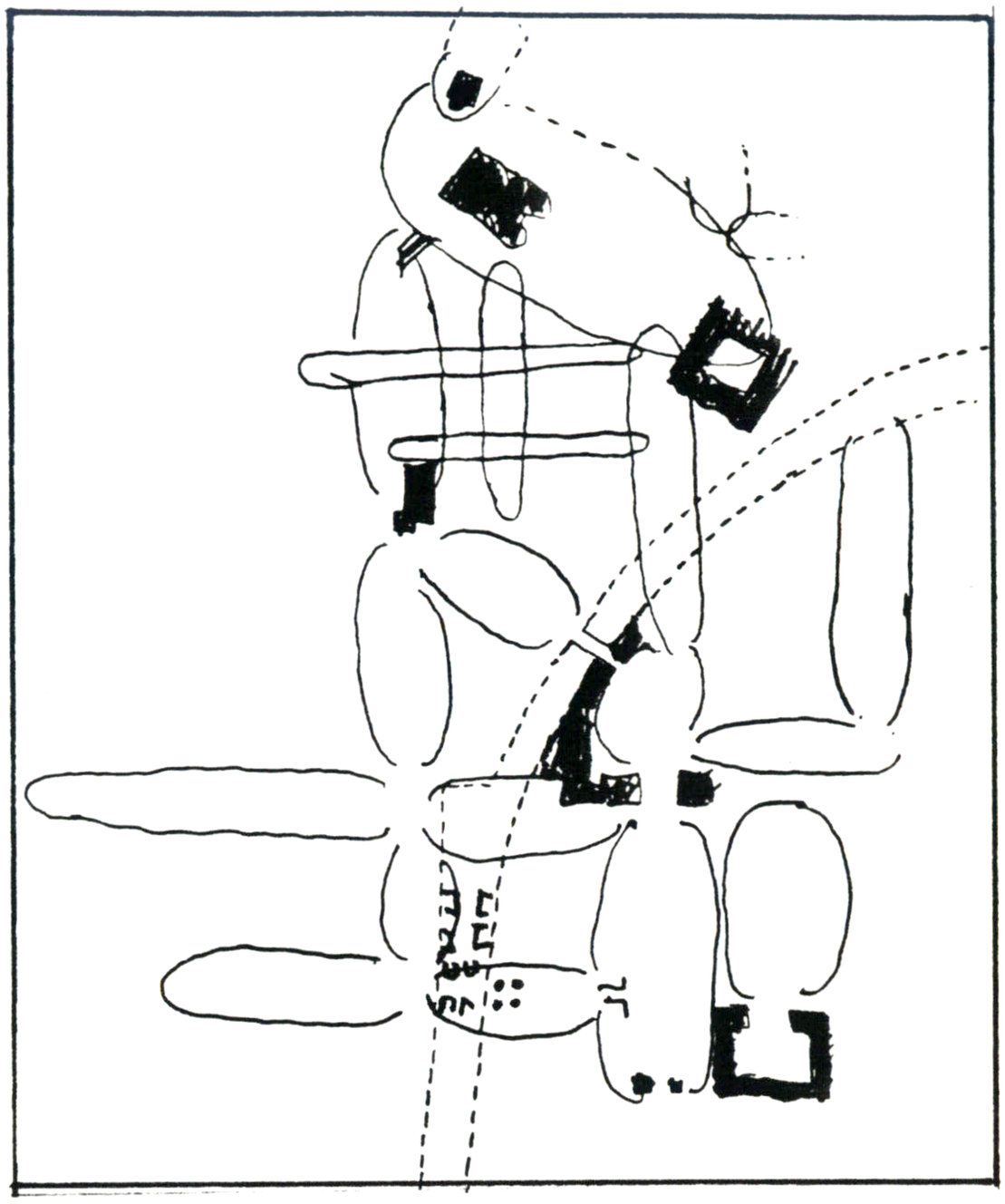
In the second category we look at the problem of financing from a very different perspective which is more concerned with financing priority and security of projects which are important in the emergence of large urban structures.

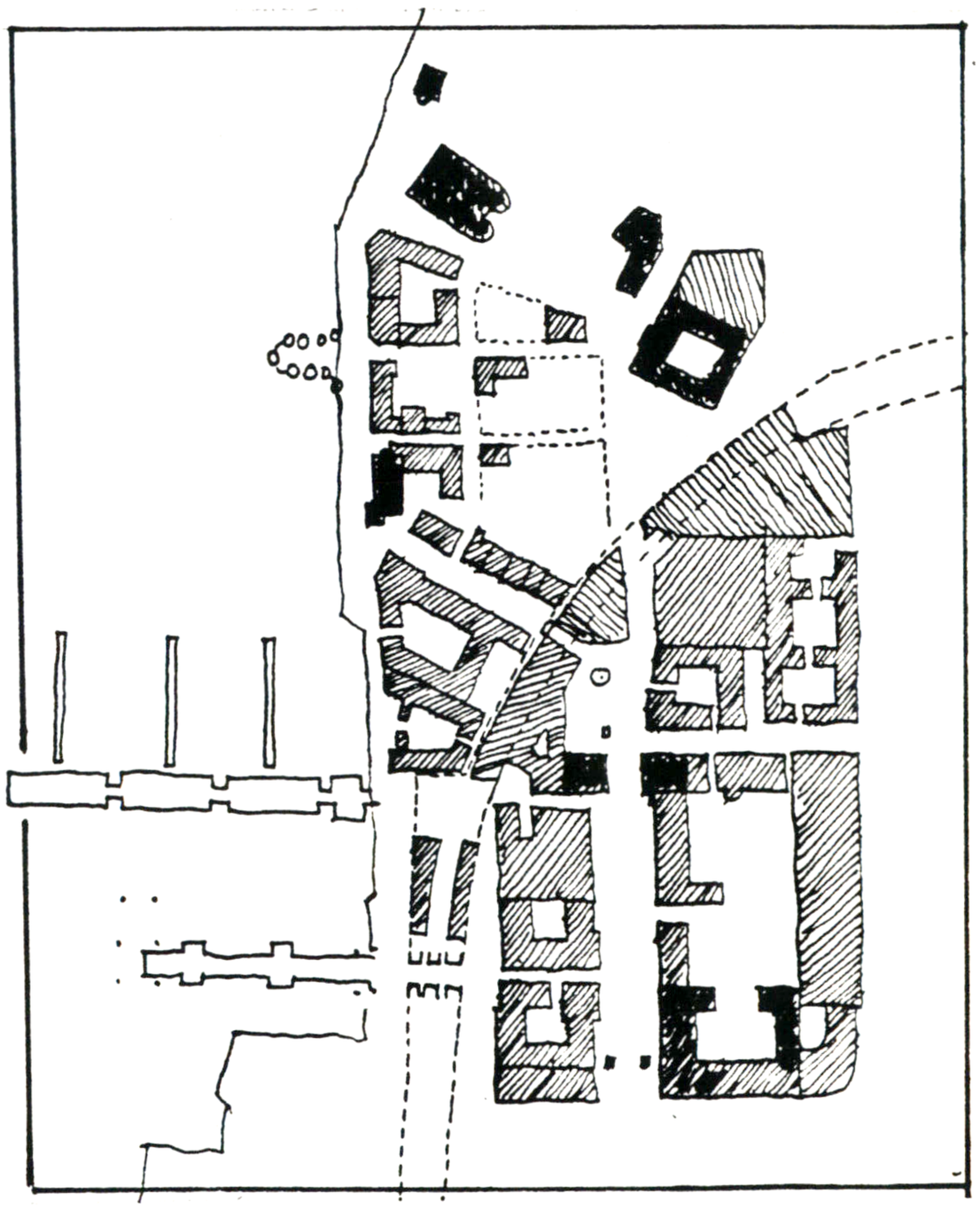
In the original organic development procedure it is suggested that the different building increments are being built rather quickly, so that the next building projects can, in fact, react to the so-far constructed buildings. Such a procedure asks for full fledged financing of each project, in other words, it would be difficult to wait with the financing of a project for several years, because this could be damaging to the growing whole process.

The problem, we are facing then, is <u>how to assure that each building project can be financed, and thus, be built in time?</u>

However, if we have a closer look at piecemeal growth and structuring wholes in the San Francisco Waterfront Project we can notice that it is particular building increments which are more important for further growth than others. Those are the projects where two or more large urban structures come together. When a large urban structure is pinned down then the growth of other large structures can continue, while existing large structures can be filled out with further building projects.

Projects in black have to have higher financing importance and security, so that thy can be completed rather quickly, because they play a key role in the process of urban growth and the emergence of large urban structures.





Thus we can establish, so far at least, a twofold hierarchy of financing importance. Buildings, which hint at or pin down large urban structures, have to have a higher financing security, so that the process can continue, while buildings which fill out large urban structures may have a lower financing security, since, in addition they may be built much later.

According to our simple model we may say that projects of the first type need full financing with full construction completion, while buildings of the second type could be started with half financing and half construction completion.

When we have a still closer look at the example of the SF Waterfront Project, we can observe that the projects of the first type that is the ones which are located at an overlap of two or more larger urban structures, are more often of public or semi-public nature than private nature. If this would hold time??? for other cases, it means that projects of the first order could be financed more often by the local government or community than by private developers, which may not always be feasible in the U.S. However, it would give the community a definite tool to direct the urban growth process.

see : the dead center on Shattuk

PROBLEM 3

TOO MUCH FINANCING FROM OUTSIDE THE AREA

Instead of saying that the pure profit motive can create a problem for the creation of a livable human environment, we may formulate the problem in a different way. Too much financing of buildings from outside the area, which is not attached to the reality of the place will result, mostly, in buildings which are put up for the purpose of profit only: and this results, more often than not, in dead and lifeless places and buildings, and has a negative effect on the quality of the area. In other words, to achieve a lively and real place we have to take care of negative outside financing effects.

However, there is always the possibility that financing from outside may very well go along with the approach proposed here, so there is no real problem with regard to financing from outside. Experience, however, shows that outside financing is very little concerned with the physical reality of the place. The primary concern mostly is fast return on investment and profit, so it is no surprise that urban areas are becoming less alive, and visually unpleasant. illogical

Examples of this kind can be observed in Germany, particularly, in the center of old German cities, where department stores of big corporations more often than not destroy the heart of the cities (i.e. Darmstadt, Regensburg).

Basically, I see two possiblities for controlling bad effects which can be created by outside financing:

1. Simply by reduction of projects which are financed from outside, maybe in terms of percentages, i.e. 30% limit for financing from outside for the development of an area.

2. By stricter control of the quality of projects which are financed from outside.

PROBLEM 4

ONE DEVELOPER VERSUS MANY DEVELOPERS

One Developer

a) If the whole area is being developed by one agent, i.e. a developer, whereby financing as well as construction is in one hand, experience shows that the place will be more lifeless than alive. but not necessarily

Many Developers

b) If the place will be developed by many developers (i.e. architects, contractors), it will be very difficult to create a coherent entity without a common language (i.e. pattern language, gestalt guidelines, construction rules, etc.).

To a) if an urban area is being developed by one agent, which in the U.S. is normally done either by a private developer, by the 'Feds', or by the State, and less so by the local government, then we first can assume that most of the land will be in the hand of the developer.

Furthermore, we assume that a developer wants to follow in a basic way the procedure proposed here, that is, 'piecemeal growth and structuring wholes', as well as the 'urban rules', the 'centering process', the 'rules for layout of buildings', and even 'the construction rules'. On the other hand because of economic reasons as well as

administrative reasons, the developer wants to finance everything by himself and he even wants to use the same construction firm. In such a case the area, very likely, will have a unity, but it will not have what we may call 'variety in unity', so the unity may become a uniformity (i.e. Faneuiel Hall in Boston, Harbor Area in Baltimore, both developed by one developer [Time, August 24, 1981]. Even by using the same contruction technique, no architect, no construction firm will be able to produce the variety, which only can come about by the personal styles of many different people.

It seems to be advisable that the one developer employs different architects as well as different construction firms, maybe even in a particular order; for example: no architect and no construction firm is permitted to design and construct a building right next to one which they have already designed and constructed. highly questionable?

However, to administer a process where many construction firms, many architects, and many users are involved may turn out to be too difficult for one agent (i.e. the local government), and may turn out to not bring a quick economic realization in form of profit (i.e. for a private developer).

To b) Assuming that the area will be developed by many agents, architects, constructors, as well as users, then the problem can easily occur that we create a lot of variety but the unity is lacking or missing altogether. Compare, for

example, the upper part of Telegraph Avenue, between Bancroft and Dwight, (close to the U.C. Campus) to the lower part between Dwight and Ashby. The upper part of Telegraph has some variety in unity while the lower part has none of that.

because of period, when erected ; style !

If many developers want to create something like the upper part of Telegraph several questions have to be asked:

1. How precise have the formulations of design rules to be so that 'variety in unity' can be achieved?

2. There are always some developers, architects, who want do their 'own thing.' How much variety in this sense can an area take and still have a unity? Are there crucial points, like the areas where major urban structures overlap, where this should not happen?

3. Another question is, if the existing planning instruments of local government suffice for guiding such a process, particularly, in its first phase, when people are still unfamiliar with the whole approach?

The basic problem for one developer is to achieve variety, spatially as well as functionally, and the basic problem of many developers is to achieve unity. The real basic problem however is to achieve 'variety in unity' or 'wholeness'.

PROBLEM 5

USER CONTROL AND INVOLVEMENT

If the real users of an urban area are not involved in the development process, the area finally will be less lively, will have no history, will be less real. More deeply, we are talking about the question, who is responsible for the building, design and development decisions and actions, who takes care of what particular entity in the process of growth? In other words what we are asking is how users, future inhabitants can actually take care of their own environment. User control and involvement is being considered an important component of the 'organic urban development' approach which needs to be integrated into this process.

The problem of user involvement and user control can be treated on two different levels:

a) First, on the level of actual involvement of users in the design and construction of buildings and the environment,

b) second, on the level of social and political structures and processes which are favorable for users to take care of their environment and which are capable for bringing the environment into a state of order.

On the first level we have to ask questions like:

-- How can users, actually, design and even construct their own rooms, buildings and gardens?

-- How much involvement of users is necessary as well as possible in the design and construction process?

-- How is this being implemented?

On the second level we have to ask questions like:

-- What kind of social structures and processes are favorable for involving users more directly in the design and construction of buildings, workplaces, roads, and public open space?

-- What kind of political structures and processes are favorable for user involvement in the creation of large urban areas?

For a more detailed understanding, we have to ask, <u>who are the users</u>, and more particularly, who are the users in mixed use urban areas? Here we want to distinguish two cases.

<u>First</u>, a particular community is designated to live and work in an urban area (like the Chinese community in Chinatown, S.F.). In this case we know the people who are going to live in the area and the question is how user participation can take place. We have to ask here what users (owners and non-owners) have to be included in what type of design decision, at what scale (room and main public square), and at what modality (design and construction) according to what criteria (interest, merit, responsibility)? The answer to this question depends largely on the existing social and political as well as cultural structure of a specific community and the ability to organize itself for different types of user participation. The task here is to provide for a structural framework which makes this possible.

In the <u>second</u> case no community is designated for an urban area, so basically we only have the owners of land who want to develop. In this case we know parts of the community,

the owners, and other users will be know a late as they come to settle, live, and work here. Here we have to start with the unknown users, yet the owners. The task is again to provide a structural framework for user participation.

In both cases we are dealing with hierarchies which can be expressed in two ways:

Why hierarchy and how?

-- hierarchy of the urban environment to be built
-- hierarchy of user participation

It will be one task of what I call the 'structural framework' to match those two hierarchies.

A particular problem for user control and involvement in mixed use urban areas is the participation in the design and construction of large scale buildings of different types. So far we have developed 'rules for the layout of large buildings' applicable to different types as well as 'rules for construction' according to a specific construction system. These rules are ordered sequentially so that they can be followed more easily. For users, however, in order to really participate, that is, to design and even construct, we have to consider the following problems:

a) The user may not be able to make definite design decisions because of the sheer size of the building.

b) The internal needs of a construction system for a large building may make it difficult for a user to participate.

c) Construction procedures with large machinery may make it difficult for a user to participate.

PROBLEM 6

CONSTRUCTION SYSTEM, CONSTRUCTION PROCEDURE, CONSTRUCTION INDUSTRY

In order to achieve wholeness in the city construction has to be included in the organic urban development approach. If construction is not included, if we leave it up to the existing construction systems, and the current procedures of the construction industry, we will not achieve a place which is whole, which has the marks of having grown from the largest to the smallest.

Today's construction industry is not prepared to construct large scale buildings which can grow, which can adapt with each step of construction to the surrounding. There are many reasons for this, but here we want to concentrate on two, construction systems and construction procedures.

1. Today's construction systems for large scale buildings are usually based on simple grid systems not permitting the cooperation of design and construction in the process of growth.
2. Construction procedures, are normally, totally based on predesigned plans to the last detail.

Consequently there are much more sophisticated construction systems needed which permit a growing whole to occur on the level of individual large scale buildings. One version of

such a construction system has been layed out in "A New Theory of Urban Design".

"The basic procedure to be followed is one in which the layout of the buiding, from a functional and spatial point of view proceeds in step with the structural design of the building. The reasons for this are basic.

1. If the structure were to come first, then careful design according to detailed functional considerations would be subordinate.

2. If the functional design were to come first then the actual physical design of the building would be chaotic."

(Alexander, et al, 1981, see as well Appendix A, 'Short Introduction to the Rules for the Layout of Large Buildings' and Appendix H, 'Short Introduction to the Rules of Construction'.)

If first versions of construction systems and procedures exist which support a gradual process of construction, which make it possible for a growing whole to occur, we should first of all develop such a system in more detail, but second we have to ask, how the construction industry can be prepared for applying such a process? Here I basically see two possibilities:

a) A basic change in the organization and production procedures of the construction industry;

b) Realistic construction procedures have to be worked out, which make it possible for a normal construction firm to proceed.

The second possibility is more promising because it involves gradual change, therefore it seems to be more realistic.

Here we have to ask questions like:

-- How much construction, actually, has to be defined (in plans) at each stage, and how much construction has to be left open at each stage so that finetuning and adaption can occur:

-- At what stages is it not only possible but important that architects and users actually participate in the construction process?

-- What type of agreements or contracts have to be arranged so that construction can proceed in this way?

Finally, this type of construction procedure requires more responsibility and creativity on the side of construction workers. And it is very well possible that in the course of a project, when construction is being applied as a generative progess one can start to ask the question, how could a construction firm be organized in such a way so that an 'organic' production procedure can happen more naturally?

PROBLEM 7

PLANNING AND PLANNING PROCEDURES

The basic problem we are facing here refers to the nature of planning which is needed for a growing whole to emerge. What kind of planning is necessary to help to achieve wholeness in the structure of the city? Is planning part of the process of a growing whole, or is it a means for achieving it? This a fundamantal question which needs some answers.

On a more practical level we have to ask questions like, who is taking care of what type of development decisions, who is taking what type of actions, what type of legal framework is needed, what type of institutions are taking part in the planning process and what is their particular function?

Questions like this refer to the administrative, legal, and institutional framework of planning and the procedures within it.

A whole bunch of detailed questions have to be asked with regard to legal, administrative and institutional structures and processes for a growing whole to occur in mixed user urban areas.

1. Is a special development agency needed for the 'organic growth process' to occur (like for example for the planning of English New Towns), or can this process be handled by the planning agency and other agencies, of an individual city with or without the help of private planning firms?

2. Under which type of zoning should the 'organic urban growth process' take place? Can it be done under a normal 'mixed use zoning category', or is it more

advantageous to zone such an area as a 'Planned Unit Development' area (PUD)?

3. In the organic urban development process it is assumed, somehow, that the right functions have to be placed each time (not only the right shapes). This assumption puts the local government into a more active role of planning and building. The question then is who is deciding when a public entity like a communal building or a park has to be built, who comes up with such a proposal, what is the procedure?

4. What prodecure for building proposal and building approval would be the best for the creation of good buildings and the creation of good urban space?

What are your answers?

10.

FINAL OBSERVATIONS

The main question of 'organic urban development' and its seven to ten most important problems which would have to be overcome, in order to rearrange the process of modern urban development, in such a way as to produce an organic structure in the city with special reference to high density mixed use urban situations, has been answered with the following shortcomings:

1. The distinction into three different types of problems, that is,

    a) Problems with regard to the organic approach,
    b) Problems with regard to existing conditions, and
    c) Problems with regard to application,

    and in particular here the decision to only concentrate on one specific problem area, problem area c), for the answering of the main question could lead to the wrong conclusion that the other two problem areas do no include basic problems to be overcome. I am aware of this problem and know that some work has to be done here. Since Professor Alexander is specifically working on problem area a), this problem is more acute for problem area b).

2. Because of my decision to only work on problem area c) 'Problems with regard to Application', there seems to be a tendency that, somehow, 'organic urban development' is taking over too much, without being matched reasonably

well and carefully enough with requirements from existing conditions, with the reality of life, so to speak. This I consider a rather serious shortcoming which needs definite consideration and further work.

On the level of 'practical application' I believe the seven problems selected and presented here are correct. There may be a question on the complete number of problems. Are there other important problems on a practical level which need to be addressed. In addition, the detailing of the problems with regard to examples may not always characterize the essence of each problem.

Altogether I feel rather confident about the identification of the seven problems on the level I have chosen to work on.

FOOTNOTES

1) See for example my paper on the structure of space 'Space is a Continuous Structure', April, 1980., and my paper on 'Processes which Create Good Structures', July 1980.

2) For the sake of classification I will use K. Lynch's classificatory system of urban theories in 'A Theory of Good City Form', p. 37.

3) See for example:

-- Geddes, P., Cities in Evolution, Howard Fertig, N.Y., 1968. (orig. 1915)

-- Howard, E., Garden Cities of To-Morrow, Faber & Faber, London, 1945. (orig. 1898)

-- Mumford, L., The Culture of Cities, Harcourt Brace & Co., N.Y., 1938.

-- Reichow, H.B., Die autogevechte Stadt, Maierverlag, Ravensburg, 1959.

Reichow, whose work may not be known in the U.S., developed his organic system in particular based on car-transportation. (See illustration). His approach may be discredited because of a 'simple copying of organic forms'.

4. One argument which is made quite often is that our modern times are different, socially, economically, politically, and in particular culturally and technologically, and consequently we are building differently.

5. Classical works with regard to the understanding of the 'growth of form' include:

Whyte, L.L., Accent on Form, Harper, N.Y., 1954.

Whyte, L.L.(ed.), Aspects of Form, Lund Humphries, London, 1951.

Bonner, J.T., Morphogenesis, Princeton University Press, 1952.

Thompson, D'Arcy W., On Growth and Form, Cambridge University Press, Cambridge, 1942.

6. With Professer M. Teitz I have done some first work on this question with some first results.

7. For this problem the work of K. Marx, F. Engels, and specifically for the American case, the work of H. George on the question of rent and taxation seems to be relevant here for further investigation.

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