

THE CITY IN CHANGE:

Socio-spatial dimensions of urban  
environmental change

by  
Biresh Shah

Bachelor of Architecture  
School of Planning and Architecture  
New Delhi, India  
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Signature of the author

  
Biresh Shah  
Department of Architecture  
May 12, 1988

Certified by

  
Reinhard Goethert  
Principal Research Associate  
Thesis Supervisor

Accepted by

  
Julian Beinart  
Chairman  
Departmental Committee for Graduate Students

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**ABSTRACT**

The physical form of the city, at any given moment in time, is the result of its historical process of formation. Change in the socio-cultural processes in a city at a given moment in its history, therefore, corresponds to and is evidenced in the physical changes of its many urban forms. The different urban forms, which are essentially manifestations of the different moments of understanding and values in the city's history, collectively give the city its distinct character. Thus, the understanding of the process of the formation of the city in time becomes crucial in the act of managing the urban environment.

This study attempts to unravel the process involved in the formation of a city in time, through the study of two segments of the city of Kathmandu. The roots of the two urban forms are centuries apart, but collectively they constitute the city today. Through an analysis of these two urban forms in terms of the aforementioned process revealed through change the study tries to stress the need to understand the built-environment as a phenomenon of change in time.

The underlying notion is that the actions we take to transform the city in the present and the future has to be within and supportive of the process of formation specific to that city, as revealed through change in time.

Thesis supervisor: Reinhard Goethert  
Title: Principal Research Associate.

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## PREFACE

The physical form of the city, at a given moment in time, is the result of its historical process of formation. The different urban forms in the city, which constitute its parts, are physical manifestations of different moments of understanding and values in its history.

The change in the socio-cultural processes in a city at a given moment in the city's history, therefore, corresponds to and is evidenced in the physical changes of its urban forms in various ways. The physical change may occur within the permanent physical structure of an existing urban form. Physical change may also occur in the evolution of a different physical structure of urban form. Together, these physical changes in the form of the city describe the inherent process of formation and transformation of a city.

An understanding of change in the urban environment, in these terms, becomes crucial to our perception of time and space within the urban environment. Change, therefore, becomes a crucial concept in understanding the ways we seek to 'order' our physical environment. Within this premise the paper investigates the correspondence between changes in socio-cultural processes and urban forms within a city.

The paper consists of three parts:

The first part consists of a theoretical framework which explains the premise of this paper. In this part, I have also, briefly, tried to describe the city's formation as a historical process.

In the second part, I have explored how the change in some socio-cultural processes in two segments of the city of

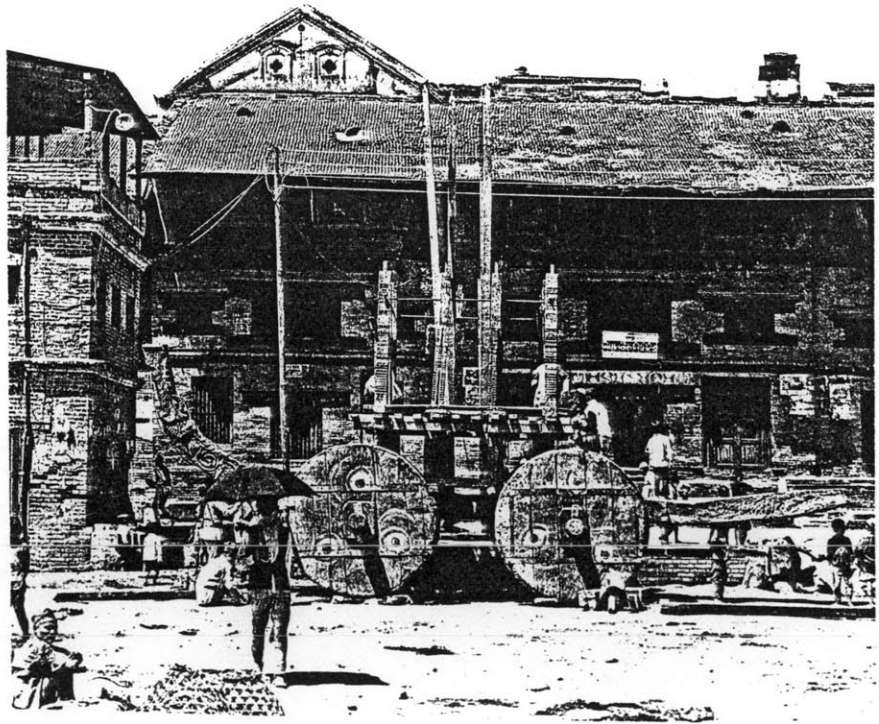
Kathmandu corresponds with physical change to their urban forms. The underlying basis of this analysis emerges out of the theoretical framework established earlier. The roots of the two segments of the city that I have selected to investigate are a few centuries apart in the process of formation of the cities in time. Together, these segments constitute the city today.

The third part elucidates the nature of the inherent process, which is revealed through change resulting, from the interaction of social and physical processes in the city. I have drawn upon certain thoughts concerning our perceptions of the urban environment in our roles as designers and managers of physical form in the city. This part of the paper also discusses some fallacies of current architectural and planning practices concerning regulating urban form, which surface due to the misinterpretations of the process of formation of the city .

# PART 1

PREMISE

HISTORICAL PERSPECTIVE



## THE PREMISE

Change is an inherent characteristic of the urban environment. Urban environment here implies the interaction between physical space and the socio-cultural processes of the place in time. It is through change in either physical space or the socio-cultural processes that the nature of this interaction gets visible.

In our attempts to unfold some of the complexity of the built-environment, certain constraints that exist in it are literally invisible without the idea of change. It is through its pattern of transformation that the built-environment reveals its most permanent structure<sup>1</sup> .

This inquiry, therefore, emerges out of a necessity to understand the complexity inherent in the formation of urban forms as a continual process. The physical form of the city, at a given moment of time, is the result of the city's historical process of formation.

Change in the socio-cultural processes in a city at a given moment in the city's history corresponds to and is evidenced in the physical changes of its urban forms in various ways.

**Persistence  
and evolution  
of Urban  
Forms**

The physical changes may occur within the permanent physical structure of an existing form, whose origins corresponds to another era of socio-cultural and political understanding in the city's history.

It is what Aldo Rossi calls the persistence of the structure of the city<sup>2</sup>, "it persists through its transformation, and the complex or simple transformations of functions that it gradually undergoes are moments in the reality of its structure". We shall term this phenomenon as the persistence of urban form in change.

Permanence, in the physical structure of the city, can be considered a propelling element. For Rossi, permanence means not only that one can still experience the form of the past in the monument but that the physical form of the past has assumed different functions and has continued to function, conditioning the urban area it stands and continuing to provide an important urban focus. Such a transformation of the urban form occurs as the socio-cultural processes existing in the form change in time.

Change in the physical form of the city may, also, occur through the evolution of an entirely different physical structure of a new urban form. The nature of such an urban form would be conditioned by the socio-

cultural processes existing at that particular moment in time. The other factors responsible for the nature of the form maybe manifold: broader topographical frameworks being one of the major constraints for the form to come into being. We may term such a phenomenon as change in the evolution of urban form.

The relationship between the two natures of form stated above is explained by Aldo Rossi in that cities tend to remain on their axes of development , maintaining the position of their original layout and growing according to the direction and meaning of their older forms, which often appear remote from present day ones<sup>3</sup> .

Sometimes these forms existing from an earlier era persist virtually unchanged , endowed with a continuous vitality; other times they exhaust themselves , and then only the permanence of their form their locus remains.<sup>4</sup>

**The Inherent  
Process in  
City  
Formation**

The purpose of this inquiry is essentially to investigate the relationship between the socio-cultural processes and ordering of physical space through the phenomenon of change in time and space. This relationship in time can be discerned through the historical process of formation of the city.

The nature of the inquiry, which essentially draws from the study of two segments of the city of Kathmandu, is based on the premise that it is crucial to understand this process, inherent in the city in its unique way, to formulate our conceptions of shaping the built-environment of the city in the future.

The issue here is clearly not that there is an absolute direct correspondence between social change and spatial change in the urban environment. The relation between social space and physical environment is not determined but possibilist. 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 relationship with those who use and interpret them.<sup>5</sup>

It is in the belief that form can be pre-determined for a particular notion of social good that the conflict between what designers propose and the view of many social-scientists arises<sup>6</sup> .

However, even those who negate the importance of the relationship between physical form of the environment and the social processes validate it themselves in their criticism of many projects born out of

visions of ideal physical environment and the consequences they led to. There are several projects to this effect , the new towns and cities in both the western world as well as the third world borne out of visions of ideal worlds, or the projects like Minoru Yamasaki's Pruitt-Igoe Apartments in St. Louis being some examples.

The dilemma out of which this conflict arises, it seems to me, lies in the conventional practice of urban designers and planners which sees the design of the environment as a collective object, an end, rather than a continual process linking the experiences of the past, the state of the present and a future which can never be determined in absolute terms. This process fits the analogy of a spiral, where the cycle never closes; where the actions we take to order the future, also become the basis of the new 'problems' that are encountered in time.

In citing the design and planning process of Ciudad Guyana, a new city on the Orinoco basin of Venezuela, Lisa Peattie points out that the urban designers, planners and economists all shared a perspective in which the new city was to be the outcome of the design and planning going on in Caracas(capital of Venezuela)--not of the inherent process observed in the city of the present<sup>7</sup> .

"The Aristotelian city appeared as businesses and neighborhoods and as people with individual and collective purposes.

" The Platonic City of the designers appeared on schematic diagrams of urban form, renderings showing elegantly slim pedestrians strolling in the shade. A great deal of the time was put into designing a project for some future 'middle-class' that could set high standards of urbanization to follow. The tendency of the urban designers to focus on design rather than process and to think of the final outcome (the planned city) as discontinuous from the present caused them a good deal of trouble with respect to the implementation of the plans."

Therefore, negation of the process inherent in the socio-cultural processes and the way these correspond to forms in a city or acting external to it seems to render objectives for the future redundant.

The relation of social and spatial change is loosely coupled in both directions. Where there is an effect of one upon the other, it is likely to be diffused-- one type of change leading , the other lagging<sup>8</sup>. However, environmental and social patterns tend to act as brakes upon each other . If we seek to cause change in one , we must understand that partial relationship.<sup>9</sup>

Kevin Lynch contends that social and spatial changes do not have the same form or the same effects , despite the similarity of the name. They affect the well-being and behaviour of the individual, which is our

principle criterion of value. Neither social nor environmental patterns are good or bad in themselves, apart from their impact on the human being.

The physical changes in the urban environment also reflect the adaptability of the urban form to incorporate new activities and possibilities as required by the socio-cultural processes in time. It is what Stanford Anderson terms as 'latency' in the built environment. Latency in the environment allows for societal change without physical changes as such. Change over time yields historical information on environmental potential which may be currently unexploited. These evolved environments, adjusting piece by piece over time to changing demands of use or signification, elude any globally prescribed use and meaning while incorporating many stimulating and sustaining parts<sup>10</sup>.

**Passage of  
Time in  
Space**

The physical changes occurring in the spatial environment provide us with an evidence of 'time' and to make visible our desire.

Thus we see the parameter of time in the study of change in urban forms. The form of the city is always the form of a particular time of the city; but there are many times

in the formation of the city, and a city may change its face even in the course of one man's life.

This link with time that the physical environment provides to an individual in the urban society is further emphasized by Kevin Lynch. He is of the contention that quality of the image of time is crucial for individual well being and also for our success in managing environmental change. A desirable image of the urban environment, as manifest in its physical-spatial environment is one which that celebrates and enlarges the present while making connections with the past and future<sup>11</sup>.

" Change and recurrence are the sense of being alive-- things gone by, death to come, and the present awareness. The world around us, so much our own creation , shifts continually and often bewilders us. We reach out to the world to change it and so to make visible our desire. The arguments of design and planning come down to the management of change."  
Kevin Lynch in "What Time Is This Place".

Developing further from the notion of physical form as adaptable in the face of changing socio-cultural activities, it can be discerned that urban form, which has a basis in certain religious ritual practices, also is the retainer of established cultural patterns over time through its nature of change and persistence . It is very clearly evident in the cultural practices of urban

societies with fairly long traditions in the relation between urban space and cultural religious rituals.

Neils Gustchow and his colleagues claim that most of the traditional urban form of the cities of the Kathmandu Valley evolved around the notion of such ritual practices in space<sup>12</sup> . Most of these festivals survive, in some cases even get further reinforced due to increased participation by societal groups previously external to the native culture. The fact that these practices survive despite major socio-cultural and physical transformations indicates the capacity of the urban form as retainer of culture in time. It further reinforces its role in providing us with a sense of the passage of time, and continuity with the past, in other words a certain measure of desired stability to the individual in the urban context<sup>13</sup> .

"Settings reinforce and perpetuate behaviour in a manner that also corresponds to the desires of the behavers. Environment, like institutions and ritual, helps to transform evanescent actions into predictable repetitions."<sup>14</sup>

The physical change perceived within the permanent structure of an existing part of the city and the change perceived through changing physical pattern in other parts of the city provide a sense of passage of time in the environment. During the physical

transformations certain architectural forms acquire symbolic meaning, where they acquire a status of permanence. In time, these physical forms become the references against which we perceive physical change with the passing of time.

In the later part of this paper, I shall analyse two segments of a city, which I have known, in perspective of the theoretical framework established so far.

Why the "two" forms? My contention is that leaving out one of these in the study is leaving the "story" half-told.

The state of the present is the function of the past, the time and events which have already taken place. Our thoughts and action, however different from the past, always have a basis in it, the basis being explicit some times and implicit at other.

While it is true that future growth in the city will take place along the lines of the latter of the two typologies, the traditional city is not a "pathological" (to use Rossi's term) artefact. It is by virtue of its context a remarkably vital and alive space, which still in the minds of both visitors and permanent residents alike commands the image of the city. But before we proceed with this inquiry, it becomes important to understand the city as a

historical process of formation till the present.

History of the city should be understood not only as something built over time and retaining the traces of time but as the actual formation and structure of 'urban artifacts', the city as a synthesis of a series of values. The latter notion is affirmed by the continuities that exist in the deepest layers of the urban structure , where certain fundamental characteristics that are common to the entire urban dynamic can be seen<sup>15</sup> .

## NOTES

1.Habraken, N. John . Transformation of The Site, Pg.2. Awater Press, Cambridge. 1983.

2. Rossi, Aldo. The Aechitecture of the City. MIT Press, Cambridge. 1982

3.Ibid.

4.Ibid. Rossi considers the idea of locus in the sense of a singular place and event, the relationship of architecture to the constituting of the city.

5.Anderson, Stanford. "The Physical city as a socio-cultural resource:Social space and physical form as reciprocally related systems of convention", in La ville Arabe dans l'Islam.

6.As an urban sociologist, Herbert Gans found himself in constant disagreement with the physical designer's basic assumption that the physical environment man-made or natural, played a major role in people's livesand that reshaping this environment was the most urgent priority for social action to achieve the good life. (People and Plans, by H. Gans, part 1 Environment and Behaviour.)

7.Peattie, Lisa R. Planning: Rethinking Ciudad Guayana. University of Michigan Press, Ann Arbor.

8.Lynch, Kevin . What Time Is This Place? MIT Press, Cambridge.

9.Ibid.

10. Anderson, Stanford ed. On Streets. pg.7

11.Op. Cit. Lynch, Kevin.

12.Gustchow and Sieverts eds. Urban space and Ritual. Seminar proceedings at the Technische Hochschule Darmstadt. 1978

13.This is explained in my analysis of Asan, Kathmandu in part two of this paper.

14.Op. cit. Lynch.

15.Op. cit. Rossi, Aldo. pg.128

## THE CITY: AS A SYNTHESIS OF VALUES

**The ancient  
city of  
Kathmandu**

fig.6

The origin of the city of Kathmandu goes as far back as the Second Century AD. During this period it consisted of scattered rural settlements within the region which constitutes the city today. The term city implied the complex of palaces of the King and his noblemen, from which control was exercised over the region. Although the villages were controlled by a member of the village itself appointed by the King, the handful of noblemen carried out the administrative tasks in the name of the King, regularly.

The society was primarily agrarian without any significant development of craft and industry. There is some evidence of trade with Tibet, but it was not of an extent where it had any significant impact on the growth and development of the city.<sup>1</sup>

During the reign of the Licchavis who ruled this region till the end of the 8th century, there is no record of a settlement which may have taken the dimensions of a city. Despite the rather extensive written records of the Licchavis, studded with the names of places and royal palaces, none identify the city, or cities, from which

the Licchavis ruled<sup>2</sup>. Mary Slusser cites the late chronicles affirming that the Licchavi king Amsuvarman built a 'Darbar' (palace) with many beautiful courtyards in a place named Madhyalakhu. He also caused his Kajis and ministers to be accommodated with houses in the same place.

Therefore during this period in the history of the city, it remained largely a symbol and mechanism of controlling the outlying areas.

**The classical  
Hindu  
cityform:  
The MANDALA.**

The advent of the Malla rulers in the 9th century marked an era of major socio-cultural development which consequently led to a major structuring of the urban form. During this period we see a very clear stance adopted by the rulers towards the structuring of society and cityform. It marks an era of a very highly developed culture and economy in the citystate. It began with a very clear division of labor according to hereditary occupations.

It is believed that the traditional Hindu concept of structuring society heirarchially according to four classes was also introduced onto the population of the city. However, historians like Mary Slusser are of the opinion that the caste system already existed in the settlements of the valley when the Malla rulers came into power. But

its use as a device for ordering socio-economic patterns and spatial distribution in the city has been accredited to the Malla rulers of Kathmandu.

fig.7

The form of the city during this period has been described by Mary Slusser<sup>3</sup> as having the Darbar Square as its nucleus. The city itself was in the shape of a rough oval on a buff bounded by the two rivers. This area includes an impressive concentration of historic monuments. Here are to be counted almost a hundred `viharas`, hundreds of monumental stupas, temples, Chaityas<sup>4</sup>.

The locus of traditional festivals is another index to the bounds of the Malla capital. For it is within this same oval, delimited by terrain and density of monuments, that the Kathmandu community festivals take place.

fig.10

It is believed that the old city was once defined by a protective wall pierced by numerous gates . This was the limit of the city for a number of centuries. After the eighteenth century with the advent of the Shahs, the city-state changed into the capital of a nation, and the city spilled outside the walls.

According to Henry Oldfield , an important clue regarding the original boundary of the

walled city was offered by the location of the once untouchable communities, which due to the application of caste hierarchy on spatial distribution of communities in the city had to be placed outside the city walls. Oldfield specified that the city walls were pierced by thirty-two gates.

fig.2

However, about nineteen of these still exist in one form or the other<sup>5</sup>. A number of significant urban spaces and neighbourhoods are still known by the names of these gates. A more concrete evidence of the extent of the city walls is provided by Upako Vanegu or the Pradakshina Path, a ritual which is observed in the month of August. Originally, it is supposed to have been a Vedic ritual circumbulation of the town along the interior of the city walls.

Today members of families who have been bereaved in the past year pass clockwise in procession around the old city along an ordained route. Where, necessary arrangements are made to permit passage through private property<sup>6</sup>, as a lot of the previous open spaces got absorbed by densification of the city. Implied in this observation is the notion of cultural rites evolved in physical space persisting in time; and their previous significance too gets transformed with the transformation in the form. In fact the ritual has now been adopted by the people who came to live in

the city much later from other parts of the country; it is observed by them under another name.

Slusser contends that there is no evidence of formal planning in the old city ; and that the myths about it being planned according to classical Hindu town planning principles of Vastushastra have no basis. The city itself grew out of the progressive fusion of indigenous hamlets into towns and cities.

However, several scholars including Gustchow and Bajracharya<sup>7</sup> postulate that a grid pattern was superimposed upon the the city sometime during the Malla period. Thus there is a possibility that the the classical Hindu order of the Mandala was incorporated in the development of the city. The Mandala essentially is developed on the belief that the city is a Microcosm , consisting of a center and a geometry of the cardinal points of the gods. The guiding concept was that the reconstruction of heavenly archetypes in the real world would bring the inhabitants of the city into harmony with the gods. This was based on the concept of Vastu Purusha Mandala, a medieval Nepalese text<sup>8</sup> .

fig.4

fig.5

fig.1

In the case of Kathmandu, there does exist a complex geometry of the cardinal points of the location of various shrines and

fig.3

temples in and around the town, as shown by Neils Gustchow in his researches on the city<sup>9</sup>. The ritual significance of these locations still persists, and its spatial significance manifest in the processional routes of these rituals.

While the grid may have been incorporated in the town pattern, the ancient trade route remains in its original form. Thus in the context of the city this space became very prominent as an urban element. We will analyse this phenomenon, its impact on cityform, specific nature of urban spaces and their subsequent nature of transformation in later part of this paper.

The identification of particular urban artefacts and cities is so automatic in certain contexts of space and time that we can speak with discrete precision of the mediaval city, the Gothic city. These stylistic definition become morphological definitions; they precisely define the nature of urban artefacts. For such civic design to occur, it is necessary that a moment of decisive historical and political importance coincide with an architecture that is rational and definite in its forms<sup>10</sup>. Thus, this period in the history of Kathmandu marked the development of a clear political vision of city form, which established its own hierarchy and rules within which a form could emerge.

From this period in time, we shall investigate the transformation of the socio-cultural processes in the city and the subsequent selective physical transformation of this form.

**The origin of  
change in  
urban form.**

fig.8

With the conquest of the Valley by the Shahs and its amalgamation into a larger nation, the significance of the city changed from being the capital of a medieval city state to the capital of a nation state. The old city wall lost its significance as the geographical limit of the city and slowly the city expanded outside it. The physical growth of the city from the second half of the 18th century onwards seemed to have taken place in three basic patterns.

Firstly, there was an increase of built-space within the walled city, although the wall was slowly disintegrating physically. Oldfield, who visited Kathmandu in the second half of the 19th century found the old city walls and its gates in ruins. After observing the remains of the medieval gates and general plan of the city, he concluded that the number of gates along the defence walls equalled the number of main squares, dols(blocks) or residential segments of the city. In other words, the arrangement of the gates was such that people could go out and come in the main road used by them leading

to a square from where small and big lanes spread and bifurcated to form a network of lanes and streets with the houses huddled close together<sup>11</sup>.

Secondly, when the city growth spilled outside the previous limits, it was essentially frontal in nature where the existing built-form patterns and grids were followed. However this expansion accommodated mainly the "outsiders" as the the native populace of the city could still find it difficult to get out of the stigma of the spatial distribution in the city according to caste heirarchy<sup>12</sup>.

This phenomenon, along with the shifting of the royal palace to the northern edges of the city from its center, had strong bearings in the way the fundamental understanding of the urban form may have got transformed. Although there is no documented evidence to this effect, it is possible to establish that in the initial phases of expansion the outsiders would have followed the pre-existing pattern of a "new place" as a physical determinant. However, as the local population refused to move due to a number of cultural reasons, the socio-cultural basis of the classical Hindu form of the Malla city became diffused slowly over time. The symbolism attached to the royal palace being at the center of the city plan was also lost.

The cultural changes in the city emanated not so much from any new, specific and epoch-making event, but from the assimilation of different cultures - the culture of the people from the hills who came with the new rulers and the native residents of the city, the Newars. The rituals and cultural institutions were retained and added on to in time. In fact a number of these festivals and cultural institutions still persist in the city.

In the history of the city this period although introduced the origins of change from the earlier order, there was no attempt to establish a new basis of urban form. The existing pattern within the city were left unaltered. The transformations that came about were largely a function of growth.

**The externalities of change: the Rana Period.** The physical development during the Rana period , which was a regime of regent hereditary prime ministers until 1951, transformed the shape of the city radically.

An examination of the duality of social and political standards these all powerful regent prime ministers adopted shows how it may have led to the transformation of the values and subsequently the urban form.

Firstly, as their hold on power relied chiefly on their support from the British rulers of India, it had to be symbolically asserted . This found its manifestation in the huge baroque and pseudo- renaissance styled palace estates built in large number on the farmlands outside the city. The family and kin of this ruling elite housed themselves in these palace estates.

Secondly, to project their image as traditional feudal rulers of high gentry, they borrowed the culture and traditions of the Kshatriya Mewar rulers of Indian Rajasthan<sup>13</sup> .

This dichotomy between social image and political symbolism started the break from the classical Hindu urban form to a ambiguous physical structure of the urban form which formed the basis for the formation of a large portion of the contemporary city.

fig.13

In Kathmandu, the transformation in the urban form seems to have evolved from this dichotomy on part of the power holders. The construction of numerous palaces with their European Beaux-arts architecture and spacious versailles-like front gardens in the north, north-east and east of the city, besides installing new morphological elements on the outskirts of

the city conditioned the overall pattern of growth.

The construction of these palaces brought about the establishment of road network linking these palaces with one another and with the city. The city growth from here on took two forms: that of a linear pattern along these routes , and a suburban sprawl perpendicular to these routes<sup>14</sup> .

While the earlier basis and significance of city form was lost, there was no attempt on part of the new power holders to project a new one. The form that evolved from here on was a natural outcome of access and topography.

During this period we see a deliberate attempt to break away from the existing cityform by the rulers as an assertion of their own dualistic existence.

fig.9

This phenomenon continued till 1951, as city grew on the farmlands surrounding the old city. The paths and tracks through the fields shaped into fragmented forms of streets.

The establishment of a quasi-democracacy in the country after 1951, the contradiction between a centralised control on one hand and publicly elected representatives functioning at all levels of society on

the other hand, and the "opening" the valley to the rest of the country and the outside world were the two major events which fuelled a new generation of change in the urban environment.

The following part of this paper deals with an exploration of the manner in which physical changes in the urban forms of the city correspond with the changing socio-cultural processes today.

## NOTES

1. Shrestha, CB et al. The Historic cities of Asia: Kathmandu. Center for Nepal and Asia Studies, Kathmandu. 1986
2. Slusser, Mary. NEPAL MANDALA vol.1 pg.107  
Princeton University Press, Princeton.
3. Ibid.
4. The terms Viharas, Chaityas etc. correspond to specific types of forms in the city. They shall be explained in detail in the later chapters.
5. Oldfield, Henry A. Sketches From Nipal 1880.
6. Op. cit. Slusser. pg.93
7. Gustchow, Niels and Manabajra Bajracharya. "Ritual as mediator of space in Kathmandu". from the Journal of Nepal Research Center. 1977:1
8. Op. cit. Shrestha, CB et al.
9. The geometrical relationship of these religious shrines is termed as 'Asthamatrika', consisting of eight mother goddesses.
10. Rossi, Aldo. The Architecture of the City. Pg. 116
11. Shrestha, C. B. et al. The historic cities of Asia: Kathmandu. pg. 68.
12. Shrestha et al. The historic cities of Asia: Kathmandu. pg.66

13. History of Nepal in the 19th century and the palaces of Kathmandu are evidence to the first observation; while Mary Slusser elaborates on the second one in "Nepal Mandala" vol.1.

14. Op. cit. Shrestha, C. B. et al.

# SERIES 1

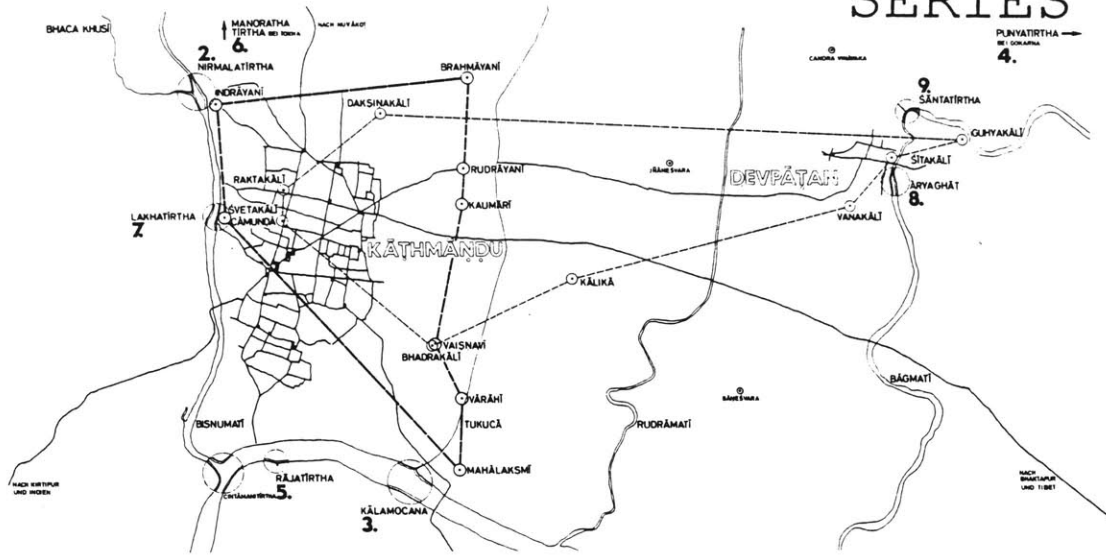


Fig.1 Kathmandu city. Astramatrika: group of temples of eight goddesses around the city and the cosmic geometry.

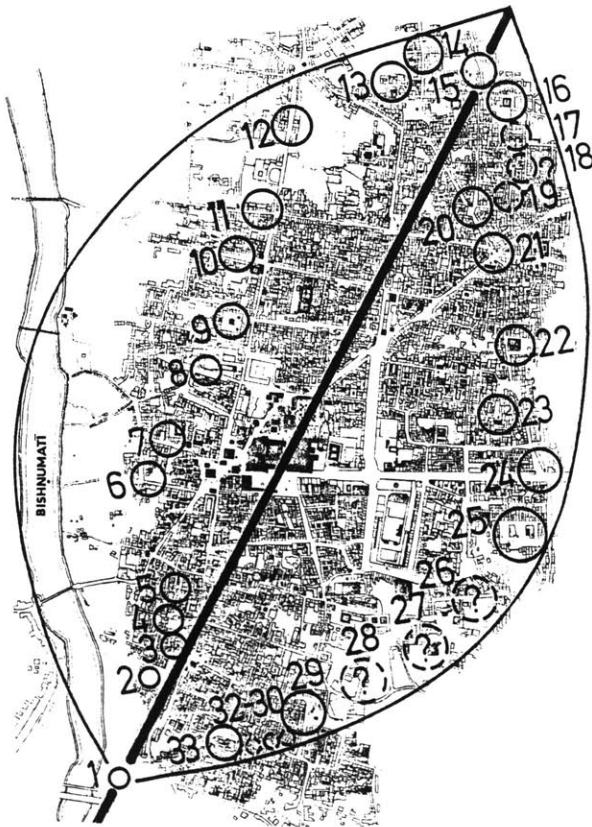


Fig.2 Kathmandu city: 34 gates of the neighborhoods.

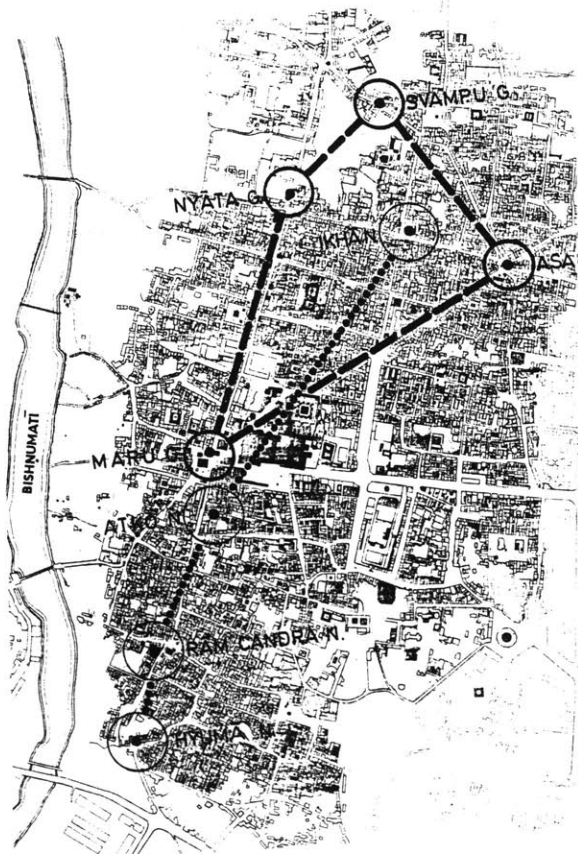


Fig.3 Group of Ganesha and Narayana temples in the city.

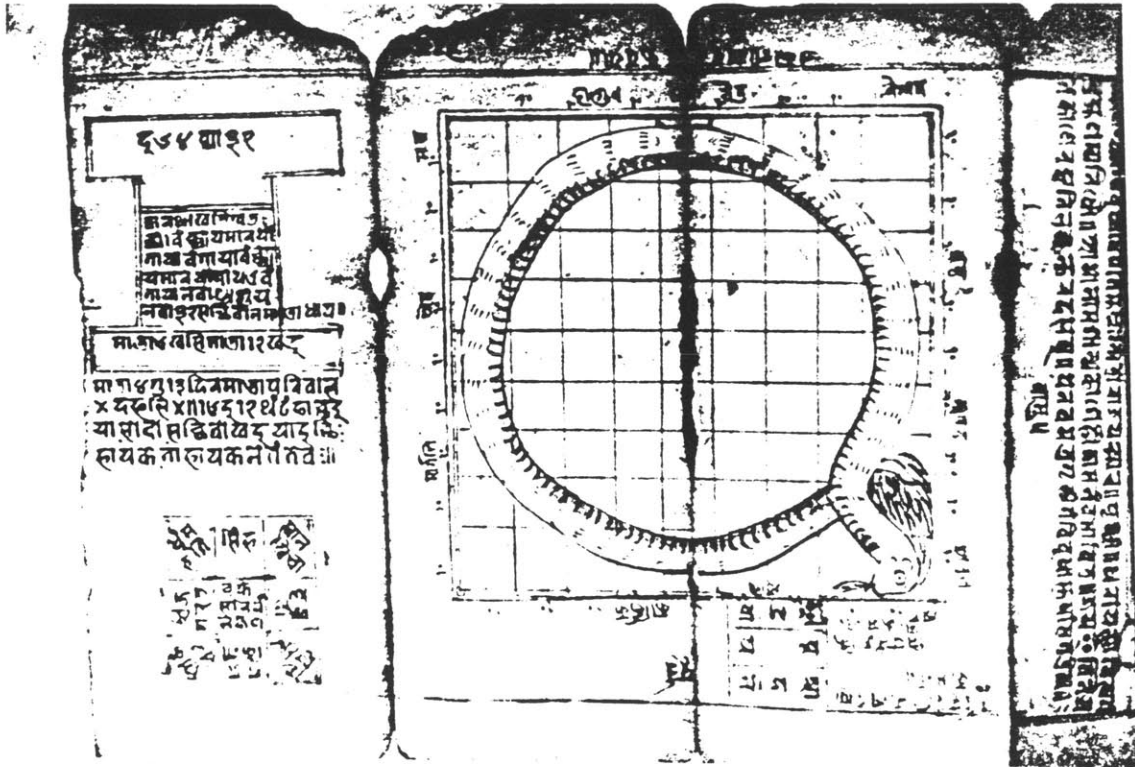


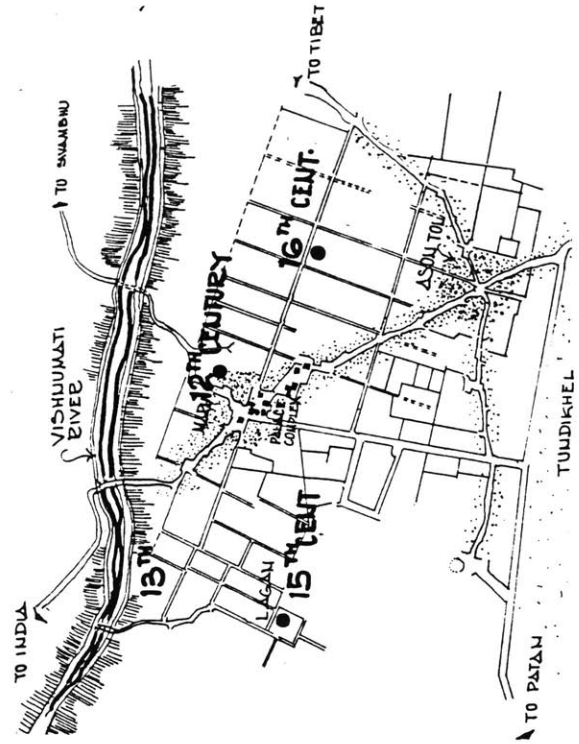
Fig.4 Folios from a Nepali architectural manual depicting a city plan as a mandala of 81 squares.



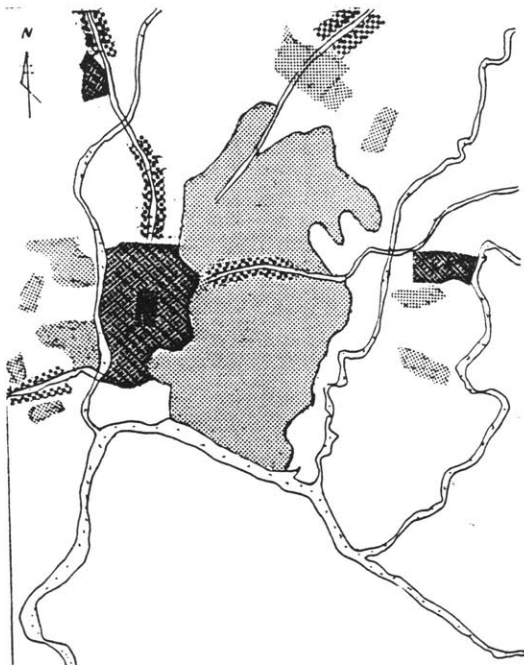
Fig.5 Folios from a Nepali builder's manual demonstrating the ancient vastu-purusha mandala of 81 squares.



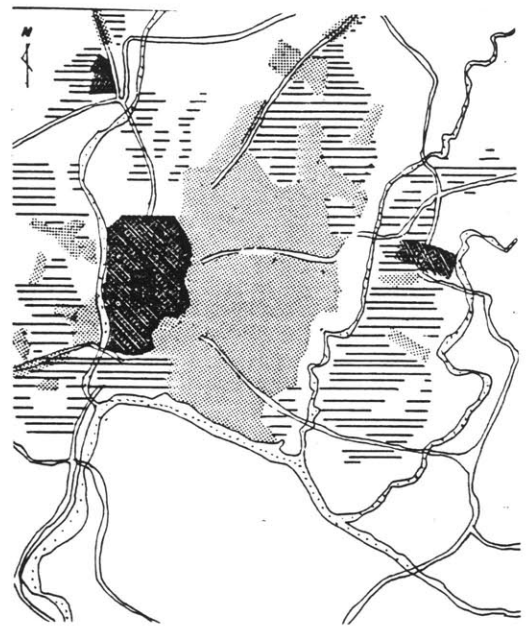
**Fig.6** The Ancient Kathmandu: the Licchavi period.



**Fig.7** The Medieval Kathmandu: the Malla Period.



**Fig.8** Expansion of the city: 1769-1949.



**Fig.9** Expansion of the city: 1950-1984.

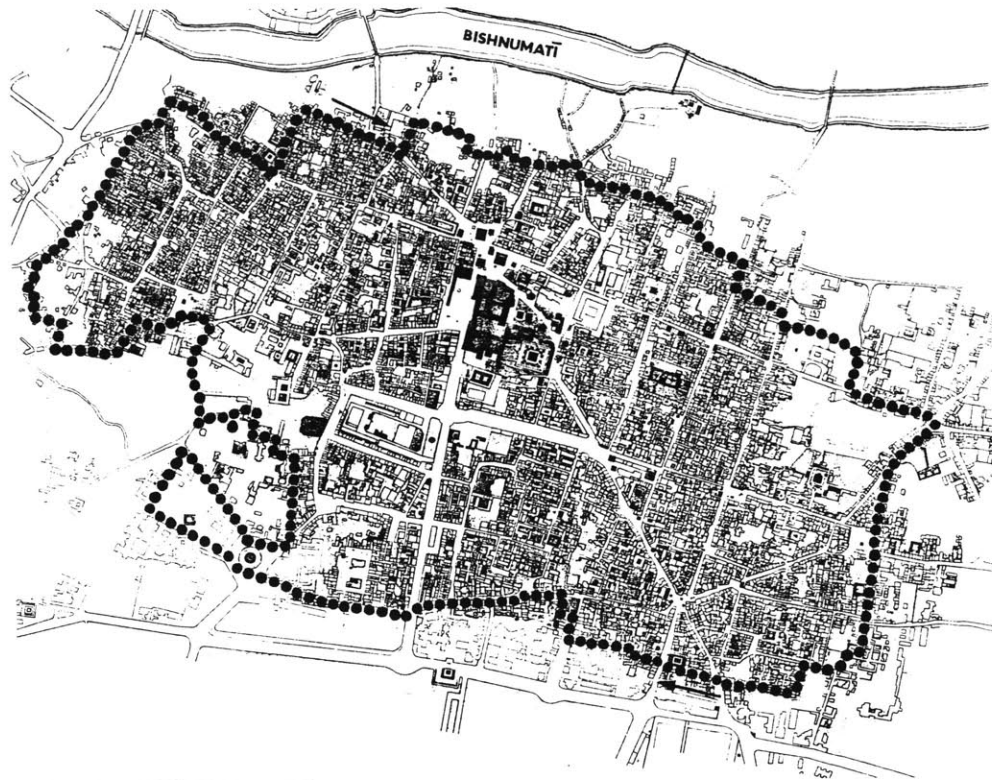


Fig.10 Kathmandu city: medieval city wall which formed the pradakshina path, the perambulation route.

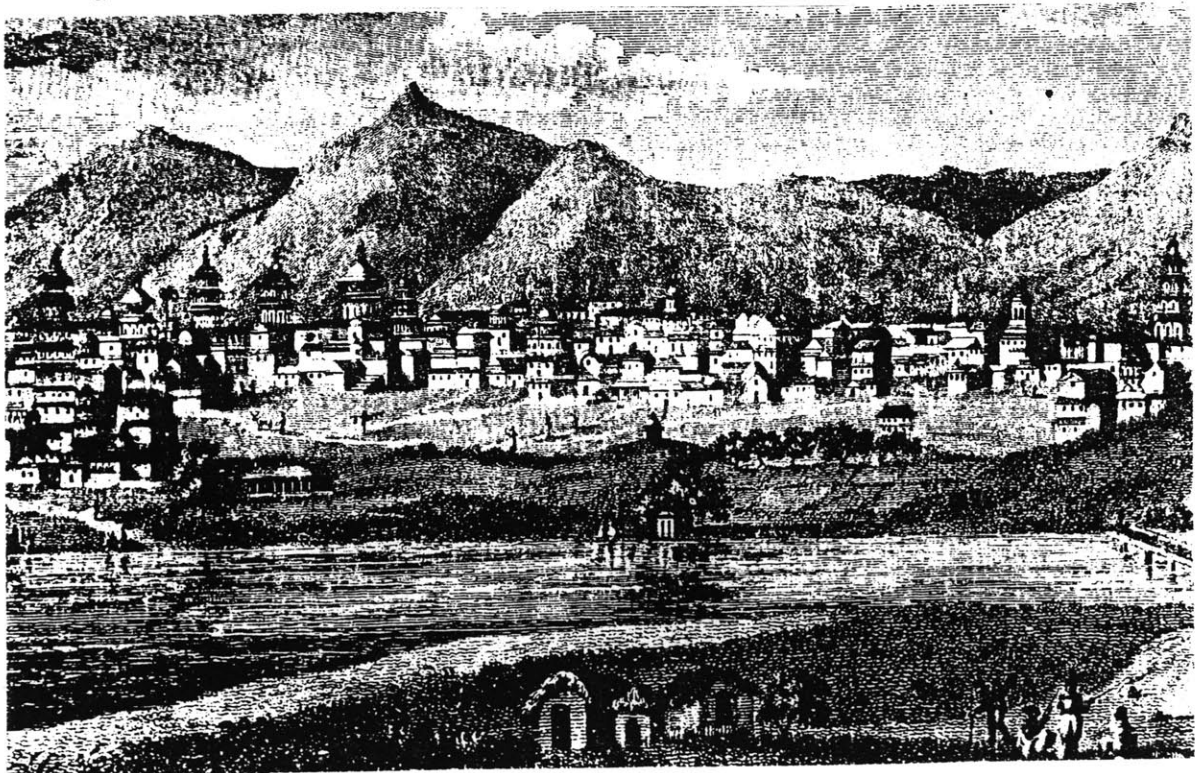


Fig.11 Late 18-th century etching by one of the members of the British delegation led by Col. Kirkpatrick.

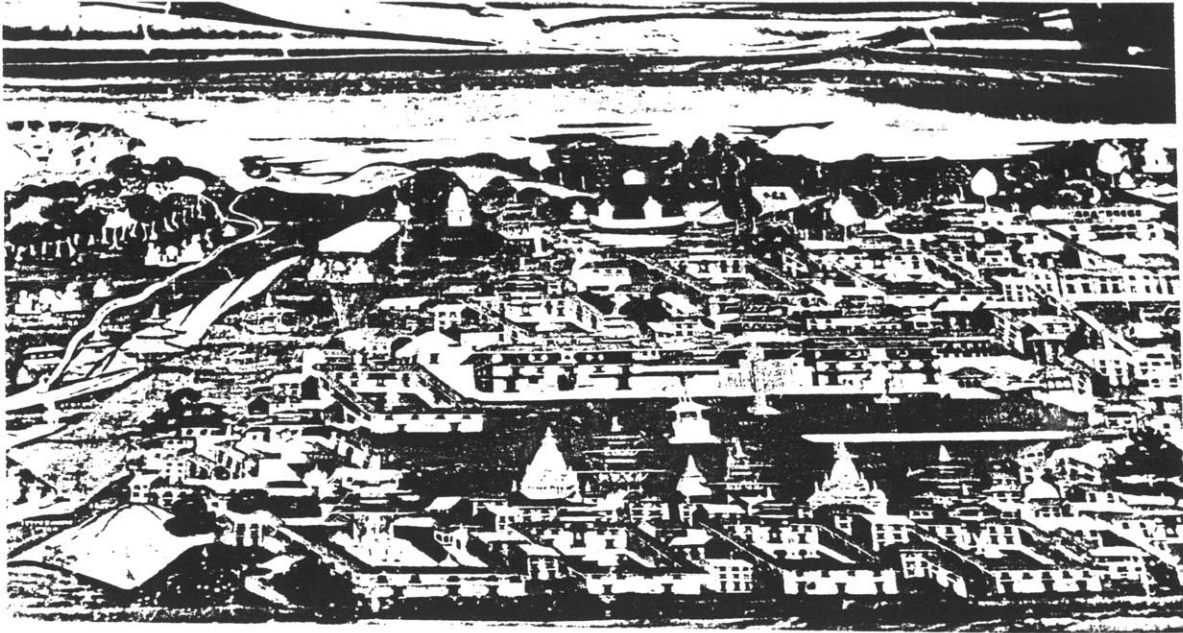


Fig.12 The temple filled Patan, the other city adjacent to Kathmandu, surrounded by vihara quadrangles, 18-th cent.

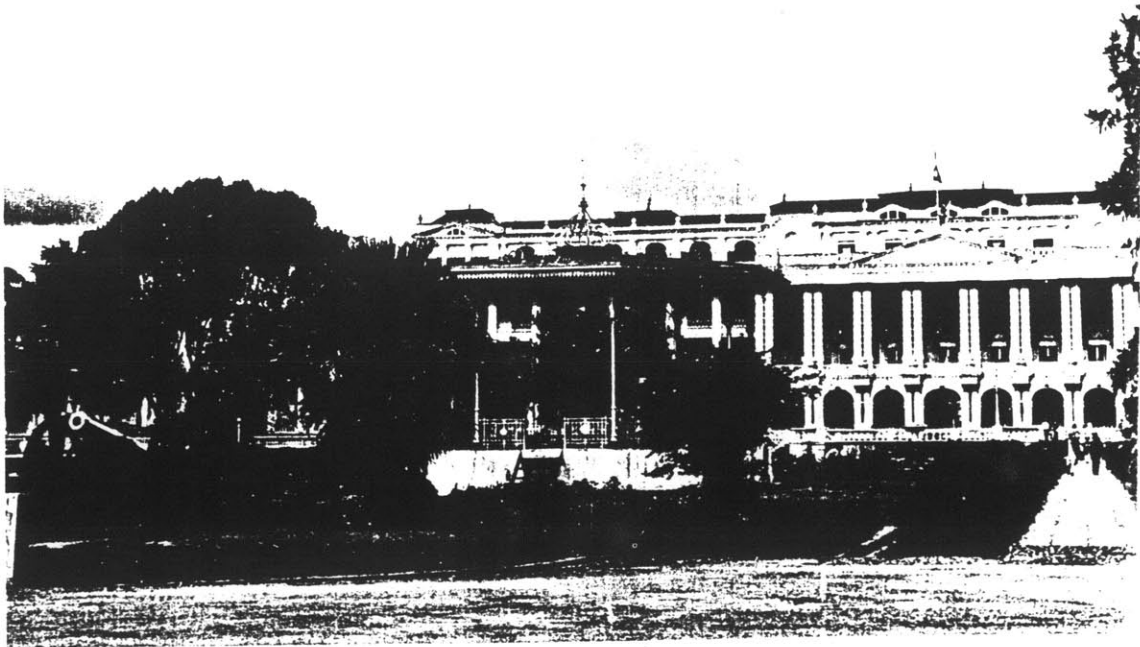
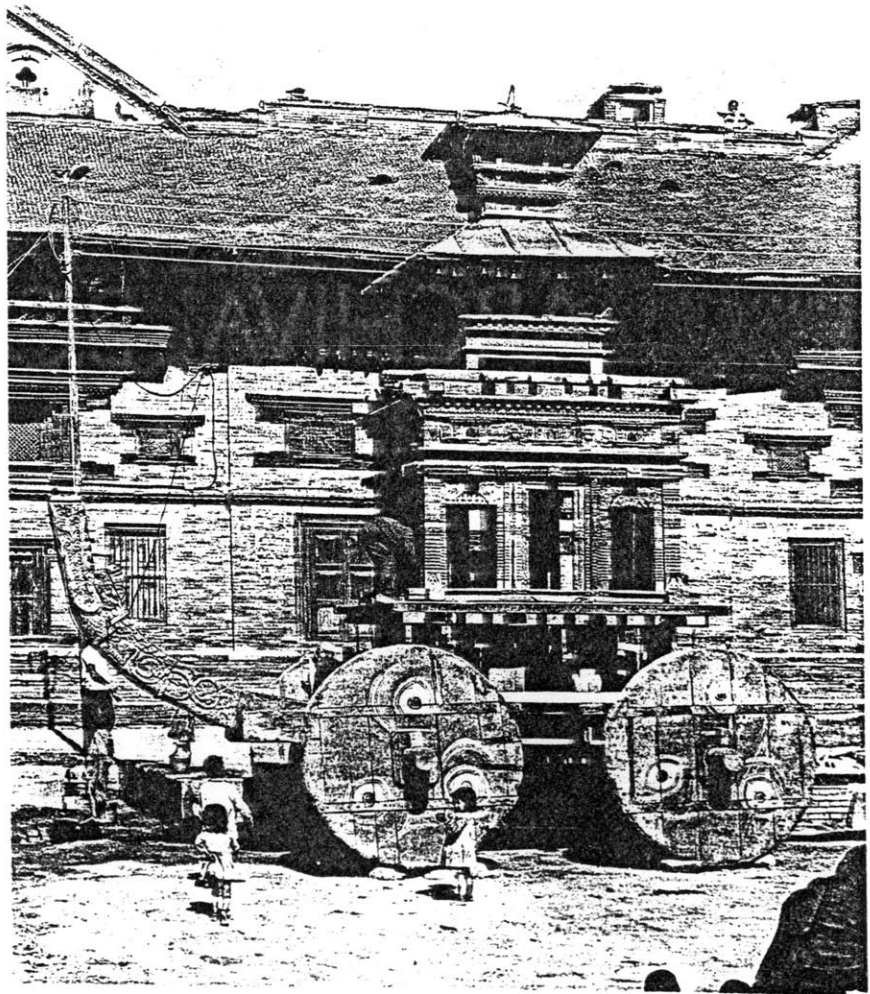


Fig.13 Singh Darbar, the European styled palace of the Rana Prime minister with its formal garden in the foreground.

## PART 2

KATHMANDU CITY:

A STUDY OF TWO URBAN FORMS.



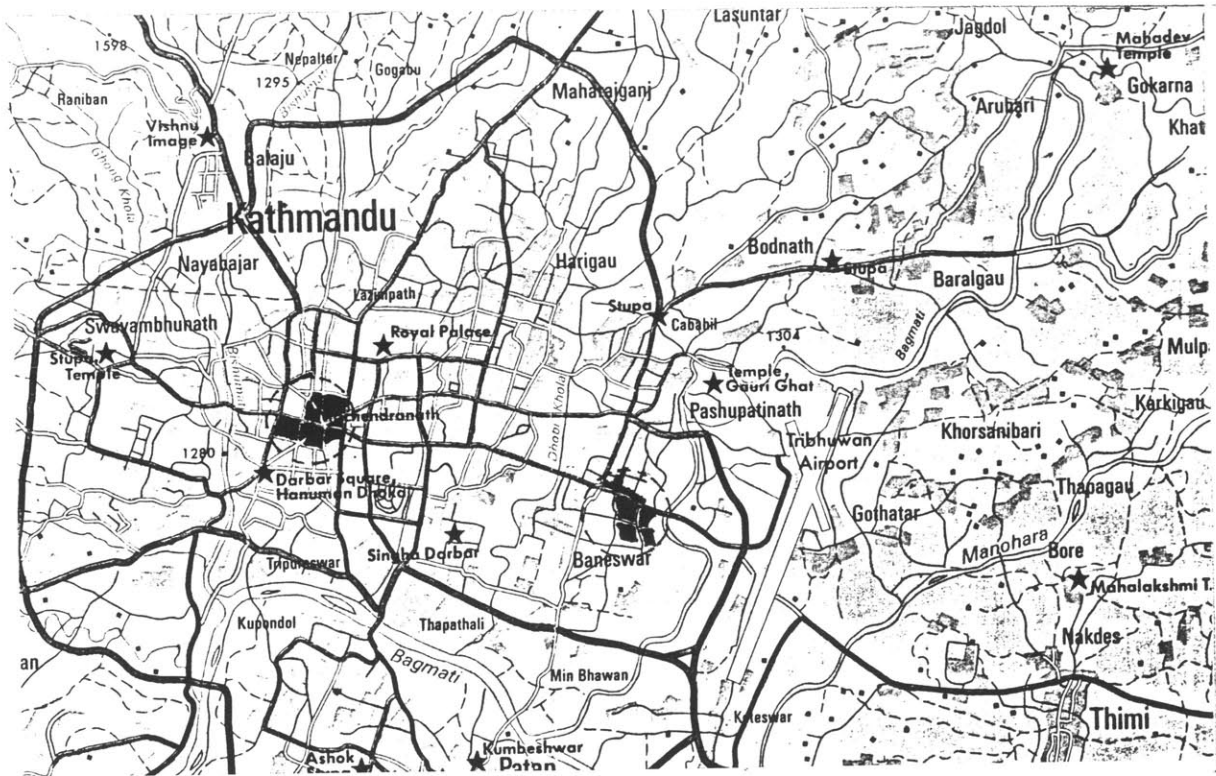


Fig.14 Map of the city of Kathmandu. The two darkened segments mark the study areas within the city today.



Fig.15 Aerial view of the old section of the city, now the city core.

At a given moment in the formation of the city in time, the inherent process involved is revealed through change in the interaction between changing socio-cultural processes and the physical transformation that the urban forms go through.

fig.14

In this part of the paper, I shall try to form an understanding of the aforementioned process as it is revealed in Kathmandu in two parts of the city. The roots of the two segments of the city to be investigated, here, lie centuries apart. However, I shall study change in both the urban forms within their realm of significance today, as parts of the synthesis of the urban whole.

The first segment, an area called **Asan**, has been chosen from the old part of the city as more than any other space shows the persistence and simultaneous transformation of the builtform of the city since the days of the ancient trade routes.

The second segment, known as **Baneswor**, has been chosen because although it lies on a major axis of the old city, it represents the physical evolution of a new form beyond the old city resulting from socio-cultural processes today.

The structure of investigation of each of these urban forms follows what their respective titles suggest.

The analysis of Asan, the first segment which is about transformation within an existing physical structure of urban form, follows a sequence where I have described the nature of the urban form of the Newar city and the distribution of its various physical elements. It is followed by a description of the changing socio-cultural processes and the significance of this form in the city today,. The manner in which these changes correspond to physical changes of the original urban form is, then, understood through an analysis of what physical changes occur in the urban form and what characteristics remain unchanged. The nature of existence of various levels of control over form and space is analyzed to understand their respective influences in the physical changes.

As the second segment, in this case Baneswor, is still in the process of formation, the study investigates the nature of the formation of its physical structure first and the socio-cultural basis of which such a formation is the result. The characteristics of this urban form in terms of its articulation of space and temporal dimensions is the result of a lack of coherent hierarchial linkage between various levels of control over space. This lack of hierarchy in a pluralistic condition leads to consensus in the form of collective

action to solve common problems in the environment. Some of the prominent actors which effect the nature of this urban form are then introduced and their inter-relationship analyzed.

Together, these two segments reflect the historical process of formation of the city. Individually, each reflects different moments of reality in the city's history, moments where certain values and understandings became manifested in physical forms.

## PERSISTENCE OF URBAN FORM IN CHANGE: **ASAN** IN KATHMANDU

fig.15 Apart from the ancient palace city of Kathmandu of which only archaeological remains exist , the oldest settlement emerged on the ancient trade route between India and Tibet. Subsequently when the grid of the Hindu Mandala was superimposed on the existing fabric of the city, this route which ran diagonal to the cardinal directions of the grid remained creating important urban nodes where it intersected with the grid, a spatial phenomenon not too dissimilar to Broadway on Manhattan grid in another world altogether.

fig.16 What is known as Asan is the name given to one of the most important urban nodes and the area around it.

### **The Urban Fabric of the Newar City**

fig.40 The original built-up area in this densely packed settlement consists of courtyard configurations largely. Essentially three forms constitute the fabric. These are:

a) The large extended or joint family courtyard houses a number of households belonging to a clan or kin living together. These were primarily built by the upper class Newars and the higher caste families of the Hill people who came to the city mainly after the beginning of the Shah

fig.35-36 dynasty from outside the valley. These originally functioned as single large courtyard houses. Generically, these  
fig.37-38 courtyards are known as "Chowks" with a prefix which used to be the family name.

b) A number of the Buddhist monastic orders were housed inward looking courtyard structures . The Buddhists among the Newars who lived in the city were divided into various orders. Each order would have its own temple courtyard with housing around it. At their inception these were prayer places on the ground level and living quarters at the upper levels. Later as the monks got domesticated and the orders transformed into clans, these became multi-family housing<sup>1</sup>. The Machindra Bahal is the largest of this type in Asan area. Although the courtyard, around which the various 3-4 storied row-houses exist, is controlled by the monastic order the families living in these houses today come from different ethnic backgrounds.

The larger ones are known as Bahals and the smaller ones as Bahils. Some of the larger Bahals later accommodated people from outside the clan and these became neighborhoods of a mixed order.

c)The multifamily courtyard housing were formed on the basis of caste and related crafts that they were prescribed to practice. These are known as the toles.

fig.33-34

Families belonging to similar castes and traits lived in houses around a communal courtyard. Even today a number of these neighborhoods are known by the caste or traits of the people they accommodated earlier<sup>2</sup>.

As the ancient chronicles point out the city was divided into square segments and the intersection was always an important urban node. The streets in their linear space simply pointed towards the four cardinal directions with the node becoming the **Mandala**<sup>3</sup>. As legend goes each node was associated with a city gate. The neighborhood were known by these nodes, in other words each neighborhood had an implicit sense of place associated with it.

The streets did not exist so much for themselves as they were part of the community and functioned as communal spaces at an urban level as against the courtyards, which functioned for activities at the immediate community level. This explains the lack of names of the street. By virtue of the linearity and the directional nature of their space, they became the settings of festivals associated with a specific time of the year and with one or more of these nodal elements. The housing types mentioned above were distributed spatially in this framework<sup>4</sup>.

Thus, the territorial depth<sup>5</sup> in this form is highly pronounced . Different levels of territoriality in the physical structure correspond directly to the organization of spaces serving various levels of urban functions.

The division of labor and the caste hierarchy governed to a great extent the locational pattern of these housing types in relation to the center of the town which in this case was the Royal Palace.

Julian Steward notes that most of the cities of ancient civilizations were rather carefully planned by a central authority for defensive , religious or politico-economic functions. Free enterprise, which might have allowed competition for zones between the institutions and sub-societies arising from these functions, was precluded by the culture.<sup>6</sup> This observation explains, generically, the political intentions of the dominant power and the manifestation in city form of such intentions.

Interestingly , one of the elderly gentlemen interviewed in this area( he had lived in the area for over seven decades ) was euphoric at the rapid change that was taking place. Although not particularly pleased with nature of the change, the symbolism of freedom of enterprise latent in the change was of great satisfaction to him.

The rapid rate of change this physical structure of the place is going through is really a function of this fundamental change in contemporary culture: freedom of enterprise.

**Factors of  
Change in the  
Context of the  
City.**

The centrality that this area enjoys in relation to the new growth of the city and the adjacency to the new commercial center of the city set the pace for its transformation. What used to be a localized market as an outlet for the surrounding rural produce has become a major retail and trade center with its own internal dynamics.

With its ability to connect the main commercial nucleus of the city to the major urban nodes of the urban fabric beyond this old part of the city, it has become an important region within the inner city where extensive commercial energy has come to be concentrated recently.

As there is no evidence that the impact of the changing socio-economic and cultural processes might have a linear progression in history, they need to be examined as they exist one by one.

Recently, in the physical fabric of the urban form which essentially constituted of residential, localized commercial and

religious activities , an entirely new range of activity patterns have precipitated.

The influx of people from different ethnic groups from outside the valley, ranging from rich merchants from India and Tibet to migrant labor from the hills, have changed the experience of place in the form as well as the rather homogenous socio-cultural existence of the original dwellers, the Newars.

The new need for space that the new activity patterns seem to have created seems to be making its influence visible in the environmental form in the following ways<sup>7</sup>.

fig.19  
fig.20  
fig.28

The demand for rental accommodation is increasing progressively for a number of purposes. The migrant merchants are firstly looking for retail space, which due to saturation on the major spines has spread onto the inner alleys, and subsequently to the courtyards and the upper floors. The merchants, coming from outside the valley, have required rental accommodation, the access to which has become easier for them now as the original owners realise the opportunity for greater returns. Today's political and social control over form allows such transformation to take place.

The increasing commercial activities in the area has brought in a entire set of wheeler-dealers who require rental office space. The

availability of cheap labor (poor migrants from outside the valley ), a variety of networks and proximity to the retail concentration has led to the springing up of small-scale workshops along with the traditional ones which have existed here. These workshops have located themselves in the ground floor of the courtyards.

Thus within the physical domains of the traditional activities, there is a heterogenous ethnic composition alongwith a variety of contemporary socio-economic activities which never existed before.

Unlike the 18-19th century period when the population coming into the valley was assimilated into the local culture, the phenomenon today implies that the influx of external population into the traditional fabric is being driven by the market. The individuals who are thus moving into the neighborhood would not have the same inclination towards assimilation in the local culture.

However, on the other side the socio-cultural dimensions of the local residents evolved over centuries is likely to undergo major changes as these externalities start creating their own physical niches into the homogeneity of traditional mainstream culture. Density, heterogeneity, and proximity to these heterogenous social groups results in major changes in original

homogenous communities of the courtyards. This phenomenon especially has its impacts in transformation of the perceptual dimensions of space in the traditional culture. The disruption of the homogeneity in societal exchange pattern and the vastly increased range of social and informational exchange that today's mobility and modern communications allow is indicative of greater ethnic plurality in interactions <sup>8</sup>.

fig.29

The new range of socio-economic activities occurring have in turn generated a variety of jobs in the inner cities especially for very poor unskilled migrant labor. As most of them live on a day to day job basis which is available in this section of the city, they cannot afford to live far from it. Thus, they rent spaces in the courtyards and usually share it between a number of them.

The spatial configurations which originally catered to homogenous community groups started to adopt itself to these social-layers generated in recent times. What I have outlined here is not really an analysis of the magnitude of economic activity but rather gives a sense of the new "potentials" of the environment that is being realized in this spatial configuration.

The layering of various socio-economic groups in space, the internal population densification and the increased market have great generated demands on the space

fig.17

available in the existing physical structures. It is not an irregular sight today to see older structures getting pulled down and new concrete framed higher buildings emerging in their place. However, the quality of the physical environment is continuously getting depleted due to over-densification. An organization of forms and space which evolved as a low-rise dense formation has buildings almost three times the height coming up on the "footprints" of the earlier buildings.

**Changes within  
the Original  
Social  
Structure**

The social structure of the population in a hierarchy of castes in the medieval period and its spatial distribution in courtyards within distinct neighborhoods in the city required a rather strict adherence to traditional norms .

The dimensions of socio-cultural interactions were small. The kinship in occupation , marriage, rituals, festivals etc. demanded spatial proximity and inward communal configurations. The dense courtyard formations met this spatial need. A number of these socio-spatial configurations in the courtyards still survive.

Most of the families living in the Bahal of the Ward chairman of this area had been living there for generations. It seems

only a small percentage of the original residents had moved out. As the Newars even today follow very strict patterns of rituals, which vary from clan to clan, it is essential for people to maintain the configuration for observing the religious and social rituals.

A number of factors of change today have altered this correspondence between space and societal practices. One of the major factors is the change from the joint or extended families to nuclear families in the original dwellers of this area. And the subsequent change in ownership of property.

The joint or extended families, which were structured according to orders of castes or occupation as prescribed by tradition, slowly dissolved due to evolution of new socio-economic orders based on modern concept of equal rights and opportunities, the advent of modern professions based on university education, democratic political representation, 'freedom of enterprise'.

These factors have expanded the dimensions of interactions of the traditional man greatly. This has led to a pluralistic culture on the one hand and a stress on individuality on the other . The administrative machinery in order to deal with these new patterns introduced the individual ownership of property to

properties owned communally for very long spans of times.

The evolution of new socio-economic classes, based on new professions and spread across the whole spectrum of ethnic groups and caste hierarchies, has expanded the socio-cultural dimensions of the contemporary generations of the people who have inhabited these forms for centuries. The contained dimensions, both perceptual and spatial, of the courtyards while still providing cultural sustainability to a large percentage of the population living here cannot be replicated or retained in its present form , given the changes taking place.

The fact that it is possible to make an instant phone call to any part of the world and make a day-long return trip to New Delhi has larger socio-cultural implications than these simple gestures suggests.

Why is the understanding of a form of another period important to us if we already accept the position that change in time has revealed the need for a newer spatial order?

Since we have established that the city is to be understood as a historical process of evolution, and changing forms constitute different moments in the city's reality, it must be investigated through its constituent parts to understand its complexity. The

spatial order of the past exists in the present , also. The new form, therefore, is a function of the formal order of the past in the historical process of evolution.

**Permanence in Transformation**

The transformations in the form, which had to have the consensus of the community using it in the past, is transformed in smaller segments by a vastly increased number of transformers. Due to the existence of the canonical orders the `locus` of the urban form remains while its cells undergo major changes. The elements of this structure, which transcend change to acquire permanence in the urban structure, become pivots providing for continuity to exist over time in the face of change. In this segment of the city, the temples of Akash-bhairav , the temple of Machindra Bahal, the temple of ASAN and their "chowks"(squares) are such pivots which give spatial articulation to urban nodes.

fig.26

fig.27

fig.25

The diagonal space of ASAN has not only persisted physically for over ten centuries but has acquired major significance in the larger urban context over time.

" Such spaces which participate as original events in the formation of the city endure and become characteristic over time, transforming or denying their original function, and finally constituting a fragment of the city-- so much that we tend to consider them more from a purely urban viewpoint than from an architectural one<sup>9</sup>."

The architectural layering on the street facades are evidence to the time gone by and the different eras it has seen through. The variations of the different human activities in the space at different times of the day and different times of the year demonstrate the temporal dimensions of the space in contemporary times.

Neighborhoods and urban spaces are known by the associational significance that particular temples, urban artifacts or events acquire over time. The sense of place and its corresponding name or identity is implicitly understood by the people who live there; it subsequently becomes explicit where it is understood by the city dwellers at large.

Interestingly , this pattern by which urban spaces and regions acquire names is something which persists even today in the manner in which newly developing areas of the city acquire their identity.

The concept of religious rituals and processional movements as a general framework for structuring urban space has been a fairly universal phenomenon. The Asan area of the city itself has derived its strong character from the various festivals and processions which move through this space in its pre-defined route, at pre-determined time intervals<sup>10</sup>. Gustchow cites

fig.22

fig.23

the festival of Indra-Jatra where certain deities are taken annually in a chariot through this diagonal. The processional movement, which gets extensive participation, takes its ritual turn at the square of Asan.

Although today it has changed considerably, traditionally the architecture of the street along these processional routes was much more elaborate than in the inner and the secondary streets. The temporal dimension that such celebrations endow the urban environment with become in time reinforcements which support its progress and evolution. This dimension threads the past, present and future , giving the built-environment the stability and the sense of an evidence of the passage of time. A point of reference identifiable with the perception of the future.

fig.24

The processional movements and the space which ordains their route in the city further interconnect the temples and other urban artifacts spread in different quarters of the city into the larger urban fabric. They become markers of events in history and of recurring events in contemporary times.

Although a number of local residents have left due to lack of space arising from the internal densification, most of the original residents have stayed back despite

repetitive sub-division and decrease of space.

The extremely high cost of land and housing in the newer areas of the city is an important factor but not the only one. The life-long values and association to a certain nature of space and the proximity to associated activities it provides are the larger factors.

It also explains the importance of sustaining in the environment recognizable patterns and landmarks for the psychological well-being of the dweller, or the imageability of the city.<sup>11</sup>

**The  
Contemporary  
Role Players**

The existence of a number of institutions and their interaction with the urban environment has determined greatly the pattern of transformations of the built fabric in this area<sup>12</sup>.

Although a number of socio-cultural institutions from the traditional culture still exist and exert considerable influence over the day to day life, for our purposes we shall restrict our observations to those related to the urban space and environment.

Prominent among these are the **Guthi foundations**, The Town Panchayat ( the local

city government) and its local Ward office and the Kathmandu Town Implementation office. There are a number of associated bodies like the Department of Archaeology which works at times with the Guthi foundation and the Department of Building and Physical Planning which in this case supervise projects of urban conservation.

The **Guthis**, which are essentially trusts, were formed initially with the religious orders established in the medieval period. A **Guthi** was established for every particular religious order for the upkeep of the Temples, the members belonging to that community and the expenses involved with the annual festival associated with these orders. A land was set aside for this purpose and the produce went towards the expenses. Eventually the members of this community sub-divided land and urban property for individual usage. This led to changes in the form of the urban property . In order to derive maximum returns on the market value of the property, the individual segments of the urban property are being rebuilt as multi-storied buildings.

However, due to the existence of the Guthi, the basic structure of the space cannot be changed and it remains constant. The phenomenon of illegal encroachment on public or community space is not absorbed here as such spaces always have associations with religious or cultural artifacts, whose

importance is endorsed by virtually everybody.

The Town Panchayat, which is an elected body, acts essentially in a regulatory capacity. The intensive building activity that this area is going through is regulated through the process of approval of plans by the city office. The city is divided into wards and it is headed by the Chairman of the Ward. The ward chairman by virtue of being closely tied to the area and the community intervenes in day to day resolution of issues in the community. He also pursues the matters of collective action for the environmental improvement of the area. More than any other entity the Ward office seems to be responsible for the day to day management of environmental issues<sup>13</sup>.

The Kathmandu Town Development Committee, a combination of administrative and technical staff is responsible for the formulation of the regulations, which essentially are based on arbitrary concepts of floor-area-ratio, building heights, and certain building standards. It also is given the added responsibility of ensuring that these arbitrary regulations are carried out in certain key areas of the city.

The other group which comes to the fore in the development of these traditional parts of the city is the urban conservation group,

consisting of the Department of Archaeology which designates artifacts and sections of the city as zones of preservation and the Department of Building and Physical planning which provides the technical support.

So in effect what we have here is a control scenario as follows: the city office which is politically motivated and regulatory, it sits away from the locality; The TDC which formulates regulations on its own criteria; The chairman of the Ward who is very active locally without any proper technical support, his interest is both political and societal; and the conservation group whose attempts at recreating forms of another time without envisioning what an urban form today could be.

By recreating forms of the past as conservation or regulating it in a piecemeal manner through arbitrary standards, we are on one hand depriving the urban environment to take advantage of its natural dynamics in the process of its evolution in time, and letting a heavily pressured urban structure loose its physical and perceptual/visual coherence on the other.

The roots of the form of Asan occurred as a result of a coincidence of events in the history of the city. The urban form derives its `strength` from the understanding and values that existed in the society at various levels of its hierarchy, and the

vision of urban form manifested in this understanding. Today, despite the heavy pressure of development the physical structure of this form persists through its change; that is its 'strength'. However, too rapid and visionless change may run over the 'footprints' and the city will lose a coherent part. The way of managing physical change in this form should emerge from a redefinition of significance of this urban form in the overall city context of today. Its significance, however, should not be seen simply in a historicist fashion but in terms of changes the form has already undergone and undergoing today.

## NOTES

1. Initially, the monks were required to observe celibacy while being part of the monastic order. Later however they married and started raising families, which placed different requirements on the space. The courtyards got subsequently to house the various families.

2. Shrestha, C. B. et al. Historic Cities of Asia: Kathmandu. CNAS, Kathmandu. 1986

3. Slusser, Mary. NEPAL MANDALA vol.1 Princeton University Press, Princeton.

4. Gustchow, Neils. Kathmandu: symbolism of the city in space and time. Urban Space and Ritual. Gustchow and Sieverts .....eds. 1978

5. Territorial depth in a built-form is defined as the progressively increasing control over space from public space to private territory. (from Transformation of the Site by N.J. Habraken).

6. Steward, Julian. Theory of Culture and Change. Chapter 2.

7. These observations are based on my conversations with the Chairman of the ward, residents of ASAN, and Mr. PAS Pradhan a planner in the government.

8. Webber, Melwin. The Urban Place and The Non-place Urban Realm. Explorations in Urban Structure. Webber, Ed. University of Pennsylvania Press, Philadelphia.

9. Rossi, Aldo. The Architecture of The City. MIT Press, Cambridge. Pg. 115.

10. Op. Cit. Gustchow, Neils.

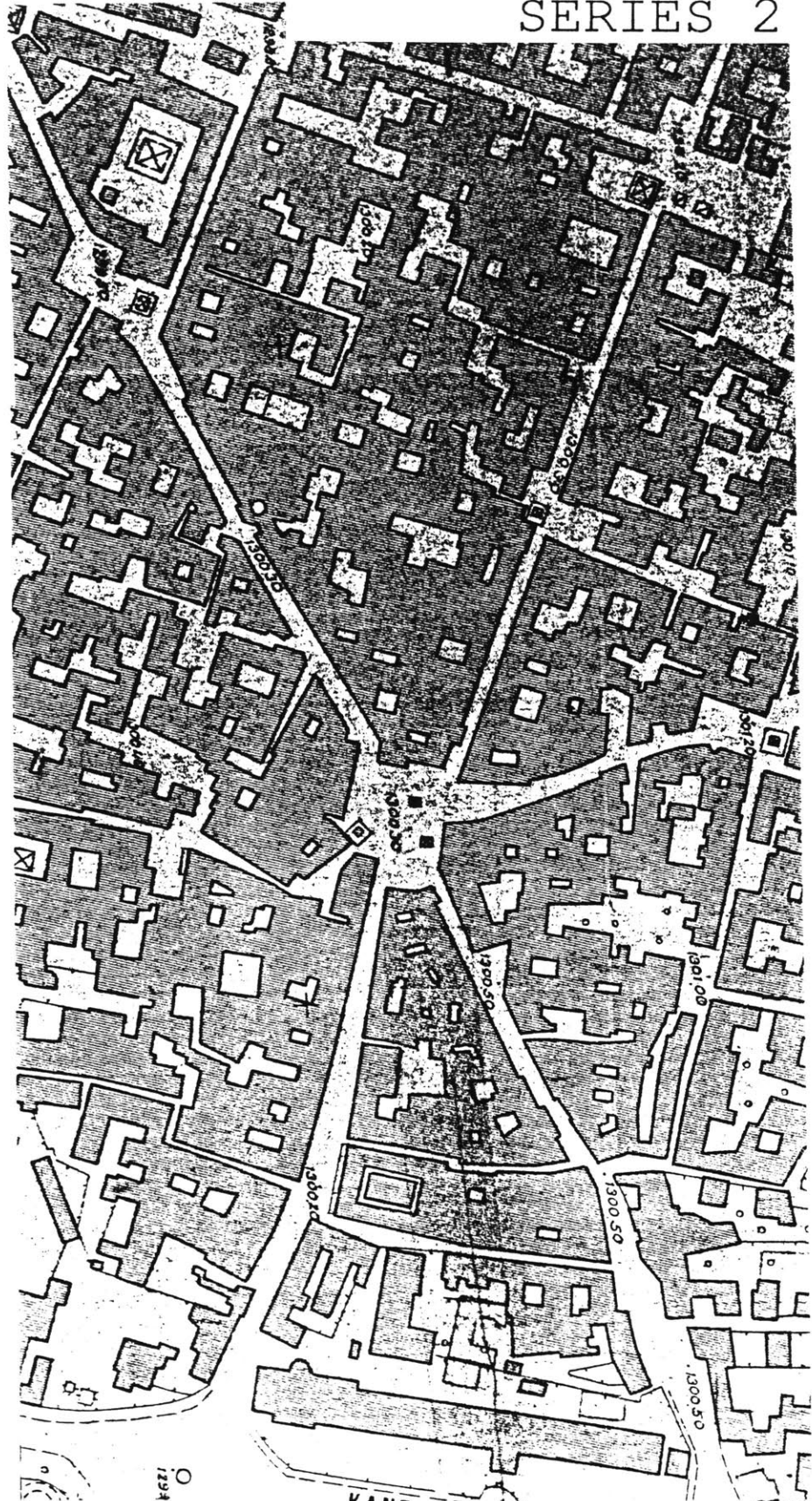
11. Lynch, Kevin. The Image of the City.  
MIT Press, Cambridge. 1960.

12. The information and analysis of the involvement of the institutions is based on interviews with Mr. PAS Pradhan, planner in Kathmandu and Kathmandu Valley: Urban Land Policy by PADCO inc.

13. In the summer of 1987, I interviewed a number of people from the office of Asan Ward , as well as the chairman of the ward.

Fig.16 ASAN in  
Kathmandu.  
Plan of Study  
Area.  
scale 1:2000

(source:  
Kathmandu Water  
Supply and  
Sewerage  
Project).





**Fig.17** Bird's eye-view of the old city with the buildings of the Darbar square flanking the housing quadrangles within.



**Fig.18** The Darbar Square of Kathmandu, the ancient center of the city, which housed the king's palace once.



Fig.19 The ancient diagonal trade route between India and Tibet. It is a lively bazaar today with Asan as its focus.



Fig.20 Bhedasin, a commercial street off Asan.

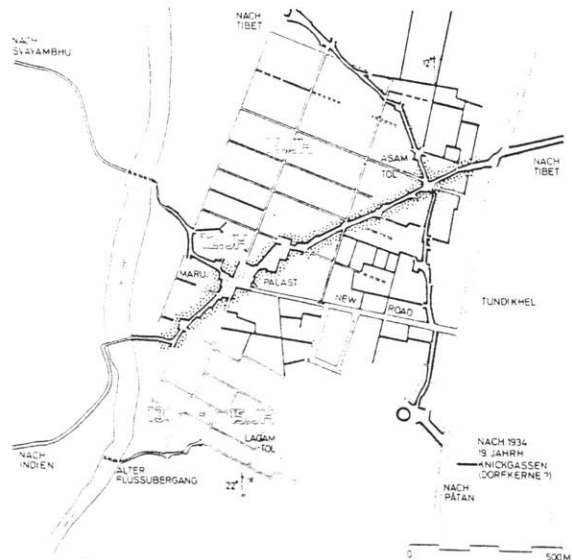
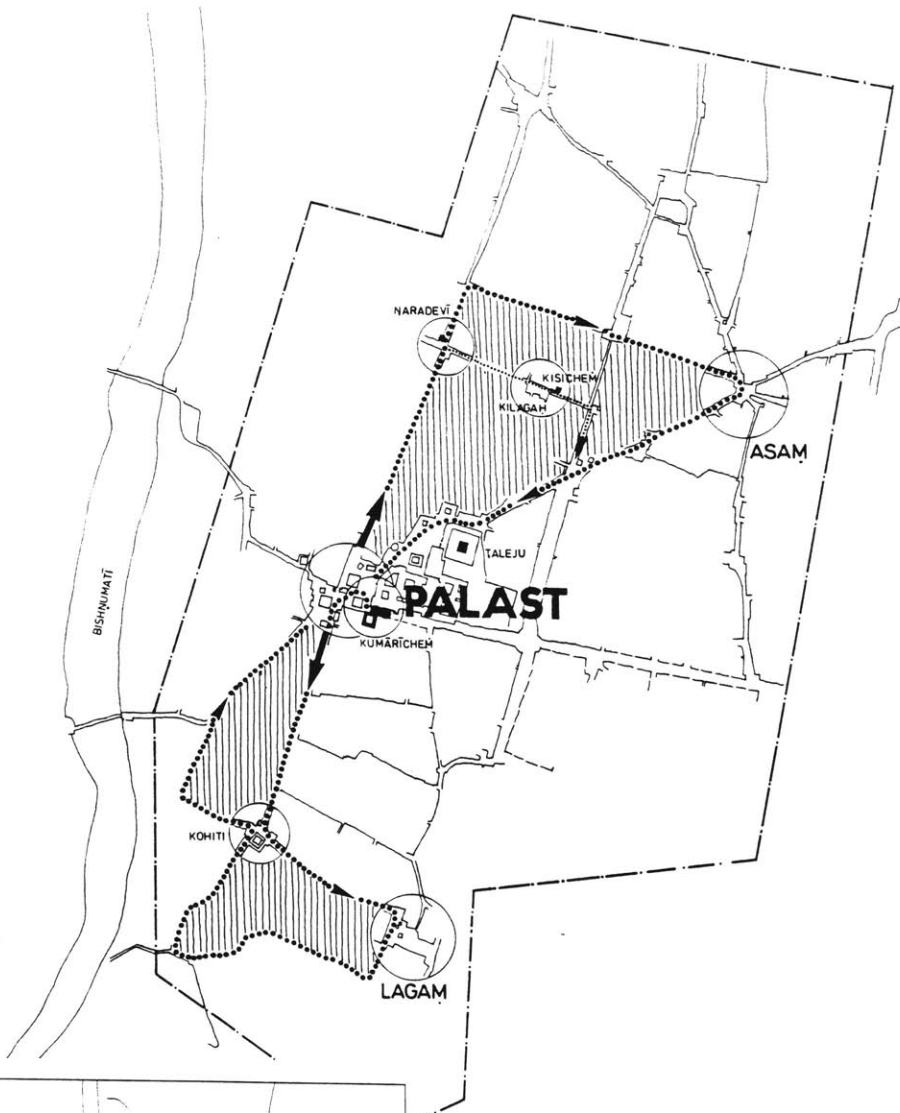
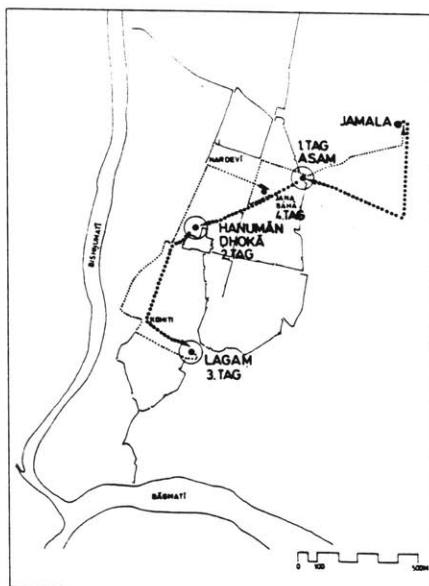


Fig.21 Diagram showing the diagonal route in the city.



**Fig.22** Plan showing the route of the annual festival of Indra-jatra.



**Fig.23** Plan showing route of the festival of svet-matsyendranath-jatra.

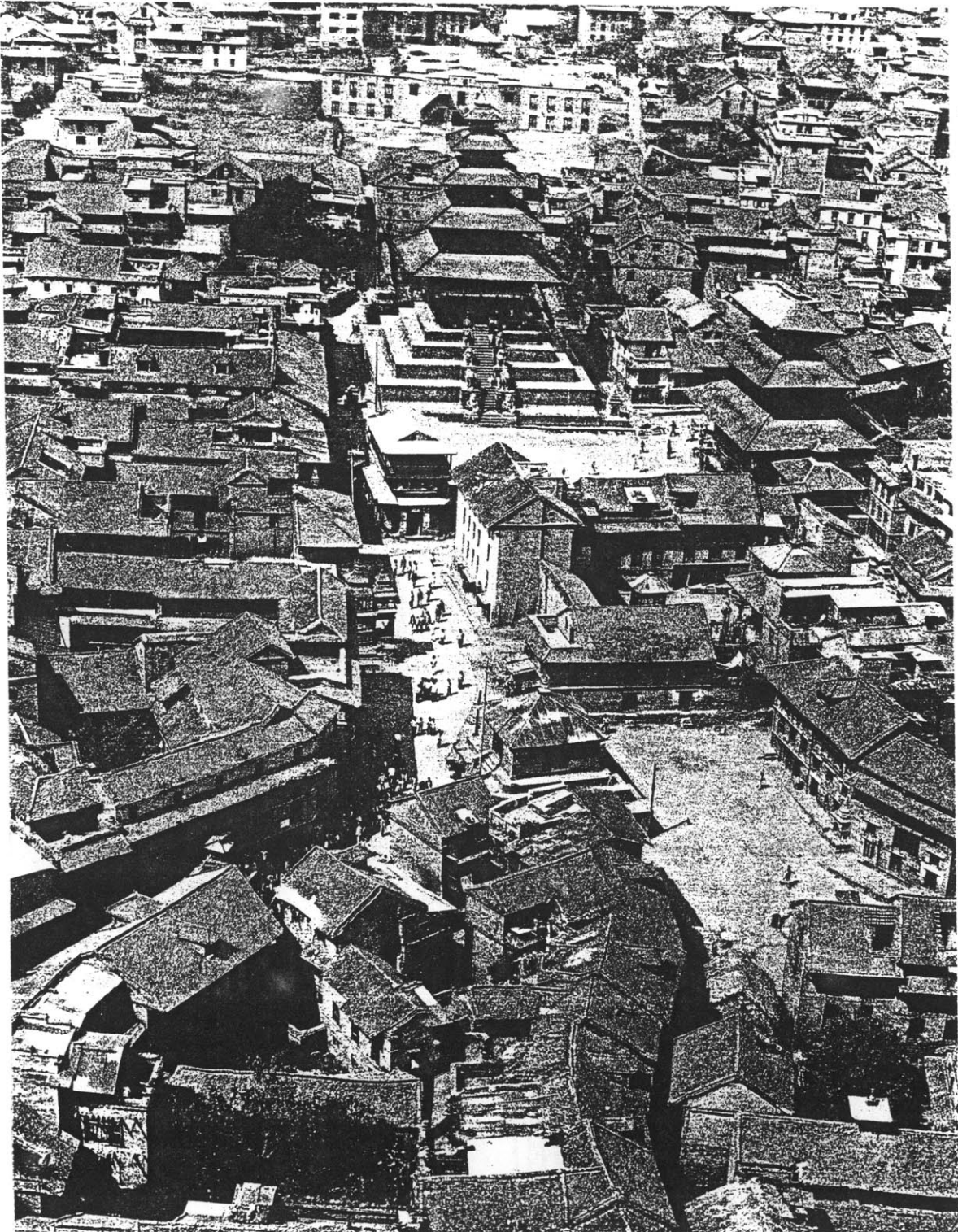


Fig.24 The urban form of Bhaktapur, another city in the Kathmandu valley. The processional routes of the annual festivals and the temple squares become the framework within which the housing courtyards are formed.

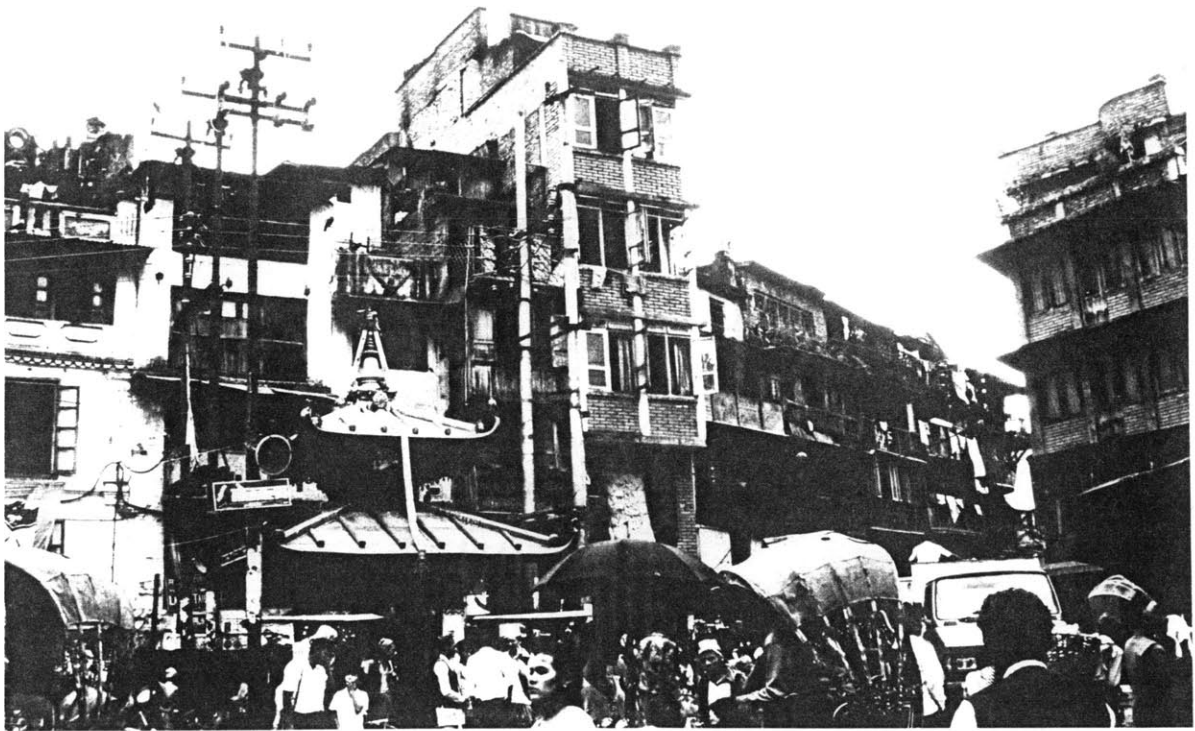


Fig.25 The square of Asan. The change in the architectural character of the street facades are seen in the renovations, division and reconstruction of buildings over time.



Fig.26 Indrachowk: another major node on the diagonal route.



Fig.27 Asan square with the temple of Asan Ganesa.

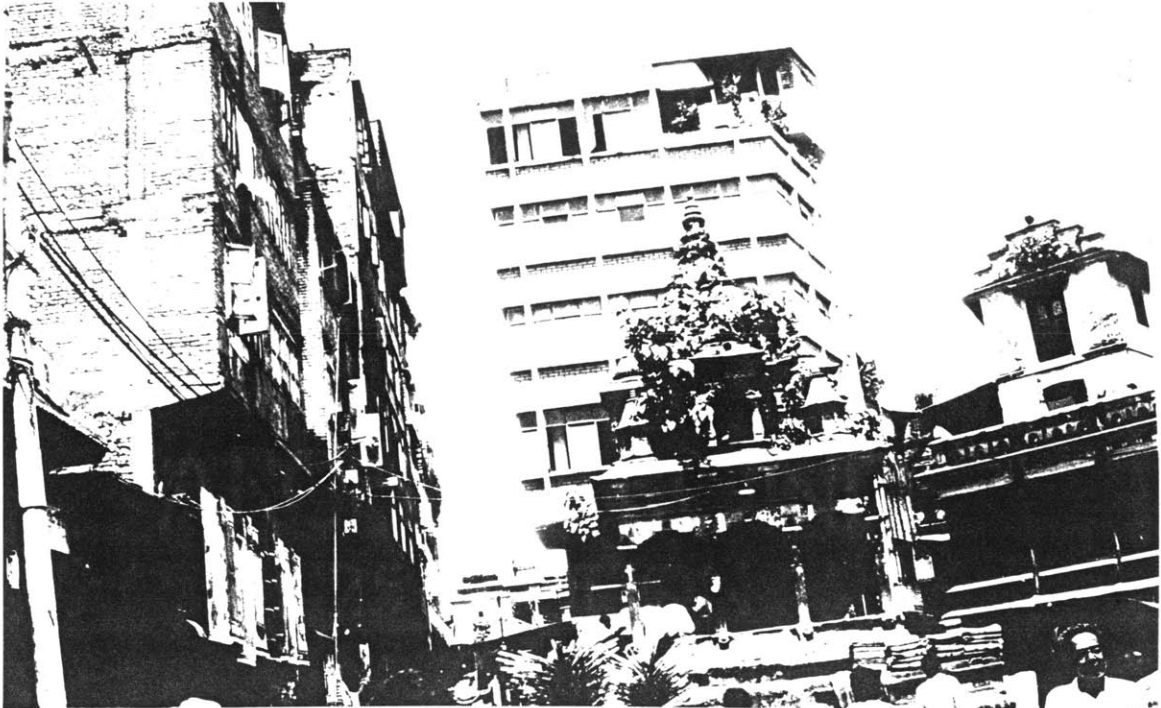


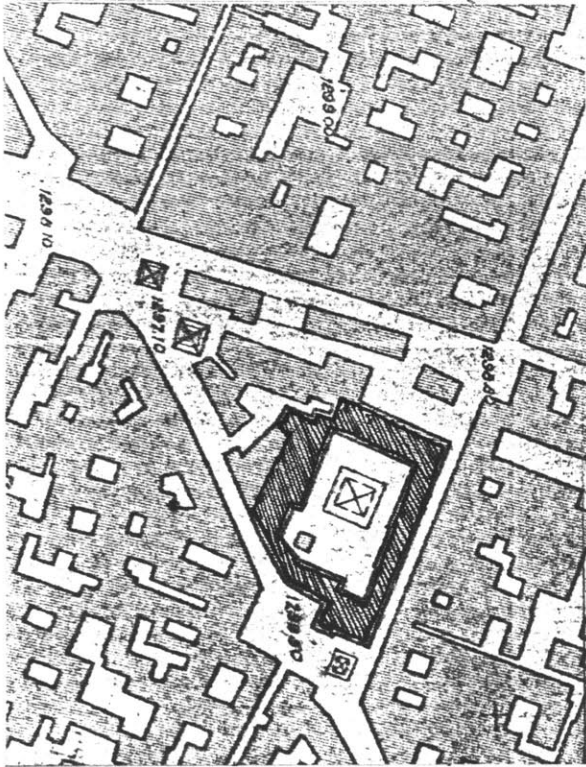
Fig.28 A street off the diagonal route of Asan. Development pressure results in high-rise buildings and commerce on the upper floors.



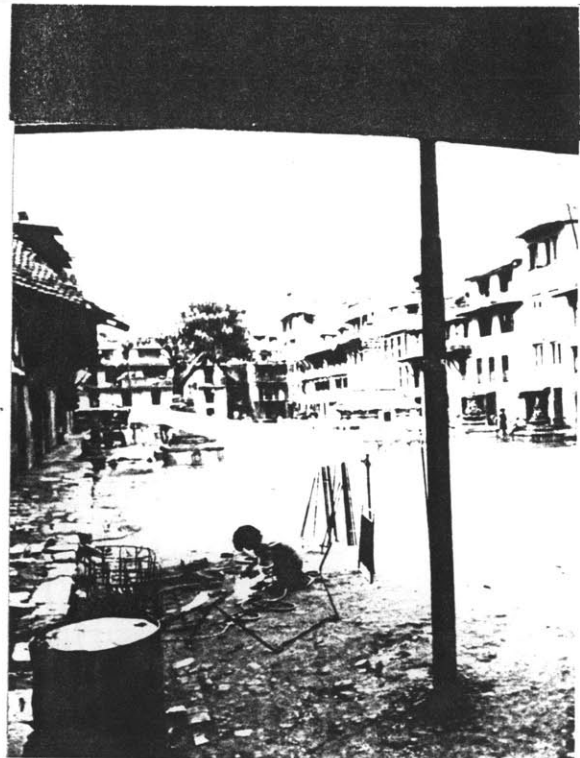
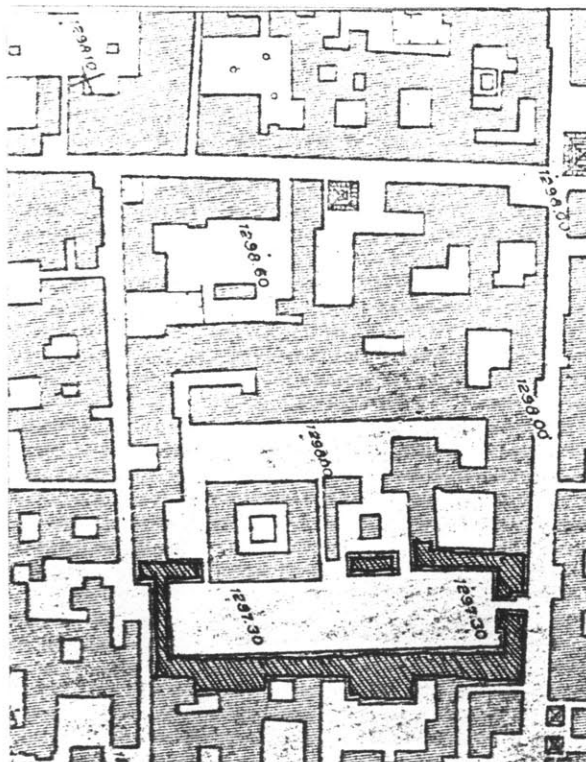
Fig.29 Hill migrants await work near Asan square.



Fig.30 A side street off the diagonal leading to a courtyard house.



**Fig.31-32** Machindra Bahal, Asan. Plan and courtyard view of the multi-family housing resulting form a former monastery.



**Fig.33-34** A Tole, Jocche. Plan and courtyard view of a multi-family housing consisting of families of a particular caste or occupation.

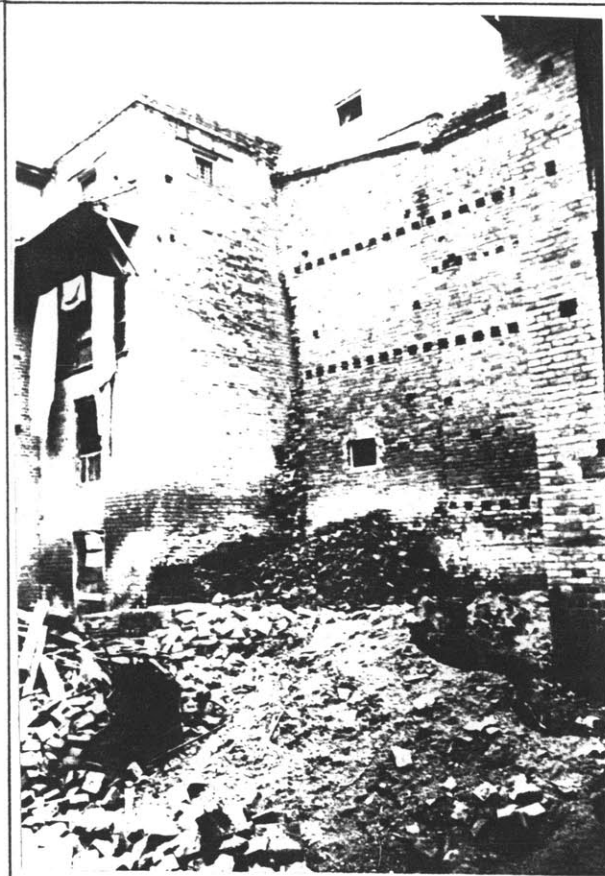


Fig.35-36 Reconstruction in a joint family courtyard house. Patan.

Fig.37-38 courtyard house in Asan.

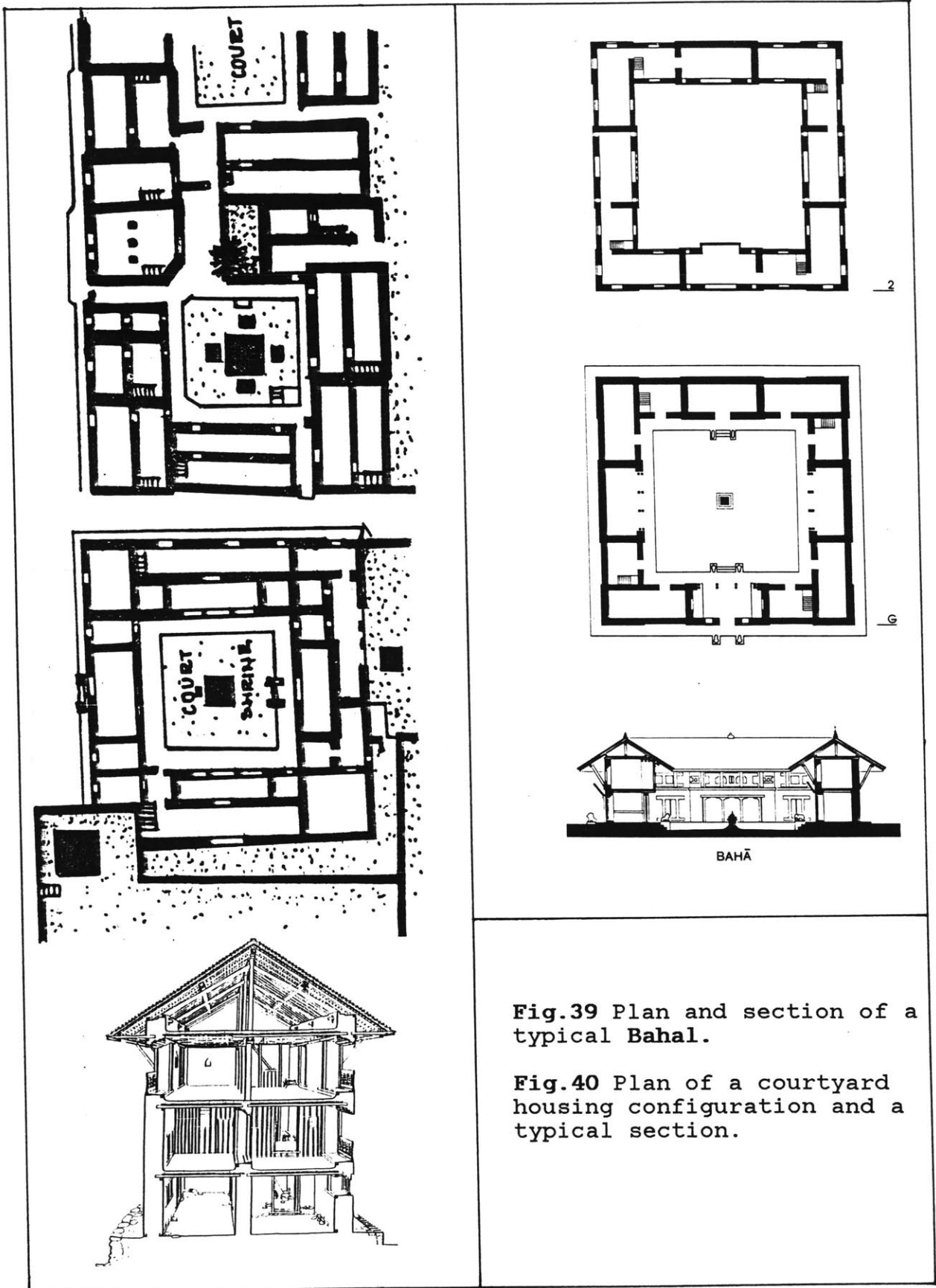


Fig.39 Plan and section of a typical Bahā.

Fig.40 Plan of a courtyard housing configuration and a typical section.

## CHANGE IN THE EVOLUTION OF URBAN FORM: **BANESWOR** IN KATHMANDU

In the process of urban environmental change, the urban form which has existed over centuries exhibits the capacity to adapt to changing socio-cultural processes in time. The physical structure of the urban form of the last half-a-century outside the old city reflects the changed socio-cultural processes in the urban environment today.

This urban form depicts another moment in the historical process of evolution of the city. It becomes the result of a new understanding and agreement within the powers who act in the process of its formation. However, the traditional urban fabric, which exists and functions today very much, becomes the physical reference along which the new form has evolved in time.

The roads leading from the old city to the other towns and important nodes became the general framework on which the contemporary peripheral form has evolved. One of the oldest of these connector roads is the road joining the Asan area to the other major city of the valley, Bhaktapur.

fig.14

fig.41            The region called **Baneswor** is situated on this road atop a buff between two rivers. The name Baneswor is given to this neighborhood from the name of a temple within this area, where the name of the deity happens to be Baneswor. As mentioned earlier, the phenomenon of urban regions and spaces deriving there identity from the names of elements of significance continues today even in the relatively recent sections of the city.

**The Formation of the Physical Structure**      As discussed earlier<sup>1</sup>, once the political and socio-cultural order that established the Mandala form gave way to an entirely different order the physical form of subsequent urban growth changed.

fig.42            The first stage in formation, here, is the consolidation of the built-form along the length of the connector roads. The builtform itself is not consistent. It is a mixture of three to four floors buildings along the street edges, of similar type to the traditional architecture, and large mansions or small bungalows set away from the street within high boundary walls. Basically the consolidation of a settlement along this line sets the grounds for urban development on the farmland this road runs through.

fig.47

fig.61

fig.44 In the next stage, we see tracks developing perpendicular to the direction of the connector roads. The larger framework for the development of form becomes the divisions of the farming property, which is eventually acquired by the brokers and subdivided for sale. Thus, the physical pattern of the emerging urban form becomes the function of the geometry of the properties which are available before the others for development .

These tracks become secondary roads in the peripheral form and they are formed on the foot-tracks running through the fields. In time as development consolidates in this direction these tracts become vehicular roads. The role of the broker becomes of paramount importance here, as he becomes the channel between the farmer who owns the land and the people who are moving in to buy land for construction of houses.

fig.45-46 The tertiary roads, which originate from these secondary roads, don't follow any previous markings on the land. They are solely the result of the activity of the brokers.

The function of the street as a space used by the community for social activities at an urban scale as experienced in the traditional form is lost here<sup>2</sup>. The formation of the street initially is the

result of introducing access to more land for development. We have discussed already as to how in the process of introducing access to land the new hierarchy of the urban structure develops.

Thus in the new hierarchy the primary street meets the need to interconnect various parts of the city together. It subsequently becomes a major communication channel.

fig.49

The secondary street is a function of the old farm trails. It subsequently forms the linear access space along which the new development takes place, and the framework for alignment of contemporary urban services. The detached cubic forms, of the houses set within boundary walls, negate the street as a social space at an urban scale as it existed traditionally. The built form on the street edge materializes as a function of the market forces, i.e. the realization of the economic possibility of the space on street, yet another function of access.

fig.50

The tertiary street is a function of the interest and control pattern of the land brokers. As spaces these streets have the least clarity in terms of direction of movement, edge identity and possibility of future action by the immediate community using it.

The distinction between public and private spaces becomes very abrupt in the form of Baneswor. It lacks, to use John Habraken's term<sup>3</sup>, territorial depth. What exist within the boundary walls is private and what exists outside it is public.

The lack of any socio-cultural meaning at different levels ascribed to the street explains the extremely poor environmental quality of the streets<sup>4</sup>. It is the territorial depth in an environment which allows the community to organize itself and interact at different levels of the urban environment.

fig.59

fig.60

The urban form itself comes into being as a set of detached cubic forms set in walled compounds, the boundary wall becoming the interface between two houses. Over time this form changes in two ways:

fig.53-54

-The cubic forms of the houses grow vertically upwards or through further subdivision and sale of the property; the building of the upper floors usually comes from the need for more space or to rent out to a newcomer to the neighborhood. The land property is sub-divided and sold when the value becomes high enough to guarantee lucrative returns. It is thus that the fabric densifies over time.

fig.55-56

- The cubic houseform changes through the building along the primary and then secondary streets due to new potentials in commercial activity. So the street starts forming slowly over time as the population increases and there is an increase in the rate of exchange in the area.

**Socio-cultural  
Basis of the  
Urban Form**

The social and ethnic composition of this segment of the city has always been a pluralistic one, since the period the city spilled outside the limits defined by the wall. Although certain enclaves of similar social groups living together did develop, there was no conscious distribution in space of social groups by their caste or occupation by the higher order of control.

- At the beginning of the century, when the Rana palace estates were constructed on the flatlands outside the city, a large portion of the surrounding valley was made accessible for development. Following the example of the de facto rulers of the country, a number of the upper class moved out of the city into enclaves of large mansions set within walled gardens. These enclaves became the progenitor of the new physical sprawl. A number of people from the city and especially those who were migrating from other parts of the country came to settle on these access roads.

Although the settlement pattern was spontaneous and thus absorbed a mixture of ethnic and social groups, the desire for spatial proximity among various ethnic groups from the hills and the southern flatlands has led to the formation of specific enclaves within the overall area known as Baneswor. But none of these enclaves are large enough either as ethnic enclaves or as enclaves of certain economic class, as the enclaves are experienced in the 'planned cities'.

Two other things regarding spatial distribution surface here. One is that the caste factor, although significant in the prevalent social practices, today, appears to have lost its significance as the factor of spatial distribution within the city. The class factor seems to have given way to the emergence of a socio-economic class order, more or less corresponding to the hierarchy established in the government employment, which also happens to be the the largest single employer in the country.

In Baneswor, the physical formation consists of a mixture of different social pockets. The different social pockets could be socio-economic groups staying together, ethnic groups staying together, or a combination of the two.

But this pluralism has other dimensions too. The basic social in Baneswor, unlike the multi-family community of Asan, here becomes the nuclear family. The lack of cultural and religious practices in the public space is also a function of the tendency towards focussing the nature of social activity towards the center of this social unit, the house. It can be illustrated by two scenarios.

Firstly modern communication and mobility make it possible to interact at much larger distance scales within the city , therefore the people involved in a certain type of social interaction may be distributed spatially across much larger dimensions.

Secondly, the associations you develop with people, in proximity within the neighborhood, over time are exercised mainly within the realm of the house.

However, the detached cubic house form of the nuclear family does present choices to the individual, previously non-existent. For a majority of the individuals migrating from outside it becomes an act of establishing your marking in the city. From then on, it is a continuous process of transforming the site in time as it presents new opportunities and as your own resources increase in time. It becomes a process, for a majority of the people, which

runs parallel to their own efforts to find a foothold in the mainstream urban life.

Over time, this houseform sustains the individual economically. In most cases, the upper floors, which are built in the second stage, become rental spaces for newcomers to the city. A fairly high percentage in this form appears to be dedicated to rental space. The growing land value and the need for commercial space along the streets add to the economic potential of the form over time. For the lower middle class and middle class families, the house and the land become the only stability in the course of their lives in a period of economic instability<sup>5</sup>.

One of the residents, whom I interviewed recited this process which he underwent. He is a middle rank employee in a government owned company, who came from outside the valley to the city over a decade ago. The size of the land which he bought from the broker was related to what he could afford. There was no fixed sized plot available. The broker simply divided the size he could afford from the land he controlled. The broker subsequently provided access. While the first floor was under construction the family stayed in the neighborhood in a rental accommodation. It moved into the house when the first floor was habitable. In time they could build

another floor, which they could rent to a family which had moved there after buying a piece of land nearby. The new family was undergoing a similar process. In time, when the land value got fairly high, the family could sell a part of there land at a profit, which they could use for other purposes.

**Imageability  
in the Urban  
Form**

The urban nodes that have emerged in this urban structure are function of the intensification of activities in space . Unlike the nature of the nodes in the Asan, the nodes here clearly lack the references of symbolic physical forms. Thus the urban node in this urban form really exists due to the energy of the activities it accommodates, rather than having a clear spatial definition which comes from symbolic elements persisting in time through change.

Nodes, as Lynch defines them, are the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling<sup>6</sup> . Nodes may be simply concentrations, which gain their importance from being the condensation of some use or physical character.

fig.43

In this respect, the main node on the main street acquires its temporal dimensions from two sets of activities primarily:

fig.51

fig.52

Firstly, as a major inter-city transportation node, where distinct peak hours are experienced; secondly, as major center for fresh food outlet, where different sorts of fresh food arrive at distinct times of the day from various parts of the country.

The passage of time is perceived to an extent in the continuous construction and addition of forms in space. However there does not seem to exist a situation where an artefact in space transcendent the inherent dynamic of the physical structure to lend it a certain measure of referential stability.

Although pattern of socio-cultural interactions may have changed today, we need to investigate it in today's context. Its validity lying in the fact that an urban situation is, more than anything else, about exchanges.

The ability of the urban form to foster social interactions at different levels of its physical structure is a function of its coherence in its dynamic pattern and its ability to generate symbolic elements.

Perhaps the pluralistic social base, the lack of consensus that resides in it and the stress on individuality in the predominant way of life, illustrate a transitional phase

in the urban structure which is not prepared to generate symbols, symbols which emerge out of agreements within the urban environment. Perhaps it is true. But what it shows is a resultant environment which has a poor mental image<sup>7</sup> in the minds of the residents and visitors alike. The physical environment outside the house has acquired a negative image for most people, something to be tolerated, somehow, in their daily interaction with the "city"<sup>8</sup>.

In my experience, the mental image of a visitor to the city is never one of sections of the city like Baneswor, but rather of the old form. The tourist brochures or the famous travel books never extend beyond the limits of the Malla cities. The response that a resident of the city will give on his image of the city needs no guessing.

The poor physical nature of the streets, lack of distinct edges<sup>9</sup>, lack of any visual and perceptual stimuli, I think even forces the individual into the retreat of his house<sup>10</sup>. It is a very clear instance of the nature of the physical environment being a discouraging or negative factor in the possibility of a certain socio-cultural dimensions to emerge.

Despite the fact that the interaction pattern of the family today has come to focus itself within the house today, the physical environment has not become

redundant as a public social space. A number of patterns in the city point otherwise. It has been my experience that physical spaces in the city which still command symbolic significance and clarity in its urban structure are becoming increasingly popular as social spaces for the entire spectrum of age groups. Perhaps it is no coincidence that a number of these spaces occur in the traditional form.

Some of the temple squares and other nodes in the traditional form have emerged as popular places of social interchange. Apart from their religious and retail significance, these tend to be popular because of the information in its various forms( like newspapers "legal and illegal", gossips and rumors that circulate about national and international affairs) that circulates from these spaces. But the physical nature of the space and the symbolism inherent in its elements seems to become critical in their functioning. The ASAN Square and the numerous nodes around the Old Palace Square are some of these spaces.

A number of enclaves in certain segments of the old city have emerged increasingly popular with the tourists in the city. A number of facilities and activities related to this phenomenon have sprung up in the old streets. These enclaves become very popular

with the younger generation , where they meet each other and new faces from other parts of the world.

**Consensus as  
Collective  
Action**

The site as a human artefact connects to the laws of human relations through the physical nature of its transformation. Consensus among powers must inevitably be an integral part of the site<sup>11</sup>. For the site to evolve in health over time where its formation is not only corresponds to socio-cultural processes but expands the possibilities of social interactions, the powers that inhabit it must find consensus that allows them to meet the following conditions:

There must be a sufficiently balanced hierarchy in the order of form. The site that tilts towards higher level configurations becomes rigid and uniform. The site that tilts towards the lower levels may become fragmented and incoherent.

There must be territorial clarity on the site. There has to be clear definition as to who controls what space in the built-environment.

There must be structure: a sharing of values.

Here, consensus should not be misunderstood as a state of being without human

subjectivity . Rather it is establishing a meaningful hierarchy among the powers who act on the site, where each plays its role in the making of form in relation to other.

When the hierarchy of powers does not function through a consensus in the act of managing form, it results in the fragmentation of the physical environment. This seems to be the case in Banewor, where there does not seem to be a clear consensus among the population. The hierarchy may exist in name but it is definitely not active in a coherent formation of the physical structure. The actors in this hierarchy have been described later.

If lack of a common understanding and the purpose that resides in it is a characteristic of the population which inhabits this place, then some of the recent happenings signal in other directions.

The haphazard growth of this area has resulted in a number of environmental problems in terms of drainage of streets, surfacing of streets etc.

Various modes of modern collective consumption like water supply, sewerage, electricity and telephone etc. are desired, but the nature of the growth pattern and the cost involved have rendered the city authorities impotent towards their

provision. However, there is a growing move towards collective action to meet these needs. A number of instances from this area can be discerned as proof of this phenomenon. It shows a new basis for the consolidation of a contemporary urban community.

The deteriorating physical form becomes the focus around which a new community generates its consensus. The community then seems to be seeking to re-establish the hierarchy with the higher powers by trying to activate the hierarchy through its demands for collective urban services.

### **The Role Players**

In the formative process of the urban structure, a number of actors can be identified as playing influential roles. Foremost among these are the brokers, who mediate in the transactions of land for development. The main reason for this phenomenon is the lack of any concrete governmental initiative.

As mentioned earlier, access becomes the most important criteria for the evolution of this form, and it originates in the form of connector roads formally introduced. The development spreads from these access roads into the farmlands. Due to a lack of co-operation among land-owners, adequate access

to these adjoining lands is very irregular. The result is an extremely inefficient type of growth that is also quite costly to service with infrastructure. The lack of land-owner collaboration in land development is due to a variety of factors including: absenteeism, lack of acquaintance, different needs and aspiration personal disputes etc<sup>1 2</sup> .

These impediments to land development are to some extent overcome by the intervention of local real estate agents, who serve as brokers between the farmer/landlord and the prospective buyers of land. In this process the brokers control the direction of the feeder roads and access to other land areas<sup>1 3</sup> .

In general a broker or group of brokers operate in specific geographical areas. As a rule they possess a sound working knowledge of laws and regulations pertaining to land and maintain good relations with the `personnel` in the local land revenue, survey, maintenance and legal offices. The brokers operate in the traditional fashion relying largely upon confidence and trust among the parties involved.

In a given locality, brokers prefer to deal with owners of large piece of land, areas of persistent quarrels between tenants and

landlords, and areas off the secondary roads but with the possibility of access by a feeder or side road. The broker's aim is largely to introduce access roads to the adjoining property so that it may be developed. Their goal is to obtain the front parcel to permit access, gain the co-operation of the landlords and the tenants along the projected path of the road, and sub-divide the their land, and to sell the subdivided land with road access at a higher price<sup>14</sup>.

When the general agreements with the owners of the land are complete, the broker purchases the road access plot outright. Potential purchasers are organized into groups depending on their ability to pay a deposit and pay off the price of the plot. Plots are later sub-divided according to the respective purchasing power of the buyers resulting in a curious mixture of plot sizes and irregular development.<sup>15</sup>

Ownership of access roads is held in the names of the brokers to avoid encroachment. The new plot purchasers on each side of an access road cede the road right of way to the broker. The direction then that the road takes is dependent upon the willingness of landlords of adjoining land to participate in the scheme. If they chose not to, the road heads off in another direction or is stopped by the broker. Thus, once the access

road is introduced the broker has more bargaining power with the land-owners<sup>16</sup>.

"Akash-Bhairav", a group of land-brokers run by the oldest operating land broker in this area, confirmed the observations made above in tracing their own actions and evolution in time in this area. The man who is heading this brokerage observed that almost the entire land parcelling, which subsequently determined the nature of the form, was done over time by him and a few other brokers operating in this area. The brokerage, which usually operates informally, has in this case been legalized as a firm registered with the city authorities. Subsequently, they have started consolidating much larger pieces of land, which are to be developed as predetermined plot sizes with a certain measure of infrastructure.

The other institutions which exist and play a role within this development process can be described as follows.

The Land Revenue office, which is responsible for the land transactions that occurs here, is an important element which can influence the nature of urban growth, it even today functions according to the regulations laid out for the purposes rendered outmoded long since then. Although it is evident to everyone that the land transactions of agricultural land have taken a different

patterns for different purposes, the legal process involved in land transactions still remains the same as it has been for the past decades.

All buildings that are to be constructed have to be approved by the Town Panchayat, the city office. However, the approval process is based on certain superficial standards of height, setbacks from the roads and location of access points. There are no standards or criteria for evaluating environmental performance of proposed built-form. As no one from the city office goes to check anything anyway, the conventional thing is to have the drawing for the city office meet all these standards.

The Kathmandu Valley Town Planning Office, responsible for the preparation of comprehensive developmental plans, has prepared physical master-plans based on land-use and density. Over the years these plans have been revised a number of times without ever being implemented or even incorporated in some partial way. A number of factors have led to this. Among these are: monolithic concepts of planning models on which they are based, lack of understanding of the local dynamics and socio-cultural change, operating external to the political process where the objectives are formulated purely on technical rationale

of `trained people`. The whole exercise then becomes finding solutions, based on unidimensional thinking, of problems of quantifiable magnitudes.

The office of the Ward Chairman is a local institutions based within the community. The chairman and the members are elected. The function of this institution involves the resolution of day to day issues on social conflict, infrastructure and environmental issues. In a sense they function as the liaison between the ward( which is the administrative boundary of the neighborhood) and the various city institutions. Although this office operates at the level of the community and is more responsible towards the management of environmental change , it lacks the technical expertise to carry it out efficiently. Interestingly, a number of the brokers operate closely with this office and a some of the members of the ward even come from the profession, using it as a stepping stone for politics. The "Akash-Bhairav" brokerage, mentioned earlier, has as its partners members of the ward (ex-brokers themselves), and a number of other office bearers in the city offices.

## NOTES

1. See The development of the classical Hindu city: the Malla Dynasty, part 1 of this paper.

2. refer to pg. of this paper.

3. Habraken, N. John. Transformation of the Site. Awater Press, Cambridge.

4. By socio-cultural meaning at different levels in the street, it is implied that the hierarchy of streets correspond to different activity patterns and socio-religious practices which give each level of street its particular significance. The morphology of Asan reflects this phenomenon.

5. This particular fact emerged in the course of discussions with several people from this socio-economic class in the area.

6. Lynch, Kevin. The Image of the City. pg. 47 MIT Press, Cambridge. 1960.

7. The concept of the mental image that the structure of the urban environment generates in the minds of people is explained by Kevin Lynch in The Image of The City. MIT press.

8. This deduction is based on a number of interviews the author conducted with the residents of this area.

9. op. cit. Lynch. The Image of the City.

10. For instance, it becomes a nightmare for the residents during monsoon to get to their houses from work or vice versa, despite the fact that the terrain has reasonable slopes.

11. Op. Cit. Habraken. pg. 63

12. Kathmandu Valley: Urban Land Policy Study. prepared by Planning and Development Collaborative International, Washington DC. 1986.

13. Ibid. pg.80.

14. Ibid. pg.81.

15. Ibid. pg. 81.

16. Ibid. pg.81.

# SERIES 3

**Fig.41 Baneswor**  
in Kathmandu.  
Plan of Study  
Area.  
scale 1:2000

(source:  
Kathmandu Water  
Supply and  
Sewerage  
Project.)

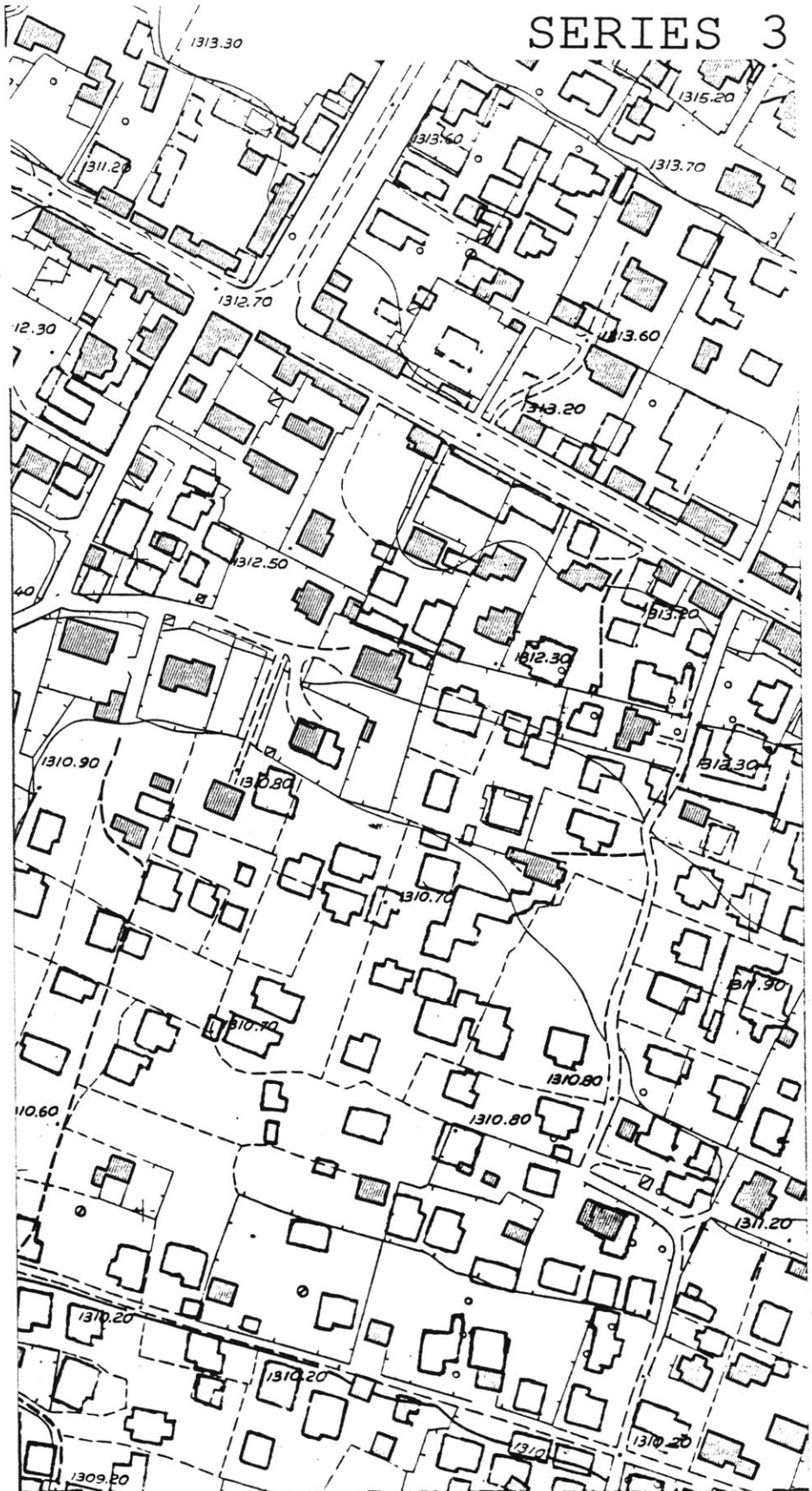


Fig.42 Linear development along main connector roads leading out of the city.

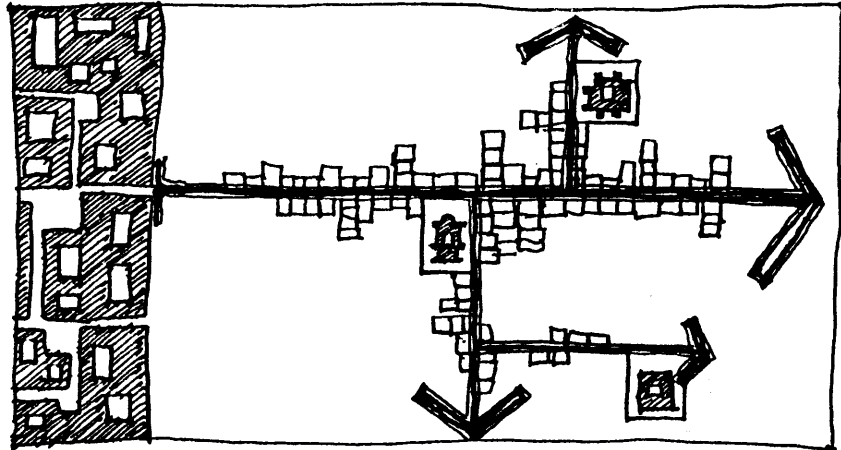


Fig.43 Formation of node along the primary street, the major connector road.

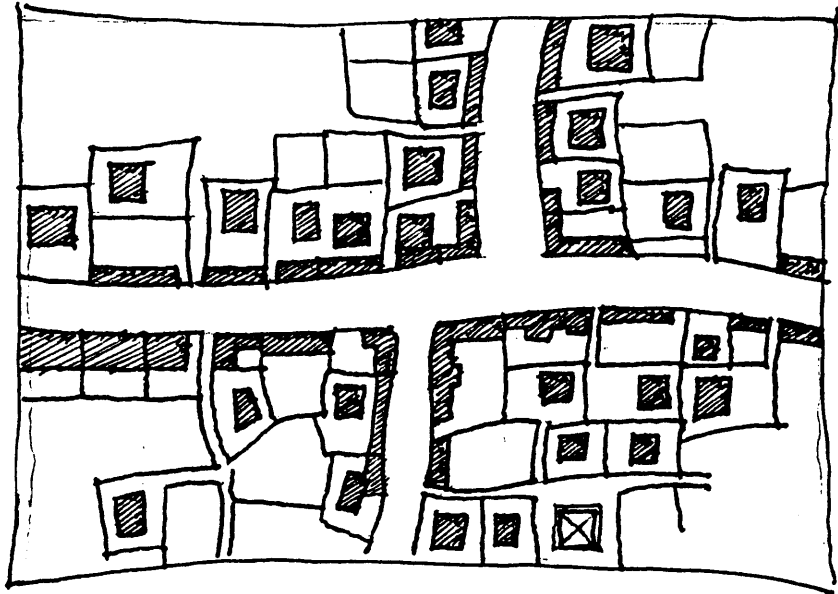
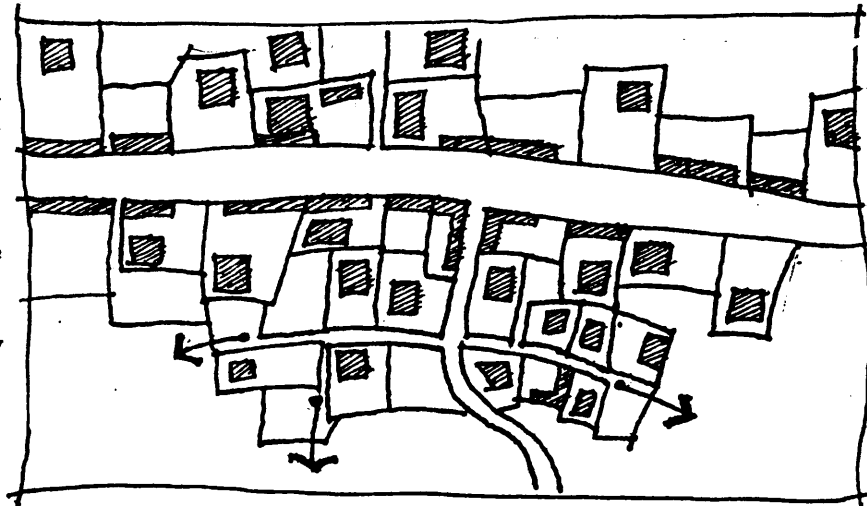
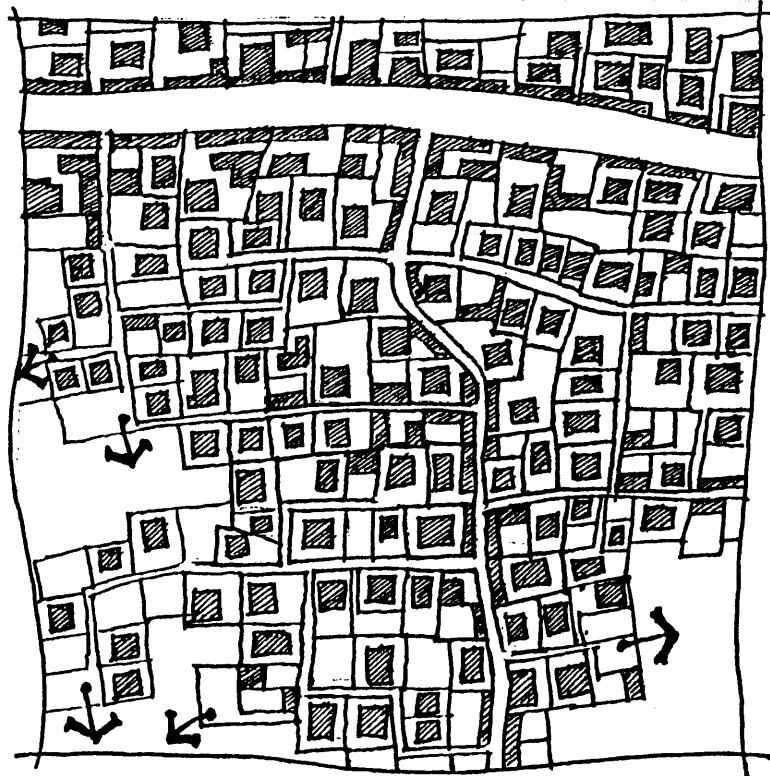
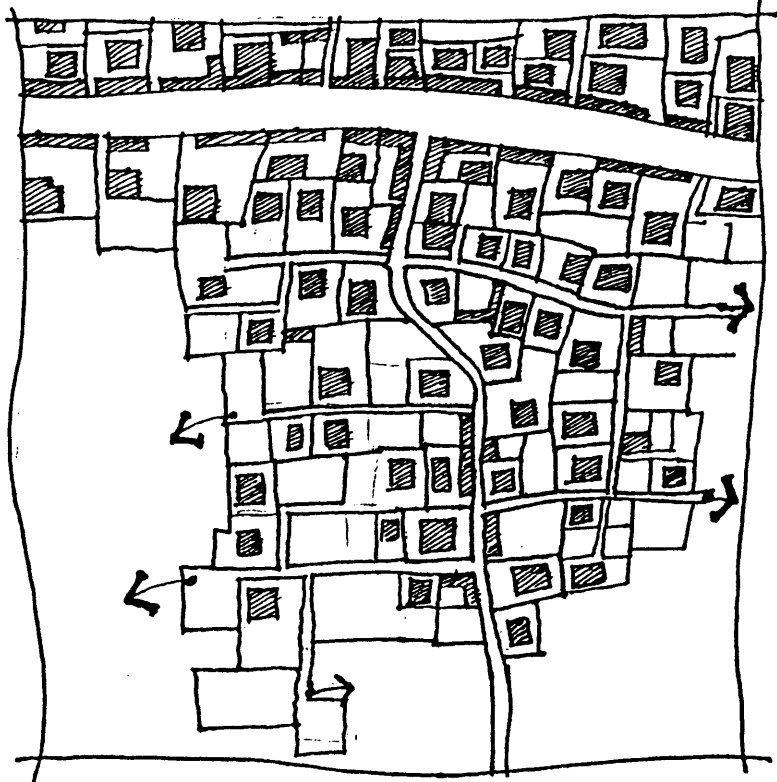


Fig.44 Development along the secondary street, the main access road off the primary street. The arrows point the possible direction of future access by the brokers.



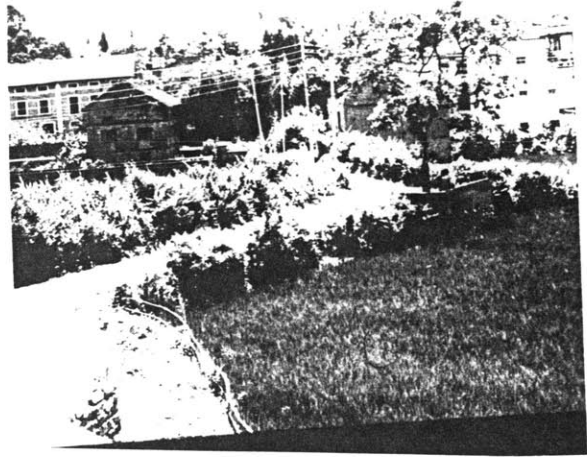
**Fig. 45-46**

The formation of physical structure of the study area. The secondary street acquires its streetform as the area develops. The tertiary streets started by the brokers connect with other tertiary streets. The arrows point the possible future directions that the tertiary access of the land-brokers is likely to take.





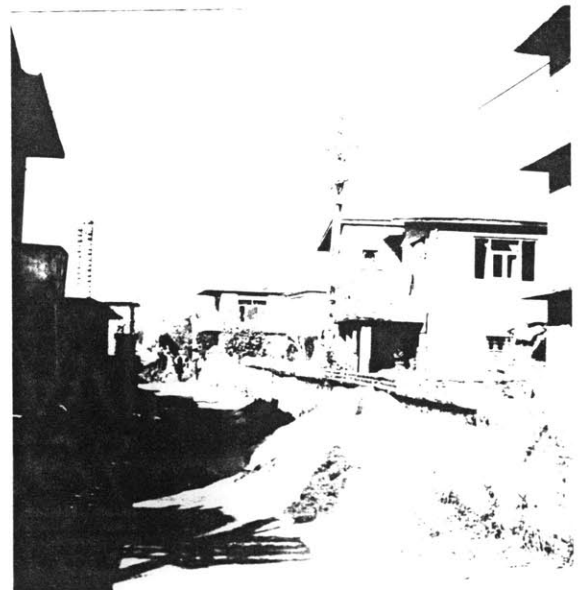
**Fig.47** Dillibazar, Kathmandu.  
Primary access road.



**Fig.48** Farm foot-tracks,  
which become main access  
roads into the farm fields.



**Fig.49** Transformation of the  
foot-tracks into secondary  
roads into the area.



**Fig.50** Tertiary roads created  
by the land-brokers.



Fig.51 Primary street, Baneswor.

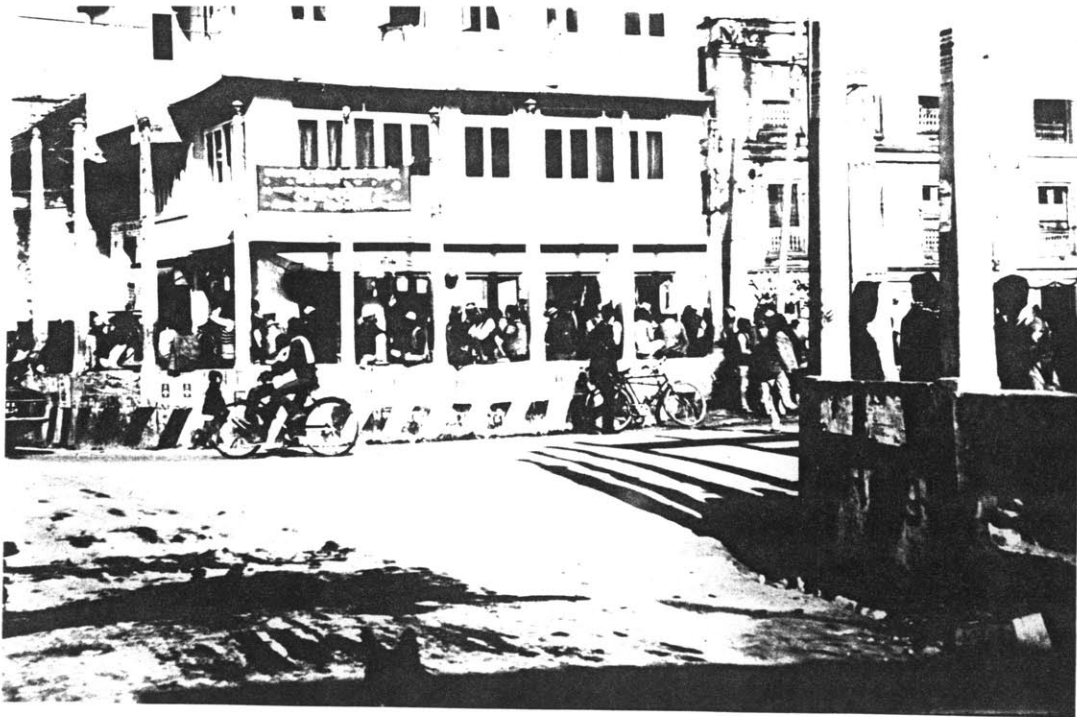
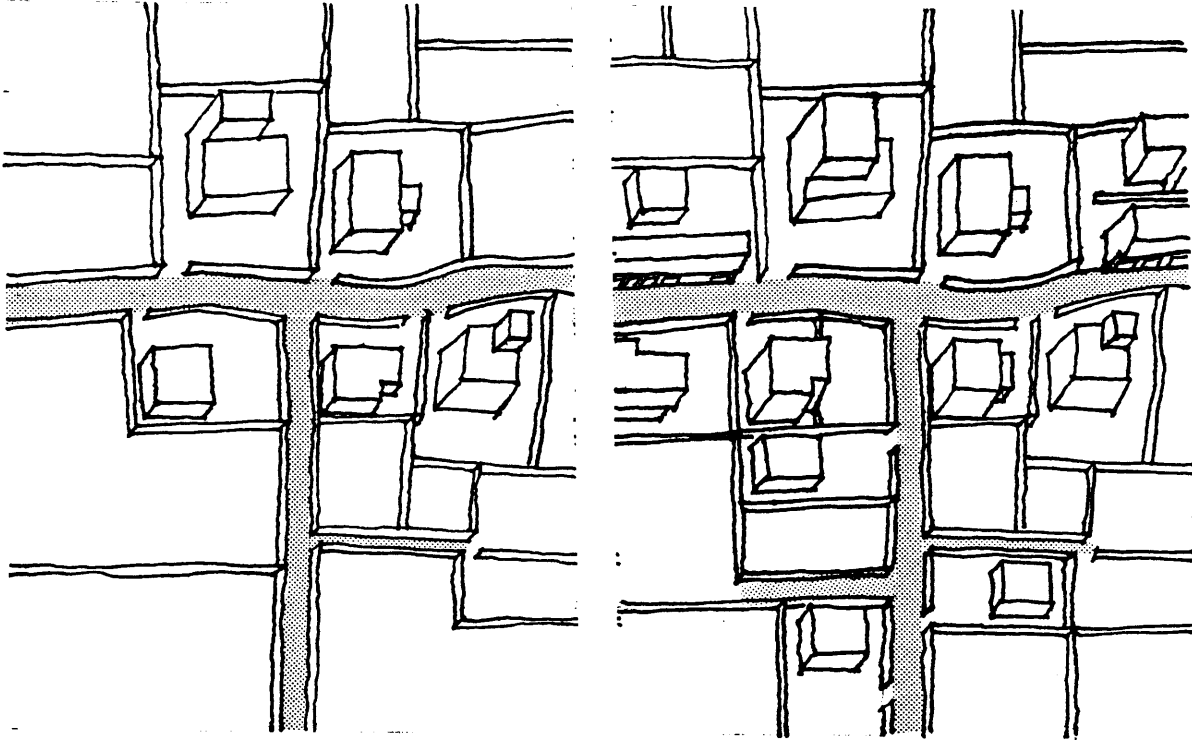
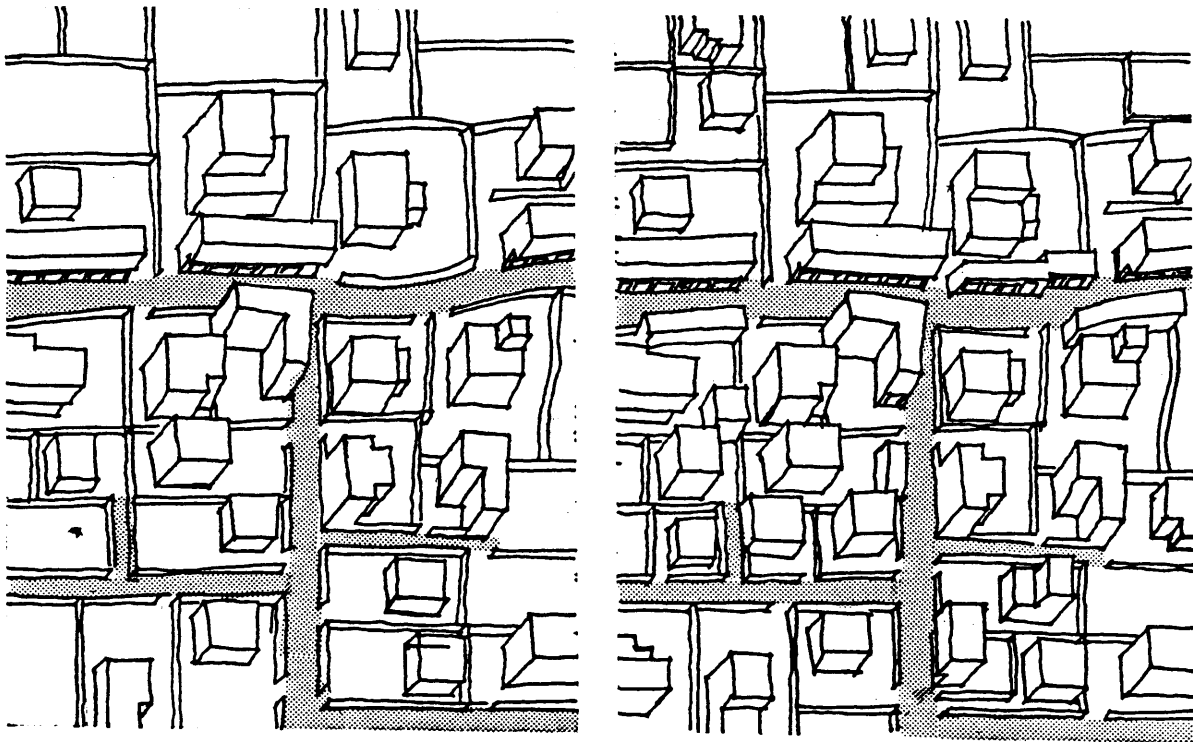


Fig.52 Primary node, Baneswor. Walls marked by flagstaffs for visiting dignitaries divide people from vehicles.



**Fig.53-54** Formation of the physical structure, Baneswor. The main access and secondary road, and initial divisions.



**Fig.55-56** Densification, and formation of a street along main access road. Secondary and tertiary access roads.



Fig.58 The subsequent sub-division of land after sale to prospective house-builders.



Fig.57 The coming up of boundary walls after sale of farmland for building.



Fig.59 Baneswor: the architectural character of the urban form.

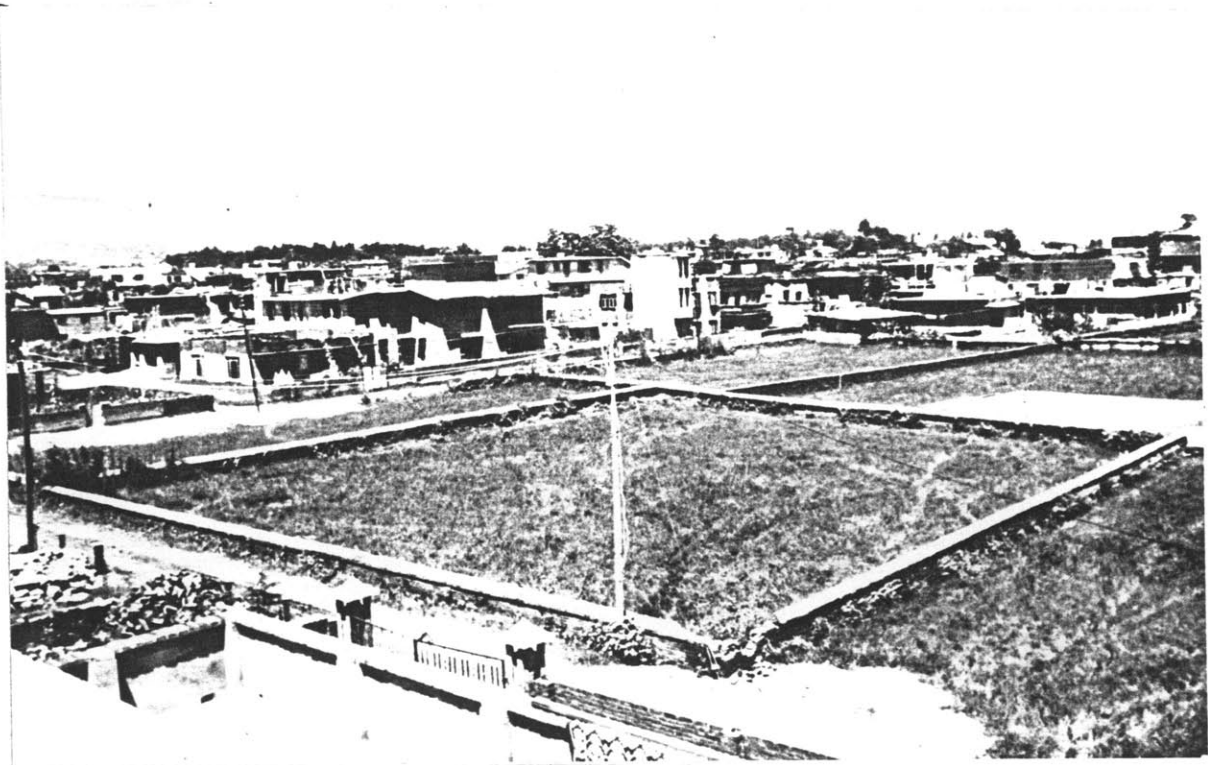
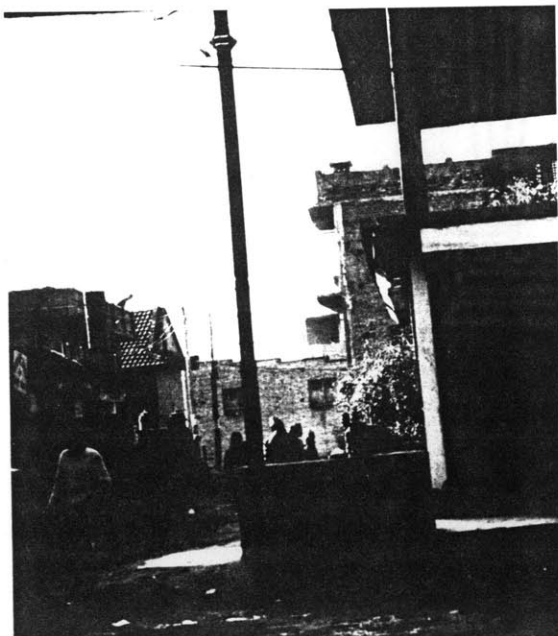


Fig.60 Development along a secondary and a tertiary road on one side, while the other side awaits construction.



**Fig.61** Aerial view of typical urban development around the medieval city core.



**Fig.62** Development of street along the secondary road in form of retail shops.

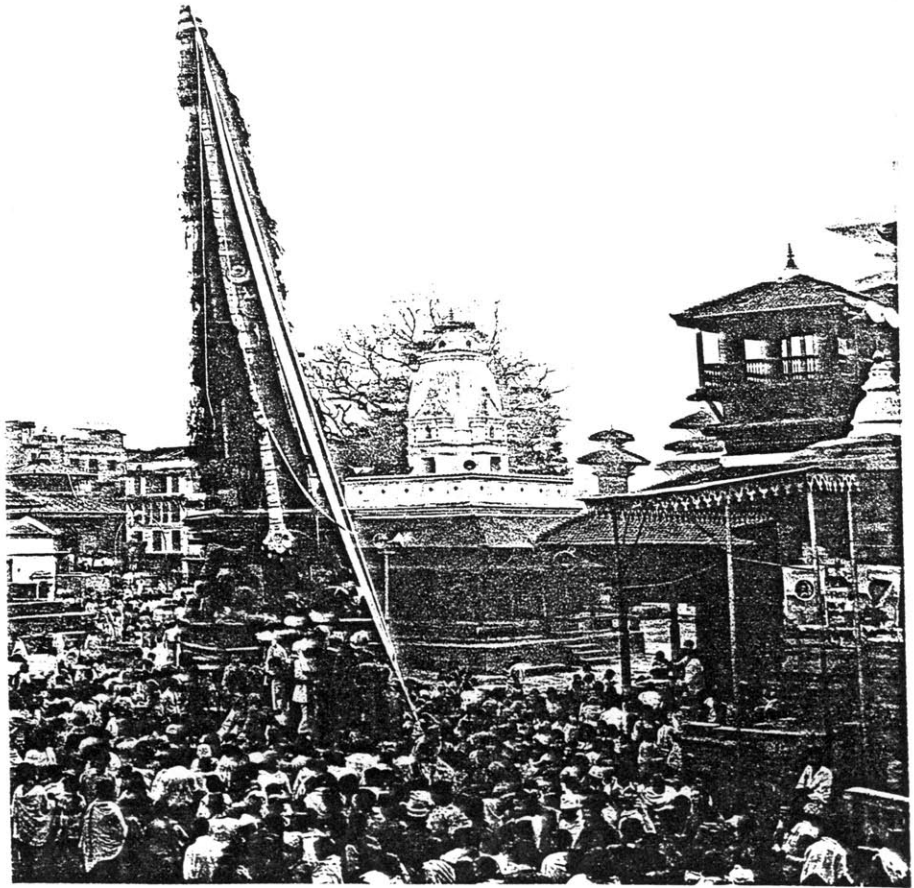


**Fig.63** Awkward access to houses resulting from complex operation of the land-brokers.

## PART 3

FORMATION PROCESS OF THE  
CITY.

TRADITION IN RETROSPECT.



## THE INHERENT PROCESS IN THE FORMATION OF THE CITY

Changing urban forms signify different moments of reality, which are the synthesis of understanding and values , in the historical process of formation of the city. The city, therefore, reflects a process of formation, where the different forms in time and their transformations reflect the correspondence between changing socio-cultural processes and the physical changes occurring in the urban forms . These different urban forms of the city constitute its parts. The city, then, is a collective phenomenon of its different `urban artifacts' .

Through the study of the forms in the two segments of the city of Kathmandu in Part Two of this paper, we can discern broadly the historical process of formation of the city. The form of area around Asan evolved as a result of a `vision' of form which corresponded well with the various levels of control over space insofar that a coherent linkage between these levels was established in the making of physical form. The higher order, which in this case were the rulers of the city with their own specific socio-political objectives, established a larger structure of form (which I have described

earlier) , where the role of the lower orders consisting of the residents of the city was clearly acknowledged within the rules established by the higher order.

The form of the Baneswor area suggests that it is the result of a certain rapid demand for land for housing and the coming together of certain local forces. The urban environment here gets fragmented as the physical form consolidates in time. It is because the linkage between the levels of control over space, consisting of higher order of the professionals and administrators within the various authorities empowered with managing change in the urban environment and the lower order of the local actors on site, is not established towards a contemporary understanding of urban form. That is not to say that the form as experienced in Baneswor is good or bad in itself. In itself, it reflects the process inherent in the formation of the city today. But if the role of the higher order is not coherently linked in the process, the progressively growing 'disorder' results in the creation of overtly regulatory plans for development. It essentially amounts to imposing an external 'sense of order' on the inherent process of the city.

If we accept this position then our basis of managing change and evolution of urban forms has to undergo major change. From this position, form in the future can only be

projected on the basis of the historical process of the city formation and in terms of intentions of the higher order professionals for the future based on what this process suggests . Physical form can not be pre-determined for an extended period into the future. The `complexities` inherent in the urban form which give it its coherence are the result of the formation of the `urban artifact` and its transformations over time.

But change, in terms of changing socio-cultural processes, exchange patterns and city growth, is too rapid today. The factors responsible for this pace are far too many to account here. Therefore, to establish the aforementioned relationship between the various layers of the urban society, today, there can be no singular vision of form (as in the formation of Asan). There can be no `mandala` today. Culture is too pluralistic, today, in any given place and it is under continual transformation. The dynamics which influence the formation of a city's physical forms, today, are too many, for a singular vision to be effective or appropriate. A master-plan, for example in its conventional form of determining land-use, density and building envelopes, I think, is a singular vision fixed for a fairly long span of time in the future.

Urban artifacts which happen in their particular moments are the manifestation of

"meaning " as understood at that moment in time in the process . Manuel Castells defines this meaning as the structural performance assigned as a goal to cities in general by the conflictive process between historical actors in a given society<sup>2</sup> . In the future such a form derived from its assigned urban meaning becomes a legible part of the urban whole, the collective image of the city. Such a process in the evolution of form is different than determining the nature of the urban form external to its special moment in the history of the city.

It is in perspective of the process of city formation, inherent in the socio-spatial correspondence in the city's parts, that we will look at some of the factors vital to understanding it, and exploring some directions towards an alternative in managing change in the urban forms of the city.

### **Imageability**

Like a piece of architecture , the city is a construction in space, a thing perceived only in the course of long spans of time. Nothing is experienced by itself, but always in relation to its surroundings, the sequence of events leading upto it, the memory of past experiences<sup>3</sup> . In other words a city is perceived as the collective memory of its various forms.

Moving elements in a city, and in particular the people and their activities, are as important as the stationary physical parts. In the process of consolidation of the city form in time, it is necessary that articulation of the physical forms and the activities are complementary.

In the process of way-finding , the strategic link is the environmental image, the generalized mental picture of the exterior physical world that is held by individuals. The need to recognize and pattern our surroundings is so crucial, and has such long roots in the past, that this image has wide practical and emotional importance to the individual.

But such an image, in its positive dimensions, is not possible in an urban form like Baneswor in Kathmandu. The image has to be a synthesis of the "process" in time, a process which involves the coming together of new understanding between the different levels of the hierarchy of controls over physical form and space within the processes of social and spatial changes occurring in time.

Like any good framework, a legible structure gives the individual the possibility of choice and a starting point for the acquisition of further information<sup>4</sup>. A vivid and integrated physical setting, capable of

producing a sharp image, plays a social role as well. It can furnish the raw material for the symbols and collective memories of group communication.

It is not to say that people can't navigate in disordered or featureless surrounding. Most people who inhabit it learn to do so. But a legible surrounding has certain positive values, which are worth incorporating: the emotional satisfaction, the framework for communications and conceptual organization, the new depths that it may bring to everyday experience<sup>5</sup>.

The image of the city of Kathmandu is a complete<sup>6</sup> one when perceived in its totality from an elevated vantage point. It is an image where the medieval urban form seems to become the concentration of all energies in the process of formation of the city, quite literally.

The total image of the city is therefore that of a very dense urban core with the tiered temples breaking the almost homogenous skyline. The rest of the city is perceived as linear arms emanating from this dense core, with fragmented developments off them. But the image within the parts of the city is not consistent.

The Asan area, despite major physical transformations, follows a clearly recognizable pattern in its form and

activities. However, the image of Baneswor is at best a partial one. The image here is clearly one of a form which is derived from the new values of society , but the image in the minds of the residents does not seem to establish itself as a coherent and desirable one. A number of people interviewed in this area had a very negative image of the `place`, as it is perceived in its urban spaces and architectural character. While they consented that the current situation allowed them to purchase a piece of land and build a house, the condition of the environment was not something they socially and emotionally found to be satisfying. When asked what could be done to remedy the situation where a desirable urban environment could be generated, they had no answer except to say that the authorities need to plan things `right`. So there seems to be a dilemma here; on the one hand the current land delivery system through the local brokers seems efficient, the fact that the local authorities are out of this activity results in a poor urban environment.

To formulate an understanding of the collective image of the city as being more than just a `the sum of its different parts`, the synthesis of its various forms in the its historical process of formation , the following illustration comes to the mind.

The city of Boston consists of such diverse urban artifacts as Beacon Hill, the high-rise CBD, the Commonwealth Avenue and the Italian neighborhood of North-end. Each urban artefact is visibly distinct in itself. But collectively they still form a very powerful and highly legible image of the city. The lack of a perceptible image of any of these areas would put us at a loss while perceiving the city as a whole.

**Conception of  
an alternative  
urban form**

What does the process described by the two segments from the city of Kathmandu suggests in terms of what may happen ? As old farm trails and foot-tracks transform into vehicular roads, more fragmented growth is likely to occur.

Two reasons for this fragmented growth that seem important are as follows:

- 1) A lot of the land in the areas of current development is constantly under speculation and the prices are rising in a steady gradient.
- 2) The environmental problems, arising out of the complexities of actions at a single level of control (basically the local actors) of the lower order in this spontaneous development of urban form without a higher order, cannot be resolved effectively locally.

Further densification due to changing forms will stress the already depleted infrastructure beyond its limits. While the nature of densification (described earlier) will not substantially improve the form of areas like Baneswor, it will most certainly start erasing the physical coherence of areas like Asan. Part of the reason is also that the new urban form does not offer the kind of opportunity that can decrease some of the activity pressure from areas like Asan.

Most of the physical transformations taking place are on the footprints of older buildings. The established canons of forms are still adhered to as most of the original social groups still reside here.

Thus the strength of the socio-cultural values and linkages out of which this urban form evolved is clearly evident in the fact that the physical structure persists, today, despite major changes in the socio-cultural processes which take place, today.

However, these 'footprints' will no longer be able to resist the pressure of speculation of properties, which have existed for centuries with the residents is sold over to outsiders with interests in maximizing economic returns only. Thus instead of regulating intensive transformation solely on a building to building basis, a new understanding of the

contemporary importance of this urban form in the totality of the city has to be established, before we create criteria for managing its change.

The study of the city of Kathmandu through the study of its two urban forms, earlier in the paper, seems to indicate that the built-environment in the future may be influenced by the following three factors; pluralism in the social composition, market forces, and increased demand for urban services.

The pluralism which appeared in the composition of the society following the ease of access to the valley some four decades back is getting increasingly intensified resulting in an wide range of informational exchange and activity patterns. These exchange and activity patterns result from different sets of social interactions of diverse ethnic groups, professional groups, nationalities. This has been described in the discussion on changing socio-cultural processes in Asan and the socio-cultural basis for the formation of Baneswor.

Thus the set of elements in a given physical space and its various subsets, which have to correspond to the complexities of this pluralism, are beyond the realm of a singular vision<sup>7</sup>. Such sets of elements which form physical space cannot be

conceived by one mind. they can only be generated in time through a supportive attitude to the inherent process reflected through change in the city in its socio-spatial dimensions.

As Webber suggests, at the heart of urban processes is social intercourses- the business transactions, the exchanges of information, the intricately complex web of interactions- through which they satisfy the interdependencies upon which their livelihoods and their welfare depend. Much of this interaction occurs at the expanding urban places, but increasingly, interactions transcends the places at which people live.

Those who share in this spatially dispersed communication are in some degree participants in urban communities that are of a non-nodal sort<sup>8</sup>. The heterogenous mixtures of businesses and populations create opportunities for the intercultural exchanges of ideas that have made cities the traditional centers of civilizations. The history of city growth, in essence, is the story of man's eager search for ease of human interaction<sup>9</sup>.

As the universal phenomenon of consumerism sets in, development pattern also starts becoming largely a function of the market value. This phenomenon is making its mark in the changing forms of the city . The traditional socio-spatial distribution of

city form has given way to the property value and the subsequent capital and energy that gets invested in it. Most actions in the generation of form become a function of this value.

Therefore the processes that professionals create in the management of urban forms has to recognize the role of the brokers as a positive phenomenon. As experience has shown, centralised authorities have failed to provide land for development efficiently. The brokers who operate locally have been far more efficient in this respect in Kathmandu.

As the physical environmental conditions get progressively depleted, there seems to be a growing desire for collective consumption of certain urban services. The range at which certain actions are required to meet the ever increasing demand for urban services are beyond the capacity of any single individual. As there is no higher order<sup>10</sup> to lay down the rules for these services to come into being, it results in collective actions at lower levels consisting the population inhabiting the place.

The lower order, which in this case are the local actors<sup>11</sup> on the site, seek the co-operation of a higher order. When the higher order does not participate, these collective actions tend to become autonomous locally. At some point in time, such actions

tend to be viewed as problematic by the higher order, motivating it to induce external 'order' onto the inherent process.

While physical formation of the city is the evolution of its different urban artifacts in its historical process, it functions primarily as processes of social exchange in space. Therefore, it is important to identify the key social processes influencing change in the urban form of the city so as to influence or manage its growth at a particular period .

The identification of such processes therefore becomes the basis for establishing a structure within which different forms specific to local dynamics can generate. One of the major roles of the professionals seems to lie in envisioning such a structure for the development of urban form; a structure which relies on intentions for the immediate future rather than rigid objective goals.

One key process, that is vital today to the current transformation in the city of Kathmandu, is access in the city which in turn can be projected to impact the urban form in the following manner.

As the evolution of city form in the recent history seems to be the function of the access pattern, nature of access deserves considerable attention. Therefore, an

alternative method of generating coherent growth of the city seems to lie in the manner we, as designers of the physical environment, deploy , control and manage **access pattern** in the city.

The following factors relative to urban form need to be considered as the access pattern of a particular part of the city transforms over time into streetforms:

- 1.It has to find its place in the flow of exchange patterns of the city as a total organism. Each access space or road, that comes into being and connects to the existing hierarchy of movements, influences and gets influenced by that existing hierarchy. This relationship shall determine the nature of interchanges that can go on in that access space.

- 2.The architectural character of the streetforms has to correspond to the nature of the flow of exchange patterns, the activities that occur within the space and the symbolic manifestation of these activities. In time, such articulation of the streetform become distinctly recognizable edges within the urban form. Such edges are important as transitional spaces which visually and physically connect different parts of a city.

- 3.The access pattern also needs to be controlled for ease and efficiency of urban services which follow later in the area.

Within such a scenario, the `traditional` way of dividing and delivering land by the brokers should go on. The form must evolve based on this access initially. Essentially in its formative period the form must find its own consensus or "urban meaning".

From then on the formation of the urban form has to be managed locally as a recognizable part of the collective whole of the city, where elements of the form get articulated<sup>1 2</sup> as they occur in time.

Once within the linear space of the street, certain spots start expanding to suggest the formation of a node, articulation of space corresponding to various activities, both the ones taking place and anticipated, has to take its course. In due course of time this articulation of forms and space should become recognizable and distinct as a place. How this symbolism is generated is something which is context specific. The nature of such nodes, therefore cannot be asserted by pre-determined singular elements, like a temple or a square or something else.

Such nodes in their recognizable symbolic dimensions have two purposes. They become the `hearts` of the area which is consolidating as a part of the larger urban structure in time. They become punctuation

in the linear space of the access pattern, becoming reference points in the collective image of the city.

Thus without resorting to a pre-determined notion of form or use, we need to understand the process involved in the evolution of the "place". From then on the social and cultural processes need to be articulated and celebrated in the forms of the channels and the nodes. As the notion itself suggests, the role of the designer or the institutions involved with the form of the city becomes that of informing himself and managing the environmental change contingently over time .

For instance, once an access has been deployed in a certain area, the nature of activities likely to be generated can be speculated for some time into the future based on current patterns in the process of the city. The role of the designer then becomes setting some basic constraints from this understanding. As the various powers on the site along the access start to reveal the nature of urban form which comes into being and which is needed in time, the designer needs to articulate these in the formation of the place. For instance, if the site reveals the need for high density apartment construction or a site-and-services housing or incorporating an existing form in the spatial development in time, the designer needs to understand these

in the context and articulate forms and space. If, for instance, the linear space of the access has to accommodate processional movements of a festival, then this phenomenon can be formally manifested in the architectural texture of the street facade in time. The character itself can be arrived at through the consensus and understandings revealed on the site. If there is a need in time to introduce a formal element like an arcade along retail edges or the creation of a civic building , then the role of the designer is to articulate such elements in the formation of the physical artefact. What this imaginary scenario tries to impress is that for a particular urban area to evolve as a **place in time** the actions described above can only be taken to transform the site at the time the site reveals the need for them through its process of formation .

**Supportive linkage vs. external order**

Working within such a role calls for having explicit intentions rather than explicit goals, intentions which are subject to constant re-evaluation over time. Intentions derived from understanding and knowledge of the process of formation of urban forms allow for the construction of goals which have the freedom to develop or change over time, conforming to the dynamic of an urban realm<sup>13</sup> .

If we are to establish an alternative linkage between the higher orders and the

local actors that the concept of access can be managed better, the need for attention to the three major factors come to the fore: development of the city as a historical process, the inefficiency resulting from the 'tug of war' between the regulatory institutions, and the fallacy of the master-plan approach in determining future urban form.

1. The development of the city firstly has to be recognised as a historical process of evolution of its various forms. During the course of this process, the various moments of the city become manifest in different artifacts that constitute the city. In the analysis of the two segments of the city we have seen that the two distinctly different urban forms signify different moments of reality in city's historical process of evolution, but in the present both collectively function as the city.

If we are to follow this concept, then a new reality manifested in a particular urban form should not be considered as a 'problem' which has a rational 'solution'. It simply becomes a new reality in the inherent process of formation of the city in time, which we are primarily concerned with. Thus, actions that the higher order, which is interested in the control and management of form, takes should be supportive of this process and not imposed as an "order" external to it.

This proposition is based on the belief that most phenomena that are perceived as problems do not suddenly appear, rather they precipitate from the decisions that we have undertaken previously. As the roots of these 'problems' lie within the previous decisions undertaken by the people in control, they in effect are created by the control institutions. To the absolute terms of reference established in time, new realities of urban forms, springing from conditions outside these terms, seem irrational. Therefore, to believe that they can seemingly be solved by 'rational' action is short-sighted.

I would like to cite two illustrations here from other cities, to clarify my argument. The Delhi Development Authority (DDA) was created, in the early fifties by the government of Delhi, primarily for the purpose of providing housing , planning and implementing pressures of sudden population growth in the city resulting from the partition of India . It seemed like an appropriate response to the reality of the moment then. But since then it has persisted and consolidated into a gargantuan machinery for regulating and implementing urban growth. Conditions are vastly different today since those "crisis" days after partition. Today, the Delhi Development Authority is still trying to deal with "the crisis known as Delhi", more often adding to

the "problems" than "solving" them. Its centralist operation and bureaucratic inefficiencies leave a vast proportion of the urban population without choices. Despite the huge constructions of housing estates it undertakes, today more than a third of Delhi's population lives outside of DDA's provided housing in what are known as 'unauthorized settlements'<sup>14</sup>. This phenomenon, although having taken such massive proportions, is still considered technically a 'problem', as to consider it as a new moment of reality in the historical evolution of the city and work from it would negate the structure of that huge institutions created for the purpose of managing urban change.

The city of Cairo, today, is a giant metropolis of twelve million. Due to a number of reasons its size has swelled multi-fold in the last few decades. The 'problem' of housing that this phenomenon has created has conventionally been tackled by the authorities by building huge tracts of 'mindless' blocks of housing. However, almost half of the population has housed itself on self-generated 'squatter and unauthorized' settlements. These settlements of Cairo signify a new reality in the process of its formation through change towards the generation of a new tradition of urban forms. If it is not to be acknowledged as such, it will always remain a "problem" the controllers of city growth

are continually trying to solve. Meanwhile, the government goes on building tracts of unrelated blocks in the new towns outside Cairo, investing huge sums of scarce resources in an essentially unproductive venture. The government does so as result of its inability to reconcile to change in the reality of urban form and the socio-cultural processes behind the form.

2. In the process of managing environmental change in the city of Kathmandu, we see a number of institutional role players operating autonomously. A number of these institutions such as the Land Transfer office, which were established for functions different than managing environmental form, have come to become just that.

Essentially, the regulatory institutions operating in the process of controlling city growth seem to be of three categories: the political institutions (the city office, the Ward office) , the administrative institutions (the Town Development Committee etc.), and the technical institutions ( the Dept. of Building and Planning, Kathmandu Valley Town Planning Team , Department of Archeology.).

In the continuous `tug of war' of these regulatory institutions, the development of urban forms gets fragmented, as that vital linkage between the actors at different layers is lost. The notion of establishing

a central development authority on the lines of various cities of this sub-continent has been floating around for some time. I consider the establishment of such an authority, in the conventional sense, to be a total anti-thesis of the formation of city as a process involving the interactions between changing socio-cultural processes and physical form in time.

Such development authorities within the realm of centralist power system tend to be self-expanding. The 'problems' they are meant to solve intensify, till they reach such huge proportions where they become absolutely adverse to the concepts of change. A new moment of reality in the process of formation of the city is seen as a threat to its status quo and, therefore, qualified as a problem without its due understanding. Such institutions tend to be anti-city. The city of Delhi, which was discussed earlier, and its recent development pattern is a classic case in this regard. It negates the natural process of city building and individual subjectivity to flourish. The main tool that such institutions deploy over city growth is the master-plan.

3. The major fallacy of deterministic tools like master-plans lie in the basis of their intentions and goals, and their relationship to the dimensions of change, by virtue of their rigid nature conventional master-plans

tend to negate the correspondence in time between changing socio-cultural processes and the physical changes of the urban form.

Neither traditional city master-plans nor their studies have successfully depicted the city as social process operating in space. And, yet they have sought to influence social process, and particularly the processes of human interaction, by manipulating the spatial arrangements.

Typically the plans are stated as static distributions of land-use categories, sometimes with distributions of resident population expressed as density<sup>15</sup>.

However, adequate the land-use and density language may be for depicting static site characteristics, it is not capable of dealing explicitly and specifically with the dynamic, localized patterns of human communications that occur through space but transcend any given place.

Apart from its inadequacies at its conceptual levels, the master-plan concept typically fails in its intentions, and it is riddled with paradoxes.

Firstly, it derives from current patterns and from these current patterns it designates future goals, which in most cases is reliving the present patterns.

Secondly, it is primarily goal oriented. Although the intentions behind the goals states public welfare quite specifically , it is the interpretation arrived at by a few with a static unitary concept of what good is. Thus while defining these goals as being for the public good , it does not provide any knowledge of what and why it considers a set of goals as being for the good of a collection of people.

Master-plans, traditionally, by projecting long-term goals into the future based on current notions of form without explicit intentions, which are more fundamental, start falling apart when faced with new (irrational) realities in the evolution of the city in time. In order to resist these 'irrationalities' they tend to become overtly regulatory.

The master-plans fixed in their objectives for specific time-periods into the future, while being incapable of coping with the complexities of city generated in time, belie the autonomy that different parts of the city require for the generation of coherent, distinct parts. The various generations of Zoning in the city of New York or the Master-planning of Delhi are some of the classic examples.

There is no rational ideal city . On the contrary, cities operate as multi-layered in

space which thrive on contradictions, conflicts, agreements and consensus. At a given time the true value of space is experiencing its multi-sensory and multi-use dimensions. To reduce the form of the city as geometrically defined uni-layered color patches or pretentious mixed-use developments, is to deprive the city for those special moments to occur which result in a distinct urban artefact; those moments in its history where a new urban meaning is generated in time and it gets manifested in form. It is depriving the city of its `places`, or its collective legibility to occur from its `different` parts.

## NOTES

1. Urban artefact implies a form in the city which takes shape at a particular moment in the historical process of formation of the city. In time, it becomes a legible part of the urban structure of the city, insofar that its knowledge becomes essential to establish a complete image of the city. The Commonwealth Avenue in the Backbay of Boston is an urban artefact. This term originates from Aldo Rossi's writings in Architecture of the City.

2. Castells, Manuel. The City and The Grassroots. University of California Press, Berkeley.

3. Lynch, Kevin. The Image of the City. pg.1 MIT Press, Cambridge. 1960.

4. Ibid. pg.4

5. Ibid. ,pg.5

6. The image of the city that one establishes is a vivid permanent one in which its uniqueness is absorbed in the memory.

7. This concept of a given urban space as a set formed from subsets, each unique in itself and in its relationship with the next, comes from the hypothesis put forth by Christopher Alexander in The City is not a Tree, an article in ZONE 1&2, ed. Stanford Qwinter.

8. This essentially refers to the discussion on contemporary social interaction patterns in areas like Asan and Baneswor in Part two of this paper.

9. Webber, Melvin. "Urban place and non-place urban realm". Explorations in Urban Structure . Univ. Of Pennsylvania press.

10. The higher order here constitutes the role of the professionals empowered with the responsibility of managing environmental change. In the case of Kathmandu the higher order would be the various professionals belonging to the technical departments and the administrators belonging to elected offices of the city.

11. The local actors on site are the land-brokers, the Ward politicians, residents, renters, future residents etc.

12. This term essentially refers to the management of form over time where it starts taking a cohesive architectural character symbolic of the nature of the linear space and the various activities it accommodates.

13. Patrose, Prataap. Future does not have a definite form. SMARCHS thesis 1984. MIT

14. This illustration is based on the research conducted by Snehanshu Mukherjee in the course of writing his S.MARCH.S. thesis entitled 'Unauthorized Colonies In the City of Delhi', 1988.

15. Op. cit. Webber, Melvin.

## TRADITION IN RETROSPECT

Traditionalism, in societies going back to ancient times, has been typically viewed as something belonging to the historical past by both those who have lived the tradition and by those who are foreign to it.

Traditional societies were commonly viewed as being essentially of a static order with little differentiation or specialization as well as exhibiting low levels of urbanization . Modernization, in contrast, was characterized as having thorough differentiation, urbanization, and exposure to mass media.

Traditional society had been conceived, above all, as being bound by the limits of the strict cultural horizons set by its tradition, and modern society as being culturally dynamic oriented to change and innovation<sup>1</sup>.

This dichotomy established to differentiate traditional and modern society does not seem valid when we accept the concept of change. Tradition itself is subject to the processes inherent in a culture, the processes which are evident in the phenomenon of change.

Shmuel Eisenstadt cites the distinction several recent social scientists have given to the terms traditionalism and tradition. Traditionalism has been defined as a more extremist negative reaction to the impingement of forces of modernity, and tradition as a society's reservoir of behavior and symbols. Typically the word tradition or traditional has had historicist emphasis. Modern and contemporary settings, it is assumed, have specific characteristics that distinguish their pattern of development from the changes that had continuously taken place in these societies in their traditional, historical settings.

However, recent research has shown the inadequacies of such a basis of understanding. Contemporary responses to these problems<sup>2</sup> may diverge greatly from the initial 'western' model of modernization. And, in the shaping of these responses, many forces that develop from within a society's traditions may indeed be of crucial importance<sup>3</sup>.

Thus tradition , which is inherent in a place , and the process of modernization , which is the set of external forces, interact in time , where each affects the other to result in a transformed 'tradition' or understanding. In course of this transformation, certain dimensions of the

tradition tend to organize themselves in new, modern settings in effective ways, some dimensions persist in their original form while other dimensions get replaced.

It simply means that tradition itself is dynamic and undergoing change in time, that it should be understood in this manner when we establish objective goals for the future based on present nature of socio-cultural processes.

If we are to accept the tradition of a society and its processes of city building as a dynamic phenomenon, then in time it is to be reinterpreted according to changing conditions.

It is not an unusual sight to see a young man on a motorbike leathers getting off his Yamaha or Honda, taking off his boots and jackets to go and pay homage to an ancient deity, whose temple happened to be on his way. He , in his own way, is reliving a tradition , wherein certain dimensions persists to provide that crucial continuity while other values change.

A farmer or a small entrepreneur today without fail performs ancient persisting rituals at prescribed intervals on his tractor , modern agricultural tools, and machine tools , an activity reserved for his ancient tools earlier. As would a truckdriver perform the rituals on his

truck. For him these material artifacts of modernity have come to mean tradition, his way of life.

In the city of Bhaktapur, renowned for its beautiful architecture and medieval cityform, a farmer had months of spare time between harvest seasons to indulge in the most intricate crafts of all sorts, before modern communication became a reality. Today, the same farmer, after his harvest, goes to work as construction labor for a contractor on a faraway project. For him, it is tradition he is living. For those, who have not lived or been part of the tradition, it is seen as the disappearance or sacrifice of tradition. Perhaps, we need to 'indulge' in our knowledge of tradition more realistically.

Change, as evidenced in the formation of the urban artifacts in the historical evolution of a city, has largely been ignored in attempts at structuring the urban environment by the designers and planners . It becomes neglected in the dichotomy that is conventionally established in the understanding of **traditional** practices and **modern** planning concepts. A number of conflicts arise from lack of understanding tradition as dynamic in its various dimensions, that they persist and change.

Several contemporary practices of regulating built-environment emerge under the guise of this dichotomy and the reluctance to explore seriously the processes evidenced in change of the urban environment.

In Kathmandu, two contradictions in this regard can be observed. On the one hand "haphazard" growth of the city has been considered a "problem". The planners therefore have at regular intervals have produced technically correct master-plan for the city. Such a master-plan typically envisions growth occurring in the future as geographically distributed usage pattern and the "correct" numbers to correspond to it. The master-plans are "rationalized" and "technically correct" therefore largely ignore the processes evidenced in change.

The other practice arises out of great concern for "tradition" and postulates the declaration of areas within the city as zones for preservation. I think it mainly results from an incorrect interpretation of tradition. There is no attempt in this practice to interpret tradition, as a dynamic process and not a static set of values and forms.

The phenomenon of change, therefore, rules out the existence of such absolute worlds. Our version of the world based on `facts` is itself subject to doubt, as the facts in themselves are not absolute. The fallacy of

absolutist thinking is affirmed by Nelson Goodman, who rejects the stance of the people who confine themselves to one viewpoint of the world in the course of their actions, who believe that facts are found and not made, that facts constitute the one and only real world, and that knowledge consists of believing the facts. He asserts that fact is as much fabricated as fictions are found<sup>4</sup>.

`Recognition of multiple alternative world versions betokens no policy of laissez-faire. Standards distinguishing right from wrong versions become, if anything more rather than less important. But what standards? Not only does countenancing unreconciled alternatives put truth in a different light, but broadening our purview to include versions and visions that make no statements and may even not describe or depict anything requires consideration of standards other than truth.'<sup>5</sup>

## NOTES

1. Eisenstadt, S.N. Post-traditional societies and the continuity and reconstruction of tradition. Post-traditional Societies . Eisenstadt ed.

2. The term 'problems' here refers to the inadequacy of the 'historicist emphasis' on the analysis of tradition as well as of the rather general undifferentiated definition of tradition.

3. Ibid.

4. Goodman, Nelson. 'Ways of Worldmaking'. pg.91. Hackett 1978.

5. Ibid. pg.107.

## POSTSCRIPT

This paper emerged out of a dilemma; a dilemma springing from that much debated issue on what constitutes the "appropriateness" of architectural forms in the urban context. The magnitude of building activity in the cities of South Asia, as in most other parts of the third world, has grown enormously in the past few decades. The current practices, which have guided formation of the city, have yielded less than satisfactory, sometimes even contradictory, results in formation of the urban built-environment. The persistent conflict between modern (considered to be derived from western thought) and traditional (considered to be derived endogenously) in the debates concerning architecture and planning has added to the existing confusion rather than giving any direction to it. Something, I feel, terribly important to us gets lost in this dilemma. What gets lost here is the "city". The city which gets its distinct character from the formation of its various **places in time**.

I consider this time-place dimension, which is not determined but evolves, in the **parts** which constitute the synthesis of the city is crucial for the well being of the society in the urban environment. This dimension of time-place is understood through change in the urban environment, change which results from the interaction of socio-cultural processes and the built-form.

I should confess here that in the process of writing this paper I started with a bias towards the form of Asan, the medieval urban form which evolved during Malla times. "Appropriateness", it seems now, in urban forms emerges from the values and understanding of the society at a given time

in the history of the city. It is reflected in the actions the various groups within the society take to transform the urban form. But such values and understanding cannot be pre-determined for long extended periods in time into the future to "order" the form of the city. Doing so negates the phenomenon of change that any environment is continually undergoing in time. Here seems to lie the fallacy of today's practice of articulating and managing the urban forms.

This paper is not so much a polemic against urban planning as an exploration towards another direction in understanding the urban built-environment and its management. From what I have come to discern in the process of writing this paper, it seems to me that the role of the professionals in the practice of design and management of the physical environment seems to lie in essentially two realms.

The role of the professionals at the higher order of decision making seems to be in the vision of a **structure**, which forms its intentions from current patterns evidenced in process of change in the built-environment. The cosmic geometry and the Hindu **Mandala**, subsequently incorporated into the medieval cityform of Kathmandu, was one such structure within which different social groups of a homogenous culture could develop forms and **places** in time. However, today, the vision of a larger urban structure has to accommodate a wide multiplicity of socio-economic and cultural exchanges in the city. The deploying of access channels based on certain activity patterns, which I have mentioned earlier in the paper, seems to me one such "larger" structure. It is not the only one.

The other role of the professional seems to lie in the realm of articulating the evolution and formation of the urban form in time. As the inherent dynamic of the **place** reflects

the need for certain kinds of actions to be taken in time to bring coherence to the urban form, it is in the role of the professional to articulate such needs locally. The analogy here may be that of **urban design in time**. Such an analogy should not be mistaken with urban design as an end product of a set of physical forms depicting an ideal situation or as conceiving urban design as simplistic phases development to be built at different times.

What links these two realms of professional roles together in the design and management of urban forms is the understanding of the process of formation of a city in time. This process, which is unique to each city, is revealed in the way in which changing socio-cultural processes at a given moment in time correspond with the physical transformations of the urban forms. What I have done here, in this paper, is to describe such a process in the city of Kathmandu in Nepal.

"Certain functions, time, place and culture modify our cities as they modify the forms of their architecture; but such modifications have value when and only when they are in action, as events and as testimony, rendering the city evident to itself. We have seen how periods of new events make this problem especially apparent, and how only a correct coincidence of factors yields an authentic urban artefact, one wherein the city realizes in itself its own idea of itself and registers it in stone.

"It is through the natural tendencies of the many groups dispersed throughout the different parts of the city that we must explain the modifications of the city structure .

"The city is as irrational as any work of art, and its mystery is perhaps above all to be found in the secret and the ceaseless will of its collective manifestations."<sup>1</sup>

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<sup>1</sup> Rossi, Aldo. The Architecture of the City. MIT Press, Cambridge. 1978

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#### ILLUSTRATION CREDITS.

Figs. 1,2,3,10,21,22,23,24. Niels Gustchow. Stadtraum und Ritual der Newarischen Stadte im Kathmandu-tal. 1982

Figs. 4,5,12,15,38. Slusser, Mary Sheperd. NEPAL MANDALA: A cultural study of the Kathmandu Valley, vol.2. 1986

Figs. 6,7,8,9. Shrestha, C.B. et al. Historic Cities of Asia: KATHMANDU. 1986

Fig. 11. Col. Kirkpatrick. An Account of the Kingdom of Nepaul, a mission to that country in 1793.

Fig. 13,39. Hosken, Franz. Kathmandu Valley Towns. 1974

Fig.15. APA MAP: Nepal. APA Press.

Fig. 31,33. Kathmandu Water Supply and Sewerage Project.