LEISURE AND HOUSING

by

John Douglas Bennett

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of

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of

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CHAPTER I

INTRODUCTION - A THEORETICAL STATEMENT

Observation of attitudes and life styles of North Americans
might lead one to assume that there is a trend away from the work
ethic and towards an evolving leisure culture. The value of work
in giving direction and meaning to life might be seen to be on the
wane for a great many people, while activities of man at leisure
are assuming more importance.

However, the approach of many people to determining their
leisure activities may be a product of work-dominated values. They
may be chosen for recuperation or relaxation. They may fill in
time between work hours. They may have high entertainment value to
provide an escape from the pressures of work. But, if one assumes
that life must have some meaningful purpose, then the concept of
leisure should be refined so that it can seem meaningful in itself,
rather than as a complement to the working day. A rewarding life
would then be derived from one's leisure. Although the work ethic
is grinding its gears in its capacity to make life meaningful, that
function could be transferred to leisure.

By examining the definition of leisure it will be shown
that there are trends towards a concept of a state of being. Lei-
sure will be seen in this light to imply an attitude of the mind
which encompasses the values one uses to determine all of his

activities, as long as he pursues those activities by choice, rather than having them forced upon him. With this deeper understanding of a man at leisure, it is then hypothesized that meaning may be derived from his leisure through a combination of three approaches: development of social relations, interaction with nature, and self-realization.

A style of life based on these three approaches is outlined, and then it is shown that typical North American housing forms, which reflect the work ethic, are not responsive to this life of leisure.

Social relations, interaction with nature and self-realization are then examined in detail to show how each can augment the meaningfulness of a life of leisure, and to show how architecture can respond to the characteristics of each which encourage leisure as a state of being.

The ways in which social relations can give a life of leisure more meaning are considered, as also are the ways in which interaction can add value to the lives of individuals and to the activities of groups. If life can thus be made more worthwhile, then the development of social relations is a worthy complement of a life of leisure.

A study of the ways people interact in groups is then made to discover clues as to how to organize a community structure in which social relations can freely develop. It is concluded that a hierarchy of communities will best satisfy this need. This hierarchy is then translated into architectural space.

Interaction with nature will be examined as a leisure pursuit
to show the purposes and values which can be derived from it. The
essence of nature is dissected to determine the characteristics from
which it comes. It is hypothesized that this exploration will re-
veal traits of nature which can be expressed in an architectural
product, either by bringing natural elements into the structure, or
by emulating natural conditions through architectural form. It will
be found that many physical and emotional characteristics of nature
can be instilled in a building. Intellectual quality will stem from
the resulting architectural statement. Spiritual qualities, on the
other hand, are too subjective to consider in architectural terms.

In thereby implanting natural characteristics into a building
form, residents will be encouraged to understand themselves as a part
of nature. They are thus readied to seek greater meaning in life
through natural interaction, and, hence, to enjoy a more fulfilling
leisure.

If a person could realize a rewarding leisure through social
and natural interaction, then he may look into himself in reflection
on how the interaction has affected him personally. He may travel a
road to self-discovery, uncovering along the way his particular
traits and abilities, and determining the best ways of applying his
talents in expression of himself. In this way he may be led to dis-
cover still more meaning which will augment the value of his life
of leisure.

One can apply an understanding of his potentials and limit-
ations to control his own destiny. Self-determination leads one to
tackle life's challenges in his own way. Acceptance and mastering
of challenges with one's own potentials can bring great satisfaction
into a life of leisure, and give some worth to living. But self-
determination is limited by the amount of control permitted within
a given situation.

Control can be maximized by providing options within the
environment. A man at leisure would then be free to choose environ-
mental conditions best suited to his self-concept. An examination
of existing housing systems which permit the user some choice in the
structuring of his habitat is outlined, and ways of allowing choice
in the home are tabled. It will be seen that control can go beyond
the home to include choice within a broader community, subject to the
needs of neighbours. If a person can discover something about his
self by being permitted to build his personal castle within a housing
structure, then architecture has assisted him towards a more meaning-
ful life of leisure.

Finally, the design of an actual housing system which in-
corporates the principles proposed through the study of social develop-
ment, interaction with nature, and self-realization is described.

It is a factory-built kit of parts which allows the architect
to fashion an environment capable of encouraging the desired social
and natural qualities, and which allows the user to control the

shaping of his individual dwelling and the ways in which some communal

spaces are used. The housing system should complement the style of

life of a man at leisure within. Hopefully, it will provide conditions

which assist his search for meaning in life to bear fruit.

In the appendix are to be found drawings which explain the

system, and show optional configurations for its use under different

hypothetical parameters. The true experiment of an architectural

thesis should be the actual construction of a proposed structure, and

observation of its use. George Candilis has said of the growth of a

leisure culture: "This major phenomenon of contemporary civilization

calls for research into, and the discovery of, a new architecture:

the architecture of leisure." (1)

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(1) G. Candilis - Planning and Design for Leisure, Karl Kramer
     Verlag, Stuttgart, 1972, p. 12.

CHAPTER II

IMPLICATIONS OF THE LEISURE REVOLUTION

Work Ethic

I.   Man and Work

Man is made to work. This has been a fundamental axiom of western culture since the beginning of the Industrial Revolution. Work has been the justification of life--the meaning of existence. An individual's ambition has been directed towards perfection of one's occupation, either for the self-satisfaction of improving one's output, or for the self-esteem of greater wealth or power of an improved occupational status. For those without ambition (either because it is supressed by circumstances of unrewarding employment or because of apathy), man must work to attain his needs and a certain degree of comfort. His purpose in life may be to provide for his family. When Western civilization hit its lowest ebb, during the initial stages of the industrial revolution, a worker's life was virtually sold to his employer in return for a subsistence for his family, and his wife's function was to work to keep house, feed and clothe the family, and serve him so that he would be rejuvenated between one day's work and the next.

Even to the present day, the life of most modern people is geared to a daily pulse: supper when returning from work, eating breakfast before returning to work, relaxing after a hard-day's

work and getting eight hours of sleep to be able to cope with the next day's work. "The will to live is tied to society's definition of worth--work."(1). Any free time is spent passively--quite acceptable as necessary rest for a hard-working person. The Marxian belief that free time in a capitalist society is for rejuvenation and reproduction still rings clear.

II.   Institutions and Work

Christian dogma has blended beautifully with the work ethic (also called the Puritan ethic). Sunday is a day of rest after a week's toil. A hard-working man has no time to be corrupted by the sins of idleness. Work has been considered man's punishment for original sin--it cleanses the soul.

Education has complemented the work ethic. Most programs have been directed towards preparing the student for an occupation. In many post-secondary schools this has been done with assembly line efficiency.

The basis of our political system is the work ethic. Free enterprise has been the fundamental principle of most governmental policy in western countries. Economics, which so directly affects individual lives as well as political operations, is founded purely on monetary earnings, giving no consideration to other qualities of life.

The nuclear family itself is a product of the work ethic,

(1) G. Fackre, from E. Stanley, N. Miller (ed.) - Leisure and the Quality of Life, American Association for Health, Physical Education, and Recreation, Washington, 1972, p. 80.

with the wage-earner being the provider of the nucleus and the head
of the table. The family is identified by the occupation of its
head.

The work ethic has been ingrained in almost every individual
in almost every western society for centuries. It is difficult for
most people to conceive of a set of values which is contrary to cul-
ture based on work. It would be prone to rejection at all levels of
society.

Yet change is happening. In a few short years the work
ethic has been eroding away. Society has not yet recognized the
differences, and may take generations to evolve. But, many indi-
viduals have recognized change, and are looking for new values to
complement their directions.

<div align="center">Evolution Towards Leisure</div>

I. <u>Erosion of the Work Ethic</u>

Since the beginning of the 1960's, trends towards the down-
fall of the work ethic have been snowballing. Firstly, more free
time is available to most people. The working day is gradually
shortening. In some Western countries, the standard office worker
puts in only seven hours a day. There have been experiments with
flexible working hours in offices and industries, allowing employees
more freedom in the scheduling of their own time. The work week,
too, is showing signs of shrinkage, with many serious tests of the

four-day work week being implemented. Holidays are getting longer--
some firms have been offering six weeks vacation. And, in a lifetime,
the amount of time at work is being decreased by staying in school
until a later age, and retiring younger. Early retirement at the
present accepted age of 65 has resulted in a large population of
healthy people with total free time.

The housewife is not to be dismissed from this reduction in
time spent at work. Modern conveniences have significantly reduced
her daily toil, and she is now challenged with ample time to attempt
other pursuits. Many have taken full or part-time employment, which
may be preferable to duties at home, present a welcome change from
household routine and supplement the family's income. This may seem
to be a contrary measure to the argument for less work time. How-
ever, this second job of hers is generally taken by choice, and,
paradoxically, may be considered a leisure activity, as will be ex-
plained later.

Besides increasing free time, there are other factors grind-
ing away at the work ethic. Higher pay and an increasing standard
of living are enabling people to make better use of their spare time
via the leisure industry. Countless pastimes are attainable by the
vast majority of people. Activities which were once confined to
the wealthy are now affordable to the middle class. Employers have
found that to attract personnel, they must offer good working

conditions as well as a pay check. On the job conditions have improved, allowing social interaction to occur during working hours, and making the job itself more pleasureable (hence, less like work).

Perhaps the strongest factor working against the work ethic is a loss of identity with the purpose of work. Automation has removed some of the need to apply human skills to many jobs. It is difficult to maintain a sense of pride in a lifetime spent at a position on an assembly line. Also, bureaucracies have removed an employee's sense of significance. He is too far removed from the end product to appreciate the fruits of his own efforts, and he has no say in determining features of the end product or in defining the directions of his employer and business. "The technocratic social situation in which man becomes a manipulated being strengthens even more the alienation of work and man, so that the entire human aspect and the human imprint on work becomes subdued and weakened."(2). The work of many people might be taken over by automation. But, a high rate of unemployment may not infer, in the long run, degradation of one's standard of living: talk of a guaranteed income is being presented more and more realistically.

II.   Changing Institutions

Synchronized with the growth of free time is a reshaping of many of the foundations of our society. Through the labours of our

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(2)   B. Samolovcev - Adult Education as a Function of Leisure, Society and Leisure, Bulletin for Sociology of Leisure, Education, and Culture, European Centre for Leisure and Recreation, Prague, No. 3, 1971, p. 57.

fathers and grandfathers we have achieved tremendous affluence. Most

people are quite comfortable with their material wealth. For older

generations this may in itself have been a utopian ideal. But many

younger people in the western world have been brought up in material-

istic splendour, and take it for granted. They aspire to new goals

and ideals--something beyond materialism. Much of the youth revo-

lution is the product of a search for new meaning in life, manifest

in many paths of exploration such as experimentation with drugs,

studying unusual religions, protesting factions of capitalism, tra-

velling to far corners of the earth to experience different societies,

and involvement in social concerns. There have also been attempts to

find deeper meaning in relations with fellow man.

Tender steps have been taken in a movement towards communal

societies. An upsurge in interest in encounter sessions has occurred.

Even marital relations have taken a turn. According to William Lederer,

the majority of marriages in the United States are unsuccessful. But

at the same time there has been a sexual liberation and many people

are sampling a variety of intimate relations. The "pill" has en-

couraged this trend, eliminating the physical gambling of pre-marital

and extra-marital intercourse, and allowing couples to live common-

law without chancing the responsibility of children. Parents are

also free to plan the size of a family. The ease of securing a di-

vorce, and the social acceptance of living common-law have assisted

in the downfall of the institution of marriage. That bond is often

considered a burden, and people are learning to avoid it or rework it to give them greater opportunity to sample human relations and to express their own individuality.

There has been a recent crumbling of many other institutions in Western society which have been closely associated with the work ethic. Attendence at churches has plummetted, particularly in the more paternalistic religions. There has been a revolution in many services aimed at encouraging participation in the worship, and at making the service more entertaining, as opposed to past ways of treating the church-goers as passive spectators come to be served fire and brimstone, and insisting that they work hard on week days to wash away their sins. People are questioning religious dogma as never before, and are apt to form a personal religious phil-osophy different from any other person's or group's. Religions are realizing the necessity to allow flexibility in belief, and to accept differing points of view, if not even encouraging them. The most important reform is letting people think for themselves. It is better for a religion to guide a person as he lays his own foundations for theology than to force him to accept religion on blind faith. If he starts questioning the whys of his relations to man and the universe, then without an understandable foundation to adapt his answers to, he may completely reject his religion. With Western man looking for meaning in life beyond his job and searching for a sense of self, he finds he must question his beliefs.

Education is also heading in new directions. No longer is a good education a guarantee of a job of one's choosing. Yet schools have not lost their credibility, as students are satisfied that their education is preparing them for life, regardless of their chosen occupation. And many school systems are adapting to this new goal. A preparation for life might be outlined as:

i) discovering one's own interests, and thereby uncovering secrets of the self

ii) pursuing those interests, and thereby testing the potentials of the self

iii) applying the interests to real-life situations, and thereby relating the self to the world about him

iv) redefining the self and realizing new interests, thereby recycling through the pursuit of knowledge and learning how to 'live'.

It will be interesting to observe how present day school children, who have been given a certain degree of academic freedom from a very early age, will fill their day-to-day existence in adulthood.

The most powerful institution in the Western world--the office of President of the United States, figurehead of 200 million people--lost its image after the Watergate scandal. Not even it is a constant. And the nourishment of 'Progress', energy, is seen to be a limited resource. Will I be able to gas up my car today?

Will the lights go on when I flick on a switch? Whether or not the quantity of available energy can be controlled, and whether or not its rationing would affect quality of life in materialistic terms is debatable. The point to be made, however, is that the energy shortage has forced us to realize how much of our everyday experiences we take for granted, and how prone they are to failure or change. Dubiousness towards the permanence of accepted beliefs is also generated by the field of science, which is dedicated to giving us a factual model of the makeup of physical objects and the dynamic physical reactions between them. It is almost daily changing its basic theories on the makeup of the universe, both at the macro and micro levels. The age and extent of the universe is always in hot debate. Theories of the structure of an atom fluctuate wildly. How can anyone be certain of anything when even science is so ambiguous?

III.   A New Self-Consciousness or Alienation?

The outcome is that some people are beginning to lose confidence in many of the institutions which were the foundations of our society during the epoch of the work ethic. Where can they turn to for security? Certainly not new institutions, for if there exists lack of trust in long-established institutions, then spur-of-the-moment new movements are unlikely to afford satisfaction or security. But people may discover confidence in themselves: learn to define their lives as they want them to be personally, and to live individual existences, in harmony with people they regularly meet,

with the environment they interact in, and with their own purposes

and dreams. This style of life would be a contradiction to the pre-

sent day acceptance of roles and ideals imposed by a larger and un-

touchable society which is so often displaying its weaknesses. This

new self-consciousness would be one road to a new philosophy of life.

The other would be alienation: disgust with the present state of

affairs, pessimism in the possibility of change, and lack of ability

to redefine the meaning of the self in a leisure culture. The

prospects for the alienated faction are bleak: social isolation,

lack of motivation, emotional stress, hostile tendencies, and, worst

of all, boredom. "The Biblical curse on labour--'In the sweat of

thy brow thou shalt eat thy bread'--is not removed by substituting--

'In boredom of spirit thou shalt eat thy bread'."(3).

Present-Day Use of Free Time

I. Non-Leisure Uses

Free time is time available to be used as one pleases. It

is exclusive of time at work or time fulfilling family responsi-

bilities or social obligations. It may or may not be used leisurely.

Many people use it up by working at a second job. This is a trend

which is especially growing for housewives. Statistics showing the

number of hours in the American employees' working week over the

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(3) R. Dubos, from G. Bell, J. Tyrwhitt - Human Identity in the
    Urban Environment, Penguin Books Ltd., Harmondsworth, Eng.,
    1972, p. 173.

past decade are deceiving because the reduced working week has been balanced by the hours of those who choose a second job or overtime work.

Another non-leisure use of free time is killing time. Many people waste the hours away, perhaps dreaming of leisure activities, but never pursuing them. Often activities are acted out because of lack of anything else to do. Some people use reading as a way of procrastinating from other activities. They will pick up any book and read it--"bookaholics." Likewise, there are "televisionholics," "eataholics" and even "activityholics" (people who always require themselves to be tackling some menial task, and thus avoid more meaningful activity). "This over-scheduling often reflects a lack of inner resources. There is evidenced a fear of being with one-self."(4). Killing time seems to be the approach taken by social services in dealing with groups who have been forced into a life of free time, such as the elderly, handicapped, and unemployed. They are kept active, but only to fill in their time, and no real goal or purpose is inherent in their assigned activities. Leisure for them is merely a pastime.

Most free time for most people is spent at home. The only exception is the adolescent, who spends about half of his free time away from home. Most time at home is spent in front of the tele-vision, the most time-consuming leisure activity. Many people have

(4) N.D. Corbin - <u>Leisure: the Ultimate Sabbath or Hell</u>, Society and Leisure, op. cit., No. 4, 1971, p. 6.

a selected set of programs they enjoy watching, and there is no
questioning the entertainment and educational values of the T.V.
But many others sit in front of the screen and watch whatever is on,
undaunted from program to program, unflinching until the test pat-
tern ends the evening. In some instances this may have recuperative
value, but in most it is purely wasting time. K. Roberts has
written, "Although watching television is an extremely important
interest in terms of the amount of time devoted to it, very few
people name it as one of their most enjoyable leisure interests."(5).

II. The Leisure Industry

The present day use of free time reflects on an over-
consumptive society. The leisure industry is burgeoning into the
largest business in North America, and hundreds of millions of people
are throwing themselves at it. This industry deals with the eco-
nomics of free time--the more activities people can fit into their
time, the more money they will spend. So, despite an excess of free
time, many people find themselves busier than ever, filling up their
time with activities decided for them by a money-oriented industry.
The leisure industry owes its success to three human flaws:

i) An inability to accept new values: In face of the
leisure culture, many people will fail to cast away the ideals of
the work ethic. The materialism of a productive society is car-
ried over as an ideal for a life of leisure. Since the goal of
materialism is limitless and since it is not an end in itself

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(5) K. Roberts - Leisure, Longman Group Ltd., London, 1970, p. 73.

anyway, in terms of fulfilling life, these people may never be content with what they have and may never approach fulfillment of their ambitions. Also, with people hanging on to work and increasing their real income through a continued increase in the rate of productivity, they may use their greater wealth to replace their possessions with higher quality goods. However, it is likely that these goods will each be used less frequently because the owner has more possessions to eat up his time.

ii) Many people imitate styles, either to emulate those they consider better off than they are, or because they want to be like everyone else. By frequently changing fashions and fads for leisure products, industry can capitalize on this weakness. "In spite of authors and innovators capable of improving mass tastes and ideas, a thousand distribution channels impose the conformism of the average customer, the common man, as the image of life."(6).

iii) Purposelessness of life styles: Despite loss of identity with role on the job, and the revolution of so many institutions which have given meaning to life in the past, many people will have difficulty realizing a replacement function for their lives. As long as they fail to find a meaningful life style, the leisure industry can dictate superficial styles to them, and they will be so preoccupied with them that they will not have any

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(6) J. Dumazedier - Towards a Society of Leisure, the Free Press, New York, 1967, p. 238.

time to think seriously about the purpose of their activity. "Man must be reduced to instinct and pocket book."(7).

III. Problems of Purposelessness

Perhaps the majority of people are content to let the leisure industry regulate their lives. However, they may be risking physical and emotional problems. Working all day at a meaningless task and then burning up free time with highly active but purposeless leisure could prove very stressful emotionally. People who are alone, either because of a forced circumstance or because of inability to interact socially, are susceptible to finding that life without purpose turns their alone situation into loneliness. As already mentioned, disenchantment with a lifestyle and its institutions, but failure to take new directions, can cause alienation from society. Some people can be extremely active, but bored at the same time. The intensity of their activity is a means of counteracting boredom. But it is a hopeless cure, because the symptom is not inactivity but purposelessness. "Reisman has strongly emphasized that boredom develops in a modern family, even one well housed, still faster than the extraordinary variety of ways to escape from it."(8). They may relapse into a state of anomie--giving up on the state of the world, and not caring about what it has to offer--being completely disinterested in anything or anybody.

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(7) Ibid., p. 67.

(8) Ibid., p. 100.

CHAPTER III

TOWARDS A LEISURE CULTURE

Meaning of Leisure

I.   Evolving Definitions

Leisure has been defined in many ways by many people, usually depending on the state of the art of the culture from which it stemmed.

In medieval times there existed no concept of leisure. Society was 'tradition-directed'--guided by norms and roles prescribed by an unknown code established long before in the distant past. Life was not thought of as divided into periods of work and non-work, but, rather, the whole of life was directed in the accepted customary style. The rare uses of the word 'leisure' in English literature at that period of time referred to a need of rest.

With the industrial revolution and the emergence of the work ethic, leisure became clearly defined as non-work time. Since men worked long hours, its meaning evolved into a time for relaxation.

Leisure became associated with time, since production deals with economizing hours. Even today, the 'time' concept of leisure is popular, although its meaning has changed from 'non-work time' to non-obligatory time': time free of work, family duties, social obligations, or personal needs. This time is useful for recuperation and relaxation after a day's work, to make use of skills

denied at work to pursue interests generated at work, or to counter-
act the monotony and frustrations of a job. One writer on the sub-
ject of leisure, K. Roberts, even goes so far as to say it functions
to provide emotional release to suppress an awareness of unhappi-
ness(1). But for most people leisure has come to mean time free of
obligations to do what one wants.

Over the past century the average work week in the U.S.
decreased substantially. Free time became more abundant, and there
was more than enough time for recuperation. Dictionaries began re-
defining leisure as an activity, as opposed to a time of passive en-
joyment. "Not what I have, but what I do, is my kingdom."(2). The
first acceptable non-work activity was education. A vacation for
employees was originally intended as a chance to pursue extra
knowledge or skills which might be helpful on the job. One of the
foremost modern scholars of leisure, Dumazedier, has described five
characteristics of an 'active' leisure, which can be compared to
the previously outlined process of modern education:

active leisure - Dumazedier	educational process
1. selective	discovering one's own in-terests
2. sensitive to the totality of the activity	testing the potentials

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(1) K. Roberts, op. cit.

(2) T. Carlyle, from E. Stanley, N. Miller, op. cit., p. 162.

3. seeking understanding   relating the self to the
                                  world about him

4. evaluation   }
                                  } redefining the self and
5. sharing experiences   } recycling through the
                                  } educational process

It would seem that Dumazedier's description of the process

of giving meaning to life through active leisure is (intended or

not) equivalent to the process of modern education, and presumably

the goals of each would be the same. Similarity has also been ex-

pressed by J.R. Kidd, of the Ontario Institute for Studies in

Education: "Education that is remedial against social and spiritual

malaise is hardly distinguishable from wise and effective utili-

zation of leisure, and one of the central tasks of education is to

help people learn how to utilize leisure."(3).

Another meaning for leisure as activity is entertainment--

pastimes of one's choosing which bring enjoyment to life. The

activity might be participation in a hobby or recreation, or obser-

vation of the arts or sports. The activity is an end in itself.

It brings self-satisfaction through a sense of accomplishment or a

sensuous experience. It provides a satisfying way of whiling away

free time, although it is unlikely on its own to be related to

one's lifelong ambitions or goals.

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(3) J.R. Kidd - Learning and Leisure, Society and Leisure,
        op. cit., No. 3, 1971, p. 36.

As leisure begins to supplant work in bringing meaning to life, the definition of leisure as an activity takes on deeper significance. More than enjoyment, it can be interpreted as non-obligatory activity which leads to self-realization. The event is not a temporary thrill. It stimulates the doer to contemplate his actions and reflect on himself and on his relationship to other people and things. This concept of leisure is far more satisfying in the long run than the idea of leisure as an activity for entertainment. However, it requires a willingness to reflect on interactions between the self and the activity, ability to recognize self-development, and concentration on the long range values of the activity. The activity itself may be active in physical terms, or it may be mental, emotional, or social activity. An active leisure of self-realization would combine all of these states of man in creating a self-awareness of the total man. "a philosophy of leisure must be directed first and foremost at the "total man" ...Total man is an individual with a body..., a heart and a soul ...a faculty for reasoning and an intelligence...and with a love for his fellow-being."(4).

These various forms of activity which have been used to define leisure--relaxation, education, entertainment, and self-realization--each have relevance to different groups of people. But an active leisure which is truly satisfying will likely show

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(4) Report of the Study Committee on the Philosophy of Leisure, Leisure in Canada 1, Information Canada, Ottawa, 1973, p. 109.

a balance between each of the forms. Any one concept of activity
will not be sufficient to allow a person to live a well-rounded life.
He must strive to attain a personal equilibrium between all forms of
leisure. For example, a leisure of purely entertaining activities
will provide momentary enjoyment, but a person contemplating such a
style of life in retrospect may realize that his life has missed a
quality that would make it meaningful. On the other hand, a leisure
of purely self-realizing activity may cause neglect of the values of
baser activity--the restorative function of relaxation, or the ex-
hilaration of momentary but sensuous entertainment. It is highly
commendable to seek self-awareness, but there comes a time when one
must accept his stage of development as adequate for the time-being
and let his whole self enjoy living. Self-awareness is not an end
in itself. "This search for a new 'joie de vivre', this new 'rage
for life', is not only part of a 'nouvelle vague', but of a new
civilization."(5).

II. A Modern Definition

The most recent definitions of leisure have taken a new turn.
It is envisioned as encompassing all of life. Leisure is more than
an activity--it is a state of being. It requires the formation of
an attitude towards life which encompasses all activity. This

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(5) J. Dumazedier, op. cit., p. 234.

attitude is founded deep in the self, and involves a desire to <u>be</u> the person that one is. "Leisure is a state of being free to be myself, free to be a human being, to be everything that God promised man, everything that I have the potential to be."(6).

To be at leisure, a person should first recognize his own merits, special qualities, and potentials. This must be a total recognition, involving the mind, the body, the emotions, and the spirit. He can then, through his self-concept, determine a personal life-style which will challenge his abilities to the extent he sees it and at the same time bring meaning to his life. His life of leisure can increase in quality by experiencing the wonders of the world about him and by cultivating relationships with other people and groups. The decisions he makes in establishing the characteristics of his style of life should be his own, and he must make them with a minimum of obligations to exterior influences. The decisions he makes regarding his leisure life would be based on a set of values which is derived from his understanding of his relationship to the universe itself; hence, his life style would be closely associated with a personal philosophy, or religion.

The definition of leisure can now be worded as such:

Leisure is a state of being in which a self-determined set of values is used to guide one's non-obligatory activities.

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(6) J. Farina - from <u>Leisure in Canada 1</u>, op. cit., p. 3.

Stated this way, leisure means a way of life which encompasses all states of man, whether he be playing, relaxing, socializing, travelling, or even <u>working</u>. This definition is not new. The ancient Greeks conceived of leisure in a similar light: "the concept of leisure to the ancient Greeks referred to a balanced way of life which included enjoyment and self-fulfillment but also encompassed work, political activity, and religious observance."(7).

It seems a paradox that one could be at leisure while at work. In fact, a harried husband may feel he is 'working' at home fulfilling his family duties, but is at 'leisure' when at his place of employment. If one can choose his occupation to complement his style of leisure he must be a happy person indeed! On the other hand, a leisure pursuit may necessitate certain undesirable tasks, such as repetitive practice, and take on the nature of work. Leisure and work come hand in hand with any activity. Work is a task which must be performed to achieve an end, but without that end the task itself would otherwise not be performed. But that end may be a non-obligatory goal--a freely chosen leisure pursuit. In this way leisure encompasses work. "One might say that the more nearly ideal the organization of society, the more perfectly would the individual's work be adapted to his abilities and the greater would

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(7) K. Roberts, op. cit., p. 87.

be the number of people who enjoyed similar qualitative leisure
through rather than outside of their work."(8).

III. Man and his World

Leisure is at the same time introverted and extroverted.
A set of values which guides leisure must derive from the indi-
vidual. He must zero in on the secrets of the self and establish
the realities of his existence. But this centripetal force fun-
nelling towards self-identity is balanced by a centrifugal force
that draws a person out of himself to explore the external en-
vironment. His non-obligatory activities can assist him towards
comprehension of his existence as a link in chains of relation-
ships which grow infinitely throughout the world, both temporally
and socially, connecting him to the natural world and the people
who inhabit it. The more diverse his experiencing of these end-
less links with the environment, the deeper will be his under-
standing of himself, and vice-versa. The continued expansion and
contraction of the place of the person augments the quality of
his leisure, and, really, is characteristic of a person who is
'alive'. He will be constantly discovering new meaning in life,
and will savour all it has to offer. His leisure, and his life

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(8) I. Craven - Leisure, According to the Encyclopedia of the
     Social Sciences, from E. Larrabee, R. Meyersohn (ed.) -
     Mass Leisure, the Free Press, Glencoe, Ill., 1960, p. 5.

are thus fulfilled by exploring the relations between his self and temporal and social ecologies: The man-nature-society relationship. "The fundamental approach to human personality is the understanding of man's relation to the world, to others, to nature, and to himself."(9).

Style of a Life of Leisure

I. The Self

A life which is styled for the leisure culture will revolve around the man-nature-society relationship. The road to a meaningful leisure will first lead to the man himself--the depths of his person, the qualities of his character, the limits of his physical potentials, the capacities of his mind, the flavors of his emotions, and the powers of his spirit.

There is no specific recipe for self-discovery. It is a specialized personal diet. But whatever the chosen activities, they must reflect the unique nature of the person.

He will cultivate a mind of his own--attempting to determine his directions independently of the influences of other people, and tending to disregard the trends set by institutions. He will try not to form a dependence on outside support, and will be prepared to stand on his own if the need arises. He will strive to keep his

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(9) E. Fromm - Escape from Freedom, Avon Books, Hearst Corp., New York, 1965, p. 317.

capacities fit for the challenges that he has set for himself in his life of leisure. The fruits of his efforts will bear the ultimate in self-satisfaction, for he will have been totally responsible for, and in command of, his own actions.

II. Nature

Roads also lead out of the self to the surrounding habitat. Much of the time spent on leisure activity may be in natural settings, and there will hopefully be more appreciation for the beauties of the countryside. Travel could enhance self-education as one discovers the world about him. The self should be understood as a part of nature, and as man explores the world he may learn how he is related to it ecologically. As he begins to understand the world man was made for, he may sense a stronger spiritual attachment to the earth, and perhaps realize some purpose as an essential element of a natural system.

There may be a desire to savour the diversity of natural characteristics, whether they be changing moods, appeal to different combinations of senses, contrasting spatial qualities, or vast territories of unique geography. The range of natural experiences will add dimensions of quality to a life of leisure.

Nature in her various forms will present unpredictable challenges. Man should face these challenges using the limits of his natural abilities. He could even search out competition with

nature in order to test his own natural potentials.

The man at leisure may attempt to include elements of nature in his day-to-day existence. The home will likely have an abundance of natural objects, but could also exhibit characteristics of experience inherent in the natural world and emulated architecturally.

III.   Society

A future style of life of leisure will also involve greater social interaction. Man will be much more gregarious than the work ethic dominated person who works hard all day and comes home to attend to family matters or relax. Close friends, rather than just the family could become part of everyday life. There may be more of a willingness to meet new people, and the opportunity will be presented frequently because many people will often change their place of residence. There should be many more gathering places where people can interact and meet, and increased recreational activity where people can become acquainted.

Choice of social activities should be provided, and choice of friends may be maximized by frequent contacts. One's personal territory could be established in relation to people of similar likes and interests. In fact, a dwelling could consist of intimate acquaintances, rather than blood relations.

Social activity will be focused within the community, since many of one's friends will be centred there. The man at leisure will

be able to assume a more significant social role within the community, since his social activities will be focused there, and because he will be able to devote more of his life to social involvement.

There should be a willingness to share with neighbours - whether it be assisting each other with difficulties, putting each others talents on display, or sharing space within the housing structure for community events. The home may be physically opened up, permitting an awareness of some of the activities of neighbours and an invitation to join in when the situation allows.

Co-operation and competition may be stimulated as individuals and groups interact. But there must always be a balancing option of escape into privacy when needed.

Architecturally, a housing structure should provide close at hand the support facilities for social activity, whether they be amenities for recreation and hobbies, spaces for entertainment and social gatherings, or environments for study and learning. Housing should be centred on a focal point to give a sense of place to social organization. This physical identity of a community might be established by an activity space where most amenities are located. The individual dwelling itself could be structured partially to reflect the relationship of its occupants to neighbours and to community territory.

Architectural Reflection

"The urban landscape should offer places of low social inter-
action as well as high; places where nature, if not wilderness are
approximated reasonably well, in addition to those where the arti-
fact dominates."(10).

Most typical North American housing, whether it be a suburban
home or a high-rise apartment, is suited to the work ethic but would
not complement a life styled to leisure. These little boxes are per-
manent and inflexible, doing little to harmonize with the require-
ments of people who move frequently and change their needs often.
The box is made primarily for sleeping and eating, and for a house-
wife to toil in the kitchen. Other family members spend most of
their time in it either in bed or watching television. "Many (modern
housing) developments are planned as if their only function was to
provide disposable cubicles for dispensable people."(11).

Little choice is offered in internal arrangements, apart
from moving furniture and decorating walls. External use and appear-
ance is largely determined by neighbourhoods (such as "keeping up
with the Jones's"). The only part of the house which allows ample
space for leisure activity, or flexibility for a variety of uses, is

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(10) J.B. Ellis, from E. Stanley, N. Miller, op. cit., p. 63.

(11) R. Dubos - So Human an Animal, Charles Scribner's Sons,
      New York, 1968, p. 174.

the unfinished part - the basement. Apartment buildings usually have recreational amenities (such as a roof-top swimming pool), but they are pre-determined for saleability and do not cater to daily leisure pursuits of very many residents.

Nature has no place in existing housing. Boxes lined up row-on-row are sterile look-alike artificial environments. The neighbourhoods they sit in show little evidence of the original land-scape, and the few natural elements are planted ornamentally and are pruned with precision. Even the naturalness of starlight is flooded away by mercury vapour lamps.

Social interaction is not generally part of the home environ-ment, as it is initiated at work or school. Neighbours are boxed off from each other. There are few communal places where people can meet and chat casually. In apartment buildings interaction can occur in corridors, but it must be very formal, because if someone stops to talk the halls scream at him to keep moving, and it is taboo to invite chance acquaintances into his apartment.

Few communities have small-scale focal points. Commercial and entertainment facilities have been zoned out of most neighbour-hoods. In existing housing it is not impossible to style a life of leisure, but the housing forms do little to encourage it. Present housing reflects the values of the work ethic and a materialistically motivated populace. If the trends towards a leisure society continue

to evolve, then housing forms should change to reflect the new values which shape our lives. "The rewards of leisure depend not only on philosophical concepts but also the availability of physical environments in which one may pursue his leisure choice."(12).

The next three chapters describe the man-nature-society implications to leisure and suggest ways of manipulating architecture to encourage development of social relations, interaction with nature, and self-realization, thereby bringing more meaning into a life of leisure. The final chapter outlines a proposed housing system which would reflect the values of a society at leisure within it.

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(12) J. MacLean, from E. Stanley, N. Miller, op. cit., p. 100.

CHAPTER IV

DEVELOPMENT OF SOCIAL RELATIONS AND

AN ENVIRONMENT FOR LEISURE

Making Existence More Meaningful

As a person becomes oriented towards the leisure culture

his position at work no longer defines his role in society. He must

find a new basis for that role. Hopefully it will evolve through

his function in community. An article in <u>Horizon</u> magazine warns of

a change in roles in a new social order replacing industrial society:

> The crisis of identity we hear so much about arises not so
much because the individual is lost but because society no longer
defines his function...
> But in the end men and women must themselves evolve new
institutions and find new social roles that satisfy the innate needs
of man and provide those necessary deep psychic protections and
safeguards that we all require. The new roles will spring from man's
great biological adaptability, if they spring at all. (1).

This great biological adaptation might be facilitated if man

were guided to a role through community involvement. Purpose would

be achieved via one's role as a social activist--the way one inter-

acts with others, and involves himself in community events and or-

ganization. His activism may be either as a leader and organizer,

or simply as a participant. His role in various activities will de-

termine his status within the community, and help him to realize a

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(1) J.H. Plumb -"<u>An epoch that started 10,000 years ago is ending</u>".
     Horizon, American Heritage Publishing Co., New York, XIV: 3,
     Summer 1972, p. 9.

social purpose. People at leisure not only have the need to interact, but also the opportunity. In turn, the design of a leisure environment should encourage and stimulate social intercourse.

When a population is geared to work, only a small proportion will involve themselves in community activity. But people with more free time may, at their leisure, devote more time to social involvement and assume active roles. This extra time component will permit a wider range of activities within a community to be maintained. There could then be greater choice of activity and there could be improved opportunity to select friends with similar interests.

Sharing experiences with friends, and realizing that their appreciation of the event is of the same order, is one of the joys of humanness.

There is also intrinsic worth in the good feeling of giving oneself to others, and, of course, in receiving. Mutual aid is assumed to be generally unnecessary in our technological world. Man may be autonomous in a materialistic sense. However, the giving and receiving of good advice, emotional support, and friendly gestures are forms of mutual aid just as important as material assistance. If one discovers an item, event, or new sensation, he has a human need to share it with others. Ideas will be interchanged with members of the community, and each person is both learner and teacher. To find meaning through social interaction, the person at leisure must accept the saying that "No man is an island."

Development of social relations tends to lead to a better understanding of differences between people and culture. The root of misunderstanding, on the contrary, is often ignorance of the conditions of unknown people. A person with a knowledge and appreciation of the ways of others can reflect on the makeup of himself-- his emotions, intellect, ideals, physical state, and environment. Social interaction thus can aid in answering self-reflective questions. Finding the answers is a step towards discovering true leisure.

Personal Value

Injecting meaning into lifestyles is the highest order of value that could be derived through social development. But there are many more immediate benefits which assist an individual's development.

I. Coexistence

Coexisting with one's neighbours and acquaintances forces him to learn and practice social graces. Compromising when differences occur, being diplomatic when decisions involving others must be made, and employing an etiquette which is appropriate to group occasions are simple arts which develop through close social ties. The individual learns that to function socially he must often accept self-sacrifice for the benefit of the group. The rewards of interaction must be worked for.

All the evidence of psychiatry shows that membership in a group sustains a man, enables him to maintain his equilibrium under the ordinary shocks of life, and helps him to bring up children who will in turn be happy and resilient...The cycle is vicious; loss of group membership in one generation may make men less capable of group membership in the next. The civilization that, by its very process of growth, shatters small group life will leave men and women lonely and unhappy. (2).

II.   Mutual Acceptance

Through interaction people may learn each other's strengths and weaknesses. They will tend to be aware of when they can be of assistance, and will be appreciative of help in return. False pride disintegrates when people can accept each other, and themselves, for what they are. Mutual aid is a step towards mutual trust--a feeling paramount for the acceptance of someone living in close proximity. 'Neighbour' becomes a good word only if mutual trust exists.

The educational value of learning from and about others is unquestionable. Gaining understanding of others, and self-reflection on one's reactions to social situations, are, too. But individuals who have learned to coexist with a bond of trust can compete with each other and still maintain acceptance. Competition would harmlessly occur when friends challenge each other, mentally or physically. This form of interaction is as important to character building as is cooperation at times of mutual need.

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(2) C. Alexander, op. cit., p. 166

III. <u>Mental Health</u>

Erving Goffman explains how individual personality is shaped

by interacting with others:

> The individual in society lives a more or less public existence, in which all his acts are anticipated, checked, inhibited, or modified by gestures and the intentions of his fellows. It is in this social conflict, in which every individual lives more or less in the mind of every other individual, that men may acquire their most characteristic and human traits.(2a).

Maintaining a proper state of mental health is a basic

function of social development. If one feels involved socially, he

is likely to avoid social ills connected with self-centredness,

such as boredom, alienation, and anomie. Thus, socially at ease in-

dividuals might be less susceptible to more severe states of mental

illness, and even criminal activity. The change in social structures

within the past couple of decades has induced states of stress in

much of the North American population. According to Canadian Health

Minister Marc Lalonde, 50% of cases in general medical practice are

related to anxiety and mental disorders.(3). Accepted institutions,

as mentioned in Chapter II, have broken up causing anxious reactions

in those who are unable to find new institutions to rely on. To

them, the rapid pace of life seems without purpose, and the man-made

environment seems to offer little to stimulate meaningful actions.

When these conditions are combined with a mind already full

of personal problems, anxiety builds up and may cause psychosomatic

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(2a) E. Goffman - <u>Behaviour in Public Places</u>, The Free Press,
         Glencoe, Ill., 1963, p. 17.

(3)   A. Edmonds - <u>The Traitor Inside</u>, from the Canadian magazine,
         Toronto, Nov. 8, 1975.

ailments. A person under stress may seek to shut out of his ex-
perience some mental inputs. He may withdraw from others, creating
a bubble of isolation around himself. This may seem like a solution
to reducing stressful incidents caused by interactions with multi-
tudes of people in a crowded city. However, the person who allows
himself to set up this defence is preventing the possibility of form-
ing meaningful relationships. The trap becomes evident when he be-
comes lonely or bored, causing more stress, and further withdrawal
into a shell. Christopher Alexander has outlined this trap of over-
reacting to stress by turning inward:

> We must overcome the temptation to turn away; we must make our-
> selves vulnerable. Each individual in society must once more ex-
> pose himself to those dangers which, in his eagerness to escape
> from stress, he has to shut out altogether. If people do not expose
> themselves, if they do not dare to make themselves vulnerable, life
> will become more and more intolerable, and we shall see more and
> more of the signs of dissociation which are already far too evi-
> dent.(4).

Alexander has outlined what he calls the autonomy-withdrawal syn-
drome: modern man feels he can fend for himself, with technology
and high salaries replacing the need to rely on assistance from
neighbours and friends. When stress is applied, he withdraws into
himself. This is made possible by his sense of autonomy. Mean-
while, friends, who are reached by car and visited relatively in-
frequently, are less likely to develop into close companions.

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(4) C. Alexander - The City as a Mechanism for Sustaining Human
Contact, from J. Helmer & N.A. Eddington (ed.) - Urbanman,
the Free Press, New York, 1973, p. 265.

This loss of intimate contacts further induces stress and withdrawal.
Self-sufficiency and privacy become a life-style, and an environment
evolves around it which further perpetuates the syndrome (see
Figure IV-1, p. 42). Alexander feels that this is a major cause of
social breakdown. And he claims that the solution, a new way of life
which involves, "3 or four intimate contacts at every stage of (an
individual's) existence"(5) cannot occur unless the physical environ-
ment changes too, to permit healthier interaction.

The syndrome is a social and psychological problem of massive
dimensions: it will be solved only when people decide to change
their way of life. But the physical environment needs changing
too. People can change their way of life only if the environment
supports their efforts."(6).

An environment which provides for propagation of the syndrome
is the stereotype of modern North American living: suburban homes
and high-rise apartments. To strive for a happier and healthier
lifestyle, there is a need to invent alternative housing forms--
forms which encourage a high degree of interaction among their pop-
ulation, and kindle relationships of lasting value.

IV. Personality

By developing social relations an individual might become
oriented within society. He may view himself as a unique component
within the social system. As he recognizes his worth, he is likely

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(5) Ibid., p. 245.

(6) Ibid., p. 260.

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┌──────────────┐
│ industrialized│
│ urbanization  │
└──────────────┘
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┌──────────┐   ┌────────────┐
│ autonomy │   ⇒   │ withdrawal │
└──────────┘   │ from stress│
                                └────────────┘

┌──────────────────┐   ┌─────────────────┐   ┌────────────────┐
│ friends scattered,│ ⇒ │ feeling of   │ ⇒ │ trivialization │
│ family smaller   │   │ self-sufficiency│   │ of friendships │
└──────────────────┘   └─────────────────┘   └────────────────┘

┌────────────────┐   ┌────────────────┐
│ inability to   │   │ rejection of   │
│ sustain intimate│   │ intimate contact│
│ contacts   │   └────────────────┘
└────────────────┘

┌────────────────────┐
│ emotional isolation│
│   of   │
│   individual   │
└────────────────────┘

┌────────────────┐
│ social breakdown│
└────────────────┘
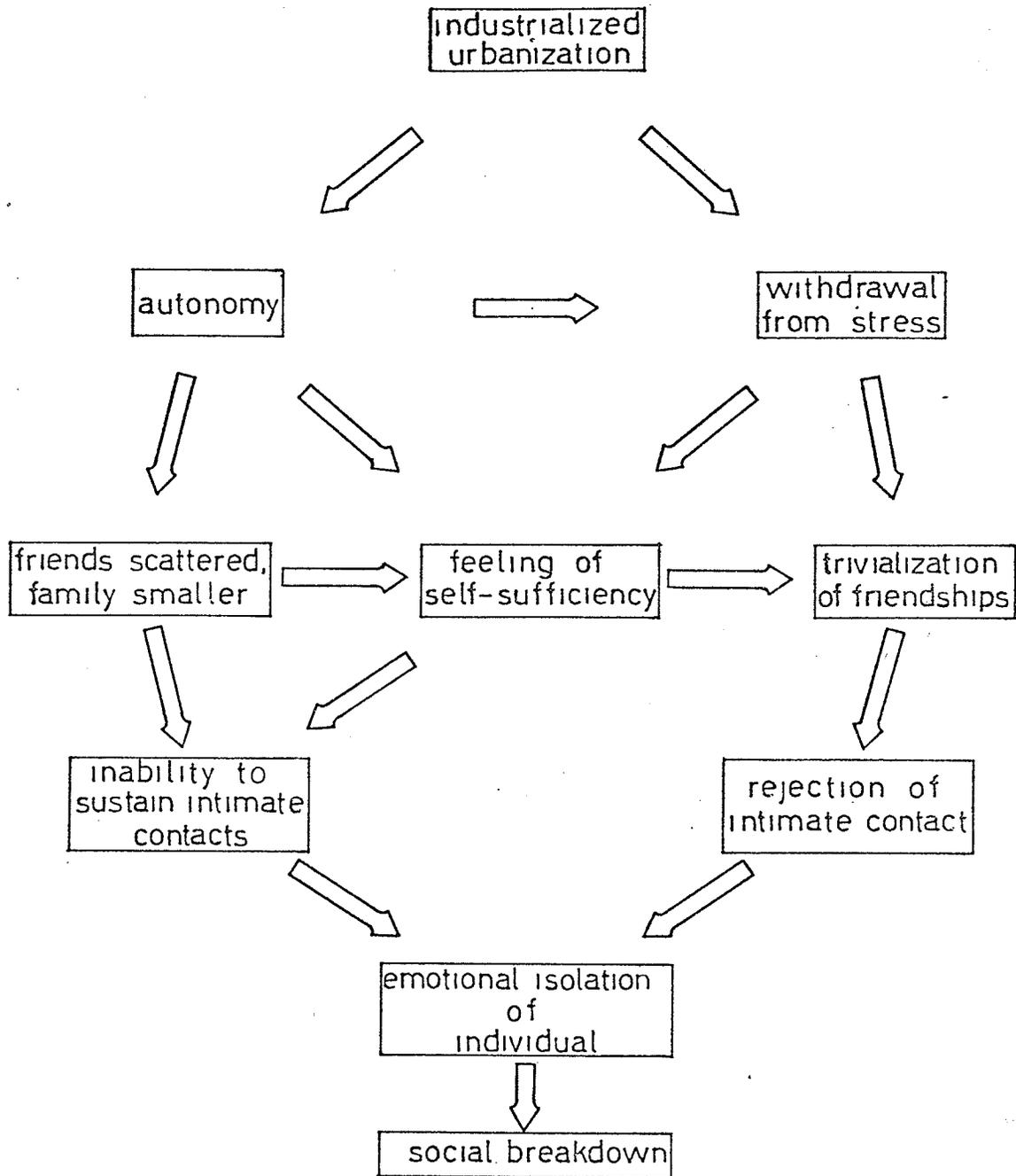
AUTONOMY - WITHDRAWAL SYNDROME
adapted from C. Alexander [1]

FIGURE 1V-1

(1)

ALEXANDER, C., THE CITY AS A MECHANISM FOR SUSTAINING HUMAN
CONTACT FROM J. HELMER & N.A. EDDINGTON (ED.) URBANMAN, THE
FREEE PRESS, NEW YORK, 1973, P. 263.

to develop self-esteem, along with an inner glow of self-satisfaction
and the confidence to approach any social scene in his natural manner.
A psychologist, C.B. Moller, has stressed the interrelationship of
social interaction, architecture, personality and mental health:

> Both the amount of interaction experienced and the kind of re-
> lationships formed are affected by structured space. Thus it is
> clear that in this as in other areas architecture becomes a critical
> agent in the shaping of personality and the conditioning of mental
> health.(7).

If this statement is true then architecture can affect the quality
and quantity of social interaction. Accepting the personal values
of relating with others it might be claimed that housing forms can
be used as a major tool for shaping individual development. This
in turn assists the individual towards finding meaning within the
leisure culture.

Social Value

I. Community Spirit

Developing social relations can lead to the development of
community spirit. This spirit engenders a feeling of co-operative-
ness in day-to-day activities, as well as collective aid to cope
with emergencies. Standards can be set to regulate behaviour within
the community. If a strong spirit prevails, these norms will be
accepted by almost all communal members. Homans, a sociologist who
specializes in group dynamics, has said that as the amount of

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(7)   C.B. Moller - Architectural Environment and our Mental Health,
        Horizon Press, New York, 1968, p. 111.

interaction increases, there is an increase in "the strength of interpersonal sentiments," and an increase "in the extent to which norms are common and clear."(8). A community spirit can thus encourage social control. This control extends to outsiders as well. If a population feel some sense of belonging to communal space, then they may protect it from invasion. The spirit would then become a form of security. Interaction might in this way breed social responsibility.

II.   Intercommunication

Mobility,which has become a way of life for much of North American society, is made easier when a community has a high degree of interplay between members and groups. Newcomers can be readily accepted into the life of the community. Others will be aware of their coming, and the new arrivals can quickly learn their way around. There could be a knowledge of the changing needs of neighbours as they settle in. This information could in turn permit the environment to change to suit new needs, assuming that a population could control the structure of its habitat. If this were possible, then when occupants leave, the community would have the opportunity to redefine the use of the vacated space.

The improved communication which social interaction may seed

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(8) G. Homans - quoted in W.J.R. Sprott - <u>Human Groups</u>, Cox and
    Wyman Ltd., London, 1958, p. 86.

can create a greater awareness of the activities of communal in-stitutions. The actions and attitudes of individuals may be broad-cast, too, and lines of communication might bring together people of similar interests. There can be a greater realization of the needs of the community and a broadening of its institutions to ca-ter to those needs. This form of social development could lead to a well organized community life offering a diversity of functions. Rene Dubos has proclaimed,

> The most dominant characteristic of Western culture has been the search...for ways to convert the universal characteristics of mankind into a great diversity of individual experience.(9).

The institutions that develop may give the community character, and their combined uniqueness may give the population a cultural identity.

Development of Community

I.   Defining Community

A community is simply a meaningful group of people. The German sociologist Rene Konig has worded community as a "local and social unit in which men cooperate in order to live their economic, social, and cultural life together."(10). This definition was in-tended to apply to a village or city unit. However, shared

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(9) Dubos, op cit., p. 117.

(10) R. Konig - The Community, (English Translation) Routledge and Kegan Paul Ltd., London, 1968, p. 25.

economic, social, and cultural institutions occur in smaller units

of population, and Konig lets slip a simpler description of

community as a relationship between people with something in common

(11). This relationship is not necessarily formed by shared space,

as it could be a cultural or kinship tie. It involves people, ra-

ther than a physical neighbourhood. However, most social units are

bonded by a sense of place, either a geographical place or a 'place'

within a larger social network. Arthur Erickson stresses the need

for both concepts of place within a community, geographically as a

common ground, and socially as a sense of belonging:

> Community exists as a relationship to common ground, the place
> which everyone possesses as an extension of himself. It is the
> vivid experience of relationship between all parts and the resultant
> sense of belonging that creates community. (12).

Common ground may not be a necessary component of community, but it

provides a platform for social interaction, permitting the above men-

tioned "experience of relationship between all parts." Rene Dubos

stresses the human need to define a territory:

> The drives to explore the environment, to delimit a territory,
> and to become familiar with a home range are among the most funda-
> mental aspects of human behaviour. (13).

This territorial need applies to communities at all levels, as well

as to families or individuals.

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(11) Ibid., p. 15.

(12) A.C. Erickson - Habitation: Space, Dilemma, and Design,
        Canadian Housing Design Council, Ottawa, 1966, p. 37.

(13) Dubos, op. cit., p. 111.

II. Criteria for Development

For meaningful social development to occur in a leisure environment there should be the sense of geographical place. Relationships scattered about a city are less likely to become intimate at a personal level and are often formed at work. An individual in the leisure culture will likely want to interact among those in his home environment, where he is spending more of his time and making more of his friends. Home is not just the place where he sleeps and eats, but the place where his daily life is centred. Home should be part of a community where "young and old, black and white, rich and poor, can participate together in learning, in recreation, and in the essential business of daily life, a place which is alive day and night, open to all people, and an exciting, good place to be."(14). In this way, a community of people at leisure can be formed, with the community, as an extension of the dwelling place, being home base.

It is reasonable to assume that physical structure can influence social interaction. This can be extrapolated to the premise that physical structure can affect the sense of community within. Community spirit evolves around the stage where interaction occurs. The architectural characteristics of that stage help to determine the quality and quantity of interaction, and, hence, the nature of the community.

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(14) F. Clark - A Broad Concept of Communities is What's New About New Towns, from Architectural Record, Dec., 1973, p. 133.

In order to encourage a community to form there should first be a compatible population. In many new towns planners attempt to achieve a balance in the mix of different classes (economic, social, or otherwise) of people. However, other planners feel that an imbalance may help to form a community character. They support a homogenous concept, where people in a community have similar backgrounds, lifestyles, and objectives. But neither homogeneity of the lifestyles, nor mixture of classes of people, are guarantees of community formation. What seems to be more important is for people to be able to meet other individuals or groups with whom they are compatible on a personal level. Homans says that the more people interact, the more they will like each other.(15). This is probably because... the more freely a population interact, the more likely are compatibilities to be discovered. When a sense of community begins to form around people with similar interests, it may affect the interests of others in the vicinity. Newcomers, also, might find their interests changing to blend in with the community.

Community formation requires some raison d'etre within the larger social network. It needs identity as a functioning unit, and its territorial limits should be in some way defined. Otherwise, its organization becomes amorphous in concept and its structure is vague. Its members might then fail to comprehend its uniqueness

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(15) G. Homans, op. cit., p. 143.

among surrounding communities, and it could lose its meaning as a
social entity.

Space and amenities can be used to give meaning to community,
if the members sense that they are sharing these functional attri-
butes with others of common interest. Physical embodiment of com-
munity could be displayed by a focal point--a structure whose pri-
mary function is to communicate that a society is centred around it.
The focal point may contain a secondary purpose in the form of a
function unique to that community. It could then become the symbol
of any community institutions that form there.

Community Hierarchy

I. Identity within Community

Efforts at identification within a large society may be re-
flected by the way the physical container of that society represents
the sense of belonging to a community within. If a structure con-
tains an impersonal society, then a person's private dwelling is all
he can identify with. Perhaps his location should stand apart visu-
ally from the dwellings of others, so he can feel that part of the
external structure is his.

But if that person understands his position within the
society, then he can relate to the communities it contains. The
physical structure itself, containing the society, is his 'home',

and the individual dwelling need not be expressed visually. He
identifies, hence, with all the society, represented by its con-
tainer. The implied sense of community is therefore symbolized by
architectural structure.

In many modern new town developments attempts have been
made at providing a town centre (centrum) with which the populace
can identify, and which symbolizes the heart of the community. But
a town centre does not make a town. It represents only the largest
scale of community within the new town. And whether or not com-
munity identification occurs at that level is not even a consider-
ation, let alone how it occurs if it does. Oscar Newman has penned,
"We have become strangers sharing the largest collective habitats
in human history".(16). The centrum symbolizes, generally, the
commercial and administrative core for multitudes of townsmen. Each
member is a stranger to almost every other, and he is not likely
aware of the social role of the other, even if it is the person next
door. Any two members may have completely different likes and dis-
likes, and the institutions they relate to, if any, are not symbol-
ized by the centrum. If the physical structure of a society fails
to make provision for social institutions which are essential to the
maintaining of community identity, then a sense of community revolving
about those institutions may never form. The editors of Concept of
Community express this worry about growing society:

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(16) O. Newman - Defensible Space, the MacMillan Co., New York,
      1972, p. 1.

As the scale of society increases, the small community, tribe or village or neighbourhood comes to depend more on the larger system of order. The loss of autonomy for the local group is often compensated by increasing wealth, power, and security. But there are real costs, and among the most important is the erosion of the existing culture--the belief system and the normative structure that have given life meaning."(17).

At the other end of the scale are attempts at forming small communities, often reflected architecturally by a single building. There have been recent attempts at building group homes, where neighbours share living space, and the only locked door is the main entrance to the building. Communes which have built geodesic domes or other non-conformist environments also fall into this category. But despite the high degree of interaction which occurs among the neighbours of these communities, the population is too small to support many institutions on which a community relies. Rene Dubos explains that this is a weakness which prevents a meaningful environment:

Society should...provide as wide a range of environmental conditions as practically and safely possible so that each human being can select the experiences most suitable to the development of his attributes and the prosecution of his goals."(18).

Group developments are often either isolated in nature or lost in a sea of society. The members may find their lives evolving around many institutions external to their home community, while their relationship to the activities of others within the group home

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(17) D. Minar and S. Greer (ed.) - The Concept of Community, Aldine Publishing Co., Chicago, 1969, p. 265.

(18) R. Dubos - The Crisis of Man in his Environment, from G. Bell & J. Tyrwhitt (ed.) - Human Identity in the Urban Environment, Penguin Books Ltd., Harmondsworth, Eng., 1972, p. 184.

diminishes, thus impeding the development of community identity.

II. Ideal Size of Community

Writers have suggested a wide range of ideal numbers for a new community. Suzanne Keller, a sociologist, found a number of suggestions which arose from her research for the Athens Centre of Ekistics(19). These numbers refer to an ideal neighbourhood size, the neighbourhood being the physical embodiment of a self-contained community:

1) Stevenage New Town (England) was planned with neighbourhoods of 10,000. But in studies by Herbert Gans, people actually related to smaller divisions of approximately 2,000.

2) Clarence Perry gives 5,000 as the maximum number of people to support a school, thus defining a neighbourhood 'unit', the unit being a subset of a neighbourhood. Keller questions this rationalization, however, as a single institution does not alone comprise the nucleus of a neighbourhood.

3) Ruth Glass, in studies of San Juan, found districts with traits of communities which ranged in size from a very few up to 10,000 persons.

4) Jacqueline Tyrwhitt defines a social unit of about 500 houses, or 2,000 people, as a subset of a larger neighbourhood system.

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(19) S. Keller - The Urban Neighbourhood, Random House, Inc., New York, 1968.

5) In a part of Hamburg, "neighbouring circles" can be identified, containing up to 40 families. The circle is a group of neighbours known by sight, among whom greetings are extended when seen.

Elizabeth Wood, in an article entitled Housing Design - A Social Theory, expresses a need for small groups of not more than 20 families within communities.(20).

Ekistics research group, Dellos Seven, reports that humans interact with no more than 100 people.(21).

Some writers have tried to make sense of these numbers by combining specific group sizes to form their definition of community. Keller has described three levels, with numbers vaguely associated with them: the neighbourhood, with an undefined population (perhaps 10,000), the neighbourhood unit, supporting basic institutions, with around 2,000 to 5,000 persons, and the neighbouring circle, with up to 40 families (say 100 to 150 people).

The editors of Human Identity in the Urban Environment, Gwen Bell and Jacqueline Tyrwhitt, have analyzed existing and proposed community sizes, and grouped them into three sizes: (22).

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(20) E. Wood - Housing Design: A Social Theory, from Bell & Tyrwhitt, op. cit., p. 344.

(21) Delos Seven - The Scale of Settlements and the Quality of Life, from Bell & Tyrwhitt, op. cit., 0. 242.

(22) Bell & Tyrwhitt, op. cit., pp. 233-235.

1)   600 to 1,500 families (averaging about 4,000 people) form an urban neighbourhood. This unit will support a primary school and a local shopping centre, although in an automobile-oriented society the numbers may be increased.

2)   500 to 1,500 people (averaging 1,000) can be contained in a pedestrian island, the smallest group that supports several social functions. It could be contained in an area of about 200 meters square.

3)   The smallest grouping of 50 to 80 families (about 250 people) is a population experiencing regular face-to-face inter-action. They feel at least on a 'nodding acquaintance'.

The Athens Centre of Ekistics, under the direction of Constantine Doxiadis, has proposed a more complex breakdown of com-munity groupings, which they refer to as an ekistics scale. Each group is studied under the categories of man, nature, society, shells, and networks. Starting from a population of one, a single man, the hierarchy runs so: two people to fill a room, four people in a family, 40 to form a group of families, 250 to comprise a small neighbourhood, 1,500 in a neighbourhood, 7,000 in a small town, and so on to form a megalopolis.

III.   System of Communities

We are approaching a better concept of community which in-volves a hierarchy of sub-communities, each with its own social

justification, and each dependent on levels above and below on the

hierarchical scale to support its existence. Bell and Tyrwhitt ex-

press the need for hierarchical organization of a city:

> The great majority of the inhabitants of megalopolis step from
> their front door straight into the impersonal, faceless city with no
> 'human scale' intermediary. The theory of ekistics holds that a
> hierarchy of spatial experiences is as necessary in human settlements
> as in biological and ecological phenomena."(23).

The hierarchical concept of community solves much of the con-

fusion of defining 'community' (George Hillery Jr. lists 94 definitions

of community--very impressive, but hardly assisting a student to

solidify his own concept (24).) Instead of arguing whether 'community'

comprises a particular social unit or another, all these units are

combined in this hierarchical understanding. Community implies a

system, rather than a specific entity.

Most definitions of community refer to a primarily self-

contained society, in social, cultural, and economic terms. These

definitions consider the community size which is known in physical

terms as the neighbourhood. It is the 'global society' which Konig

speaks of. As an example, Scott Greer's definition fits this category:

"When a territorially defined group, like the village, is a true

functional group for all its members and when it manifests a powerful

primary dimension, we call it a community."(25).

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(23) Ibid., p. 232

(24) Konig, op. cit., p. 22.

(25) Minar and Greer, op. cit., p. 63.

However, this is simply a description of the lowest level in the community hierarchy which can attain some degree of autonomy as a functional group. It also contains the smallest population with which a community hierarchy can exist in a viable form. At any lower level, the groupings would comprise something less than a total community.

These smaller groupings, although not autonomous in any sense, are necessary subsystems as they encourage formation of institutions which assume a more local and more personal role. The neighbourhood community itself may be only a subsystem of a set (of larger systems) of a size which forms the whole urban grouping.

In a leisure environment it has been shown that an active social interaction would be helpful as a vehicle for making life more meaningful. The development of social relations could be encouraged by the formation of a community system with a strong hierarchical structure.

The need for a hierarchy is expressed by Chermayeff and Alexander, although they speak of different levels of communities in terms of the transition from community to privacy:

To develop both privacy and the true advantages of living in a community, an entirely new anatomy of urbanism is needed, built of many hierarchies of clearly articulated domains. Such an urban anatomy must provide special domains for all degrees of privacy and all degrees of community living, ranging from the most intimately private to the most intensely communal."(26).

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(26) S. Chermayeff and C. Alexander - Community and Privacy, p. 37.

A Proposal

I. Numbers

A community hierarchy which is developed with a multiple of four seems to include most previously mentioned community sizes. The choice of the factor four is also responsive to the existing fabric of most North American cities: rectilinear form. When a rectilinear grid is a parameter, then dealing with systems that increase fourfold through each level of complexity simplifies planning. However, the factor 4 is not absolute, and a range could be allowed at each level. It might be a reasonable approximation to base this range on the factors of 3 and 6 applied to the average number in the immediately lower level. For small group interaction among individuals, 4 is close to an ideal group size, while 3 and 6 are approaching minimum and maximum sizes for efficient interaction. Above 6, the group may tend to become heavily dominated by a few individuals, ignoring others. It might also develop a tendency to split into two smaller groups. Below 3 does not comprise a group. Beyond a group of individuals it might be deduced that groups interact with other groups efficiently when the same maximum and minimum represent the numbers of groups in the interacting body. This assumption would further justify the hierarchy's factor.

The accompanying Figure IV-2, p. 58 compares the hierarchy based on a factor of 4 with the ekistics hierarchy, and the community

POPULATION OF COMUNITY HIERARCHIES

– with comparison to levels of proposed hierarchy

SOURCE	PROPOSED LEVELS						
	I	II	III	IV	V	VI	VII
Chermayeff & Alexander	individual private	family private	group private	group public	urban semi-public	urban public	
Bell & Tyrwhitt					250	1,000	4,000
Ekistics	1,2	4		40	250	1,500	7,000
Proposed*	1	4	16	64	250	1,000	4,000
Proposed Range†	1-2	3-6	12-24	48-96	192-384	750-1,500	3,000-6,000

* proposed population for a level is the population of the immediately lower level multiplied by a factor of 4.

† proposed range for a population of a level is the population of the immediately lower level (based on the factor of 4) multiplied by a factor of 3 for the lower limit and a factor of 6 for the upper limit. All numbers are approximations.

Figure IV-2

levels proposed by Bell and Tyrwhitt. The comparison is similar.
The more intensive categorization of the proposed system is a re-
flection of the desire to create a leisure environment, where en-
couragement of a high degree of social interaction is a prime
criteria.

II. Description of Levels

Following is an outline describing each level in a hier-
archy of communities based on a factor of 4. This proposal is the
basis of a programme to be used later in the design of a leisure
environment. Its criteria are further outlined in chart form in
the Appendix.

Although a single individual in no way exists as a community,
he is the basic element of any community. The community hierarchy
cannot exclude him, and the population of the first level of the
hierarchy is one. Spacially, he should be entitled to more than
would be ample as a place to sleep. This area will also serve for
personal activities such as hobbies or studies. It will be an in-
tensely private place, since a highly sociable community must be
balanced by the provision of an escape into privacy. It should
allow the individual freedom in shaping his own environment within,
closed off from the views of others. The privacy of this personal
territory could also be shared by a couple.

The second level, with a population of four, is the family--
'family' meaning a group of people living their daily lives together.

Group

NOT THIS....   THIS

⊙▷ social orientation of dwelling   ✚ focal point

Unit

NOT THIS....   THIS

ORIENTATION OF DWELLINGS
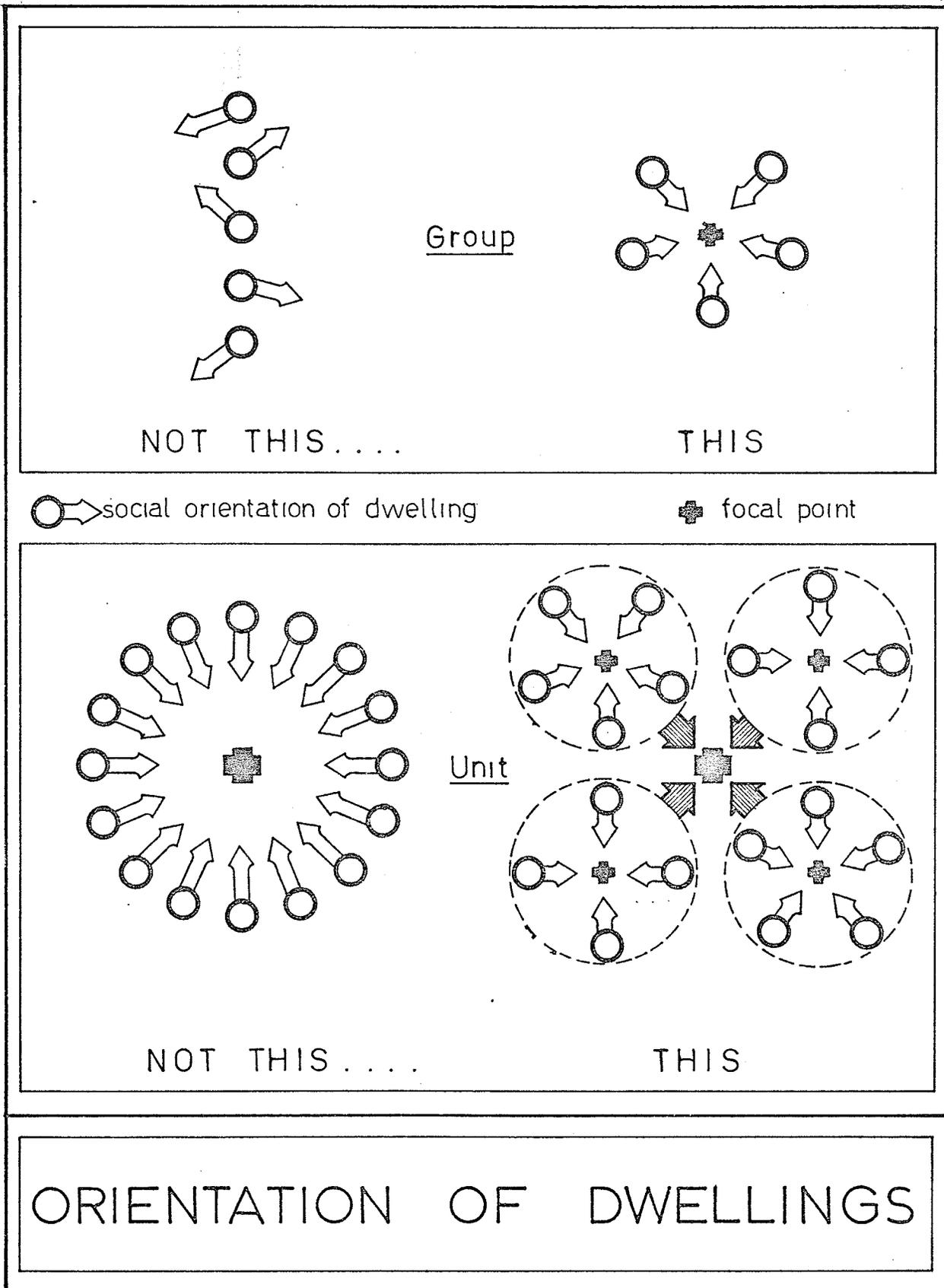
FIGURE 1V-3

It could consist of a nuclear family, a group of students, or even more unusual arrangements generally shunned by work-dominated society, such as a group marriage, or a cell of a sect. The area occupied could be small, but then would be compensated for by provision of extra space in higher hierarchical levels.

The next level (III) would have a population of about 15 people, composed of four or five families who interact constantly through individual expression of talents and hobbies, sharing personal possessions and food, and informally grouping for drinking coffee, playing cards or watching children at play. It should be an informal territory, and form a transition between the more private family level and level IV in the community hierarchy. Level III will be known as a 'group'.

Level IV, a 'unit', will contain about 60 people (four 'groups') and provide a sizable communal space. Individuals should interact daily, and everyone will know each other by name. It is the highest level at which individuals will be encouraged to interact face-to-face, so should have a strong sense of identity as a distinct society. It could be a gathering place where spontaneous, energetic liesure activities can occur and grasp the attention of all. Figure IV-3, p. 60, shows how family dwellings can be arranged to form groups and units. Families and groups are oriented towards entities which give a sense of identity.

Level V is a 'section'. It will provide communal space for four 'units', or about 250 people. At this level neighbours will be recognized by sight, or at least be 'known of'. Interaction will hopefully be friendly, but is likely to occur most frequently in groups. It might contain some sort of focal point, such as a fountain or a piece of sculpture, and some functional contents, perhaps a laundry, workshops, and car maintenance area. It may also provide space for functional amenities of higher levels which overlap the structure of the section, thus bringing in an external population.

Level VI is a 'block' containing about 1,000 people. Its built-up area would be quite dense but, with extra green space, it would fill a typical city block. It could be an entirely pedestrian island--the "pedestrian precinct" of Bell and Tyrwhitt. Individuals would interact on a formal level--a "nodding acquaintance" relationship. 'Units' might regularly interact at this level, perhaps as teams in athletic leagues, or as political units in the organization of the block.

The neighbourhood, with about 4,000 people, is level VII. Its centre would be a commercial, administrative, and transportation node. It should contain all the institutions or an active neighbourhood and maintain a strong identity, both architecturally and culturally. However, it would also draw in the population of the surrounding urban society, and offer them its unique cultural presence as a distinct node within the larger urban area. In other words,

it would develop a local colour which would give it a sense of place in the urban fabric.

The neighbourhood community would be defined by its function. Socially, its inhabitants will feel a bondage because they share common institutions. Being the level of the hierarchy at which social interaction gives way to functional amenities in defining its meaning, it can be considered the lowest self-contained community (in terms of social interaction). Any community design should take into account all hierarchical levels of community up to and including the neighbourhood. In an isolated location, a neighbourhood formed with the outlined community hierarchy could exist as a functional leisure environment. For a larger population, the levels of community can increase upwards as necessary, and provide larger-scale institutions which would enhance a life of leisure. Their design should be beyond the control of one architectural ideology. To ensure interesting local colour in other neighbourhoods, their concepts should be formed by other designers.

III.   Urban Links

This system of communities can be used in part to link with an existing neighbourhood to strengthen its organizational structure and complete its hierarchical breakdown, thereby encouraging greater social interaction within. Either high level communities can be added to a community which is too small, or lower level hierarchies
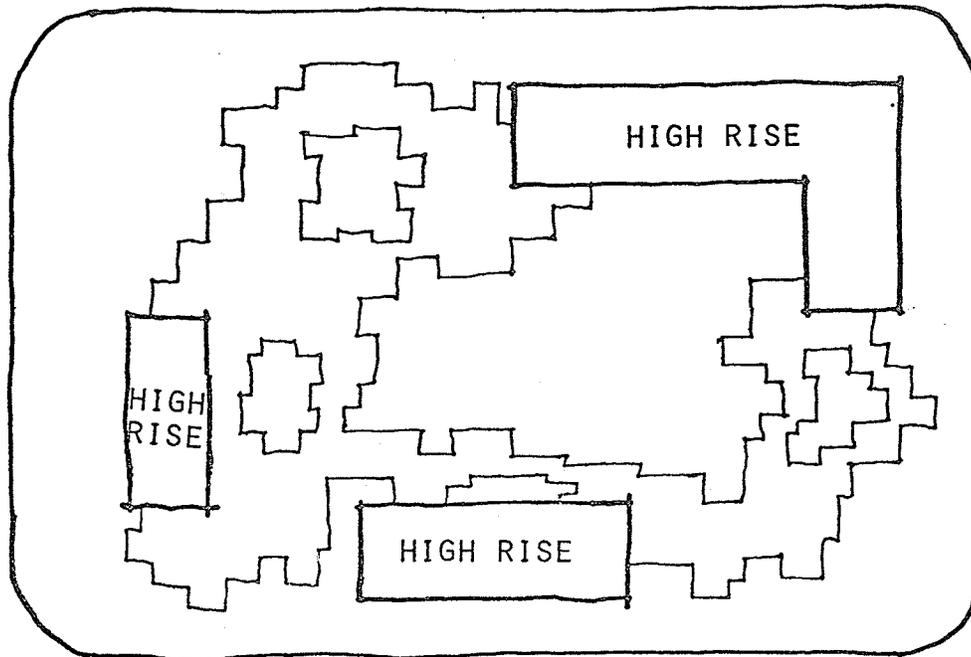
FIGURE IV-4:   INFILL OF HOUSING SYSTEM TO PROVIDE
AMENITIES AND SUPPORT POPULATION ON
WASTE GREEN SPACE BETWEEN HIGH – RISE
BLOCKS.

can be inserted into a neighbourhood which contains a hierarchical social structure only at the higher levels.

To accomplish this strengthening of the community hierarchy a community system could be used as infill on land surrounding existing buildings, whether they be high-rise blocks or suburban homes. The land built on would be superfluous green space, and would be replaced by a more usable rooftop park. Existing buildings would be tied together. The density would be increased to enable support of new institutions which encourage community formation. A variety of housing forms could be provided in the old and new structures. The revitalized neighbourhood would have a strong architectural identity, and also would encourage identity with the institutions formed at each hierarchical level of community (see Figure IV-4, p. 64).

There will be a certain amount of overlap between levels of community, particularly between adjacent levels. As Christopher Alexander says, "the city is not a tree," and, rather, has a lattice-like organization.(27). The proposed housing system permits a lattice to form, both internally, and externally in its relation to the surrounding urban area. Overlaps between levels would occur naturally, depending on the personal interests of individuals and groups. A lattice, though, should not develop to the degree where its complexity confuses the population, and one's position in society becomes nebulous. However a family could relate to two different

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(27) C. Alexander - The City is not a Tree, from Bell and Tyrwhitt,
      op. cit., pp.

level III 'groups', or belong to a bridge club composed mostly of residents of a different 'unit' (level IV) without being too mixed up about its place in society. A proper balance should be maintained between a lattice-like pattern of activities, and identity with institutions within one's own community hierarchy. Think of the community as a tree whose branches stem from the same trunk, but intermingle with the branches of surrounding trees.

IV.   Naturalness of Interaction

The occupants of a structure styled to contain a leisure culture should be able to define their personal territories naturally, as well as the territories to the communities which they form. The designer can only encourage the territorialization he desires. He can suggest particular community territory by the way he structures space, and he can imply certain uses by the choice of materials and other architectural qualities, such as lighting, acoustics, and ceiling heights. But the final decision should rest with the user, who could use spaces to suit his particular needs, and form institutions which serve his and his neighbours' peculiar interests. The way communities territorialize within the structure will never be exactly as anticipated by the designer. It will always depend on the initiative of the occupants. Predictions are valid only to the degree that we can classify human dynamics.

As groups form, they should develop their own norms of behaviour. Hopefully (if we have enough faith in mankind to believe that we all have more good qualities than bad), these should reflect the better qualities of the occupants. Group pressure would control individual aggression, and perhaps encourage the good side of a member's character to shine. Members of a group generally agree with group decisions, and new members quickly accept group policy, so a group, with its associated institutions, is generally self-perpetuating, and can maintain its uniqueness. A deviant, if he cannot accept a group's interests, or dislikes his neighbours, should have the option of redefining his position within the neighbourhood, making himself part of a different community. For deviants who wish to withdraw from community, privacy must be another option. Again, increased community must be complemented with increased opportunity to escape into privacy.

There are those who suspect our ability to coexist in a highly interactive environment, but the feeling is derived from our existing society, where a stranger is mistrusted before he is known, and our lack of intimate contact makes us wary of those we do not understand. Many of us lack self-confidence in our ability to interact with others, because we have rarely had the occasion to test our reactions to close interaction.

But can we bury our pre-conceptions of group interactions?

Can we accept that a new culture could form in the leisure en-
vironment, with norms which cannot be judged by typical North
American society? B.F. Skinner, in speaking of his psychological
utopia, Walden II, has pleaded with us to suppress our cloak of
pessimism, assuring us that a community of people at leisure will
enhance the common good:

> But live in Walden II a month or so and you will get a fresh
> point of view. You will shake off the pessimism which fills the
> abysmal depths to which we've sunk, and you will begin to see
> the potentialities of man. You will begin to expect great things
> of men, and see the chance of getting them, too.(28).

Many social problems which we might anticipate may not occur at
all within the community hierarchy in the way they might in pre-
sent society. And if they do, there may be simple solutions to
them which we cannot predict. For example, the imposition of
authority may be governed by a cult of honesty, rather than by
the diplomacy and bureaucracy to which we are accustomed. Says
R.E. Roberts, author of The New Communes, "New forms of authority
are hopefully developing in the communal scene--authority revolv-
ing around self-insight, knowledge of group dynamics, and co-
operation with nature."(29).

The individual who realizes a true state of leisure will
have a set of values to guide his life that is radically different

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(28) B.F. Skinner - Walden II (spoken by Frazier), the MacMillan
        Co., New York, 1962, p. 290.

(29) R.E. Roberts - The New Communes, Prentice Hall, Englewood
        Cliffs, N.J., 1971, p. 139.

from our own, and will probably be based on a better understanding

of his relation to community than we have. He would have the

social maturity to understand that, by living in harmony with

community, he can find the greatest amount of freedom to style his

own life.

> "'the conquest of man
>
> - the conquest of man himself,
>
> but never of other men.'"
>
> - Frazier, in _Walden II_ (30)

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(30) Skinner, op. cit., (spoken by Frazier), p. 76.

CHAPTER V

INTERACTION WITH NATURE

Purpose as Leisure Pursuit

I. Man and Earth

"The Lord God took the man and put him into the Garden of
Eden to till it and keep it."(1). It is risky enterprise to attempt
to improve on nature. Alternatively, man might try to fit into it
in the most harmonious way possible. If he can do so, he will find
a big, beautiful world which has been made for him. He can make
use of it in any way he chooses, but he must remember that if he
reshapes it he will be affecting a universal system, the consequences
of which may be too complex to predict. If man's activities comple-
ment natural systems, he can realize harmony with nature. If man
attempts to conquer nature, he may conquer himself, his race being
an entity of the universal natural system. "Man turned the earth
into a howling waste from which he would be the first to vanish."(2).
The choice is open, but a man striving for meaningful leisure might
test the option of harmony. Having an understanding of the intrinsic
value and true purpose of his activities, he may discover that inter-
acting with nature on its own terms can help fulfill his own life.

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(1) The Bible - Genisis 2:15, Revised Standard Edition.

(2) W. Faulkner, quoted by R. Dubos - So Human an Animal, Charles
     Scribner's Sons, New York, 1968, p. 190.

The choice of conquering nature is more in tune with the work ethic and the concept of work for work's sake: artificiality for artificiality's sake.

Over time and space nature offers unique sensations and experiences which can augment the quality of a person's existence. Within the natural sphere he is presented with diverse challenges, which can be accepted or avoided. Acceptance may help a person to realize his own potentials and give him confidence to explore and discover the world about him.

Some men claim to sense an unexplainable spiritual attachment to nature. Beauty can be seen in many forms of nature, and it may stir up in a sensitive person a good feeling which has no rational basis. Nature, if one listens closely, may be heard calling us away from our urban habitat, a call which has stirred many suburbanites to search out wilderness, although the inability to foresake modern conveniences dilutes the experience, and the desire to mix with a social scene may override the value of natural sensations. However, in contrast to their sterile home environments, the semi-natural condition is far more rewarding during their leisure time. Instead of 'escaping' to nature, it might be better if many of the characteristics of nature were built into the home environment. Then the natural world outside could be explored for its own sake.

II.   Personal Development

Nature can help man develop in all aspects of his personal being. Physically, his body functions have evolved through eons of time of existing in nature. The functions are kept oiled when exposed to the rigors of natural experience, and his state of health may be improved.

There also seems to be an instinctive emotional response to the natural setting. Nature, with her changing moods, stimulates a wealth of contrasting sensations of the heart. The person at leisure, who sensitizes himself to these conditions of nature, will feel a spectrum of states of emotion, which can help dispel boredom and apathy from his attitudes towards life.

Nature stimulates the intellect with her organizational complexities. At the macro and micro levels man is enticed to seek knowledge. This knowledge may lead to reflection and self-discovery, and pave the way to a comprehension of a man's role on earth and his personal relationship with the universe. The spiritual attachment which man feels towards nature combined with his intellectual pursuit of universal attachment, may give rise to a personal philosophy-- the foundation of an individual's religion. This approach to realizing meaning in life has been expressed by Cyril Connolly: "The more I see of _life_ the more I perceive that only through solitary

communion with nature can one gain an idea of its richness and mean-
ing."(3).

III.   Social Development

Nature provides excellent settings for many forms of group
interaction, especially when group privacy is desired. To experience
nature in a sociable setting can have sincere rewards in that natural
experiences are shared, hopefully bringing people closer together
through a common bond of experiential awareness.

The wilder the setting the more people must rely on each other
in their efforts to cope with the environment. Again, this may help
to solidify relationships, as well as cementing into a group the social
values derived from mutual aid.

When a group is communing with nature, individuals are more
likely to be natural in their social relationships, perhaps as a re-
sult of the informality of the environment. Their natural selves tend
to become evident, and they are more likely to express their true po-
tentials, as opposed to acting as somebody they are not and pretending
to a role which they have not really got, or are incapable of main-
taining.

Group members, if they can be themselves in nature, may gain
from others recognition for their real abilities. This true

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(3) C. Connolly, quoted by Chermayeff and Alexander - Community and
       Privacy, Doubleday & Co., Inc., Garden City, N.Y., 1963, p. 40.

appreciation might tend to further encourage co-operation within the group. Also, potential could be tested in friendly competition without concern about exposing one's true self, because the self would be accepted to begin with.

The spiritual sentiments which nature instills in individuals can be combined with those of others to form a group theosophy. When a group shares a theory of its 'meaningful' relationships with the universe, the groundwork is set for a religion. A religion which arises through natural interaction would have validity today because a person needs evidence in forming a comprehension of universal attachment in order to realize meaning in his leisure pursuits. Rene Dubos comments:

We can change our ways only if we adopt a new social ethic--almost a new social religion. Whatever form this religion takes, it will have to be based on harmony with nature as well as man, instead of the drive for mastery.(4).

Essence of Nature

Nature's magnetism can be described in intangible terms, such as beauty and timelessness, or freshness and vitality. But these qualities become felt only as a result of combinations of tangible traits. An analysis of these traits may lead to a better understanding of what constitutes nature in the real world, and perhaps give clues as to how to emulate the essence of nature architecturally.

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(4) Dubos, op. cit., p. 7.

I. Change

The appeal of nature can be examined in all forms of human experience: physical, emotional, spiritual, and intellectual. Over each of these forms rules the process of change--change in place and change over time. The changing states of nature are normally balanced. Change occurs, and it influences change in other parts of the system. But all remains in a state of equilibrium. Birth and rebirth, and cyclical migrations are the rule. Hermann Hesse, an author and philosopher, discovered that everything changes and everything comes back to the same place. "He saw that the water continually flowed and flowed and yet it was always there; it was always the same and yet every moment it was new."(5). However, change is constant. No two places, or no two instances of time, are ever the same. When metamorphosis is cyclical, the conditions of the environment may evolve slightly, and one cycle may slip off on a tangent from the previous one. When things return to the same place, that place may have a different substance or new meaning. "This path is stupid, it goes in spirals, perhaps in circles, but whichever way it goes, I will follow it."(6).

Natural change affects people, too, not only physically, but also in their emotions and attitudes. Humans adapt to changes in

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(5) H. Hesse, <u>Siddhartha</u>, New Directions Publishing Corp., New York, 1951, p. 83.

(6) H. Hesse, op. cit., p. 78.

their fellows, and thereby become part of each other as they change
themselves in response. Similarily, societies change as people adapt
and regroup their communal expectations, in adjusting to a restructur-
ing of their social order. Moller has quoted G. Herbert, in referring
to planning, on the domination of change:

> The art of town planning is the art of the living, growing,
> developing, ever-changing city...Change is indeed the only permanence;
> being, becoming, and perishing the only external truths.(7).

Change will be especially prevalent in a leisure society, with
people frequently moving and travelling, with attitudes to neighbours
and community continually being reconsidered and refined, and with
perception of the self constantly being questioned.

II. <u>Diversity</u>

In the physical state, the diversity of nature is partially
apparent in appeal to the senses. Texture, sounds, visual experiences
of light and colour, flavours, and fragrances are perceived in any
natural habitat in myriads of combinations. A delicate sensation
associated with a real experience may be duplicated, even years later,
and flood the mind and heart with detailed recollections of the event;
e.g. the scent of a flower may rekindle fond memories of lazy summer
afternoons in the country during childhood. Thoreau appreciated the
appeal and significance of simple sensations in a natural setting.

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(7) G. Herbert, quoted by C. Moller - <u>Architectural Environment
and Our Mental Health</u>, Horizon Press, New York, 1968, p. 116.

He described how thought can be generated by "the faint hum of a mosquitoe": "There was something cosmical about it; a standing advertisement, till forbidden, of the everlasting vigour and fertility of the world."(8).

Tangible evidence of diversity is apparent everywhere in nature in extreme contrasts. As one travels through a wild setting his spatial environment is constantly changing from one extreme to the next. One minute the path is wide, the next narrow. One place has a bower of leaves, the next is open to the sky. Here the land is flat and grassy, there it is hilly and rocky. Even the quality of diversity itself is contrasted when a varied landscape gives way to a long and wide prairie. (Although at the micro-scale the prairie has its own diverse characteristics).

Along the journey the senses are aware of diverse messages. Spaces are affected by changing qualities of light and shadow. The ground underfoot communicates feelings of hard stone and soft soil, or coarse gravel and smooth ice. The ear is pounded with the thunder of a waterfall, and later pressured with silence. In a hot summer the baked earth can still bleed ice cold spring water. The greys of winter are subtly blended with the colours of berries and bark, or yellow blades of grass which manage to reach above the snow.

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(8) H.D. Thoreau, _Walden_ - Dolphin Books, Garden City, N.Y., 1960, p. 78.

Each of these sensual experiences affect the perception of space,
and their diverse combinations appeal to the human spirit that is
aware. Through experiencing a wide range of natural spaces, a
person may discover some with special appeal to him--an appeal
which urges him to develop a personal attachment to those spaces,
and perhaps to discover something about himself. Dubos recognizes
this as the prime benefit of a diverse environment, despite (when
applied to architecture) extra cost or difficulties in planning:

> Diversity may result in some loss of efficiency. It will
> certainly increase the variety of challenges, but the more
> important goal is to provide the many kinds of soil that will
> permit the germination of the seeds now dormant in man's
> nature.(9).

Vastness is another tangible physical characteristic of
diversity. Boundaries are unlimited, and the individual is free to
explore almost any path he chooses. Although the globe is finite,
one could never experience it totally in a thousand lifetimes, and
even returning to a previous place will prove the unrepeatability
of experience because it will have changed with time. Vastness is
apparent in the range of expectations of what a new experience has
to offer. What's around the next corner? What lies over the hill,
or beyond the horizon? Also,the vast powers of nature are difficult
to control. Our attempts at mastering natural processes have un-
predictable consequences as a new equilibrium settles. It is

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(9) Dubos, op. cit., p. 175.

better to conform to natural functions--blend in with its natural habitats, and harmonize with its processes.

III.   Organic Structure

Organic structure characterizes the physical traits of nature. All parts are dependent on all other parts in a state of dynamic equilibrium. Spatial environments, large or small, exhibit ecological balance. Because of these dependencies, differentiation between neighbouring environments occurs transitionally in most cases, unless there is an abrupt change in topography, such as at the edge of a cliff, or if mediums change, as where land meets sea. The 'structure' of nature, in an organic sense, is not only inherent in its roots and stems, but also in every aspect of the physical environment: spatial dimensions, sense of enclosure, light and colour, textures, acoustics, etc. Each of these qualities is related to every other one, and are organically inseparable as distinct entities with separate functions.

Flexibility is another organic trait. It is found not only in the possibility of multi-functional use of a particular environment, but also in the limitless freedom of choice between environments. An environment can be found for almost any particular need, assuming one has the patience and means to search far enough.

IV.   Spontaniety

Spontaniety characterizes the natural environment. From time

to time and from place to place unpredictable events occur and un-
expected objects appear. Yet, whether we call it instinct, genetics,
or natural law, all dynamic conditions of nature are subject to a
calculated pattern of processes. Any event or object is a sponta-
neous affirmation of those processes. Still, to man, the variations
of patterns are infinite, and nature's complexities give him fascin-
ation and excitement, suspense and surprise--his own spontaneous re-
actions to natural conditions. Erich Fromm has expressed the happy
feelings which our spontaniety brings us:

> Whether it be the fresh and spontaneous perception of a land-
> scape, or the dawning of some truth as the result of our thinking,
> or a sensuous pleasure that is not stereotyped, or the welling up
> of love for another person--in these moments we all know what a
> spontaneous act is and may have some vision of what human life
> could be if these experiences were not such rare and uncultivated
> occurrences.(10).

A spontaneous environment encourages the spontaneous act.
If the individual can free himself to respond naturally to an
immediate condition of nature, then his real characteristics and true
potentials may become evident. The spontaneous act relies on the
creative ability of the individual who is coping with the condition
in his own natural way. Fromm says a spontaneous person displays
"the quality of creative activity that can operate in one's emotional,
intellectual, and sensuous experiences and in one's will as well."(11).

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(10) E. Fromm - <u>Escape from Freedom</u>, Avon Books, New York, 1965,
         p. 286.

(11) Ibid., p. 285.

This is an important step to experiencing the true self, and sensing

the joy of spontaneous intercourse with the universe:

> If the individual realizes himself by spontaneous activity
> and thus relates himself to the world, he ceases to be an iso-
> lated atom; he and the world become part of one structuralized
> whole; he has his rightful place, and thereby his doubt con-
> cerning himself and the meaning of life disappears. This
> doubt sprang from his separateness and from the thwarting of
> life; when he can live, neither compulsively nor automatically
> but spontaneously; the doubt disappears. He is aware of him-
> self as an active and creative individual and recognizes that
> there is only one meaning of life: the act of living itself.(12).

The freedom to act spontaneously, then, implies non-

obligatory activity, and activity which exercises the intellect,

emotions, and physique in conjunction with natural conditions. It

is thus an essential element of a life of leisure.

V.   Emotions

The next quality of nature to consider is the emotional

essence. The natural world is very moody. It can change from the

fury of an afternoon thunderstorm to the tranquility of an evening

sunset over glassy water. The moods of nature are often described

metaphorically: lazy summer, mountain solitude, wild waters,

solemn forests, lone prairie.

Reaction to the wilderness is stimulated by negative and

positive emotion, depending on cultural, economic, and personal con-

ditions. However, the person at leisure, who has satisfied his basic

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(12) Ibid., p. 289.

needs, and is searching for meaning in a oneness with nature, will

accept most of his responses as complementing his wealth of worldly

experiences.

The physical characteristics of nature are manipulated to

stimulate emotional response. Tangible elements combine to emote

suspense, anticipation, surprise, curiosity, orientation, and many

more states of mind which make life more interesting. The more

these feelings are triggered, the more fascinating life will be.

Their occurence is spontaneous, with no formal pattern to dispel

the curiosity which entices one to see what can be discovered along

every step of the way. Says J.B. Bakema, in referring to archi-

tecture: "Neighbourhoods must be a kind of castle with towers,

rooms, galleries, secret corridors, and surprising courtyards."(13).

This informality of nature encourages man to lose himself within it,

as in a maze, and expose himself to chance experiences. He can even

forget himself in time as he explores. The infinite cycles of

natural processes, and the unbending powers of natural forces, give

to any setting a sense of timelessness. There is no better therapy

for anxiety-torn modern man.

VI. Spirit

Nature's spiritual essence emerges from a sense of universal

attachment among all things. Everything affects everything else;

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(13) J.B. Bakema, quoted in G. Bell, J. Tyrwhitt (ed.) - Human
      Identity in the Urban Environment, Penguin Books Ltd.,
      Harmondsworth, Eng., 1972, p. 383.

everything depends on everything else; everything is part of every-thing else. The infinite magnitude of the universe makes it im-possible for man to define the true self, the boundaries of his ex-istence being limitless. The forces of nature, too, are controlled by powers beyond the possibility of comprehension. Man then gains the impression of being at one with the unknown, an unknown of in-comprehensible vastness and supernatural power. This feeling may give rise to a spiritual sense--a sense of some undescribable force which controls the universe, and which at the same time is part of us all. All religions have their own explanation of this feeling, but it can best be experienced through natural interaction. It is usually a good feeling, because nature provides us with a beautiful world--a world which gives us the freedom to use it in any way we choose. Dubos points out:

> Nature should be regarded...as a kind of garden to be developed according to its own potentialities, in which human beings become what they want to be according to their own genius.(14).

The spirit tempts us to strive for something beyond our-selves--to face the challenges which nature presents to us, and to challenge our own natural capacities. It may cause a sensation to well up inside us--perhaps the stirring of the soul?

VII. <u>Intellect</u>

The essence of nature also becomes apparent through

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(14) Dubos, op. cit., p. 200.

intellectual stimulus. Nature provides a perpetual source of study material for man's unquenchable thirst for knowledge. Complexities ·of nature, such as ecological chains or natural order, are bound to stimulate interest in the pursuit of knowledge and in the self-discoveries they reveal. Questioning universal attachments entices philosophical reflection. The search for a better understanding of life is an endeavor which brings meaning into a life of leisure.

Adaption to Architecture

I. Manifestation of Nature's Essence

The physical qualities of nature are tangible. Their essence can be manifest architecturally. In turn, manipulation of the physical characteristics to create architectural environments can stimulate emotional response.

Emulation of nature in built form can provide a new intellectual environment. Artificial expression of the essence of nature could encourage exploration of the transitions between nature and architecture. In this search could lie the key to inserting the intellectual essence of nature into architecture.

The spiritual essence, however, is intangible and cannot be dealt with through real materials. If a perfect robot were technically created, would·it have human spirit? Surely this would be the distinction--the soul of man. Similarily it is unlikely that the

essence of natural spirit could be instilled into artificial objects.
The soul cannot be fooled. But Frank Lloyd Wright wrote, "When man
builds 'natural' buildings naturally, he builds his very life into
them."(15). Perhaps an architectural order based on natural inter-
action would emanate its _own_ spirit.

The accompanying Figure V-1, p.86 outlines some of the
qualities which generate the essence of nature, and lists their
potential in architectural application.

II. Natural Order and Architecture

A. _Planning Control Versus Spontaniety_. Traditionally, archi-
tecture has been ordered in a manner which displays a high degree
of pre-planning. The methodical clarity of a building generally
demonstrates systematic preconception of the arrangements of its
parts and of the expression of its presence. It is ordered as a
closed system, which indicates its purposeful response to a specific
problem. The solution is an artificial environment with everything
in its intended place--static, clearly organized, and obvious in
function. In great works of conventional architecture man has
proven his ability to design a needed environment and to control
the functions it houses.

Natural order, on the other hand, is far more spontaneous.
Its systems and processes are not planned. Rather, their development
depends, to a large extent, on environmental conditions at any

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(15) F.L. Wright, _The Living City_, Horizon Press, New York, 1958,
p. 25.

ESSENCE OF NATURE

NATURAL QUALITIES

PHYSICAL: diversity, contrast, vastness, change, appeal to senses, transition, organic structure, spontaniety.

EMOTIONAL: informality, moodiness, timelessness, curiosity.

SPIRITUAL: beauty, universal attachment, striving of soul, freedom, infinity, supernatural control.

INTELLECTUAL: self-discovery, natural order, philosophical enticement, pursuit of knowledge, complexities·

ARCHITECTURAL POTENTIAL

The physical essence can be manifested architecturally.

Manipulation of physical characteristics can stimulate emotional responses.

Perhaps architecture can emanate its own spirit, but the essence of natural spirit cannot be instilled into artificial objects anymore than a perfect robot could become a man. The soul cannot be fooled.

Artificial expression of the essence of nature would establish a new intellectual environment, exploring the transitions between nature and architecture.

Figure V-1

moment as time passes, so they form in an evolutionary state. Instead of being designed, nature is ordered as it grows. Even the genetic pattern in a seed is an extension of the spontaneous response of a species to environmental conditions, if one accepts Darwinian Theory. Although this pattern has some control after germination, the final form is still dependent on unpredictable external forces. Most natural systems are too complex to comprehend perfectly. They are often difficult to define because of their transitional links with other dependent systems. Their order is thus ambiguous to mankind, even if some superior intelligence has exerted control over their design.

It may be possible to approach natural order through architecture by lowering the degree of planning control. This does not advocate providing a completely disordered environment, but rather transferring a certain amount of the control of its design from the architect to the actual users of the environment. Instead of providing a pre-planned shell for a preconceived use, the designer would provide only a framework within which the user could shape his habitat as he responds to spontaneous conditions that arise in the course of his personal existence. In this way, he will be living more naturally than he could in a conventional architectural system.

Conversely, natural systems can be re-ordered to approach the clarity of control asserted by conventional architecture. This

might be done by decorating artificial surroundings with natural

objects, such as gardens, flower boxes, or cedar-rail fences, or

by modifying natural conditions, such as controlling sunlight and

shadow, or creating views by clearing brush.

On the one hand, it is seen that by shifting planning con-

trol of the architectural environment to the user a person may tend

to become a natural element of the system, able to respond spon-

taneously to his environment. The architectural order develops as

a function of its users, therefore evolving as a natural habitat.

On the other hand, natural systems can be rearranged to suit pre-

conceived ideals which arise from man's values. natural order

and architectural order can thus approach each other in their degree

of spontaniety and control. With merging orders, the resulting en-

vironment could be characterized by interpenetrations between nature

and architecture.

B. _Diversity_. A variety of spatial qualities can be ordered

in diverse ways to create an apparent condition of controlled

irregularity: ceiling heights can be raised or lowered, floors can

be wide or narrow, spaces can be open or enclosed, surfaces can be

coarse or smooth, acoustics can be loud or soft, and everything can

be splashed with colour, or left grey and non-descript. The di-

verse conditions created within an environment permit a greater

freedom of choice for locating leisure pursuits. Rene Dubos has written: "Society should...provide as wide a range of environmental conditions as practically and safely possible so that each human being can select the experiences most suitable to the development of his attributes and the prosecution of his goals."(16). As in raw nature, the spaces could encourage not only a wide variety of leisure forms to occur within them, but also the creation of new activities to suit the special qualities of that space.

C. Emotions. Natural order can also be approached architecturally through the use of emotional spatial elements which occur spontaneously and instill fascination in a sequence of spaces; surprise, suspense, anticipation, curiosity, all of which can be emulated by manipulating physical qualities of nature to create an emotional essence in built form. The urge of architects and planners to systemize their plans has erased many of these emotions from the essence of the built environment, and sterilized the spaces we exist in. This process is severely criticized by A. & P. Smithson:

> The slum has gone but we have only to look at one of the new towns or a recent housing development, to realize to what extent the spirit of spontaneity has also gone into hiding. Architects left no cracks and crevices this time. They expelled all sense of place. They were fearful of the unpremediated event, the spontaneous act, unscheduled gaiety or violence, unpredictable danger round the corner. They made a flat surface of everything so that no microbes could survive the civic vacuum cleaner. To think that architects are given to talking devotedly about space while they are actually emasculating it into a void.(17).

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(16) R. Dubos - The Crisis of Man in his Environment, printed in Bell, Tyrwhitt, op. cit., p. 184.

(17) A. & P. Smithson - The Role of the Architect in Community Building, printed in Bell, Tyrwhitt, op. cit., p. 380.

The informality of nature encourages the spontaneous act. The tangible qualities of nature, combined to emote spontaneous feelings, liberate leisured man to lose himself within a maze of chance experiences.

III. Organic Interrelationships

A. Organic Structure. The organic structure of nature can be reflected in architecture. The interdependencies of spatial characteristics that structure a natural environment also are applicable in architecture: lighting, textures, acoustics, spatial dimensioning, colour, enclosure, form, physical structures. These may all be organically related in built form. Moshe Safdie has explained this organic concept of structure:

> The structure of a building is not just what holds it up; it is also the structure of light, the structure of air, the structure of the distribution of services through it, the structure of movement, the psychic structure of human response to location, identity, and privacy. All these are structure.(18).

The human occupant himself can be part of the structure. Frank Lloyd Wright has said that organic architecture gives the human spirit "appropriate architectural form."(19). A building would at the same time continue its organic links back into nature, through transitional stages, so that the structure of the building and the

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(18) M. Safdie - Beyond Habitat, Tundra Books, Montreal, 1970, p. 148.

(19) Wright, op. cit., p. 25.

structure of nature become fused, and operate as a single organism.

Safdie continues to say:

I believe that as the man-made environment approaches the per-
fection of the form fulfillment of natural organisms, this separation
between the man-made and the natural will disappear, that we as men
will be equally fulfilled in either man-made or natural environments.
(20).

The building itself could become a geological structure with

nature being allowed to play her role over it, the building being

blanketed with a natural landscape (see Figures V-2 and V-3, p. 92).

The artificial geological structure, with spaces for human inter-

action built into it (or hollowed out of it, as in troglodytic dwell-

ings) could fuse with existing urban structure, thus forming another

transitional link.

B. Transition. A building encouraging interaction with

nature should be tied into the landscape, just as in nature every-

thing is part of everything else. Then an occupant can feel that he

is a part of nature in transition, rather than existing in a separate

and artificial bubble. When this transition exists within his living

environment, then he can choose his personal habitat at the degree of

artificiality or naturalness that he desires, simply by finding the

right position in the environment.

C. Change. The variety of organic interrelationships should

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(20) Safdie, op. cit., p. 147.
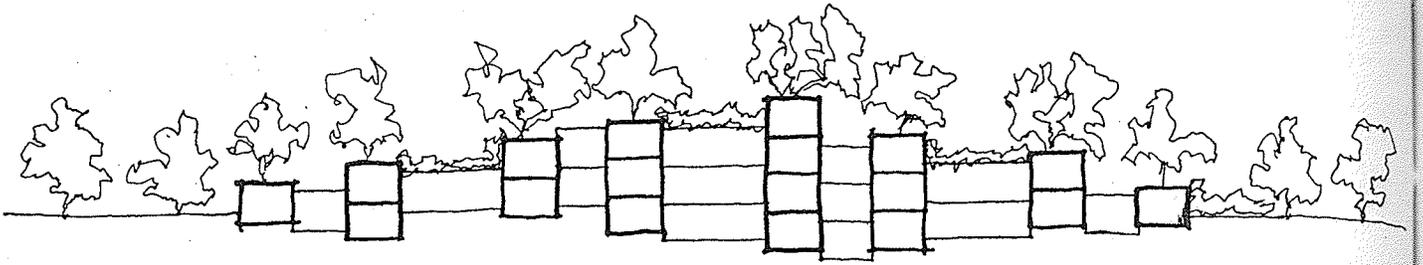
FIGURE V-2: ARTICULATION OF LANDSCAPE WITH
ARTIFICIAL GEOLOGICAL STRUCTURE
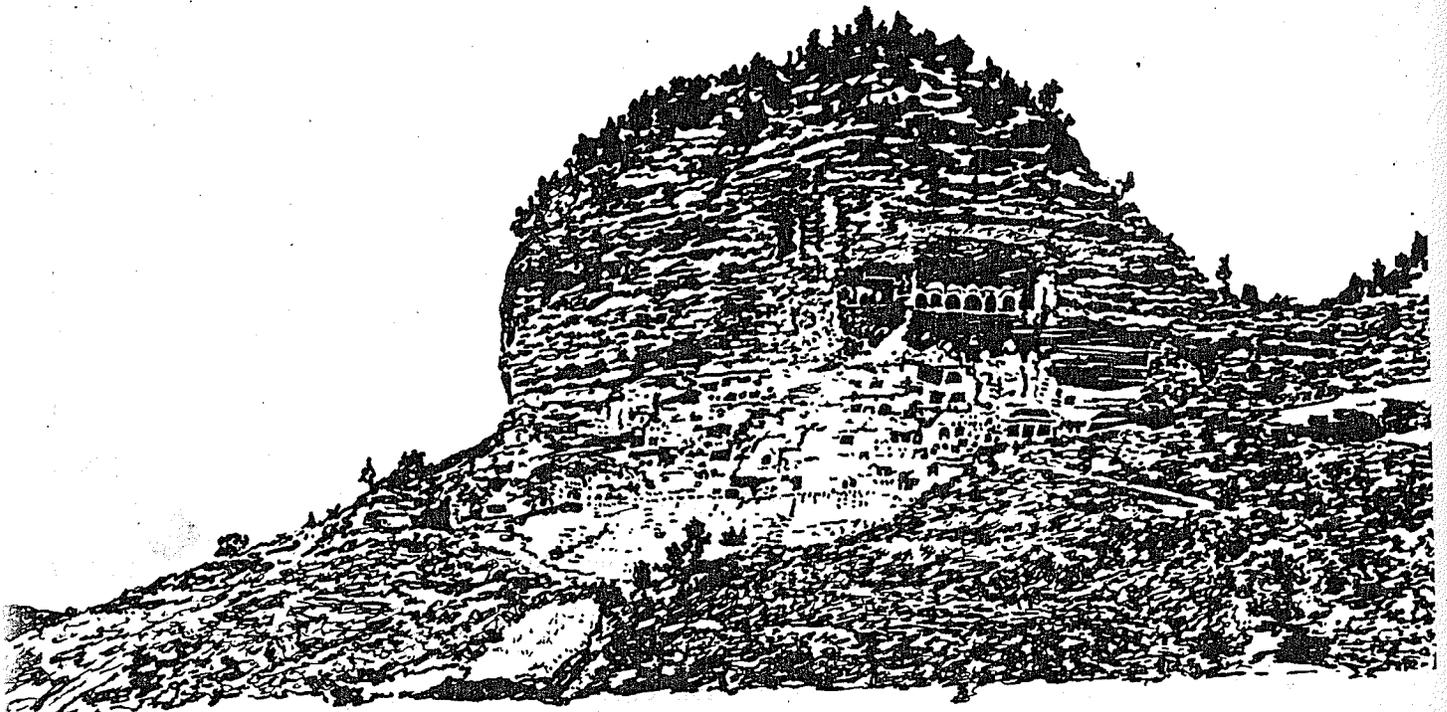
FIGURE V-3: MAICHISHAN GROTTOES, A BUDDHIST
MONASTARY BUILT IN CHINA AROUND
400 A.D. (FROM BUDDHISTS IN NEW
CHINA EDITED BY THE CHINESE
BUDDHIST ASSOCIATION, NATIONALITIES
PUBLISHING HOUSE, PEKING, 1956).

be subject to ecological balance: when one part changes, all other parts should be modified to adapt to change, assuming a new state of equilibrium. The significance of ecological balance appeared in the works of F.L. Wright many years ago: "When the meaning of the word 'organic' dawns within the mind of man, he will demand integrity and significance in everything he has to live with or that he does to others."(21). Also, a diversity of organic states should provide a freedom of choice of habitation to suit an occupant's personal needs. Flexibility should not only exist in the choice of location, but also in the occupant's own way of adapting to his natural habitat. He himself, having partial control over the environment, is thus an element of the organic structure. The system will react dynamically to his influence. If his conditions change, the social system will evolve and the structure should reflect that evolution. Herbert has said of architecture, "An organic concept...must be dynamic and not static; the ideal of organic unity, therefore, is a process rather than an accomplishment."(22). Hence, metamorphosis will highlight an architecture which reflects natural interaction. The individual at leisure, for whom change is an essential criterion in his daily life, will, through his role in his habitat's organic systems, be affecting the metamorphosis. Sensing the reality of his

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(21) Wright, op. cit., p. 215.

(22) G.B. Herbert, quoted by Moller, op. cit., p. 116.

importance to all interconnected things will give purpose to his

state of being, and that thought will bring contentment to his life

of leisure. Says Dubos, "The humanness of life depends above all on

the quality of man's relationships to the rest of creation--to the

winds and the stars, to the flowers and the beasts, to smiling and

weeping humanity."(23).

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(23) Dubos, op. cit., p. 8.

CHAPTER VI

THE SELF AND ARCHITECTURE

Search for Self

I. Self-Awareness

When one finds significance in the natural environment, and experiences meaningful interactions in his social life, then he can turn to himself in reflection. Some purpose in life can be realized through self-development, and, hence, a fuller leisure life can be attained.

Exploration of the self can take the aspect of any of four modes of man: mental, physical, emotional, or spiritual. The leisure pursuits which aid in discovery can be in the natural or social realm, or dwell inside the man himself in such forms as contemplation, concentration, calisthenics, or meditation. By pushing his potentials in each of the modes beyond capacity, one could determine the limits of his abilities. Then, being aware of the powers of his total person, he would be prepared to accept the meaningful challenges of the outer world.

The taxing of the body's modes for purposeful ends must ensure a self-satisfaction that will bring to the heart an inner glow in retrospect, especially if we have the freedom to choose those ends at our leisure. Surely, on looking back on life, we will be able to justify all occasions when we did our best to cope with the world through the total self. On the other hand, we will be

tormented while reminiscing on situations when, despite our leisure,
we contained our potential for involvement and avoided releasing the
true self:

> The person who gives up his individual self and becomes an
> automaton, identical with millions of other automatons around him,
> need not feel alone and anxious any more. But the price he pays,
> however, is high; it is the loss of his self.(1)

An awareness of one's capacities enables him to develop a
sense of uniqueness, because his makeup is different from anyone
else's. His singular qualities can be applied to a range of or-
iginal or specialized activities. For these involvements he may
gain the respect of his fellows. He definitely will develop self-
esteem, especially if those activities were non-obligatory.

II. Self-Acceptance

The man at leisure who has developed his self-awareness
will better understand the effects of the environment on him, and
will appreciate the interaction of his person with the environment.
He will tend to be in control of his reactions, rather than respond-
ing automatically with pre-programmed patterns implanted by society
or nature. If a situation demands abilities beyond his own po-
tential, then he must rely on assistance from others. But the
decisions of whom he needs, and of what he needs them for, are
strictly his own, and he bears responsibility for the results. In

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(1) E. Fromm - op. cit., p. 209.

this way he maintains his sense of independence, and, as Erich Fromm points out, can cope with acceptance of his "separateness" from all men.(2).

An inner peace may settle on the man at leisure who can accept himself. Too many people try to emulate someone else, or an ideal. E.E. Cummings has said that to be yourself, in a world which is trying, day and night, to make you everyone else, is the hardest battle anyone can fight. Awareness of self will always, however, evolve from the individual's relation to society and links with nature, but in a manner that reveals his uniqueness, rather than his subjugation.

The man at leisure must always be prepared to revise his self-image, since nature and society are in a state of flux. His sense of self should evolve as his environment changes in dynamic equilibrium. Also, he should strive to improve himself as he gains a deeper awareness of his true being. Otherwise, he may be sacrificing routes to a more meaningful existence.

Self-discovery can certainly help fulfill leisure activity. But,at times the self must be accepted per se, and a man must face the world with what he is. Rather than 'learning' about the self, he will 'experience' the self--sensing the satisfaction of self-expression, and dwelling on the significance of his actions instead

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(2) Ibid., p. 161.

of his internal developments. His leisure will assume an ultimate

meaning--that of 'living' life.

Habitat and Self-Choice

I. Control of Environment

Many authors have expounded the need for more individual

control of the design and construction of the environment. Here

are some examples:

> We must design the habitat only to the point at which man
> can take over. We must provide a framework in which man can
> again be master of his home.(3).

> However sophisticated urbanman's common sense and accumulated
> everyday knowledge may be--and the pressure of fatefulness en-
> courages in him greater sophistication and self-consciousness all
> the time--he remains impotent to significantly change the human
> environment of the city to suit himself.(4).

> Buildings that meet fluctuating patterns of experience will be
> necessary and perhaps, above all, buildings with which the users
> can really interact.(5).

Apart from detached homes, most existing housing permits

very little individual choice in the structure of the environment.

It allows a person to select and rearrange furniture and decorations.

Only rarely can finishes be changed. The only other choice provided

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(3) G. Candilis - quoted in G. Bell, J. Tyrwhitt (ed.) - Human
      Identity in the Urban Environment, Penguin Books Ltd.,
      Harmondsworth, Eng., 1972, p. 384.

(4) J. Helmer, N.A. Eddington (ed.) - Urbanman, The Free Press,
      New York, 1973, p. xi.

(5) D.V. Canter - The Place of Architectural Psychology, paper,
      Architectural Psychology Conference.

is in minor functional controls, such as the temperature or lighting. Even single family homes on city lots are difficult to rearrange to suit the user's needs. They are generally constructed as closed systems; setbacks limit their extension; established community norms control their exterior appearance. Internally, spaces are generally explicitly defined in function by permanent room divisions.

In light of the leisure culture, extended user controls might encourage more meaningful interaction with, and adaptation to, the built environment. Choice could extend into the realms of social and natural interaction, as well as permitting self-discovery and self-expression. The man at leisure would have time and money to devote to his enterprise, as well as the state of mind to desire to model a habitat complementing his relation to the world and to employ his personal resources to a maximum in constructing it. Said Frazier in Walden II:

There's a certain satisfaction in building your own living
quarters. A sort of nesting instinct. It has become part of the
process of being in love in Walden II.(6).

II. New Thinking

Extension of user controls would require new thinking in the provision of housing. The structure of a building would have to allow more scope and flexibility for user controls. This requires a

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(6) B.F. Skinner, op. cit., p. 76.

redefinition of how much an architect should design, and what should be left to the choice of the inhabitants. A redefinition is also required for user choice versus management controls. Problems may arise when a new tenant moves into a suite previously personalized by the outgoing occupant. Is a wall damaged when it is painted, or when it has a hole cut in it, or when it is removed and thrown out-- or never? If a living unit is extended beyond its original space, how will this affect the neighbours? And, if space is increased, does the rent change? This is only a sampling of managerial and financial questions which could arise. However, explorations in these fields have already been made in a number of European housing experiments, and the answers are not as complicated as they might be anticipated to be.

New thinking will also be required from a user. An apartment unit will not be perceived as a number of rooms, but as a total space package which is to be shaped to suit the user himself. At the same time as he is redefining his relation to his apartment, he may have to change his social expectations. Does he really want to barricade himself off from his neighbours? Should family space be sacrificed for communal space? Will an extension block off sunshine from a neighbour's room? The user must be aware that there are other tenants around him who have their own needs and lifestyles. There are a number of factors which could lessen

these problems:

- dependency on a more sophisticated social interaction within a leisure society (L. Festinger, a sociologist, has shown that increasing the frequency of informal contact increases the chances of friendship ties forming).(7).

- establishment of rules to define what a user can or cannot do in relation to his neighbours.

- encouragement of users to choose their habitat among people who have common interests and attitudes.

- development of a new housing form which, through its structure, will allow maximum user control with minimum adverse affects upon neighbours. Most European housing which allows greater user control is purely a variation of existing housing forms. Their structure has not been invented with user choice and social interaction in mind.

III.   Internal Controls

Apart from rearranging furniture and changing wall finishes, there are a number of controls over the internal family dwelling which could be delegated to the user.

A.   Partitions. Flexible partitioning gives the occupant the feeling that he can rearrange his spaces at will, and even if he

(7)   L. Festinger, S. Schachter, K. Back - Social Pressures in Informal Groups, Stanford University Press, 1950.

never exercises that choice after moving in, it is reassuring to know it is possible. Either a partition system can be provided with the apartment, or the occupant could be left to his own inventions. In Sweden it has been found that there is a tendency towards open planning when partitioning can change.(8).

An apartment building at Montereau, near Paris, designed by Luc and Xavier Arsene-Henri, has a partition system which works on a 900 mm. grid. It has a central service core, with plug-in bathroom and kitchen. Electrical outlets are provided on mullions around the perimeter. The user plans his flat under the guidance of the architect, and the grid is easily understood. The resulting plans, incidentally, would never be satisfactory to architects, but certainly please the occupants.

B. <u>Mechanical Systems</u>. Choice of placement of mechanical systems, such as plumbing, stove wiring, or ventilation, to liberate the locations of kitchen facilities or bathrooms is difficult to provide, and would require a certain degree of skill in the user. The choice can be feasible if management provided a team of technicians to work these changes. However, it would seem more reasonable to provide these facilities as core fixtures, unless technological advances are made in the design of plug-in kitchens and

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(8) <u>Housing Flexibility</u> - article from <u>Architecture Design</u>,
     Nov., 1973, p. 709 - A. Rabeneck, D. Sheppard, P. Town.

bathrooms, making those rooms as mobile within the dwelling as any piece of furniture.

C. <u>Height</u>. A person who is free to plan his own dwelling may, if he aspires to a more creative solution, experiment in the third dimension. He may wish to raise a floor, put a bed above a desk, or have a cosy gallery overlooking his living room. Higher ceilings would facilitate this endeavor. The range of possibilities for layout design increases greatly when the height dimension is considered.

D. <u>External Facades</u>. If external facades could be altered, a resident would have the choice of self-expression of his position within a structure. Here, though, he is beginning to play with the interests of neighbours. For example, a resident of the Royal Crescent in Bath, England, put bright yellow curtains on her living room windows. A group of fellow residents of the crescent took her to court (although unsuccessfully) because they felt the colour detracted from the overall appearance of the facade, which they all had a share in (see figure VI-1, p. 104).

E. <u>Extension</u>. Housing can be extended spatially to further increase user choice. This can be done by adding to the front or back, or by building on the roof. This type of extension would likely be permanent, unless a simple component system was employed. Again, the rights of neighbours must be considered. An extension
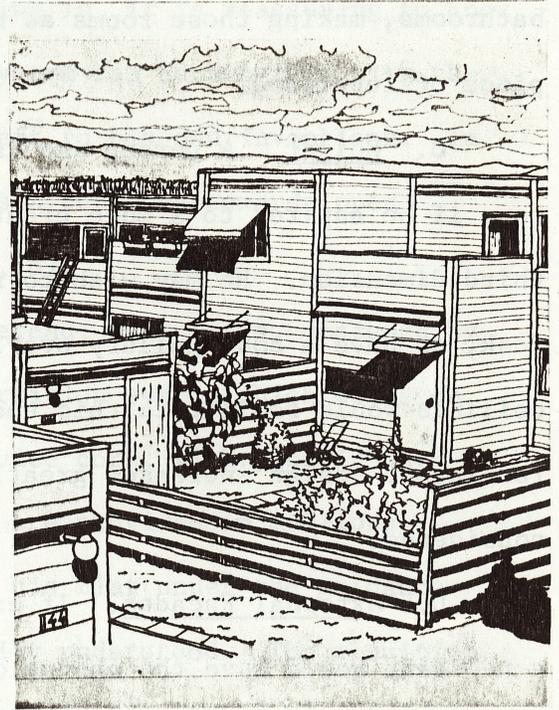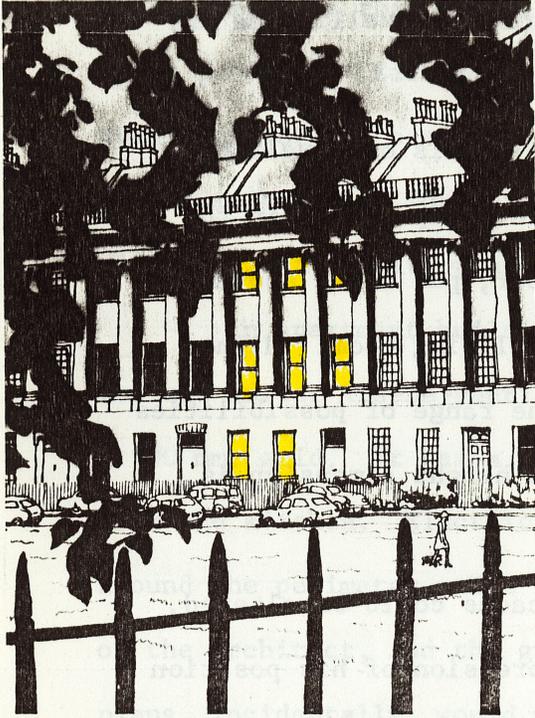
FIGURE V1-1 TOP LEFT:
ROYAL CRESCENT, BATH.

FIGURE V1-2 TOP RIGHT:
SKJETTON, NORWAY

FIGURE V1-3 BOTTOM LEFT:
SELF-BUILT WORKSHOP, B.C.

may block off someone's view, or conflict with the next-door neighbour's plans for extension. Skjetton, a townhouse project near Oslo, Norway, designed by Eric Hultberg, permits this type of flexibility (see Figure VI-2, p.104). It is designed on a three-metre grid, and can be extended front or back by a grid length. The roof can be built on, but there are rules which prevent blocking of sunlight to neighbours. External facades are personalizable and moveable, so can be reused when an extension is built. People can choose their windows and colours from a controlled supply (colours can vary from house to house, but blend well together because of the limited selection allowed). Internally, partitions can be changed. All wiring is exposed to facilitate change. It is even possible to remove a floor to form a clerestory. A certain amount of faith in the skills of occupants must be allowed, but perhaps architects misinterpret the abilities of people to construct their environment. In Sweden, before the Second World War, there was a plan to provide materials and land, and let people build their own homes. Some were actually done as row houses, so a co-operative effort was necessary. Most of the homes built then still look like new, and one wonders if users would do a better job than builders because of the care and attention they would put into their own homes. The editor of Shelter has boldly stated his belief in the abilities of the common man:

We are trying to subvert the building industry in its present form. The effect of its dehumanizing and impersonal structure is profound on the national psyche. We are conditioned to believe that we don't have the special abilities to do things for ourselves.(9).

Christopher Alexander has proposed a housing type which would allow maximum internal choice. There would simply be "pods"-- plots of artificial land on which a user could do whatever he wished, including having a contractor build him a house, or pitching a tent. The solution would be limited only by the boundaries of the pod.(10).

F. Adaptability. A further way of designing for users' choice in housing is to make dwelling spaces adaptable to different uses. One room might then function as a bedroom or dining room or study, depending on the occupant's needs. The freedom of adaptable housing is referred to as "occupant choice through ambiguity" by some British writers.(11). Semi-open planning facilitates this approach--a central space with nooks opening on it could absorb any or all of those nooks to allow different possibilities of use.

IV. Self-Built Examples

There are numerous examples of self-built detached homes which display not only the occupant's planning and construction abilities, but also his creative talents. A professor who lives

(9) L. Kahn (ed.) - Shelter, Shelter Publications, Bolinas, Calif., 1973, p. 107.

(10) C. Alexander - The City as a Mechanism for Sustaining Human Contact, from Helmer & Eddington, op. cit., p. 263.

(11) A. Rabeneck, D. Sheppard, P. Town - Housing - Flexibility/ Adaptability, article from Architecture Design, Feb., 1974.

in Albuquerque, New Mexico, has been building his adobe house over the past 19 years, adding to it as necessary. It now spreads all over his lot in a curving pattern, with countless rooms of all shapes and sizes, including a ball room and conservatory. In British Columbia, a retired shopkeeper, with no woodworking experience, has built an enormous studio without nails or screws(see Figure VI-3, p. 104). Every surface is curvilinear, with hardly a straight line in the place.(12). These acts of skill and creativity are not confined to specially talented people. Many Canadians have built recreation rooms in their basements--the only part of the house which permits a high degree of user control--and have done a respectable job.

Another project worthy of note is Herman Hertzberger's experimental housing at Delft. Homes are composed of platforms built around a service core and a stair tower, with a half-storey difference between adjacent platforms(see Figure VI-V, p. 108). The use of each platform is determined by the occupants, and the half-storey changes permit greater possibilities of relationships between spaces, and flexibility in zoning activities. If Hertzberger could combine this form of housing with his concepts of office landscaping (involving platforms and bridges on a tartan grid which provides a variety of spatial arrangements, three-dimensional

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(12)   P. Hanson - Something More than a Workshop, article in
           The Vancouver Sun, Sept. 27, 1975, p. 28.
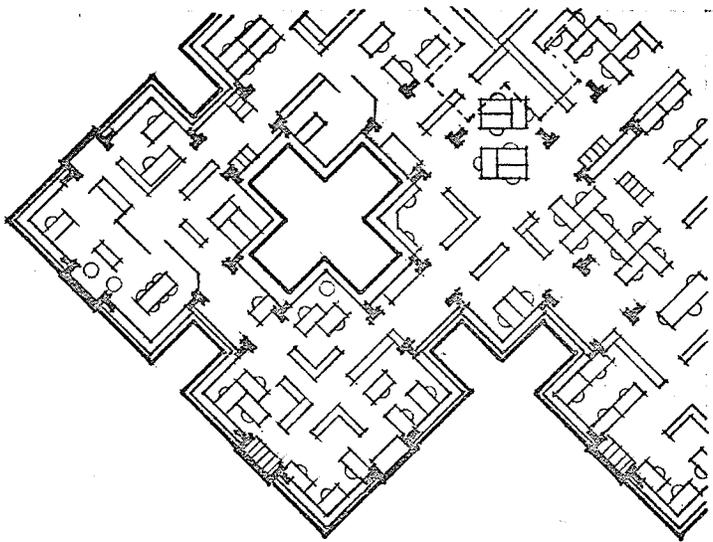
FIGURE V1-4
OFFICE LANDSCAPING AT
CENTRAAL BEHEER
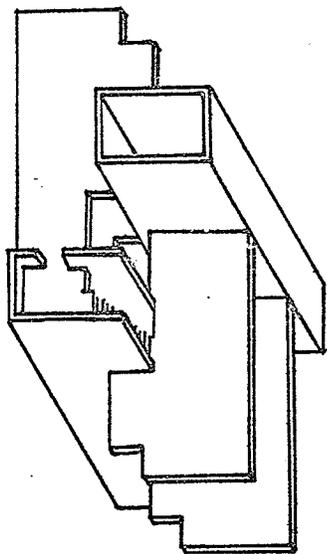
FIGURE V1-5
INTERNAL ARRANGEMENT OF
HOUSING AT DELFT

interrelationships, zoning of private, semi-private, and communal areas, and a sense of community (see Figure VI-4, p.108)) then he might realize a structure which provides self-choice for the community as well as the individual tenant. It would be a structural innovation, specifically suited to user control, and permitting a high degree of possibilities for internal (within a dwelling unit) flexibility, external metamorphosis, and community interaction.

V. External Controls

User controls do not have to stop at the boundaries of the individual dwelling. Externally, much choice can be permitted. In a leisure environment, where people may develop a personal style of relating to society and nature, and where conditions must change so frequently, this freedom of choice beyond the dwelling is essential.

A. Location. People normally have the choice of where within a municipality they want to live. But, once they select a specific neighbourhood, their choice is limited by vacancies open and by the availability of dwellings which suit their family's needs. A risk must be taken on what the neighbours will be like. The institutions which exist must be accepted. Choice is further reduced by the homogeniety of types of housing found in most modern neighbourhoods.

Would it not be advantageous to be able to choose the quality of environment one wishes within a particular neighbourhood? This might be feasible if transitions between contrasting environmental conditions crossed the community. If transitional states occur prependicularly to each other, a lattice of varying habitats can be provided for the prospective residents' choosing. Types of environment normally zoned over a large area between town and country can all be simulated within a single neighbourhood by, for example, crossing the transitional conditions between natural and artificial habitats with the conditions between community and privacy.

If, as discussed in Chapter IV, a hierarchy of communities were established within a neighbourhood, a newcomer could examine the varying tastes and interests of different dwelling groups. The distinctive character of each would be more readily evident, and its relationship to the total neighbourhood apparent. Each community group would have a unique set of institutions associated with it, providing choice at any particular hierarchical level. At the smaller community levels, the attitudes of the occupants themselves can likely be gleaned from the physical enclosures they construct, from the relationships of those constructions to each other, from personal embellishments added to decorate their living spaces, and from the quality and quantity of social activity

sponsored by the communities they are associated with. If each in-
dividual is truely an organic element of a healthy social system,
then the system (and its container) should reflect his attitudes.
At larger community levels the attitudes displayed will be general.
At smaller community levels the attitudes will be demonstrated more
specifically. After a newcomer moves in, the order may adapt to
reflect his traits and interests.

B. Transposition. If a neighbourhood has the plasticity to
allow metamorphosis of its contents, then a vacancy could be trans-
posed to a different location, allowing newcomers to select their
position regardless of where previous tenants were situated. If
this process were left to occur naturally, it would be slow, and
perhaps the new tenant would find his location shifting for awhile
after he moves in until it adjusts to his (and his neighbours')
liking. On the other hand, the process could be speeded by purpose-
ful shuffling by management or community groups. Yona Friedman has
spoken of the technological possibilities of forcasting and guiding
changes in the makeup of a community, proposing a "'warning' feed-
back mechanism to keep everyone informed of the consequences to the
whole community of each individual choice within the repertory."(13).

In any case, most residents would have to be willing to
accept revision and adjustment as part of life. For the process

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(13) N. Cross - Design Participation, Academy Editions, London,
1972, p. 12.

to be feasible it must allow each tenant to improve his own conditions each time an adjustment is made, and the physical structure must facilitate changes.

C. <u>Choice of Neighbours</u>. At a larger scale, choice of location would be strongly influenced by functional contents. But in smaller-scale communities social relationships should take precedent. Choice of neighbours would make life smoother, particularly in the sociable atmosphere of a leisure environment. If the population is compacted to increase density in a smaller area, then chances for informal contact are increased. As people meet other people whom they like, they could shift their position within a metamorphic system to improve communication with friends, and to reorganize into community groups with people of common interests. Even without shifting position, a tenant could re-orient his social focus from one group of neighbours to an adjacent group which he may find more likeable.

There could be a choice of determining one's relationship to neighbours in physical terms. Instead of everyone shutting themselves into little boxes, some may wish to maintain a more open relationship. Perhaps it is not necessary to place a wall between two neighbours' living rooms. Maybe two families with babies could keep the infants in a single shared room, like a nursery. Is our concept of 'house' really so ingrained in us that we cannot consider these possibilities? At least every individual is free to make his own choice, even if he

sticks to traditional styles. The designer can be content that he has not imposed a particular lifestyle through his architectural forms. "I would not like to incite the designing of utopias if this were to work towards the narrowing down of individual choices," wrote de Jouvenel.(14).

To provide further choice in external relations interaction could occur in three dimensions. If living spaces were surrounded by other spaces a half-storey up and down, then the possibilities for choice would increase logarithmically. The potential for external flexibility of the dwelling is enormously enhanced. Since the number of adjacent neighbours can be higher there is greater diversity in the selection of and the relationships with them. Instead of a neighbour on either side and another across the hall, as in typical apartments, there could be six or seven neighbours: up or down to one side, up or down to the other, or even under and over from the front. An occupant would have control over how he would relate to each one. If he wants to shut himself away from them all, that is his privilege, too.

D. <u>Liberated Boundaries</u>. In such a three-dimensional structure, it would be possible to trade spaces with neighbours. If a

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(14)   B. De Jouvenel - <u>Utopia for Practical Purposes</u>, from Bell & Tyrwhitt, op. cit., p. 166.

street
eating/hobbies
private space
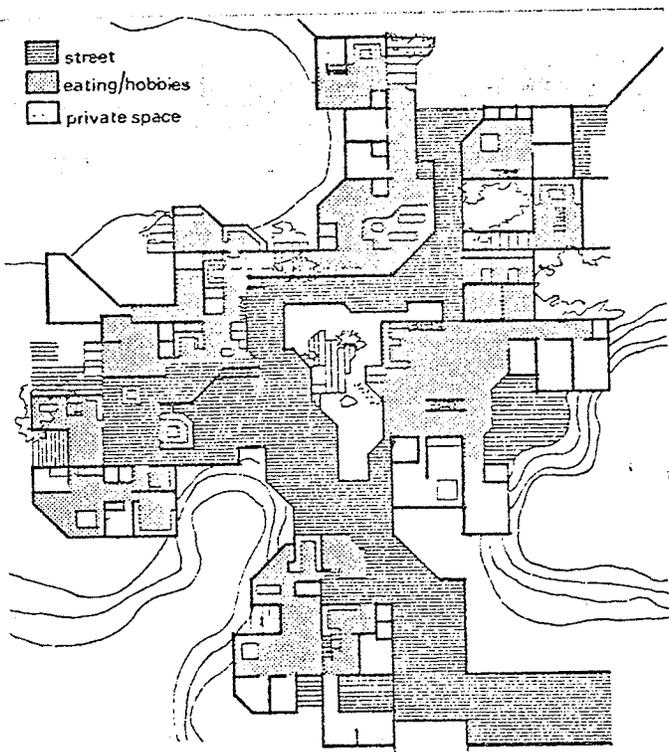
FIGURE V1-6
TAET LAV COLLECTIVE HOUSING
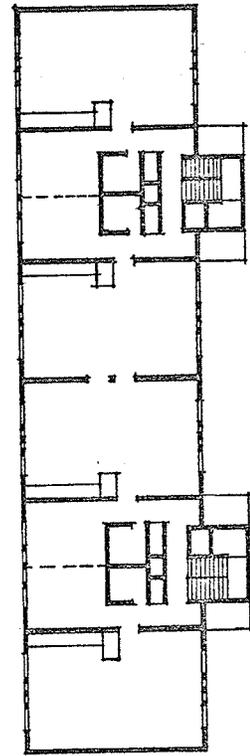
FIGURE V1-7 - PSSHAK

FIGURE V1-8
FARNHAM MID PUNDT SHOWING COMMUNITY CORRIDOR

communal room

pedestrian street

entry courts

communal space
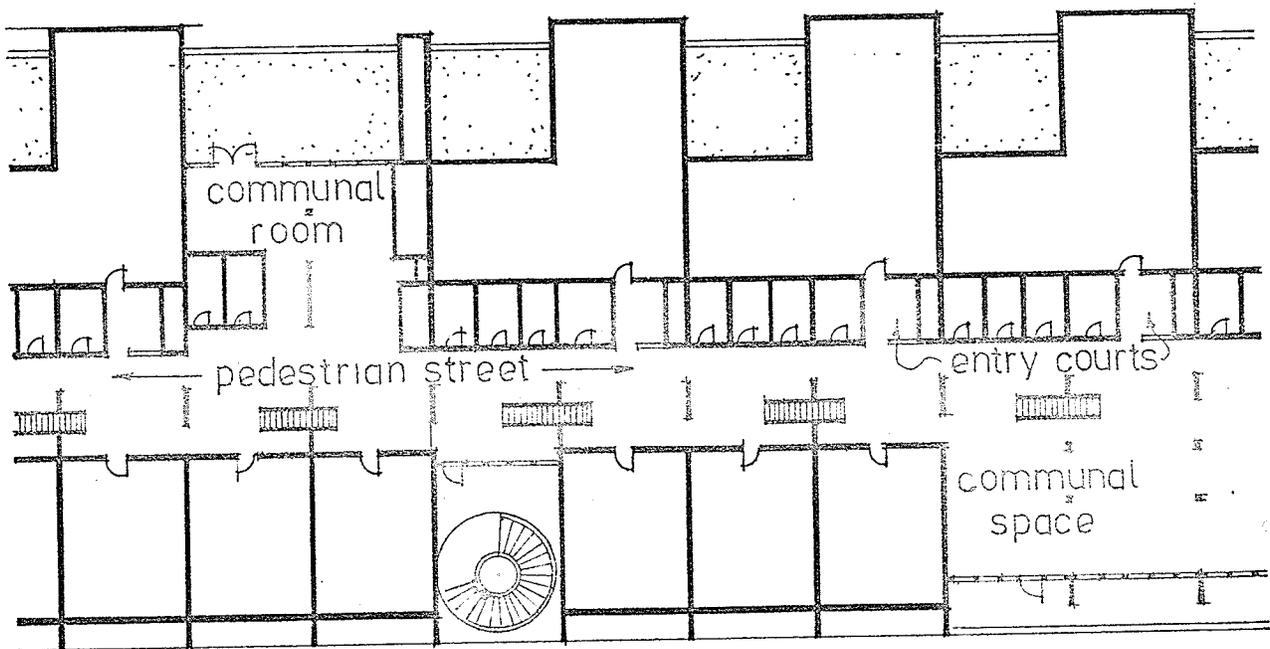
tenant needed extra space, he could wait until a neighbour moved out,

and absorb some of the vacated space. The external boundaries of a

dwelling are therefore liberated. N.J. Habracken has proposed such

a system in which the designer controls only the support structure,

and the user can place his own dwelling within it. The support

structure is a ribbon of artificial land, with service cores and

stair towers spread along beside it. The use of the support is not

defined. It does not have to contain only housing. Habracken's

concepts have been seriously considered in a number of projects,

most notably PSSHAK, an effort of the Greater London Council (see

Figure VI-7, p.114). Basically, apartments are built with an extra

room between them. This extra room can be joined to either apart-

ment, or to both, permitting a number of variations of apartment

types. However, the building is otherwise a conventional walk-up,

and its two-dimensional nature limits the configurations to inter-

action with only two neighbours: to the left and/or to the right.

The apartments at the ends of the building only have one choice

(but at least they have that). Its designers have commented on

planning for a process of living, rather than a specific pattern:

"Therefore, as architects, we are not occupied with designing

dwellings, but with designing the possibilities for dwellings to

be made."(15).

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(15) N. Hamdi, N. Wilkinson, J. Evans - PSSHAK, article from
       RIBA Journal, Oct., 1971, p. 436.

E. Interaction with Community Territory. External choice can also involve interaction with communal groups. It could be possible .to make trade-offs between family space and communal space, depending on which is more important to the residents. For example, children from a number of families could share a play-space, or each family could have a playroom. It is conceivable that a group of families might wish to share cooking and eating. Or a recreation room which is never used could be absorbed into someone's living room. In some crowded Mediterranean cities it is not unusual to see someone move a television and some easy chairs out onto the street on a hot evening. Neighbours can gather around and watch, too. Another example of a shared lifestyle is a Danish design for a competition (Taet Lav) in which residents have chosen to open their apartments to each other (see Figure VI-6; p.114). Living rooms open discreetly onto interior communal spaces. There is a gradual spatial transition from public to private. The only locks are on the outside of the building. Presumably, the residents know each other very well before moving in.(16).

In another Danish project, Farnham Mid Pundt, corridors have been widened to serve as streets (see Figure VI-8, p.114). Off these streets are generous communal spaces, the use of which is left to be determined by the residents themselves. Unfortunately, the

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(16) N. Merryweather, S. Rayner - Danish Collective Housing, article from Architecture Design, Dec. 11, 1973, p. 692.

streets are formed of brutal concrete, they are poorly lit, and
are not suited for human experience. But at least the idea of en-
couraging groups of families to form their own social institutions
was tried.

Moshe Safdie has experimented with spaces which are adap-
table to differing sizes of social activities. He calls his concept
a "space-maker", and has applied it in the design of a student
union building for San Francisco State University and for a plaza
around the wailing wall in Jerusalem. Applying his ideas to housing,
communal spaces could become adaptable to uses on varying levels of
community. One space could be used for a party for a larger com-
munity one day, and break down to serve as a number of recreation
spaces for smaller communities the next. Said Safdie of the Wailing
Wall project, "For me this problem became how to create a place where
ten people can pray, three thousand can celebrate, and fifty thousand
can demonstrate."(17).

F. A Personal Environment for Leisure. A housing structure
which gives the user all the choices previously outlined would
enable him to control his personal needs and social activities. He
could fashion his own lifestyle within, tempered only by the presence
of his neighbours, who could be close friends. If choice of life-
style within the home could be combined with freedom of selection of

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(17) M. Safdie - For Everyone a Garden, M.I.T. Press, Cambridge,
      Mass., 1974, p. 322.

occupation, then a true leisure could be realized. This dream would certainly not be for everyone. In fact, many people would be willing to establish themselves within a conventional community and accept the neighbours who happen to be there. But for those who recognize the potentials of such a controllable system, it could enable them to shape their personal utopias. If one can express himself so truely in the formation of his home environment, then his leisure has shown him meaning via the discovery of self.

CHAPTER VII

A HOUSING SYSTEM FOR A LEISURE ENVIRONMENT

The System

The feasibility of a leisure culture owes its credibility partly to the advancement of automation and technical production. To build an environment for leisure it would be wise to accept the state of the art of the more advanced construction technology applied in the housing field today. If factory production could be applied to a simple 'kit of parts', then a very efficient system could be developed. If a complete neighbourhood is to be built, then there will be more than enough repetition of components to justify the economy of systems building. The main trick is to minimize the number of parts in the kit, while at the same time maximizing the potential of the kit to form a variety of diverse spaces.

Building systematically will simplify the co-ordination of the support system with user controls in a semi-self-built environment. Sub-systems and super-systems can be identified as independent from the main structural system with the control of each being specifically designated to the architect or user. Yet, at the same time, all systems can be designed to harmonize with each other in their function and joinery.

If the system gained acceptance, it could be used in a number of projects. Different conditions could be met by varying
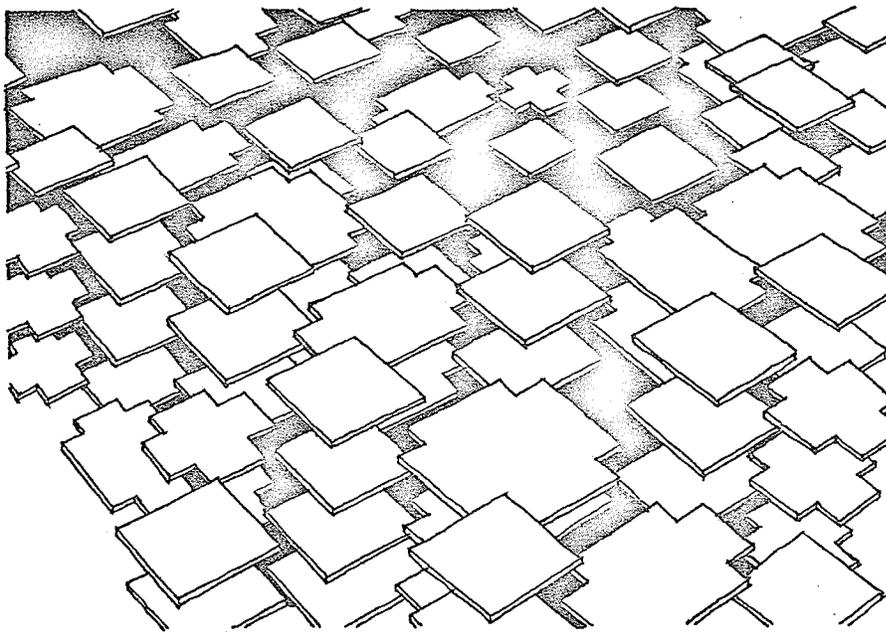
FIGURE V11-1
PLATFORMS
SUSPENDED IN
SPACE
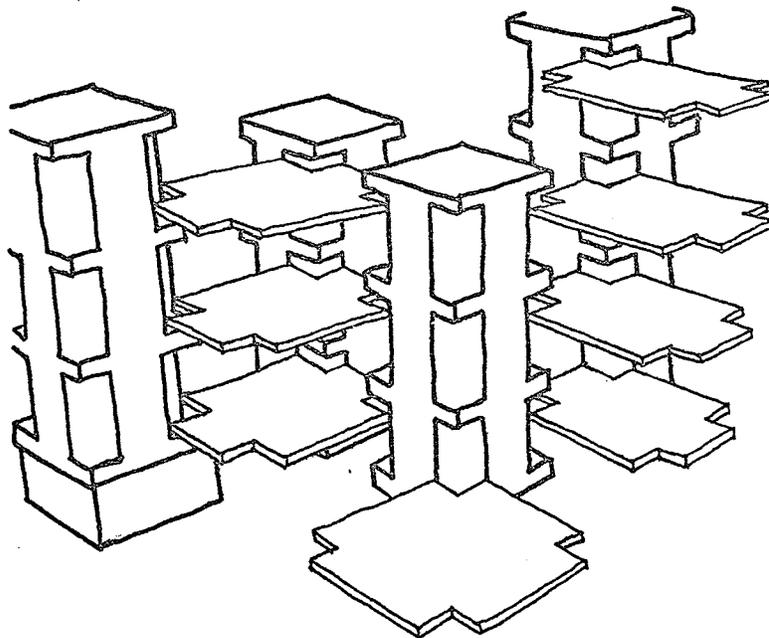
FIGURE V11-2
COLUMNS OF
STRUCTURAL BLOCKS
SUPPORTING
PLATFORMS

the configurations of components. Also, in widely contrasting

applications, the structural system could be used while other

systems (such as the skin) are redesigned.

Structure

The basic system is composed of the few structural com-

ponent types. To visualize the system, think of a large space in

which platforms of various sizes are suspended at varying levels

(see Figure VII-1, p. 120). Into this space can be moved a pop-

ulation. People can select the platforms they want and build

their homes on them.

The platforms are actually supported on structural blocks.

These blocks are piled on top of each other to form columns, and

themselves enclose usable space (see Figure VII-2, p. 120). The

space within them has more of a sense of closure than the spaces

among the platforms. The blocks also have vertical mechanical

ducts built into them.

The whole space is enclosed by a skin. Part of the roof

is usable as an extension of the ground, and part is skylighting.

Between a platform and an adjacent one is a half-storey

difference. The blocks are in-between at quarter-storey levels.

This vertical arrangement permits interconnections to occur be-

tween spaces three-dimensionally, thereby increasing the potential

for forming different shaped suites and maximizing the choice of relating to neighbours.

In some other housing systems, complete dwelling units can be prefabricated within a single box or two. In the proposed system, however, spaces are smaller, and are sized to accommodate activity areas, rather than complete homes. Not only are the parts more manageable during construction, but also a variety of units can be formed from different combinations of platforms. The external limits of a dwelling are liberated, and could even be left open, depending on the neighbours. The limits can increase, decrease, or transform, depending on users' needs. The family is thus not confined by a "little box".

Grid

I. Criteria

Certain criteria must be established for the organization of the housing system in plan. Since dwellings may be fashioned in an unpredictable and random manner, the layout of platforms should at least counteract with a sense of control. This is accomplished by ordering all planning on a strict grid.

The prime criteria for the design of the grid is its ability to accommodate a hierarchy of social interactions which encourages the formation of communities and their associated institutions and spirit.

Minimum dimensions must be defined for usable space and for circulation networks. These dimensions, when compounded and combined, must also be appropriate for activities in larger community precincts. Between platforms, headroom above stairs must be allowed for. It should be possible, within the grid, to zone related activities. The shape of platforms, determined by grid lines, should permit a maximum of variation of use, but with a minimum of different platform types to keep the system simple. A component may have a fairly complex shape and structure because it will be repeated many times. But complicating the number of types of components would counteract the advantages of mass production.

The grid should be rectilinear, to complement the fabric of most of our cities. But that does not imply a regular grid. Tartan grids permit control of far greater diversity. Sometimes grids overlapping other grids enable desirable characteristics of both to function simultaneously.

II. Superimposing Grids

Figure VII-3, p.124 shows a plan adopted by Moshe Safdie for the design of a habitat for New York City. It has been laid out on a square grid, with the corners of every second square truncated to form octagons. This forms two types of units. Type 'B' is a structural box, formed by the truncated squares.
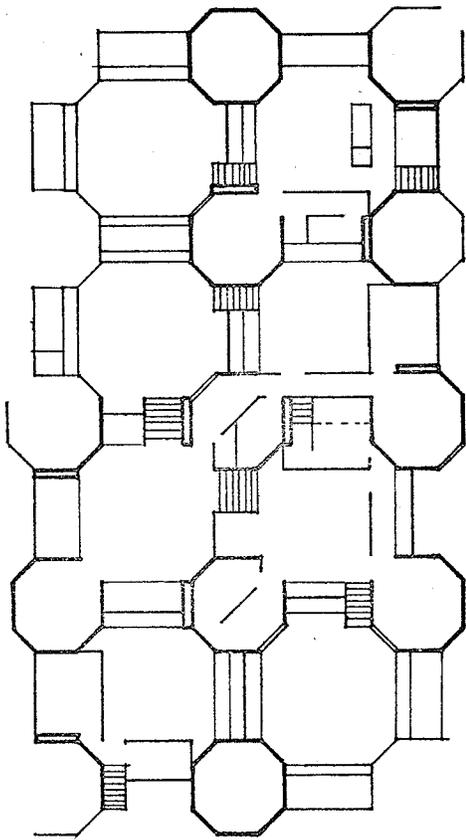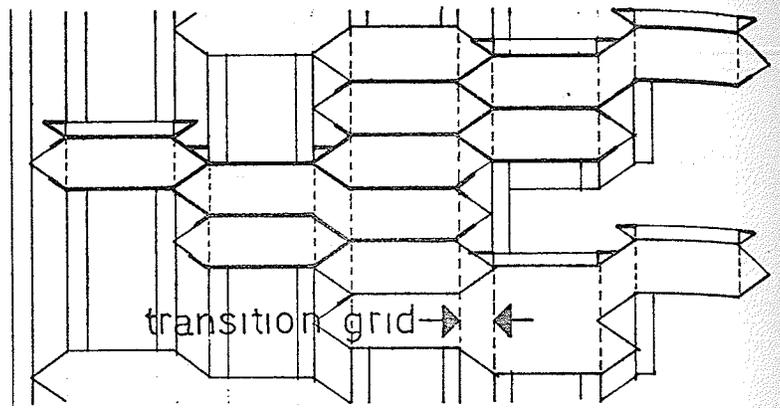
SECTION

FÍGURE V11-3
SAFDIE - NEW YORK HABITAT

PLAN
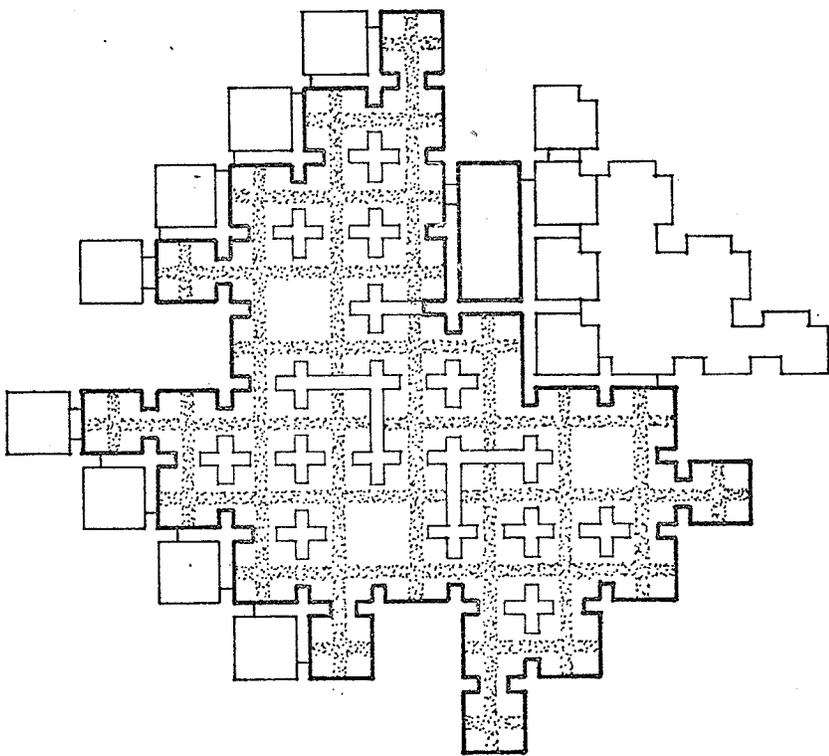
transition grid

FIGURE V11-4
HERTZBERGER - PLAN OF
CENTRAAL BEHEER

Type 'A' is the larger space suspended between the type 'B' units.
Each successive type 'A' unit varies in elevation by half a storey,
with a transition space between them. This transition space is
actually defined by a secondary grid overlaying the squares. It
delineates the truncated corners. In section, the transition space
is triangular, to permit stacking, with the angle determined by the
slope of a stair. Into this awkward shape Safdie has placed rather
neatly designed built-ins.

The dwelling units formed work very well in plan, but are
suitable only for bachelor or one-bedroom units. As soon as an
attempt is made to add a second bedroom, a problem becomes evident
within the grid. The bedrooms must occur on opposite sides of the
main living space. It might be possible to put a corridor between,
but certainly the grid lacks the potential to zone similar functions.
It is difficult to plan it for a parent's area and a children's
area, or an activity zone and a sleeping zone.

The problem has been remedied in another project by Herman
Hertzberger (see Figure VII-4, p. 124). It is an office building
called Centraal Beheer, in Apeldoorn, The Netherlands. An in-
teresting tartan grid has been employed to facilitate office land-
scaping. There is a narrow circulation grid running throughout the
building. At the corners of each intersection are four boxes which
are suitable for small offices, open to the circulation space, and

proposed plan

ink intermediate
block void TRANSITION GRID type B

family transition zones type A

TRANSITION GRID

CIRCULATION GRID

CIRCULATION GRID
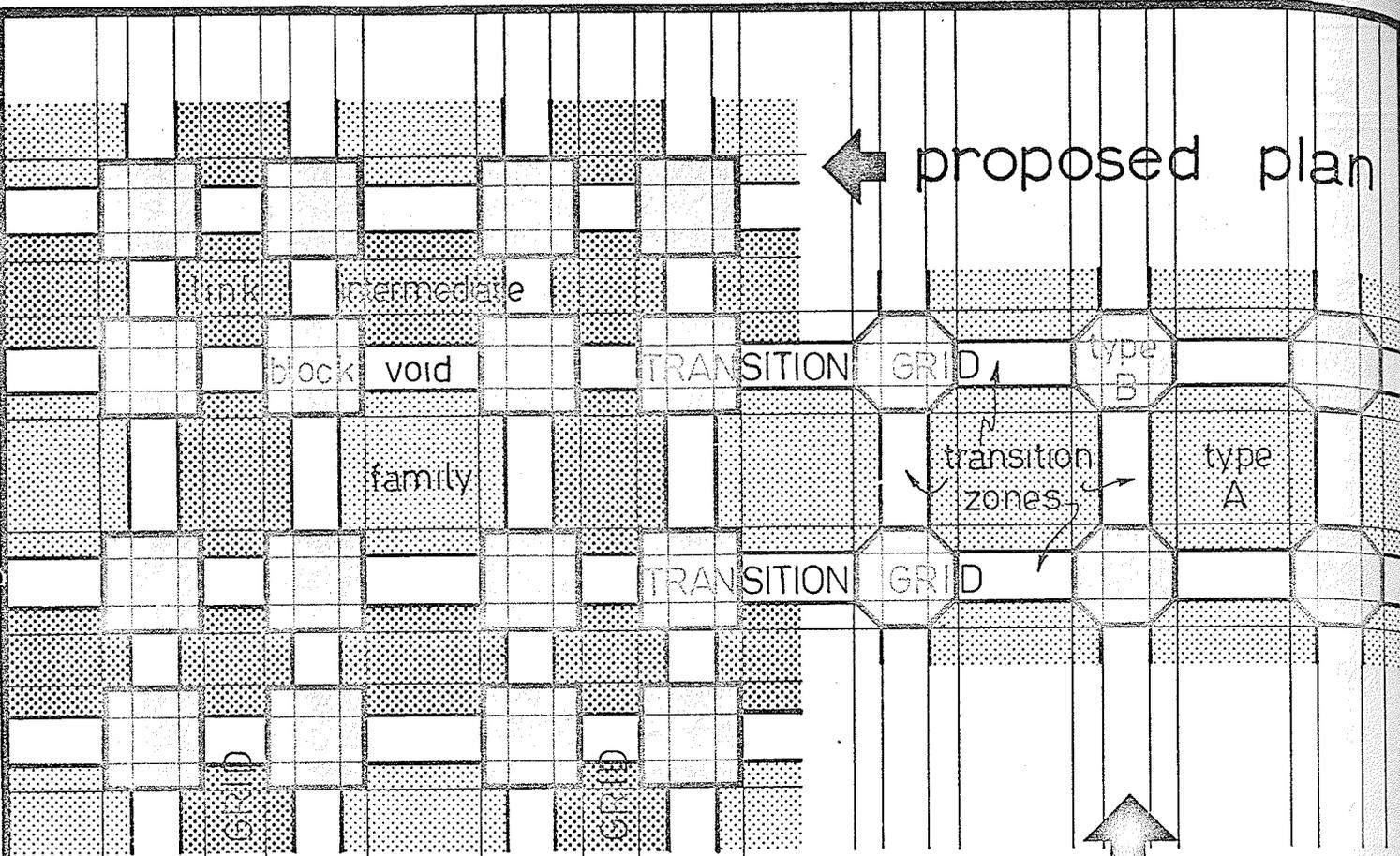
Safdie's plan

void

FIGURE V11-5
OVERLAYING OF GRIDS

bridge

corner offices
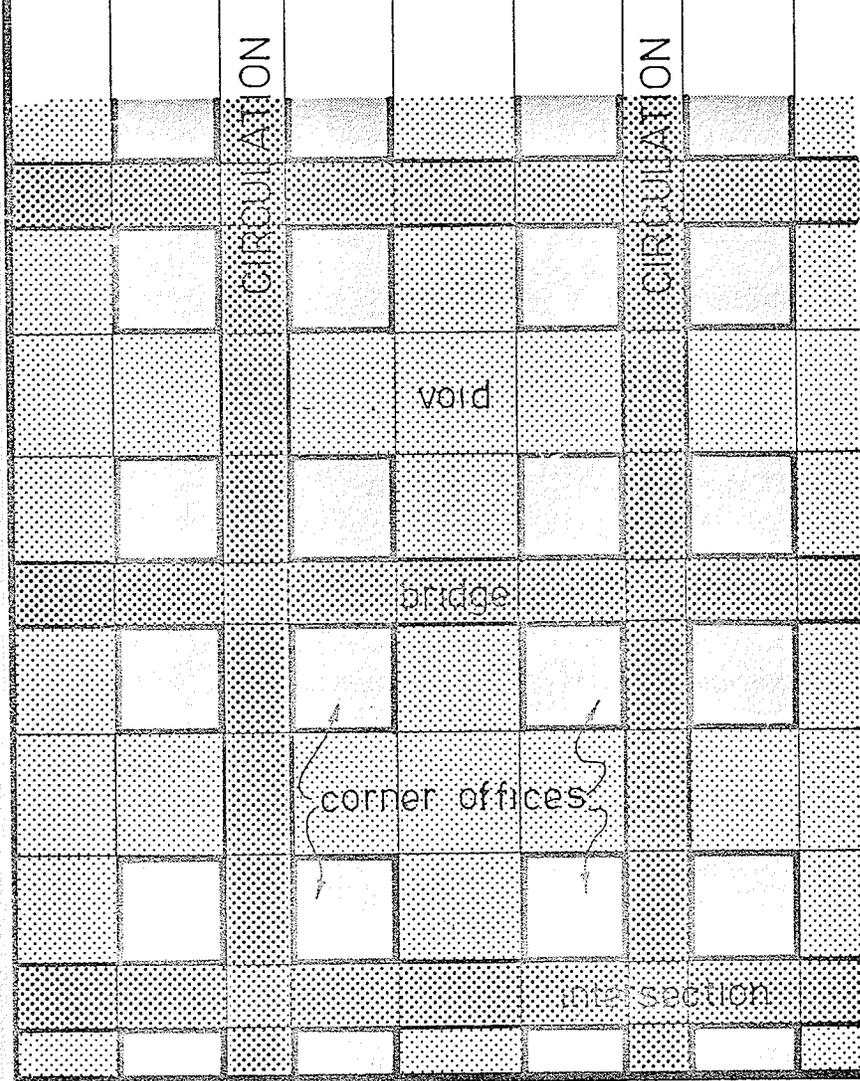
Hertzberger's
plan

intersection

overlooking the left-over space which is generally a void. This
void gives an airiness to the layout, and enables visual contact
between floors. The circulation grid actually forms bridges where
it crosses between voids. Where larger offices are required, the
void is filled in with floor space. Although the plan is intended
for office use, it could also be used for residential landscaping,
a good phrase for conceptualizing an interactive leisure habitat.
Hertzberger's grid would require modification to function physically
in the third dimension. However, its strength is Safdie's weakness:
the capacity for zoning. At any intersection can be up to four re-
lated activities.

Let us now superimpose Hertzberger's circulation grid onto
Safdie's New York grid (see Figure VII-5, p. 126). A square of
circulation will surround one of Safdie's 'A' units, and four 'B'
units. Each intersection of the circulation grid thus is in between
four 'B' units, which can become a zone of related activities. The
grid which forms Safdie's zone of transition divides the circulation
grid. These divisions can become extra level changes. Where
Hertzberger's intersections and bridges would be are formed new
platforms. Instead of the corner offices are the structural boxes
of Safdie's design. Although the corners are open they are not
truncated. Rather, they are kept square to permit choice of access
from two directions.

A
guard rails have been removed

B
placing stringers on anchor bolts

C
tightening nuts on anchor bolts

D
slotting stair sections into stringers

F
placing handrail into sleeves

E
hardwood treads have been screwed down
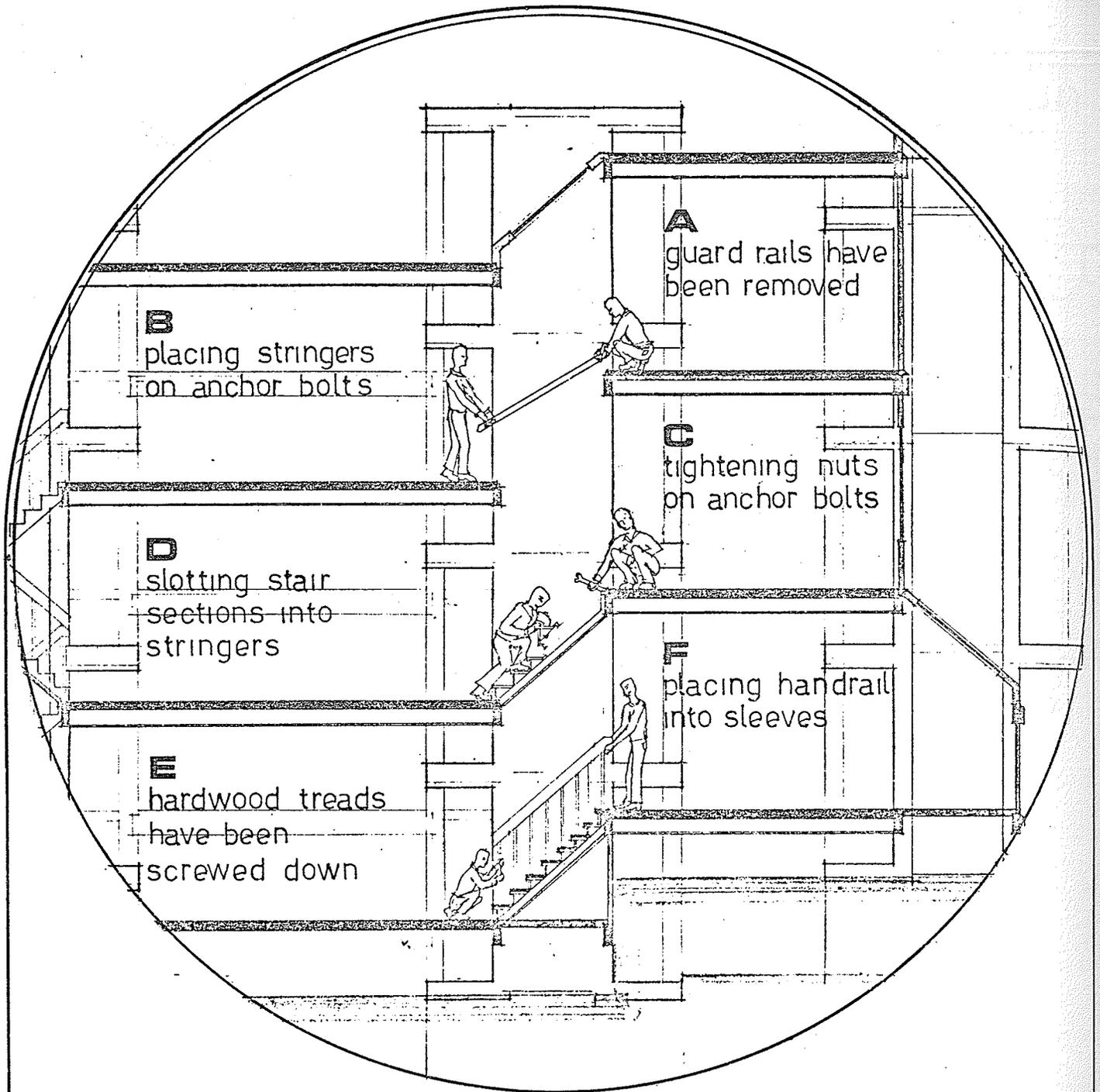
USING THE VOIDS

OCCUPANTS CONSTRUCTING STAIR, USING SELF - BUILD COMPONENTS

FIGURE V11-6

The super-imposition has thus described three types of
platforms, rather than Safdie's one, with enclosed structural
blocks at the corners of each which have the potential for zoning.

The blocks are dimensioned to be suitable for use as
personal spaces, like a bedroom or study, or other single-person
functions, such as a kitchen. The large platforms would be best
suited to family functions, as in Safdie's plan. The small cruci-
form platforms, or 'links', (Hertzberger's intersections) would be
primarily for interconnecting the zoned boxes, while the elongated
platforms (the bridges) would be in a position of transition be-
tween family activity and personal spaces. These 'intermediate'
platforms likely serve as a circulation node for a family dwelling,
and could contain useful activity spaces as well, especially when
family activities requiring smaller areas are required.

Instead of having angular spaces at Safdie's zones of
transition, this area will be left open as voids. A void can be
filled using either a component stair or floor sections, depending
on the whims of the user (see Figure VII-6, p. 128 , & Figure VII-7,
p. 130). In this way the area of a platform can be increased by
extending it into the void. The void could also be left open with
only a railing. This would give a new sense of space to housing,
and give meaning to the concept of residential landscaping if it
replaces party walls. Through the void, a platform can be connected

1.5x15 oak handrail

oak treads

snap-in steel stair sections

steel stringers (box-beams)
@ .480 c/c.

2-layer plywood subfloor

steel trusses
@ .480 c/c.

structural beam
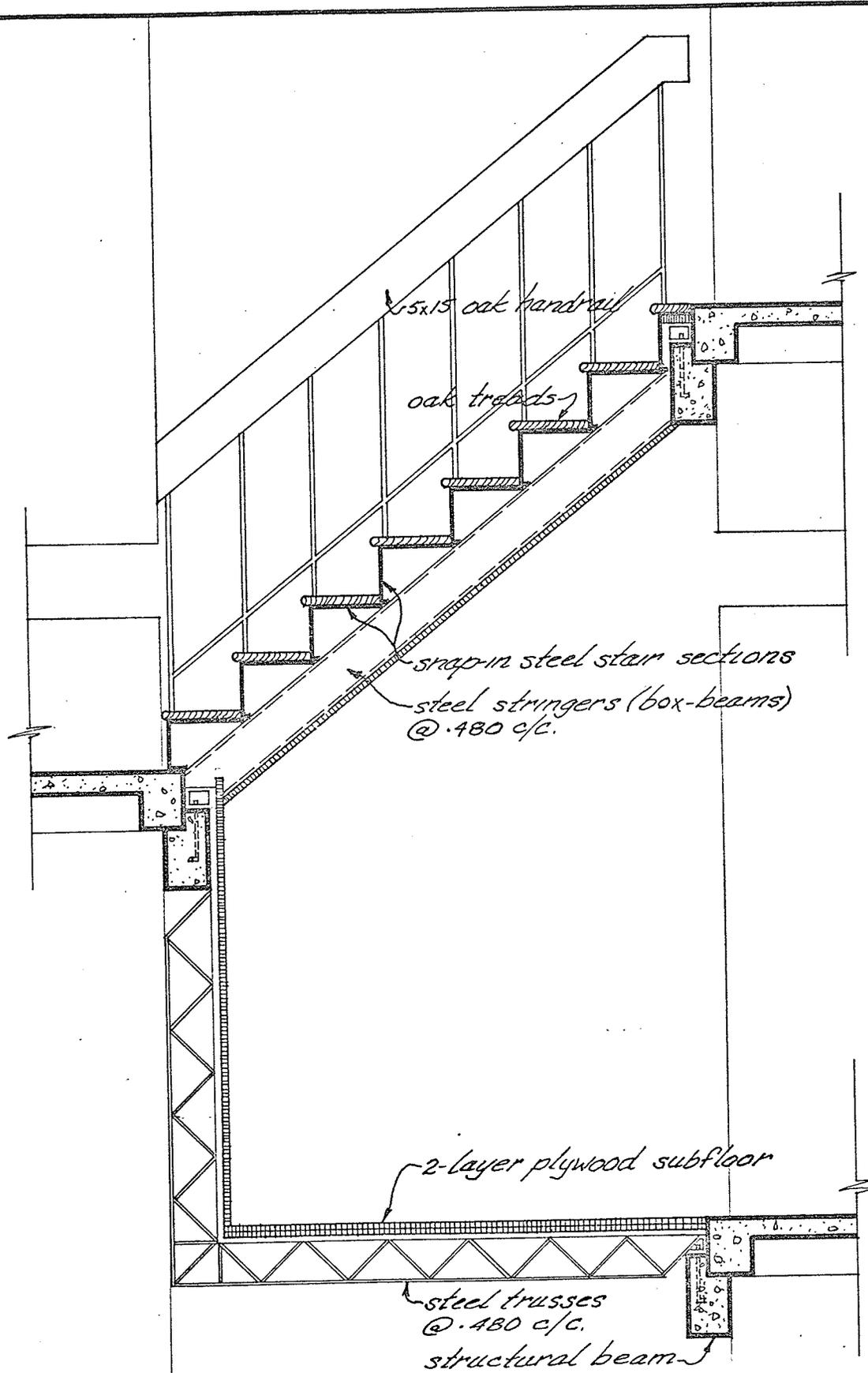
VOID COMPONENTS showing stair and floor sections

FIGURE V11-7

1 : 20

to an adjacent one by going either up or down, or both, truly
accommodating three-dimensional interaction and choice.

Auxiliary Systems and Sub-Systems

I. Space Division

To facilitate the division of space a partition system has
been developed (see Figure VII-8, p. 132). If an occupant wishes
to use his own constructions to develop his space, that should be
his option, but the partition system will make the layout of one's
territory quick and simple, and co-ordinate the appearance of
community areas.

Platforms can each be sub-divided in a number of ways on
a partition grid of approximately one metre (see Figure VII-9,
p.133). The structural blocks will accept partitions only in a
band around their perimeter, for the purpose of forming corridors
or storage spaces. The boxes are too small to sub-divide into
habitable spaces.

The partition system is composed of panels and columns.
There are small holes on a one-metre grid on the floor, and chan-
nels on an equivalent grid in the ceiling. Columns can be placed
anywhere on the grid at one metre spacings, and the panels are
snapped in between. The panels can be full, half, or quarter
height. They can be opaque or transparent, be replaced by a

panel   half panel railing   door   closet   shelves   closet

ELEVATIONS   1:40

.900   .60

PLAN   1:40

waffle slab

channel

gasket
felt
column
panel
connector
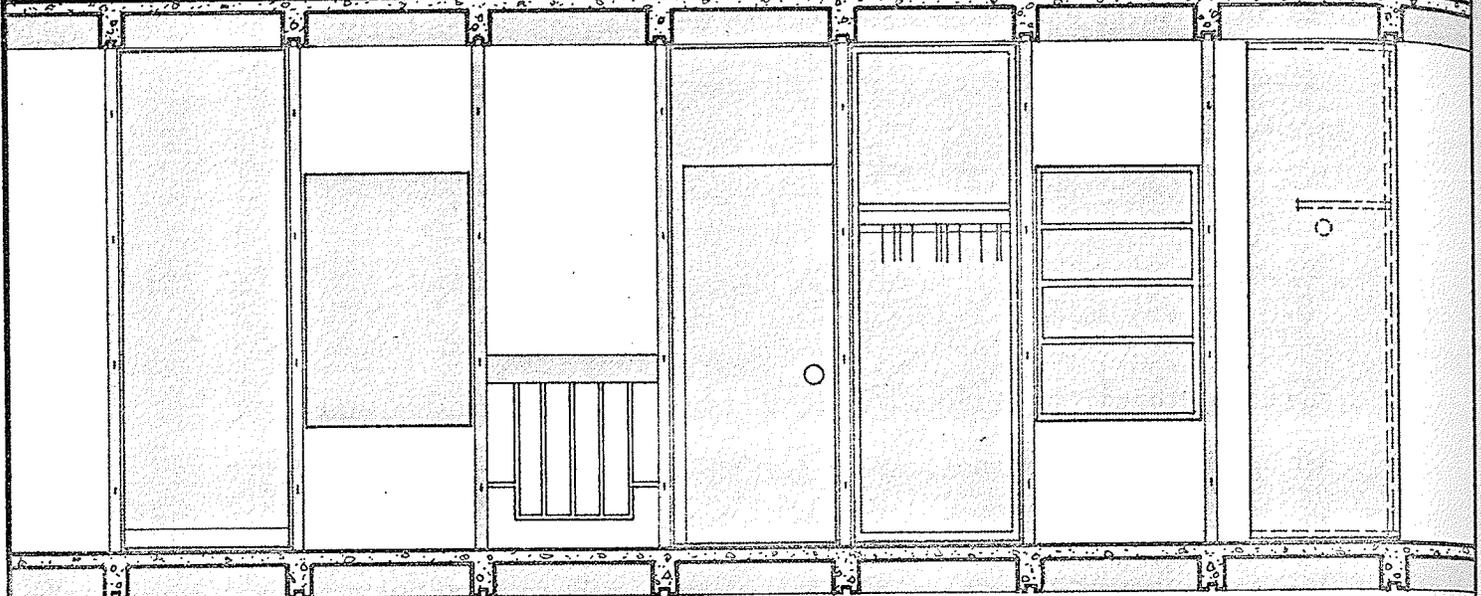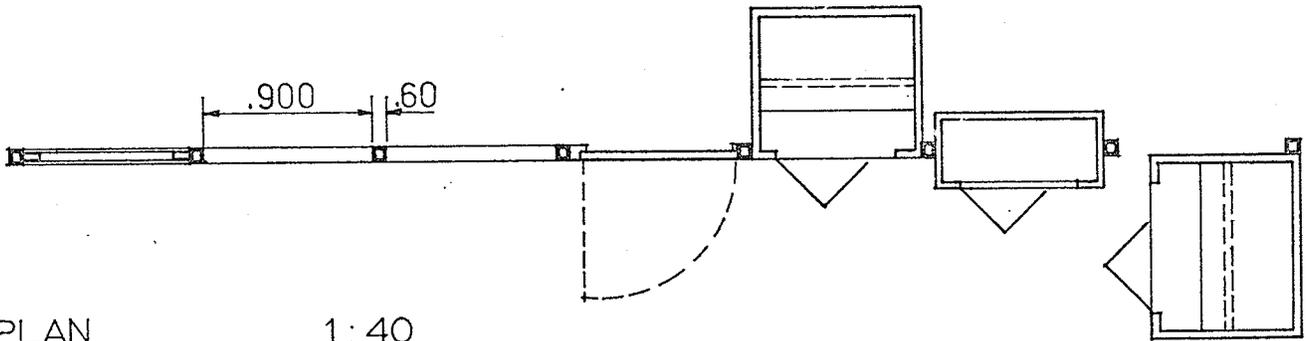
PARTITION COMPONENTS
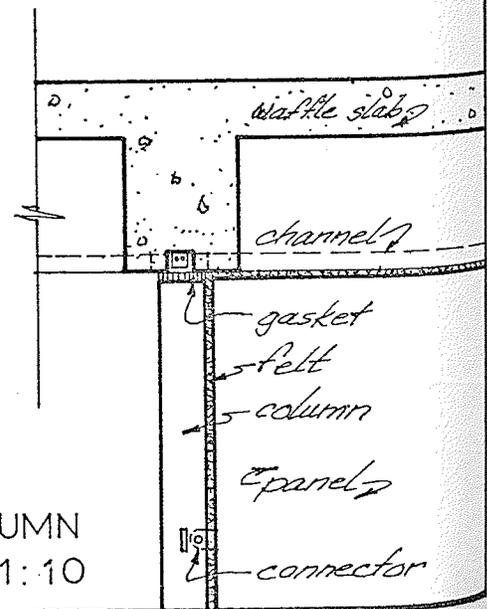
FIGURE VII-8

DETAIL OF COLUMN
AT CEILING   1:10

column location—□
ceiling receptacle—▪
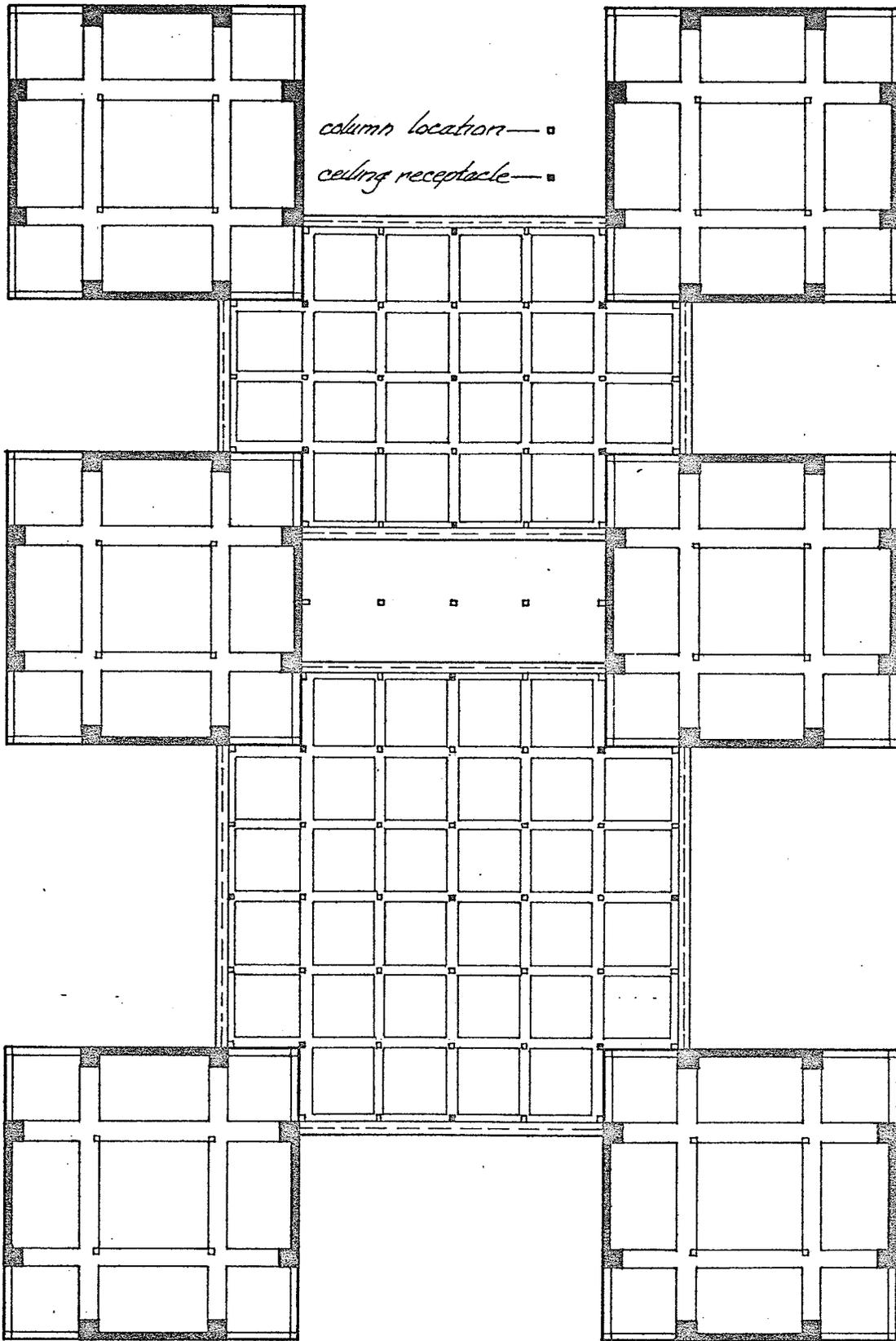
REFLECTED CEILING PLAN   1 : 80
showing column locations for partition system

FIGURE VII-9

31.4 sq. m. 20.0 sq. m. 12.1 sq. m.

max. expansion to 58.1 sq. m.

max. expansion to 40.1 sq. m.

max. expansion to 25.7 sq. m.

FIGURE VII-10
EXPANSION

partitioning
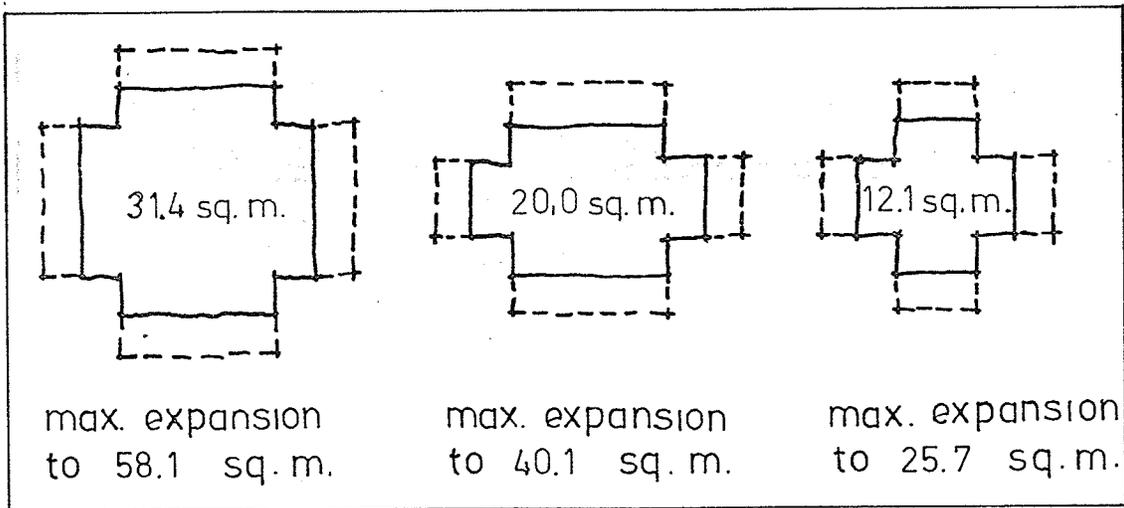
extension
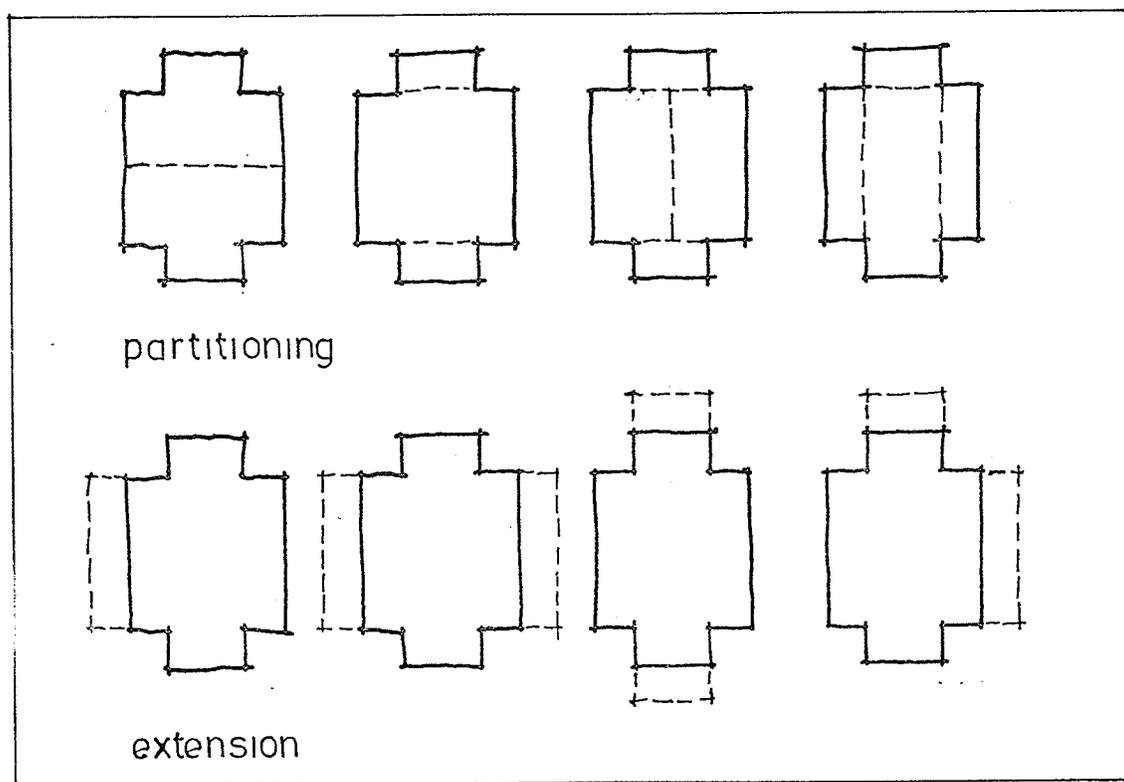
FIGURE VII-11
PLATFORM
PLANNING
POSSIBILITIES

intermediate link exit

kitchen bath
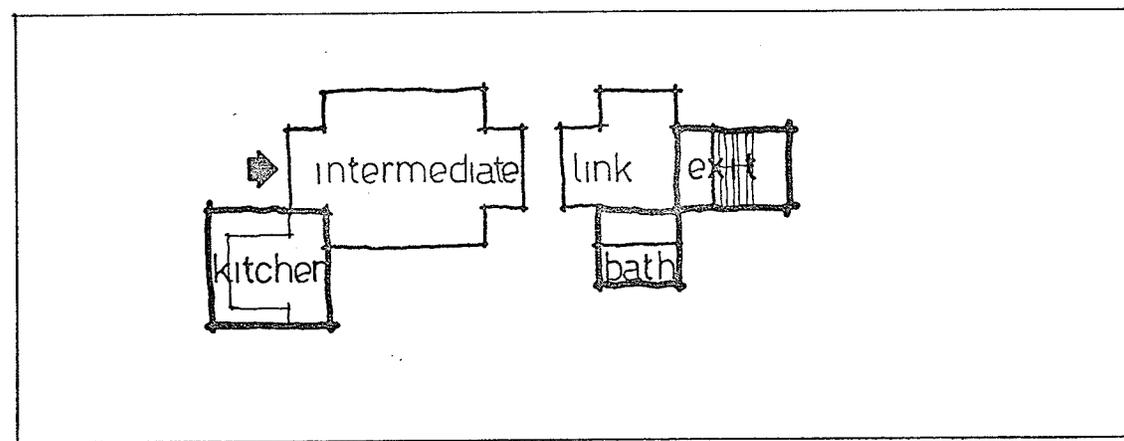
FIGURE VII-12
BASIC
PACKAGE

railing or left vacant. Panels with doors or ventilators in them are also provided. Space between columns can also be filled with a closet or storage cabinet.

Panels are light enough to be carried easily by two people. To improve the acoustic quality between the enclosed boxes and the more open activity areas the partition grid has been laid out to allow a double layer of panels between them.

The channels in the ceiling can be wired by the user. At intersections, sockets for electric lights may be hung. Columns can have an optional electrical outlet on them, wired from the channels above.

The auxiliary system for the extension of platforms has already been mentioned. By expanding into each of its voids, the area of a platform may be increased by over fifty percent. This also gives greater possibilities for subdivisions. The accompanying Figure VII-10, p.134 & Figure VII-11, p. 134 , illustrate some alternatives. The component parts which fill in the voids come in sections approximately half a metre wide. The narrowest voids are sized to accept two stairways--one up and one down.

II. Core Facilities

There are core fixtures which are custom-located throughout the structural grid. A family will form its dwelling around these fixtures. They must have at least one of each of kitchens,

bathrooms, and rear exits (see Figure VII-12, p. 134). Kitchens have been placed inside the structural blocks. Although a few steps are required to reach adjacent platforms, the choice of entry is optional, allowing an eating area to be located freely outside the kitchen. The kitchen does not have to be designed into the structural block. It could also be located in a void, making it much more open. However, its location must be determined before the structure is built, because plumbing and stove wiring are difficult for the user to relocate. If an efficient plug-in kitchen could be developed, it would be ideal. Likewise, the bathroom must be pre-located. One bathroom is placed in each zone of personal spaces--structural boxes around a small cruciform platform (a link). Also off this zone is a rear exit. Each dwelling will then have at least two exits: the front leading to a 'group' area, and the one in the personal zone which could also function as a private entrance.

Roughed-in plumbing may be built into certain positions for two possibilities. Firstly, they would permit the addition of an extra family to the community if spaces allowed. Secondly, a 'group' or 'unit' may wish to cook communally.

Outside of the family dwellings there will be core facilities to serve the communities, such as stairs, storage, workshops and lounges. As the level of community increases, the architect will control more of the design.

The mechanical system runs vertically through ducts in the walls of the structural blocks. The ducts are closed off by the partition system, whose panels can easily be removed for access. The heating system is hybrid. The whole space is heated to a minimum temperature (say 20°C) by forced air pumped out at the perimeter. Individual spaces can be further tempered to taste with electrical heating on each platform, individually controlled.

Wiring runs through some of the channels in the ceiling. The columns of the partition system, which may have an electric outlet in them, can be plugged into it, as can overhead lighting. There are wall-mounted lights operated by switches on the side of each void at each level and inside each structural block.

An auxiliary system is provided for underground parking, although its planning is ancillary to the design of the social system. Its platforms each support four columns of structural blocks. The platforms sit on four columns, spaced to permit the parking of cars efficiently between. Stairs lead up to 'unit' spaces. The mechanical room will also occur within the grid of columns.

III. Skin of Structure

The exterior skin is a system of many parts. A number of extra components must be provided to permit joining at interior corners, an ageless problem. The form of the housing system is

Labels on the figure:

- cap, indicating underlying structure
- fascia with parapet
- infill panel
- infill window panel
- wall panel
- wall frame panel
- diagonal wall panel
- sloping window panel
- half panel
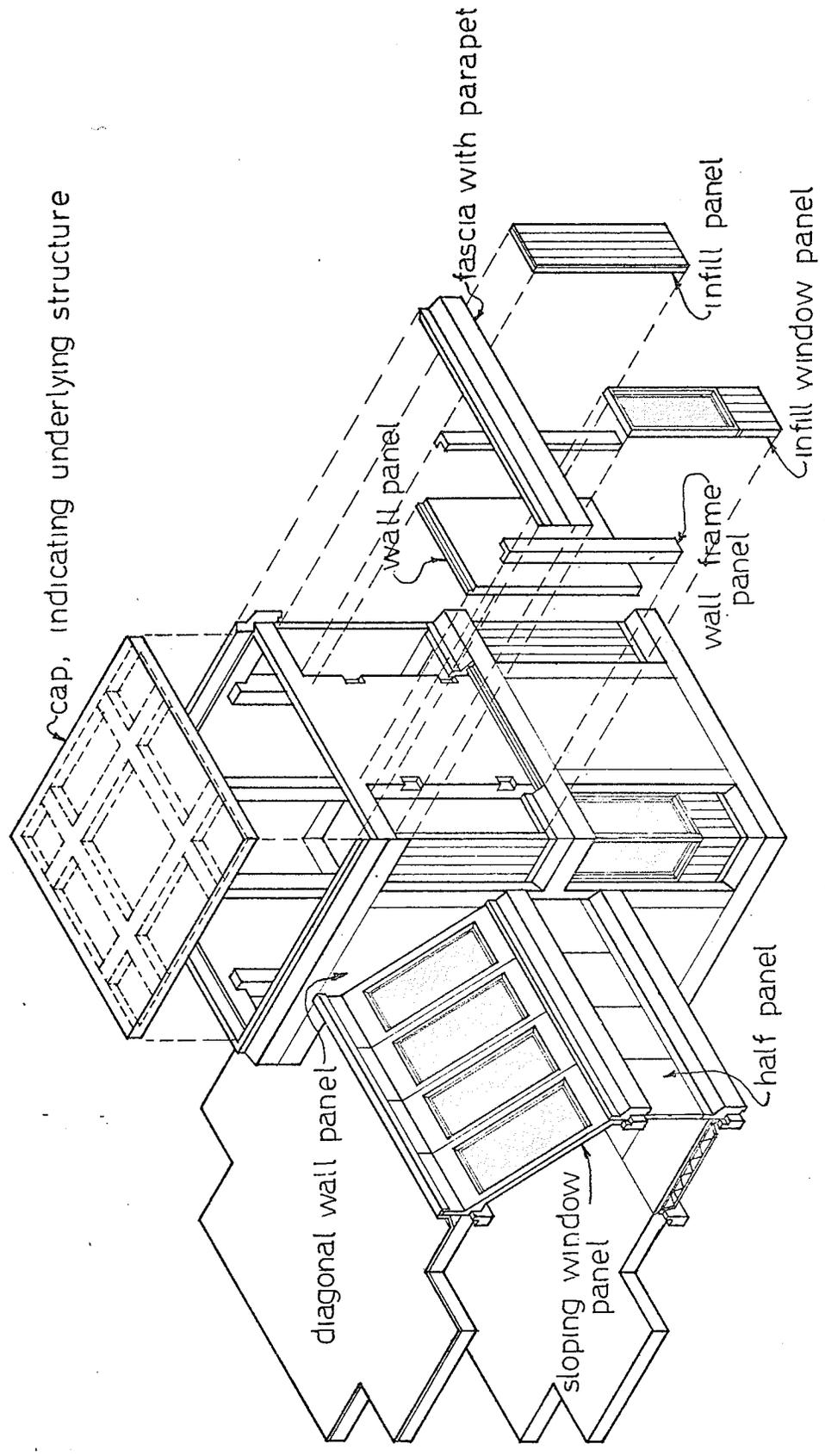
EXPLODED VIEW SHOWING EXTERIOR SKIN

FIGURE VII-13

strong enough to generate of itself an aesthetic response, so the finish of the skin is immaterial. However, a pre-cast concrete skin system has been designed to show a reasonable alternative (see Figure VII-13, p. 138).

The open corners of the structural blocks can have windows or be filled with solid panels of any material that contrasts with the pre-cast components. A few blocks, on the roof, or within the external landscape, will be left completely open and serve as exterior architectural spaces--perhaps a gazebo or shaded sitting area or bus shelter. Another component is required to form a railing around usable roof spaces. The skin which roofs the voids can be of three components: a skylight, an exterior stair, or a solid panel.

The panels are insulated. Although the structural system can be used in configurations in which a lot of surface area is exposed, the integration of internal functions into one space reduces the ratio of surface to volume, as opposed to detached homes or conventional community centres where functional amenities are zoned commercial, institutional or recreational, and are set apart in individual buildings. The system can be used in response to a cold environment by stacking it with regimented facades to reduce surface area, and orienting openings southerly. Cold weather response is also reflected in non-material systems. For

example, the high concentration of residents in spaces linked directly to community amenities enables social events to occur in a warm atmosphere with groups of people huddled together and bracked from the weather outside.

All platforms suitable for personal and family use have day-light exposure, with the exception of some of the elongated 'intermediate' ones which will function primarily as circulation nodes but can also have secondary functions such as a dining nook or laundry area. They will, however, receive indirect light via other platforms. Also, a few of the interior structural blocks have no exterior exposure, but again sunlight is not a parameter for their use: kitchens, workshops, or storage. If rooms are partitioned off without openings, then a panel with a ventilation screen above a door must be used.

Part of the skin system is a coating of landscaping. The structural system is a geological structure, like a rock outcrop which underlies a hill, and plantings are places on the caps of the structural boxes. In between, on the roofs of the platforms, can be outdoor activity areas, such as playgrounds, sitting and viewing areas, amphitheatres, outdoor classrooms, and sundecks. Roof gardens can occur in either the public or private realm, and many platforms also have private balconies. It would even be possible to rent out parts of the roof for vegetable gardens for occupants.

Exterior landscaping is designed on the same grid as the building, to join architecture with earth by transition. Inside, plantings can be placed by residents and community groups wherever sunlight allows.

Primary System

I. Main Components

The primary system is the structure itself, consisting of the platforms and structural blocks. Concrete beams are suspended between the blocks, framing the voids. On these beams sit the platforms (see Figure VII-14, p. 142).

The platforms are prefabricated waffle slabs, deep enough to withstand the stresses of erection. The blocks have open corners. Their walls are thickened at each edge to form columns, with the space between permitting ductwork. The bottom of the block has a floor, but the top is left open to prevent duplication of structure. The perimeter of the block is stiffened with headers at the top and bottom.

Ceilings are high. This allows headroom for the placement of steps between platform and block, and enables the user to establish his own ceiling heights using a suspension system. Although the user would have to devise his own suspension system, he could fasten it to the partition channels.

structural blocks

intermediate platform

family platform

beam

void, showing self-build components
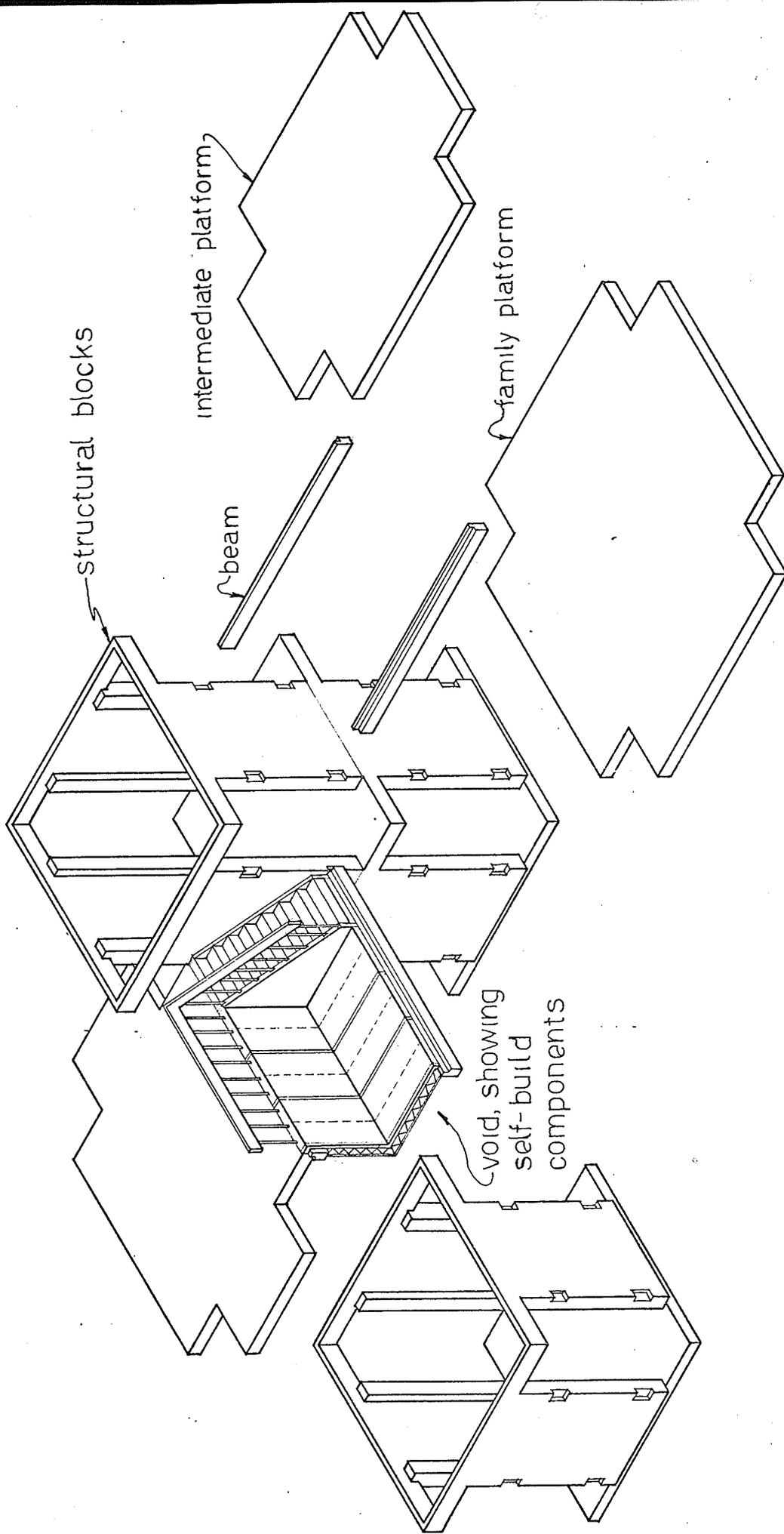
EXPLODED VIEW OF PRIMARY SYSTEM

FIGURE VII-14

II. Special Components

The structural system has some special components. The top of each column of blocks is capped with a roof plate. The elevations of the blocks can be varied by employing square fillers within the columns. In this way floor levels can be changed by half or quarter of a storey. There are also blocks which can support a platform with the same floor level. This allows the provision of one-level combinations of spaces, and would enable a tenant in a wheelchair to arrange a dwelling on the ground floor.

Wide spaces are spanned with a space-frame. The frame is a system of semi-octahedra and tetrahedra (see Figure VII-15, p. 144). On top of it are placed skylights and electric lighting. The frame is suspended, like the platforms, on beams between the structural blocks.

In places it is redundant to use the blocks when only the ends of one or two beams are to be supported. In such cases a 'wing' is used in place of the block. The wing is simply a wall component which flanks the voids. Its edges are thickened as columns, with duct space in between.

All platforms can be designed for the same loading conditions as they support only their own weight and the live load applied to their surface. The structural blocks on the other hand, support the weight of the blocks above them and the
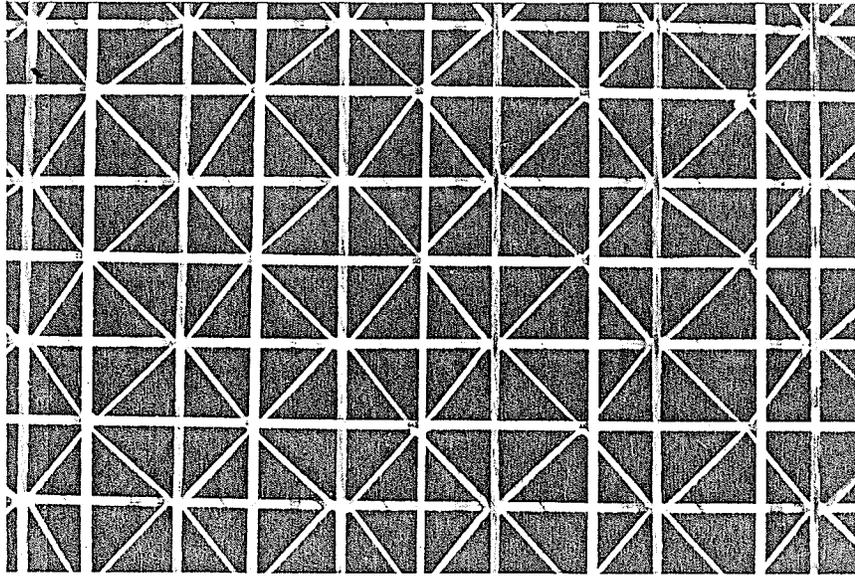
TOP VIEW
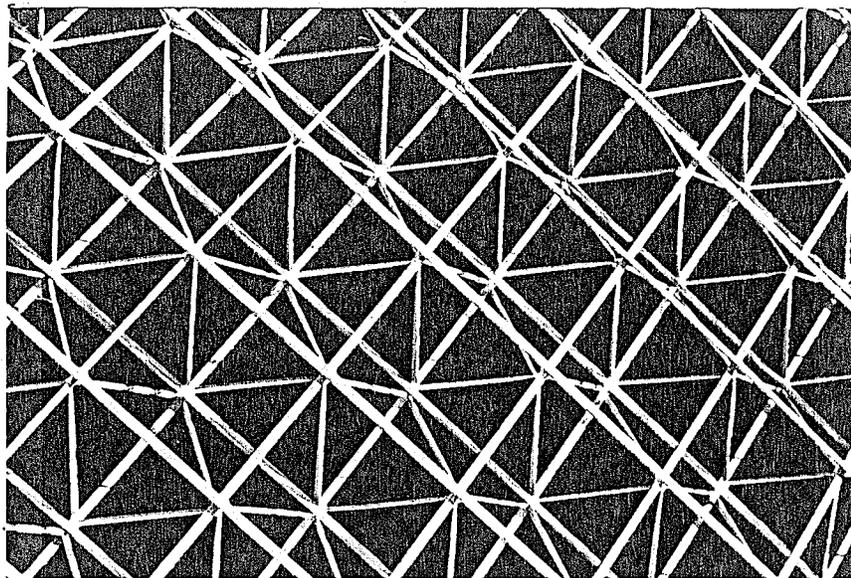
OBLIQUE VIEW

SPACE FRAME: PACKAGED WITH TETRAHEDRA AND
SEMI-OCTAHEDRA

FIGURE VII-15

platforms. The blocks at the bottom may require more reinforcing than those at the top of a column. In this manner the need to refine parts to different loading conditons is confined to only one component--the block.

Ways of using the system to support blocks and platforms are shown in Figure VII-16, p. 146.

Super Systems

The lower levels of the community hierarchy can be defined structurally by the primary system and its components. For example, a personal space could be contained in a structural block, or on a smaller platform. A family space could form on a larger platform. Group territory would occupy a combination of platforms and blocks. But larger communities would require structural definition which is external to the kit of parts. They would occupy spaces structured by super-systems whose components are derived from the primary system.

When elements of the primary system are assembled, the spaces within the total structure are suitable for group, family and personal use. But the spaces formed outside the structure, and surrounding it, form another system. These external spaces constitute 'unit' territory. They are either open to the sky or skylight. The unit super-system is in total a sealed space, making the unit a self-contained package. This is symbolic of

	section	plan
Block on Block		
Platform on Blocks		
Platform on Blocks & Wings		wings
Block on 1/2- Storey Filler		
Blocks on Parking Structure	columns	tie beams
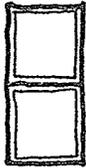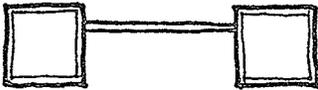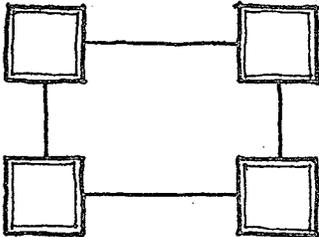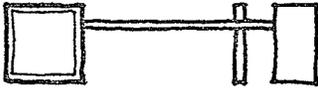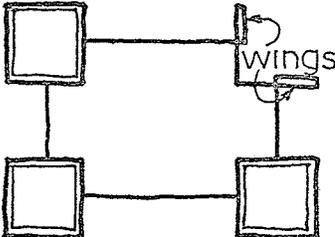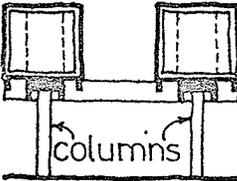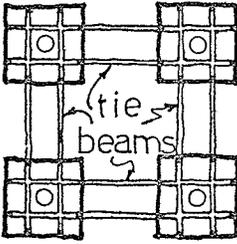
METHODS OF SUPPORT

FIGURE VII-16

the limits of user control, as well as representing the close

social contact of the unit community.

By stacking packages of 'units' together, a 'section'

can be developed. The section is thus a system of sealed spaces.

Likewise, the 'block' is a system of four or five sections, al-

though its community spaces are not enclosed. The vocabulary

for structuring the configuration of a block can be unique from

any other block. Although a block can be linked by bridge or

tunnel to other blocks, it is the largest structure contained in

a pedestrian island.

The neighbourhood, a system of blocks, is the largest

level at which the structural system is used. At this level it

can overlap with the surrounding community, so that some of the

blocks of the neighbourhood system may be constructed without

use of the primary system. However, as a super-system, the

neighbourhood still has its architectural identity rooted in the

primary system of structural blocks and platforms.

Architectural Controls Vs. User Controls

The housing system has been designed to facilitate control

of the environment by the user. Accordingly, its form must deviate

from conventional housing, where each user is assigned to a family

cell, and the structural organization discourages social interaction. On the other hand, many controls must, reasonably, be retained by the architect to establish some order in the design, to regulate the use of facilities, and to encourage healthy natural and social interaction. Some of the designer's controls will be permanent. Others will be changeable or moveable, to enable experimentation with the structure after its initial use has been evaluated over a period of time. Still other architectural controls can be re-assigned to the user when it is demonstrated that community organization has matured enough to enable him to take over.

The basic areas of control can be listed and summarized. This outline deals with the maximum possibilities for user control. The system could function with any lesser degree of choice assigned to tenants.

I. The Grid

The architect controls the planning of the grid. This enables him to systemize the construction of the project, with the advantages of economy and technical sophistication which mass-production brings. Control of the grid design also enables the designer to establish a sense of order within the structure, and to co-ordinate the relationships of its parts. The user retains choice of his position within the grid. Using a component system

he can govern growth into the grid's voids. The user can choose patterns of platforms in the third dimension as well, and has three-dimensional control over his relationships with neighbours. A plan drawing is therefore a cumbersome method of indicating which platforms a particular tenant possesses, because they may consist of many different levels.

II. Platforms

Within the grid, the architect determines where platforms will be located. Floor pads are heavy structured elements which cannot be handled conveniently by the user, and their position remains permanent. But the user can choose which platforms he wants, depending on availability, and can increase or decrease his dwelling when suitable, or trade platforms with neighbours. He also has the option of extending platforms into the voids, or subdividing them with partitions.

III. Articulation

The architect has the power to articulate the system components within the grid. This enables him to encourage, through the juxtaposition of parts, the formation of communities in the desired hierarchy, thus expressing a characteristic of a leisure habitat. He can also mass the exterior to suit environmental conditions and to complement his aesthetic ideals.

The user, however, is not forced to bow to the pressures of socialization exerted by the structural configuration. He is free to style a very private life if he wishes. But if he accepts the intended social structure, he will relate to and can determine, with others, the institutions which will form.

IV. Core Facilities

The architect must design and locate core facilities, such as bathrooms, kitchens, and rear exits, because their position is dependent on servicing or function and their construction is complex and permanent. The user can establish the relationship of his chosen spaces to the core facilities.

V. Rules for Location of Dwellings

Some rules must be established by the designer to designate particular spaces to tenants. Each family must be ensured of claiming a full set of core facilities. Rules also enable the density of a community to be controlled. Building codes and safety criteria must be catered to, so the architect must exert control to ensure their standards are met. By making rules for the location of dwellings, the designer can predict external circulation patterns, thereby simplifying their organization and building them in with rugged and permanent components.

After community organizations form and mature, the rules can be redefined and some control transferred to the tenants.

Although tenants must accept a package of core facilities, they are still free to determine growth of the unit beyond the core, and control the external limits of their dwelling. They also control the way in which they relate to neighbours and surrounding community space.

VI. Finishes

In larger community spaces, finish materials are determined by the designer. He will attempt to create a variety of environmental conditions to provide a diversity of moods and spatial sensations. This is accomplished by manipulating finish qualities, such as texture, colour, acoustics, and lighting, in transitional states throughout a structure, modified by intended use. Spaces could be hard or soft, coarse or smooth, brightly coloured or dull, loud or quiet, bright or dark. By affecting the physical characteristics of a habitat, the architect can exert control over the use of spaces. In this way he is able to suggest, through his use of materials, a hierarchical organization of spaces, assuming that social use can be influenced by materials used, without labelling spaces for specific functions. The furniture he uses to landscape spaces could similarily influence the use of space, and its characteristics, too, should reveal a diversity of physical qualities. Presumably, if enough different spatial conditions are provided, then almost any leisure activity can find a nearly ideal

environment in which to function. The user will have the choice

of thus relating his activity to architectural characteristics.

Within his family and personal territories he will also have the

option to choose his own finish materials and change existing ones.

VII. Partitioning

To simplify the use of partitions a system should be

designed by the architect. He should also be able to co-ordinate

the appearance and control the quality of the partitioning. By

letting the user finish his own spaces (with materials as well as

partitions) labour costs are avoided, making up for the price of

the partition system. The user can locate the partitions freely,

and determine which components of the system best suit his spatial

needs. He also controls the nature of spatial divisions, deciding

whether to have strict partitioning or to leave spaces open. He

could have the option, if he is particularly skilled, to custom-

build his own form of partitions.

Management Methods

There are a number of alternative methods for managing

use of the system. The first is co-operative rental. A family

group would apply for space. They would receive a rental pack-

age of one platform suitable for family use, the minimum core

facilities, and a basic number of components of their choice for

expanding or dividing space. Extra platforms and extra components would require extra rent. When platforms are vacated, co-op members would have priority of claiming them over new tenants. Co-op members would share in all decision making.

If the system were to serve as a condominium, it would function similarily to a co-op, except that the basic package and extra parts can be bought. Platforms and components can also be sold or traded.

A commune could own or rent a complete community, such as a 'unit' or a 'section'. They would establish equal ownership for all, with spatial use determined naturally by need and by group pressure.

Another alternative is to finish the interior design and provide conventional fixed apartments for each family. User control would, as in most contemporary housing, be confined to family dwellings. The family would have more space allotted to it at the expense of community territory.

But the most realistic alternative would be to allow all previous methods to be employed as needed within a neighbourhood. There could be a mix of conventional apartments, co-op rental units, condominiums, and communes within the community structure, providing choice for all needs.
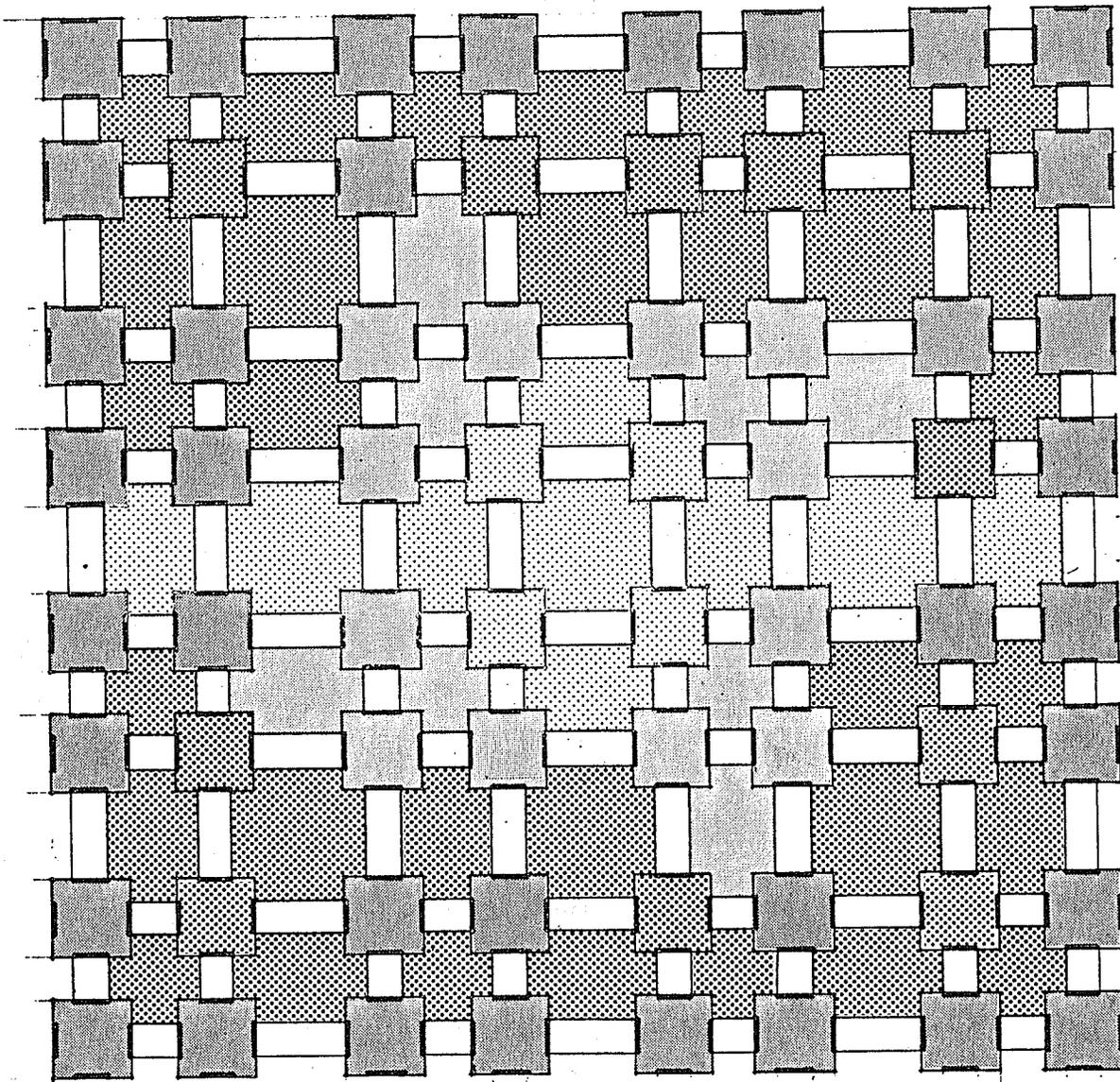
COMMUNITY TERRITORIES WITHIN UNIT
overlaid on proposed grid

personal territory   ▨   group territory.   ▨
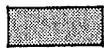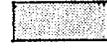
family territory   ▨   unit territory   ▨

FIGURE VII-17

Use of Housing System

I. Shaping the Structure

The first step in planning the use of the system is to over-
lay on the grid a social structure which indicates a community
hierarchy. The overlay will show which platforms within the grid
will be suitable for personal or family use, and the territories
that will be used communally by each level of the hierarchy (see
Figure VII-17, p. 154). The next step is to determine the form of
the building within the grid. The perimeter is articulated. In-
terior space is provided to suit the necessary areas, and arranged
three-dimensionally as required by each social territory. The
shaping of the structure should also consider the input of charac-
teristics of nature, such as a range of spatial experiences and an
informal pattern. The exterior shape should reflect the designer's
particular criteria for that site. He may want the facades to
sympathize with the existing landscape. A hilly site and a prairie
location would dictate different massings. He may wish to create
a maze-like appearance by stacking modules at random. Or, if the
designer is energy-conscious, he could develop a very regular
facade. Although the system can be used in configurations which ex-
pose a lot of surface area, the usable volume enclosed is large,
as mentioned previously, and since community functions are integrated
into the same structure exposed areas are reduced, openings
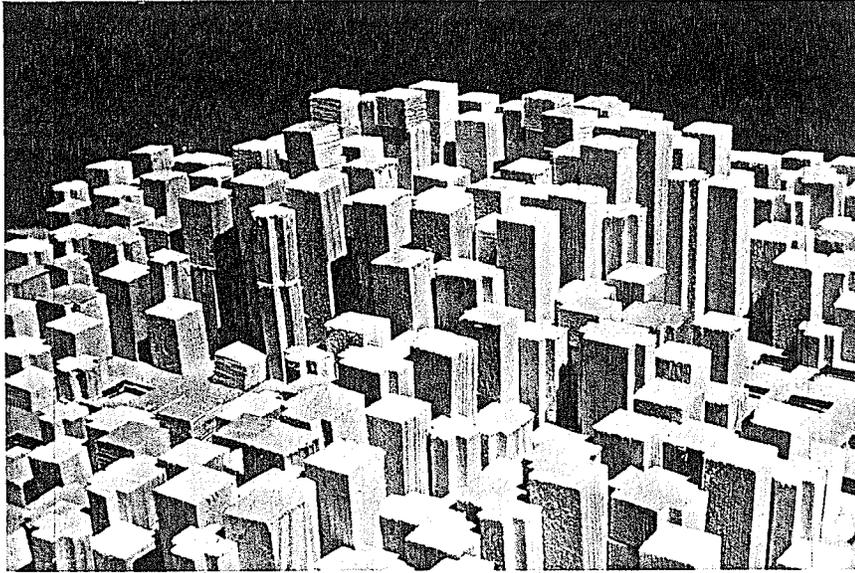
OBLIQUE VIEW
SENSE OF RANDOMNESS
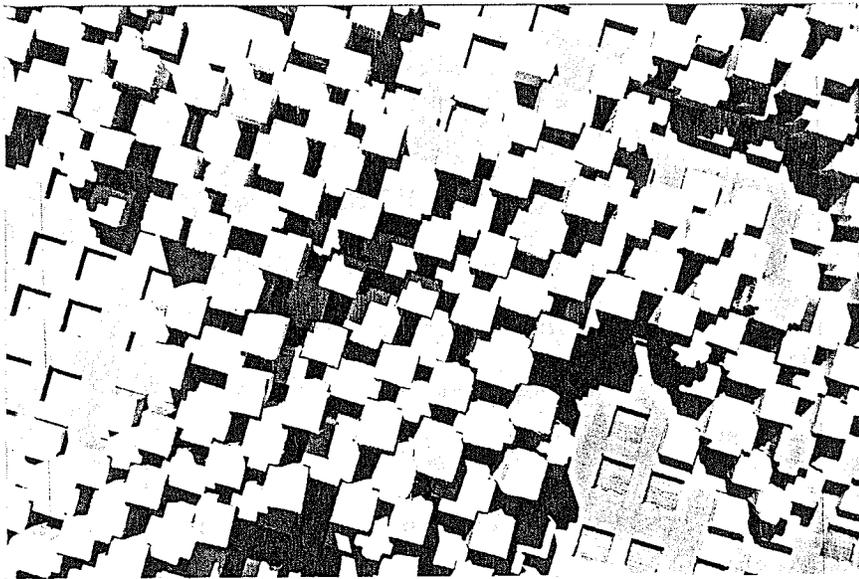
TOP VIEW

GEOMETRIC ARRANGEMENT
BECOMING APPARENT

FIGURE VII-18

(especially exterior doors) are kept to a minimum, and people can walk from place to place without going outside.

On first glance the building would appear to have a very random arrangement of components. But the plan reveals a very strong ordering principle--the grid. Its strength is necessary to simplify the complex organization of the building. Also, it facilitates systemization of the components and draws on the benefits of technology. If a designer wished to provide for future expansion or contraction, he could develop the building as an open system which grows within the grid.

On the other hand, the apparent sense of randomness, when the building is viewed in three-dimensions, relieves the perception of the powerful grid. Within the framework of the grid the designer has the freedom to zone platforms and to define community territories as he pleases. Diverse spatial experiences can be created within and without the structure. The form of the building can be reflective of the many interacting levels of platforms and structural blocks. The disordered form can have natural qualities, if it is informally articulated and allowed to step up from its perimeter as if an outgrowth of the ground. If the grid is extended beyond the building and used for landscaping, there will also be the naturalness of transition.

BEDROOMS

pre-br.

two-br.

m. br.

one-br.

KITCHEN / DINING

BATHROOMS

SOME ALTERNATIVE LAYOUTS
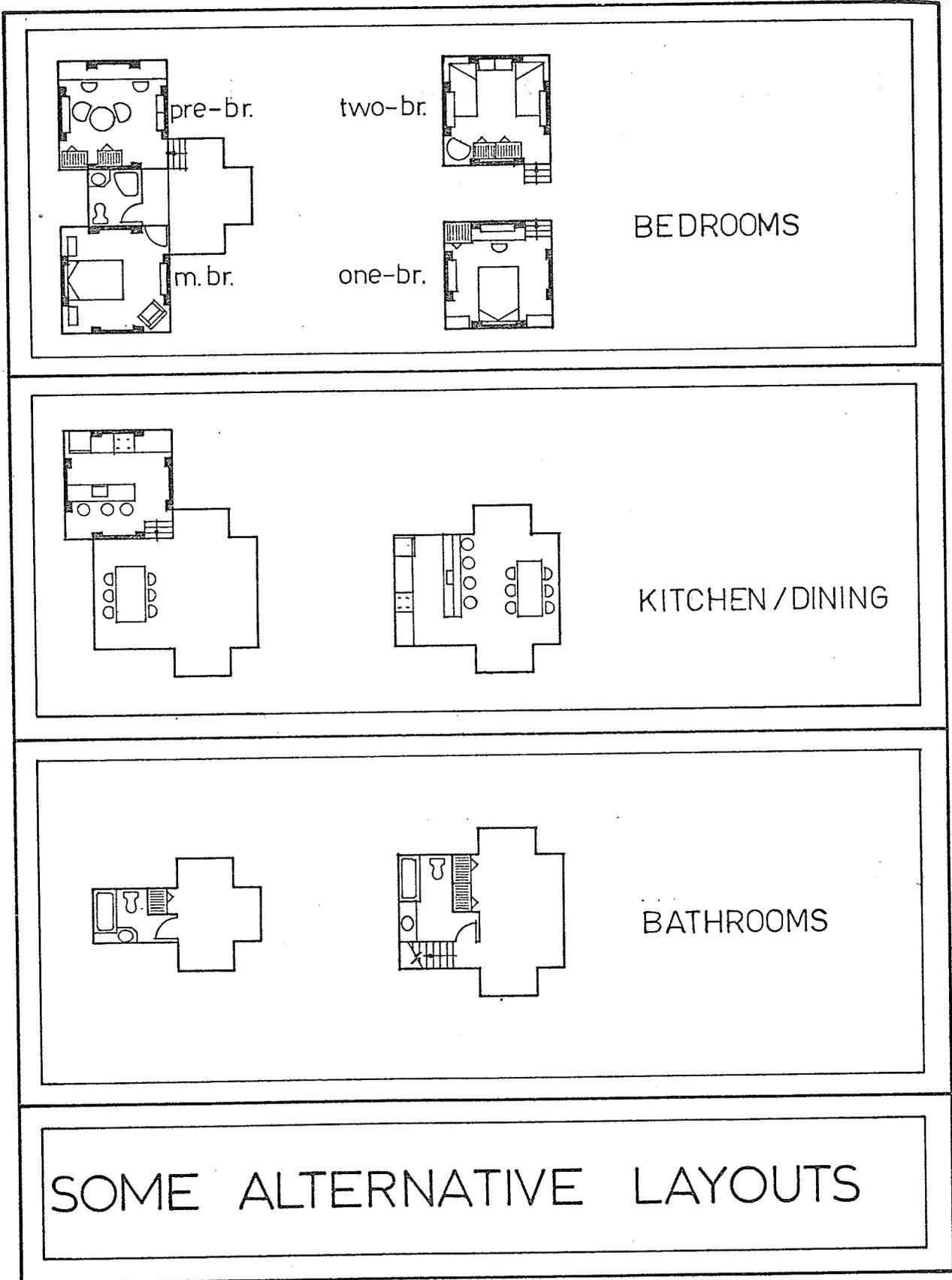
FIGURE VII-19

Although the grid is very symmetrical and establishes rectilinear co-ordinates which control the fabric of the structure, assymmetrical freedom is encouraged within the grid. The designer manipulates the components by adding or subtracting them within the three-dimensional co-ordinates of the total space package. The interplay between the grid's strong geometry and the random ordering of components is shown in Figure VII-18, p. 156.

II. Arranging Community Hierarchy

After the platforms are erected, the population is moved in. People territorialize as they please, except that each family must have at least one intermediate-sized platform, off which is a kitchen, and at least one link (small cruciform platform), which connects to a bathroom and rear exit. The structural blocks would probably be desired as personal spaces, being ideal for bedrooms. Two blocks could be linked to provide a large bedroom with a dressing area or pre-bedroom adjacent. The platforms, too, can be used for personal space. One intermediate platform could be subdivided into two bedrooms. The personal territories could function in other leisure-oriented ways: study, workshop, music room, etc. Some alternative ways of using blocks and platforms are shown in Figure VII-19, p. 158.

A family living area could take up a large platform. Or it could be divided into two activity areas on upper and lower

private terrace

roof garden

skylights

gazebo

balcony

wing

grade

parking
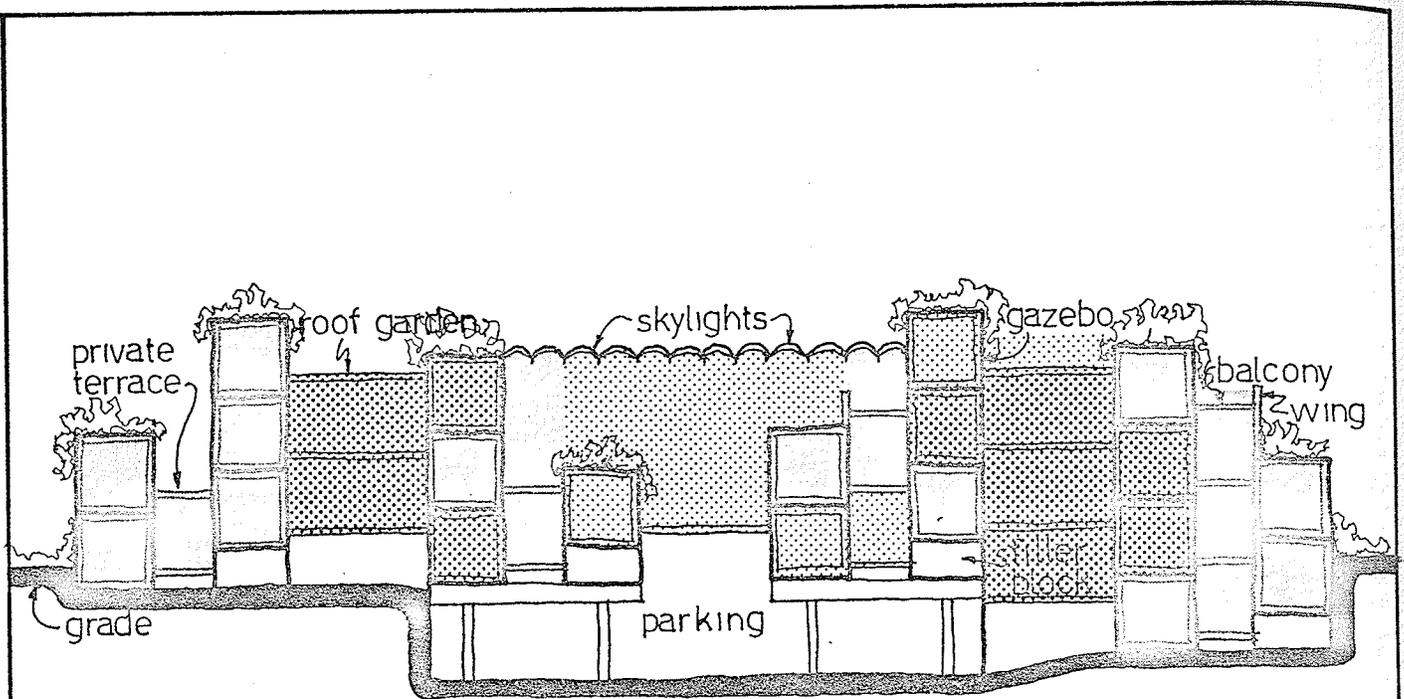
COMMUNITY TERRITORIES	personal		group	
	family		unit	

CONCEPTUAL UNIT (in section)

FIGURE VII-20

intermediate platforms. The possible arrangements are left to the imagination of the occupants.

Group space could consist of a few platforms and blocks, partially enclosed and on a number of different levels. Off this space will be the entrances to about four family territories. Enclosed parts of the group space can be partitioned. Use of the platforms will be suggested by the qualities of its materials and spaces, rather than by labelling.

To form a unit, platforms are best arranged in an annular pattern to form a doughnut-shaped structure. This permits combinations of family and personal platforms to occur within an uninterrupted circle. In this way, there is no dwelling at the end of a building, as would occur on Habracken's ribbon system, and the population is focused inward to the communal spaces in the hole of the doughnut. This central area is skylit. It is part of a pedestrian street which runs through the unit, with communal activity areas opening onto it. A section through a unit, showing its community arrangement, is sketched in Figure VII-20, p. 160

A section is formed of units grouped around an enclosed mall. The mall's spaces can serve the functional and social requirements of its local residents, and it can also contain institutional or commercial uses which serve a larger external population. The section's function is ambiguous, and will evolve as residents organize.
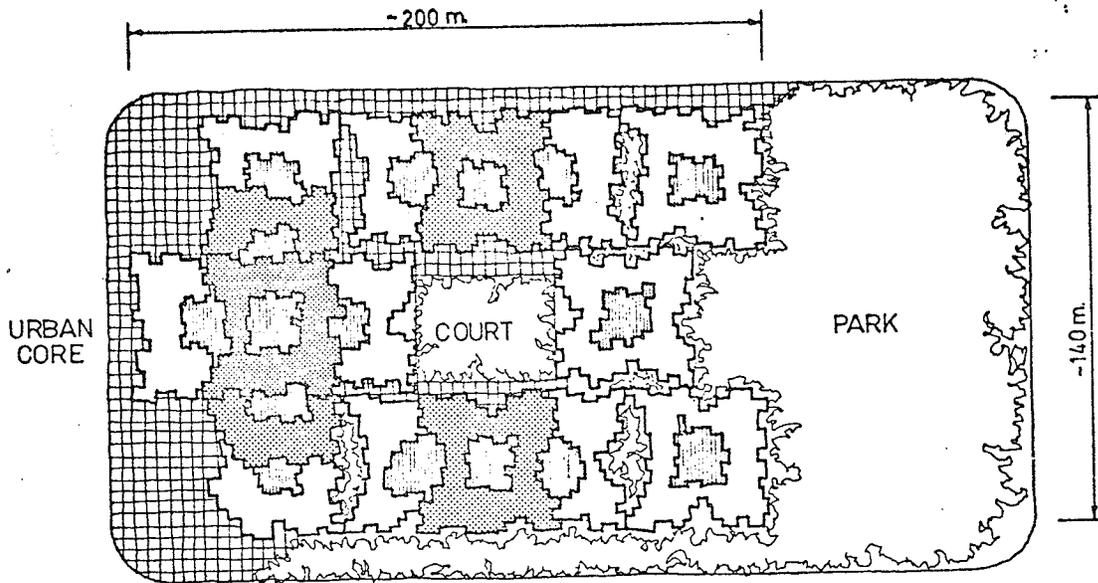
approximately 5 hectares, with 2 to 3 hectares built up, containing 1,000 people

1 to 3 storeys
4 to 6 storeys
7 to 10 storeys

urbanity
nature
skylights

CONCEPTUAL BLOCK - showing roof plan
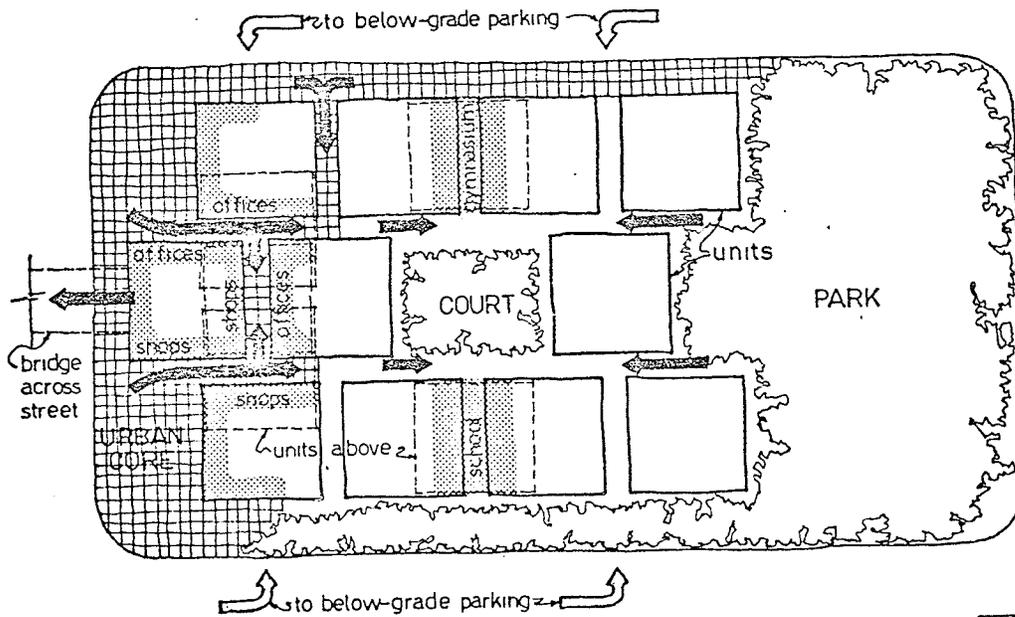
vehicular circulation
pedestrian circulation

commercial & institutional
residential use

CONCEPTUAL BLOCK-ground level circulation

FIGURE VII-21

The block, as its name implies, could fill a city block. Across it would be a transition from an urban character, where the density is concentrated, to a more park-like setting, with commercial or office use where the urban activity is and institutional facilities in lower density areas. A possible arrangement for a block is shown in Figure VII-21, p. 162.

A neighbourhood, being a group of four blocks, would have a central urban core surrounded by high-density structure. This core would serve as a transportation node. Each block would be strongly linked by bridge or tunnel, and shops could be located on many levels. The density decreases towards the perimeter, and the whole neighbourhood is surrounded by greenery (see Figure VII-22, p. 164).

III. Instilling Traits of Nature

Not only the social system is built into the structural hierarchy. Natural elements also occur at every level of community, with more user choice at the smaller territorial levels. These elements will be integrated with the structure through transition, from ordered natural landscape items to a spontaneous arrangement of structural elements within the grid. Since the grid extends into the landscape, the system will have limitless boundaries. It is fused with the infinite natural world through transition.

The system itself has inherent natural qualities. It can be used in configurations which provide diverse combinations of spaces: closed and open, high and low, bright and dark. Its materials and finishes also can provide diversity through appeal to senses.

NATURE

NATURE

shops

offices

community services

school

gym

administration

entertainment

offices

shops

NATURE

NATURE

overpass

overpass

overpass

underpass

underpass

transit

public

node

URBANITY

N
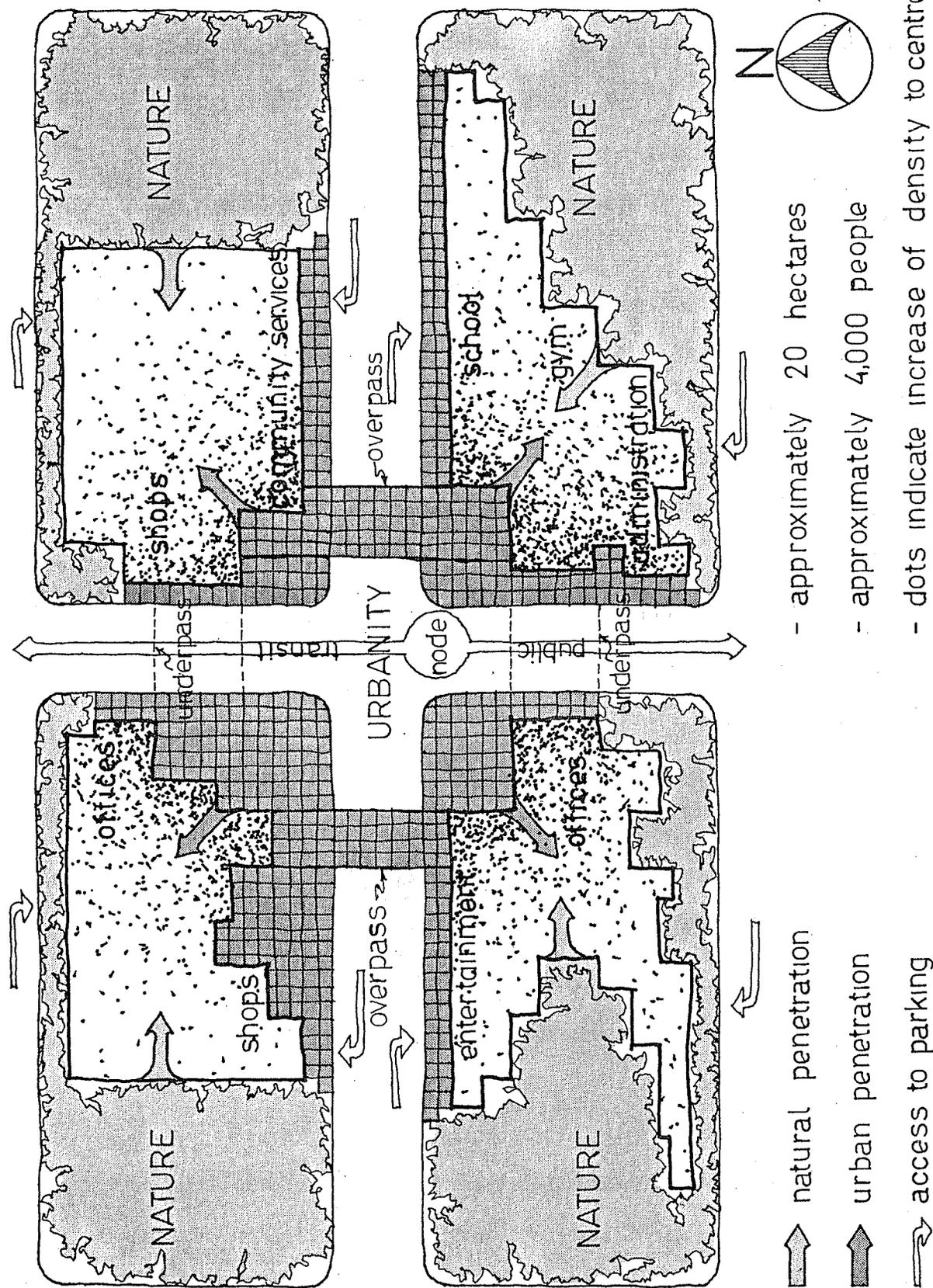
- approximately 20 hectares

- approximately 4,000 people

- dots indicate increase of density to centre

natural penetration

urban penetration

access to parking

CONCEPTUAL NEIGHBOURHOOD on 4 blocks

FIGURE VII-22

Transitions from place to place will be unpredictable, revealing

a maze of spontaneous experiences. Over time and space the

structure will change. People come and go, and needs change, so

environmental experiences will be in a state of flux. But the

arrangement of components controls this change by fortifying the

social structure. This in turn equilibrates the ecological

development of the population as it interacts with the physical

structure.

Organic relationships encompass more than the flexibility

and interconnectedness of sub-systems or the geological nature

and landscaped blanket of the structure. The human himself is

an organic element of the total system with his choices affecting

the structure of the habitat. The primary system is thus an

interface between man and habitat, so that environment evolves

naturally.

IV. A Utopian Dream

.The proposed housing system gives the user freedom to

strive for his utopian dreams. He and the society he shares his

spaces with have the privilege of choice for determining the way

social institutions will be founded and grow. And he and they

will experience a diversity of spatial qualities which make the

essence of nature a part of everyday existence. The combination

of social and natural interactions will encourage a more meaning-

ful life, replacing the occupational purpose instilled through

the roles of the disintegrating work ethic. Reflection on the

meanings of social and natural interaction will lead the user to

consider the place of his self within the universe, revealing in

his own mind and heart still more meaning. He can thus attain

a state of mind of true leisure, determining his activities for

himself based on his self-concept, and leading a fulfilling life

which rewards himself and others with the joys of being alive.

The beautiful world was made with all the elements which give man

the freedom to style a life of leisure as he pleases. The housing

system will hopefully complement those elements, sheltering a

place on earth for a few men where their leisure activities are

concentrated. The leisure environment may reveal to users new

roads to meaningful existence which transcend society and nature

and the self. A re-evaluation of the significance of leisure may

indicate criteria for the design of yet another leisure environ-

ment which encourages still more sophisticated purposes in life.

The design of leisure habitats could become a continually evolving

process.

V. The Drawings

The following drawings describe hypothetical uses of the

housing system. Examples of a single-family home, a group home for

six dwellings, a unit for about 60 people, and a section for about

300 people have been developed. The drawings for the family and

group homes include possible dwelling and furniture arrangements

(the user's input) in fairly conventional order, while the unit

and section are described more conceptually. The solutions shown are not absolute. Rather, they are suggestions which illustrate the versatility of the system. Different configurations would result from different conditions of site, climate, population, designer's values, and other parameters and criteria external to the system's physical nature. The solutions should, however, provide frameworks which respond to the needs of a man at leisure, and which allow him to be the final sculptor.
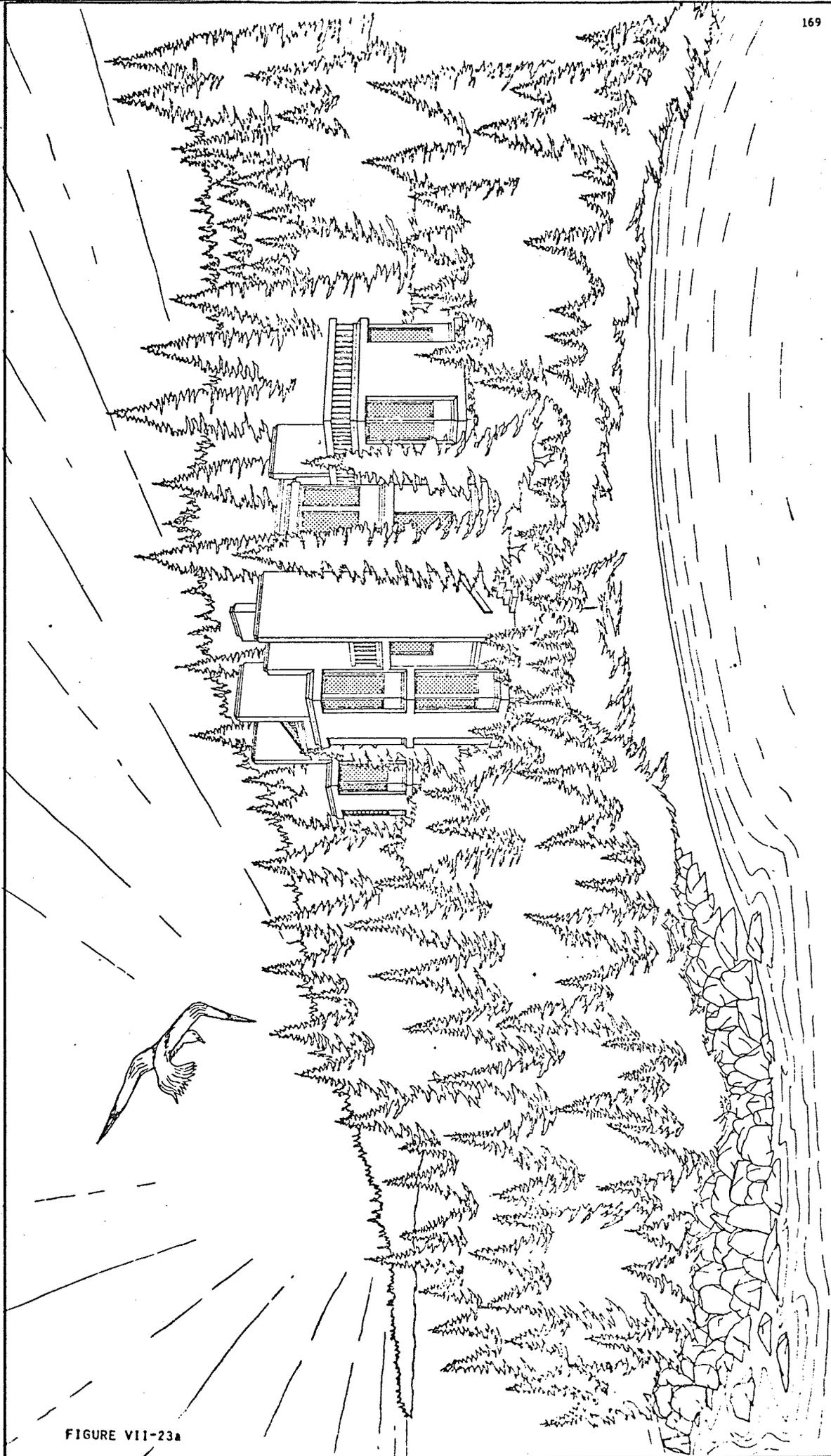
A HOME FOR A FAMILY OF FIVE AT LEISURE

FIGURE VII-23a

Patio

1-1/2

FIGURE VII-23b
UPPER FLOORS 1:80

Bathroom

1-1/4

+1

-1/2

Bedroom

Bedroom

1-3/4

Living Room

Den

+2

1-3/4

+2

2- 1/4
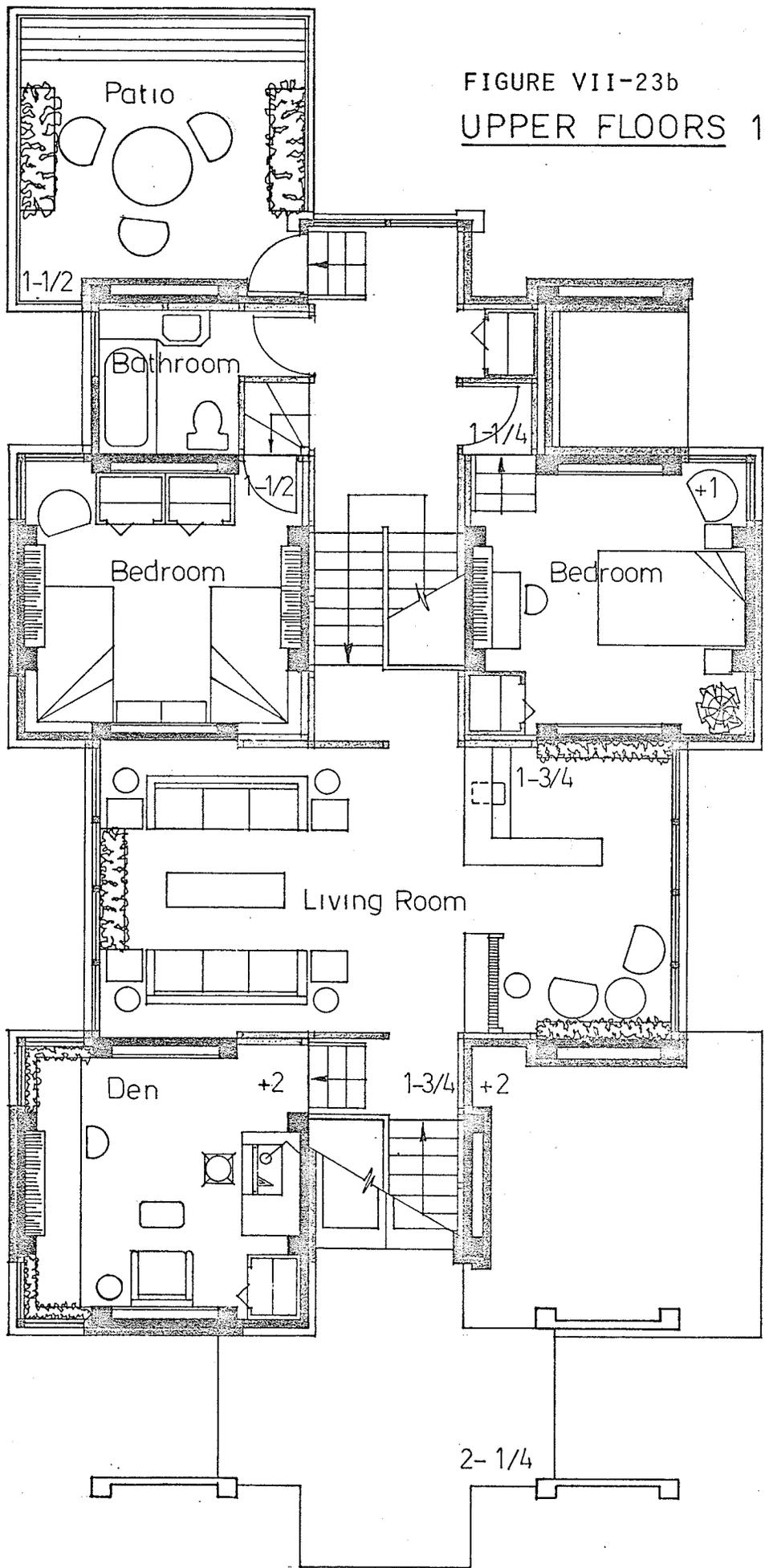
FIGURE VII-23c

LOWER FLOORS 1:80

N

Pre-Bedroom

1/2

washroom

Storage

1/2

1/4

+0

Master Bedroom

Furnace Room

Kitchen

Dining

3/4

Utility +1

+1 Family Room

Coats

Entry

1-1/4

Hall

1/4

1/4

Hall

Living Room

1-3/4

Kitchen

3/4

Entry 1-1/4

SECTION A-A

-1 0 1 2 3 4 5
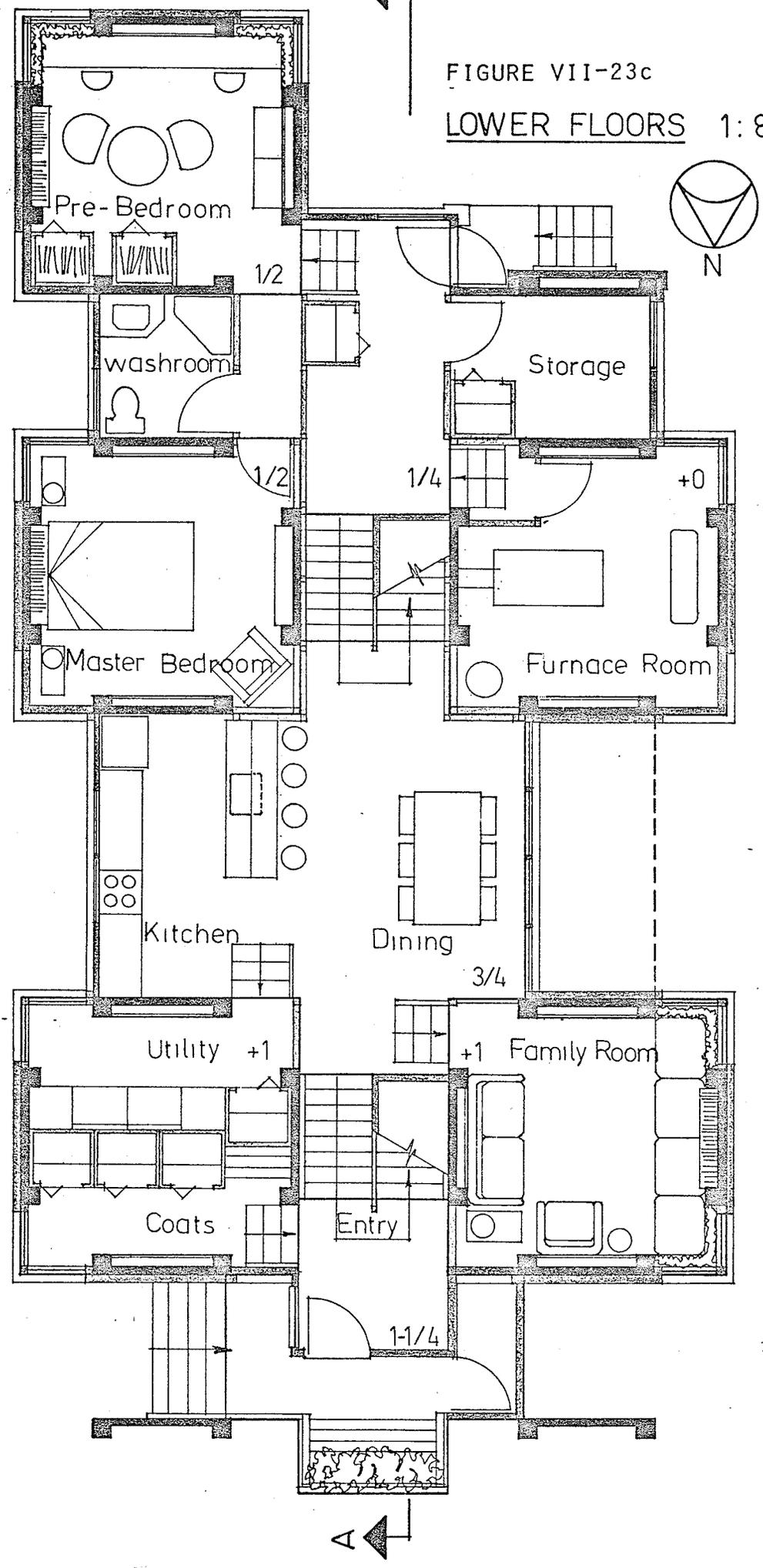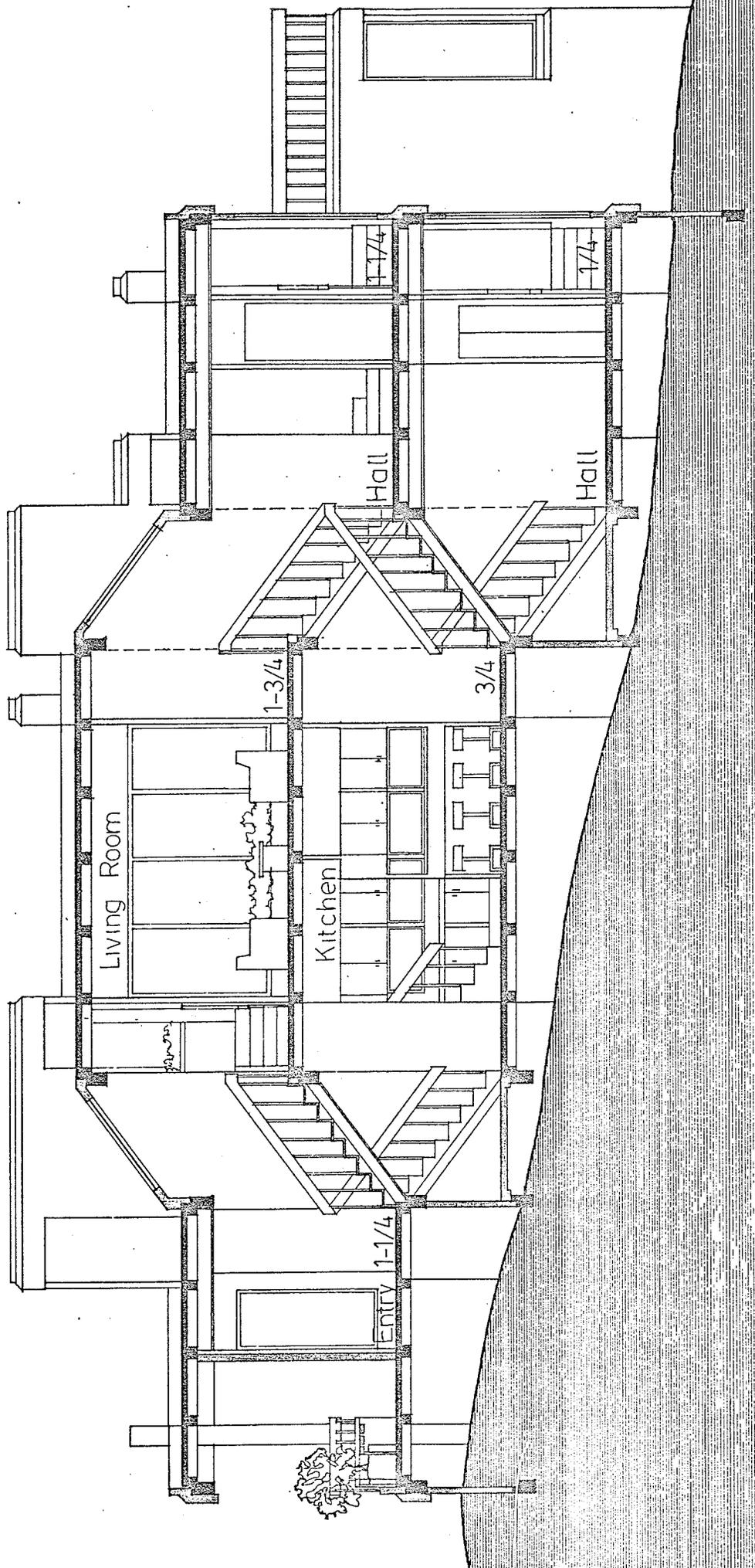
metres

FIGURE VII-23d

FIGURE VII-23d
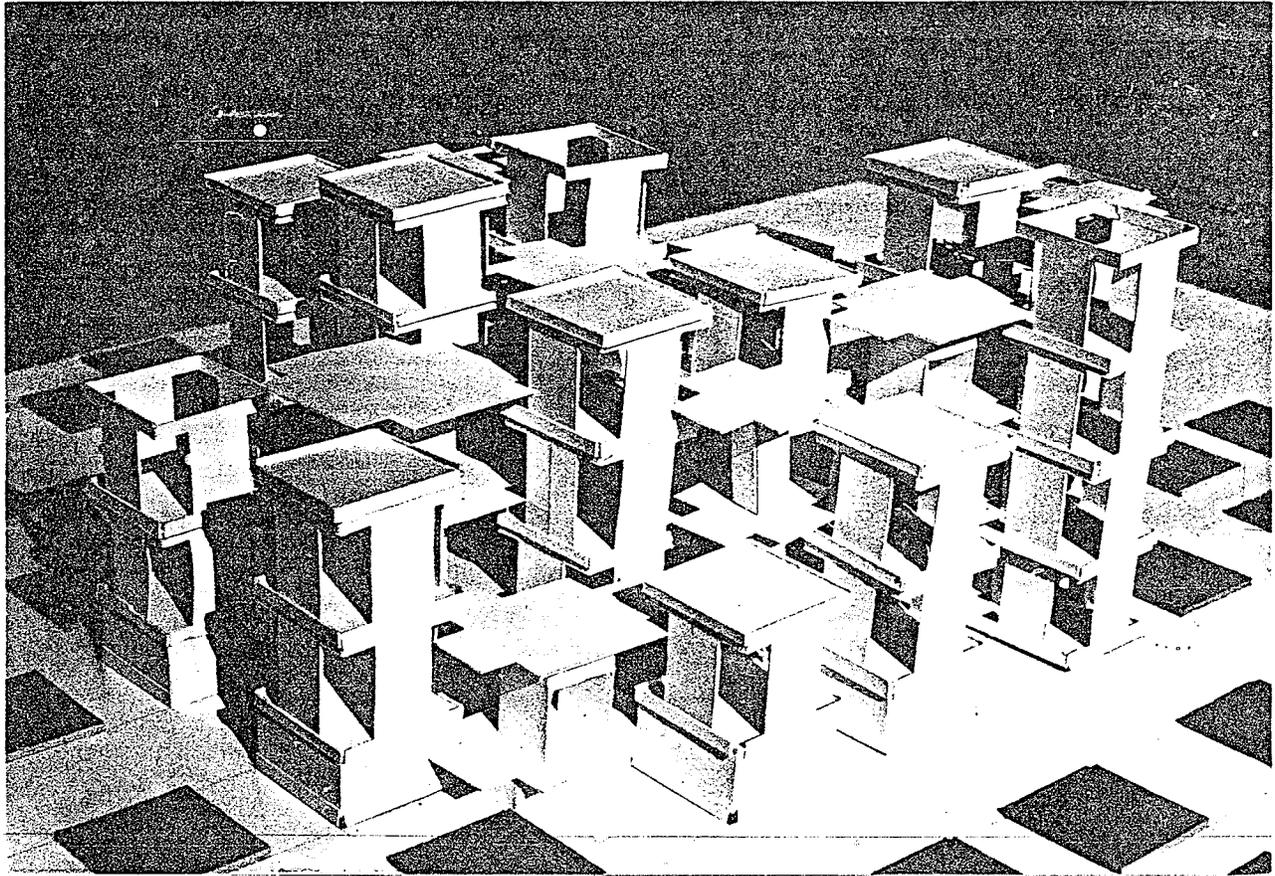
GROUP HOME OF 6 DWELLINGS

- NUMBERS INDICATE ELEVATIONS OF PLATFORMS, IN STOREYS

- SHADING DIFFERENTIATES A FEW DWELLINGS

- PLATFORM RELATIONSHIPS, PARTITIONS, AND FURNITURE ARE
  SHOWN IN POSSIBLE CONFIGURATIONS, BUT WOULD BE ESTABLISHED
  BY THE USERS

FIGURE VII-24a

levels 0 to 3/4

FIGURE VII-24b

N

-1 0 1 2 3 4 5
metres

1/2

3/4

1/2

balcony

1/2

balcony

1/2

3/4

3/4

1/4

3/4

1/2

1/2

1/2

1/2

RECREATION
ROOM

1/4

up from
mechanical rm.

3/4

VESTIBULE

1/4

3/4

A

A

1/2 COFFEE
RM.

1/2
READING
RM.

levels 1 to 1-3/4

FIGURE VII-24c

1/2

1-3/4

1-1/2

balcony

1

balcony

1-3/4

1-1/4

1-1/2

1-1/2

1-1/2

1-1/2

1-3/4

1-1/4

1-3/4

1-1/4

LANDING

1-3/4

1-1/4

1-1/2

SCULPTURE
GARDEN

1-1/2

GAMES RM.

1

SUNDECK
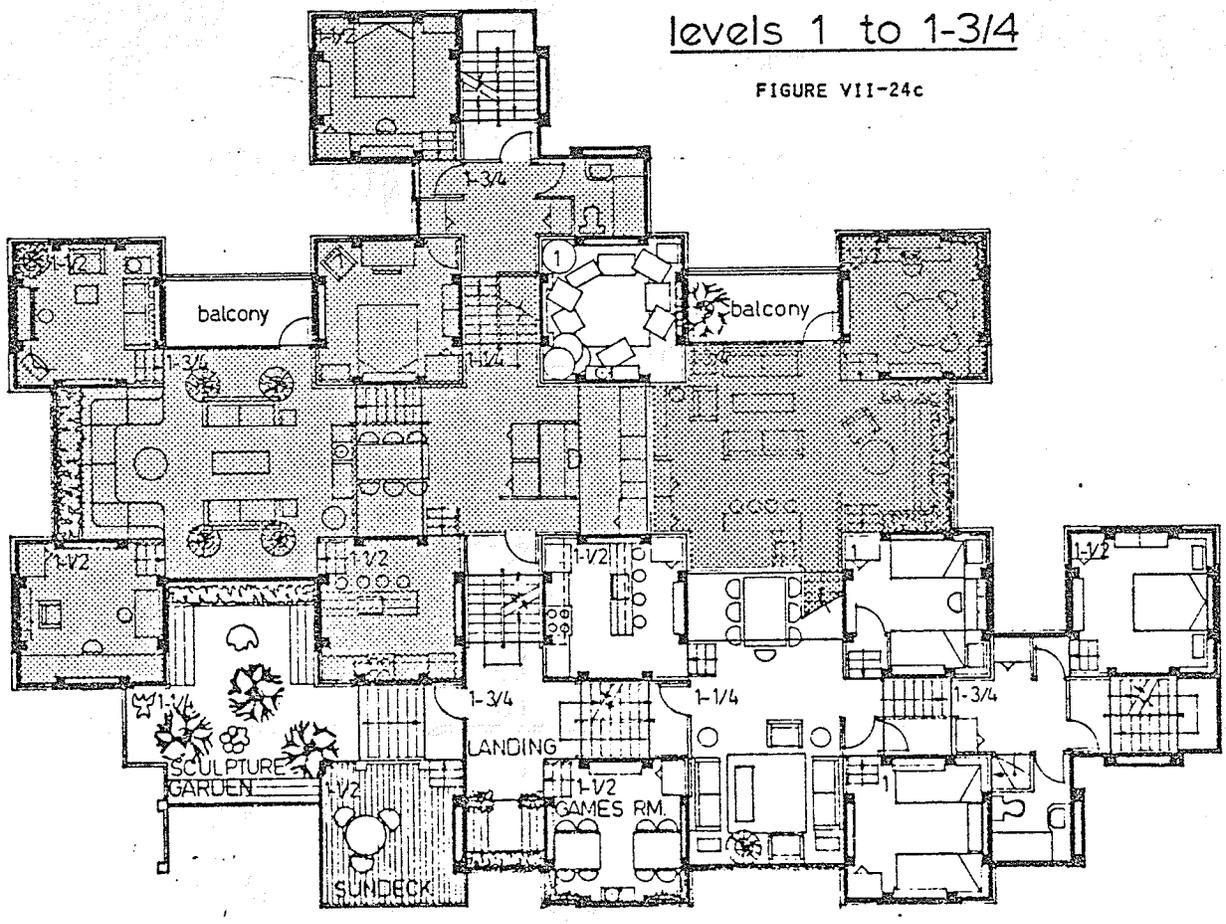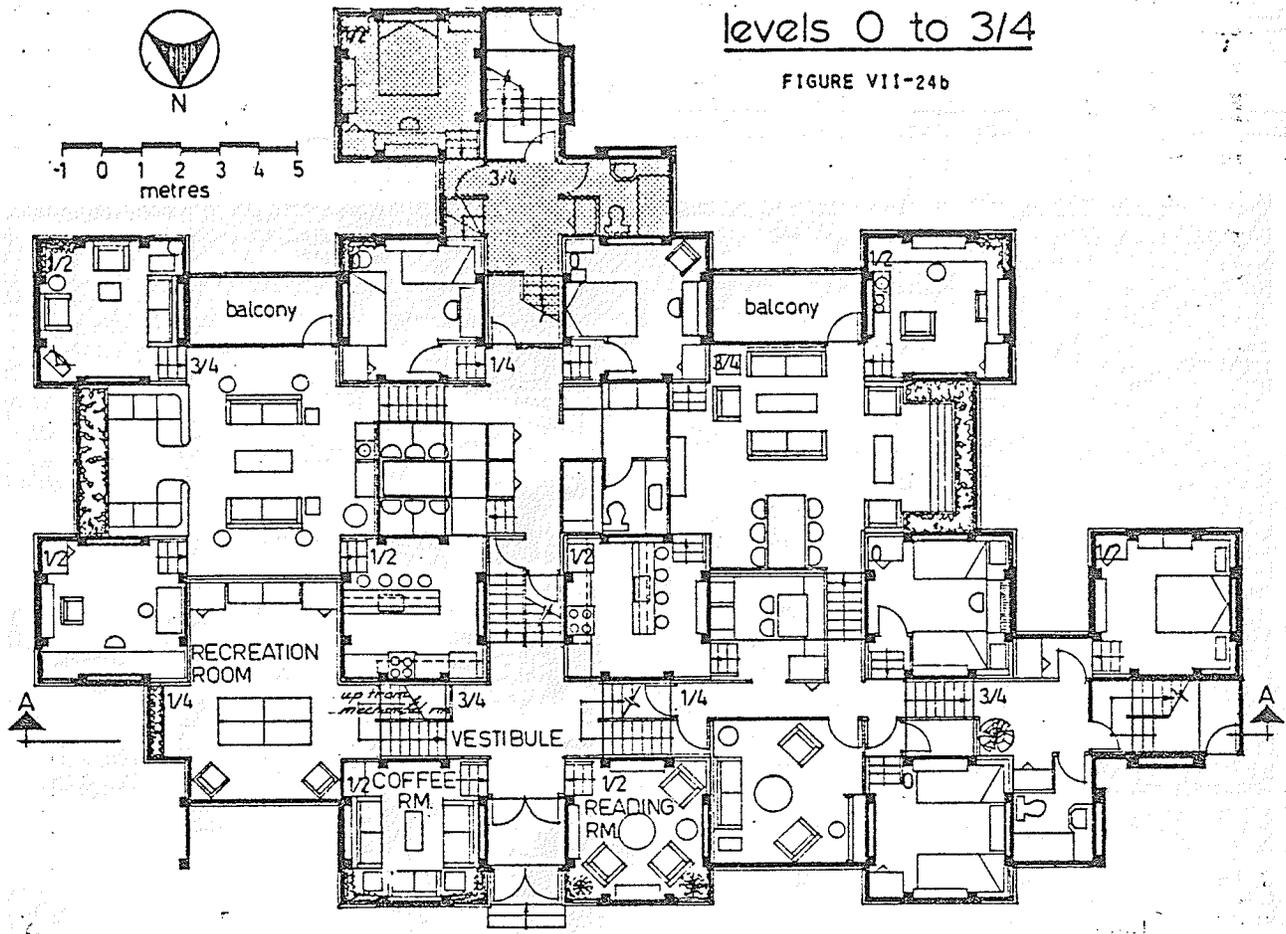
levels 2 to 2-3/4

FIGURE VII-24d
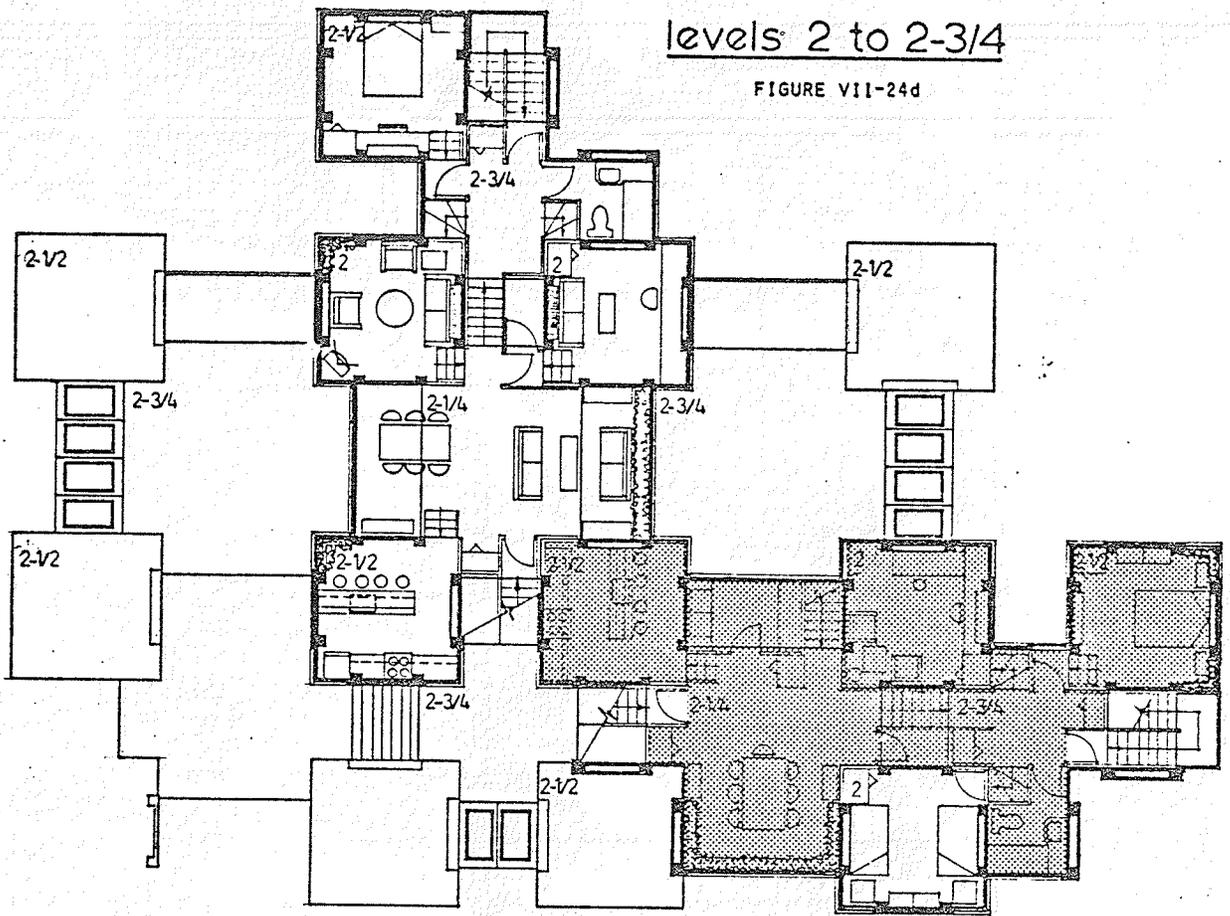
levels 3 to 3-3/4

FIGURE VII-24e

SECTION A-A

Mechanical Rm.
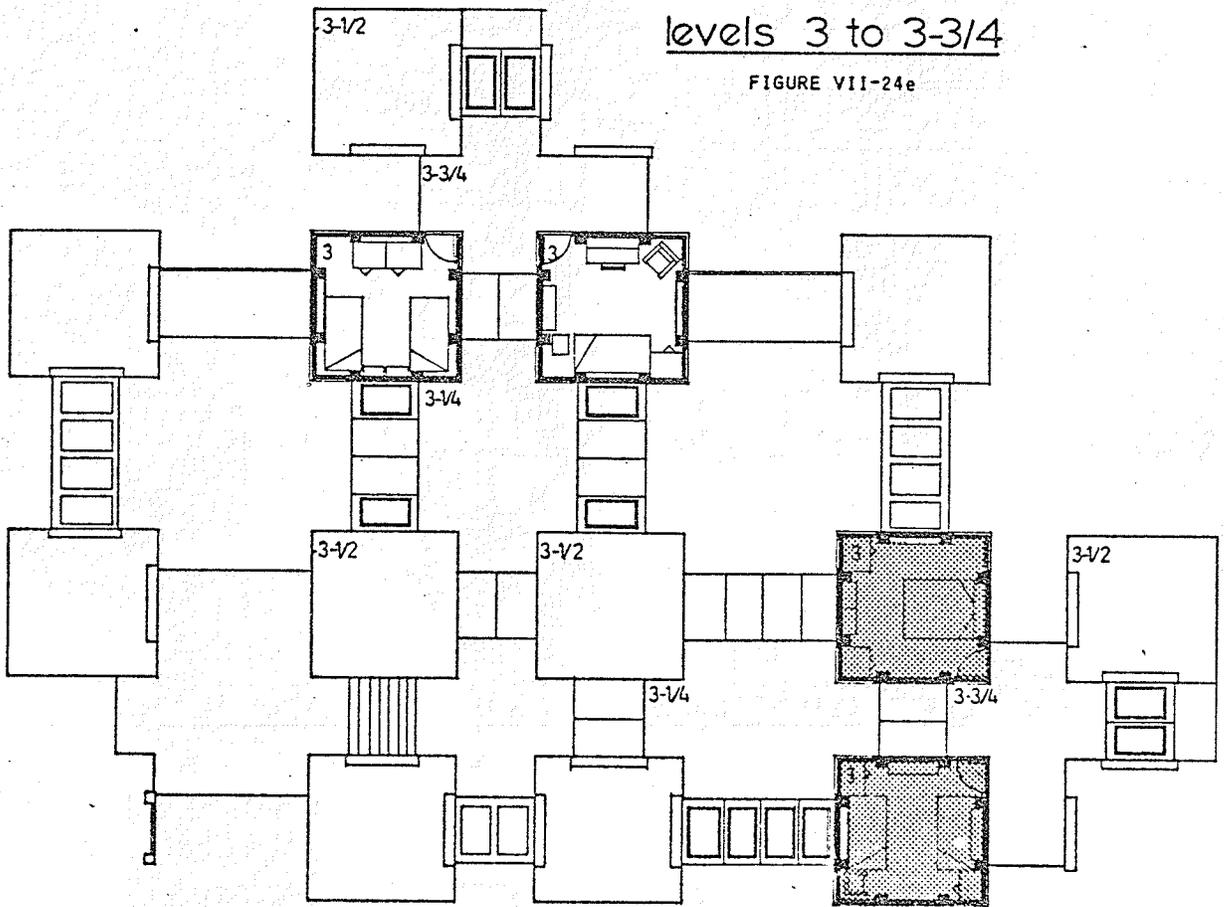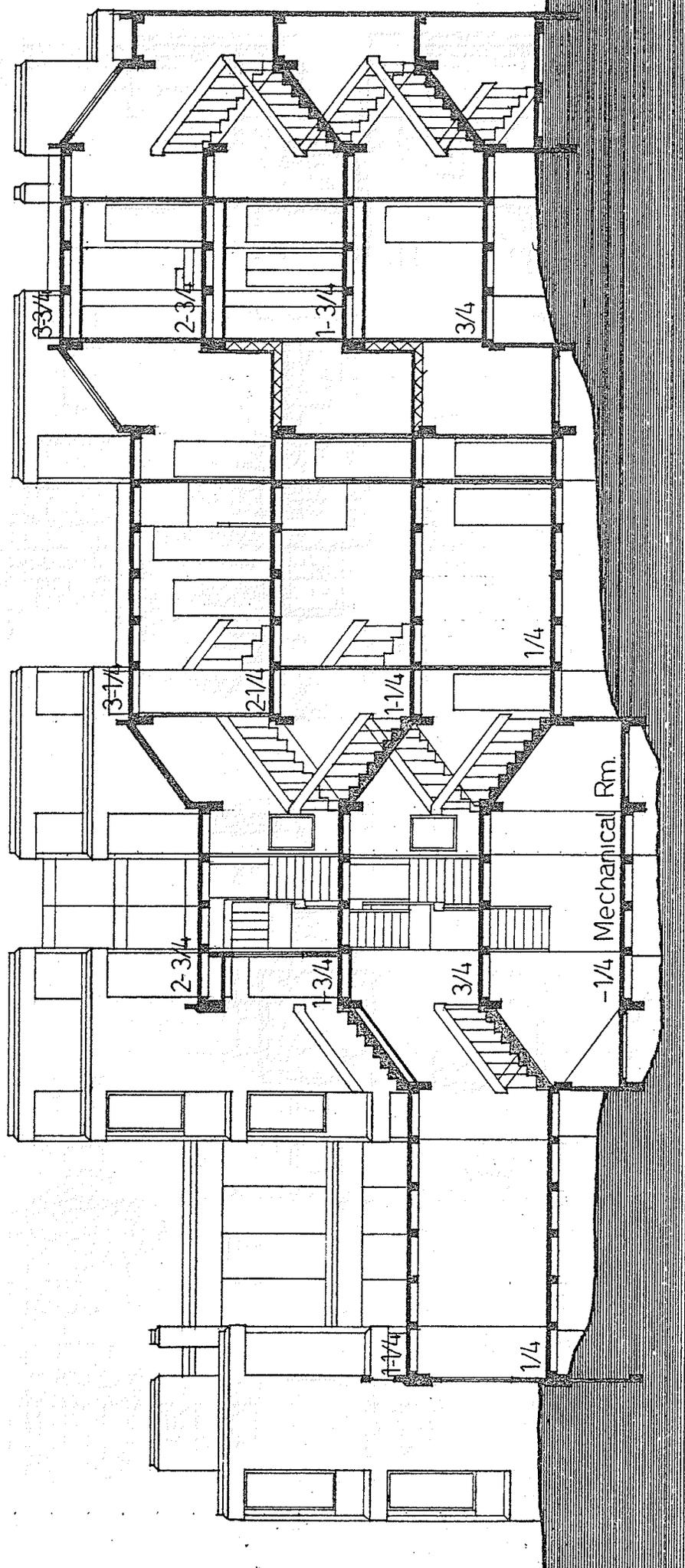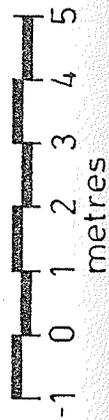
metres

FIGURE VII-24f

FIGURE VII-24f

-1 0 1 2 3 4 5
metres
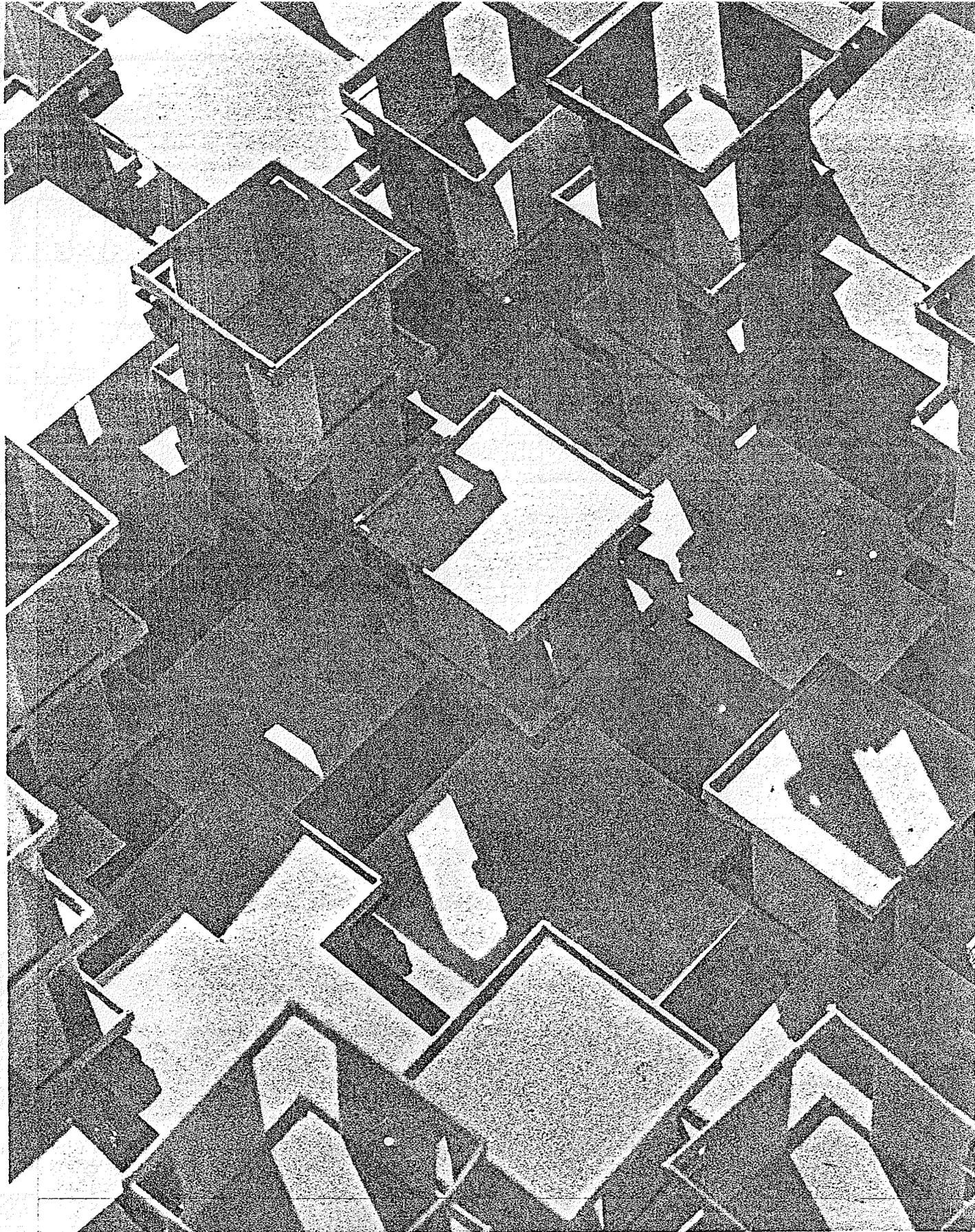
FIGURE VII-25a MODEL OF UNIT, SHOWING PRIMARY SYSTEM

music practice

lockers

lockers

t.v./radio

vending

focal display   parties/dances

garbage

mail/notices   lounge   stage   lounge   superintendent

lockers   lockers   day care

darkroom

LEVELS 1/4 to 1

0   5   10
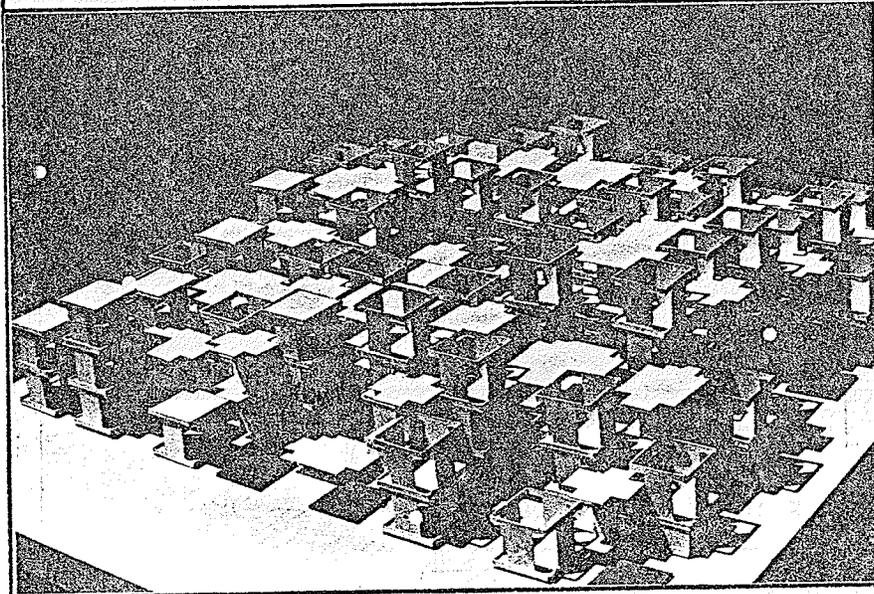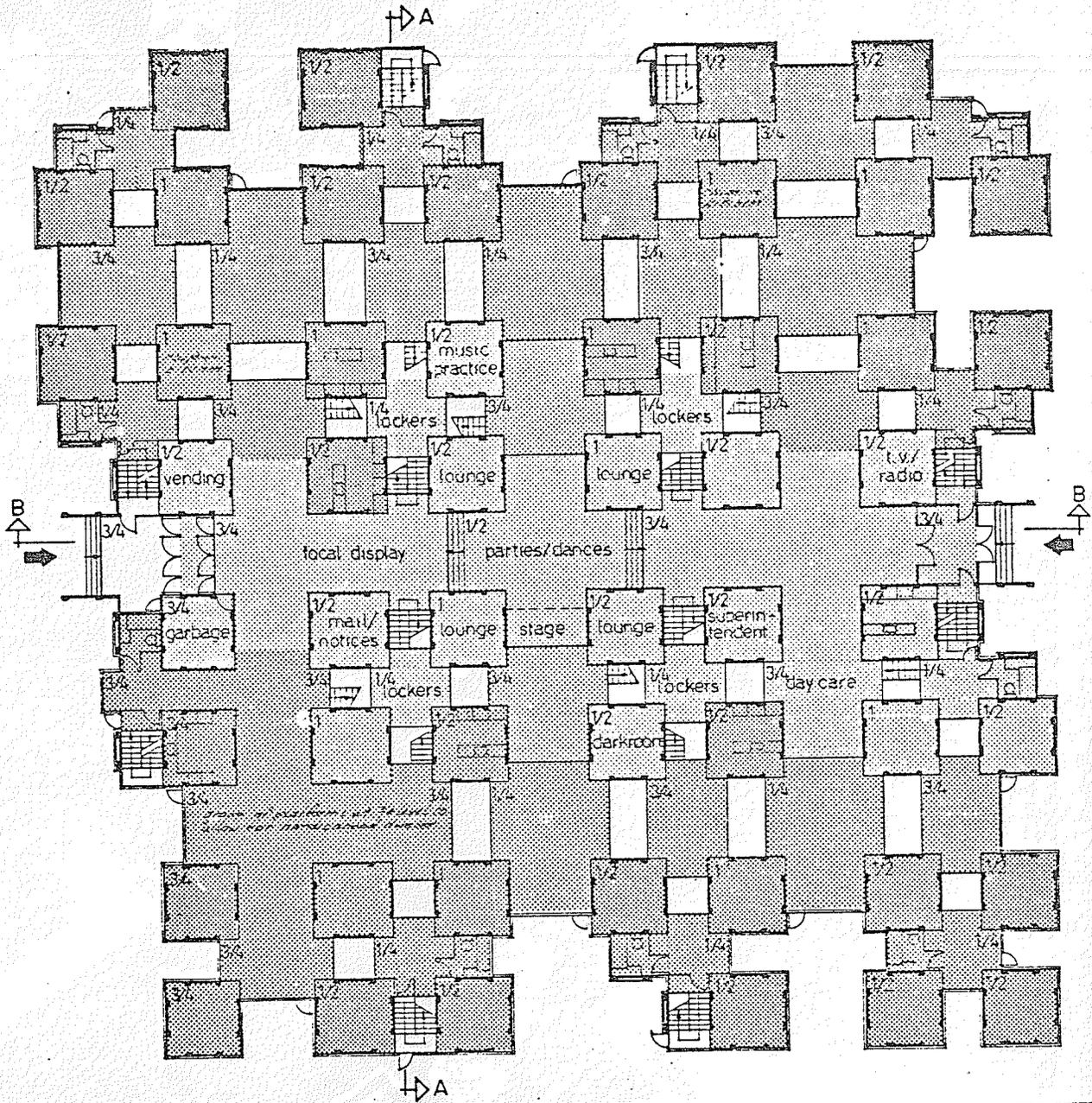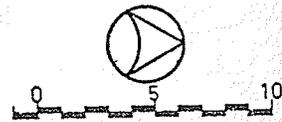
PERSONAL TERRITORY

FAMILY TERRITORY

GROUP TERRITORY

UNIT TERRITORY

FIGURE VII-25b
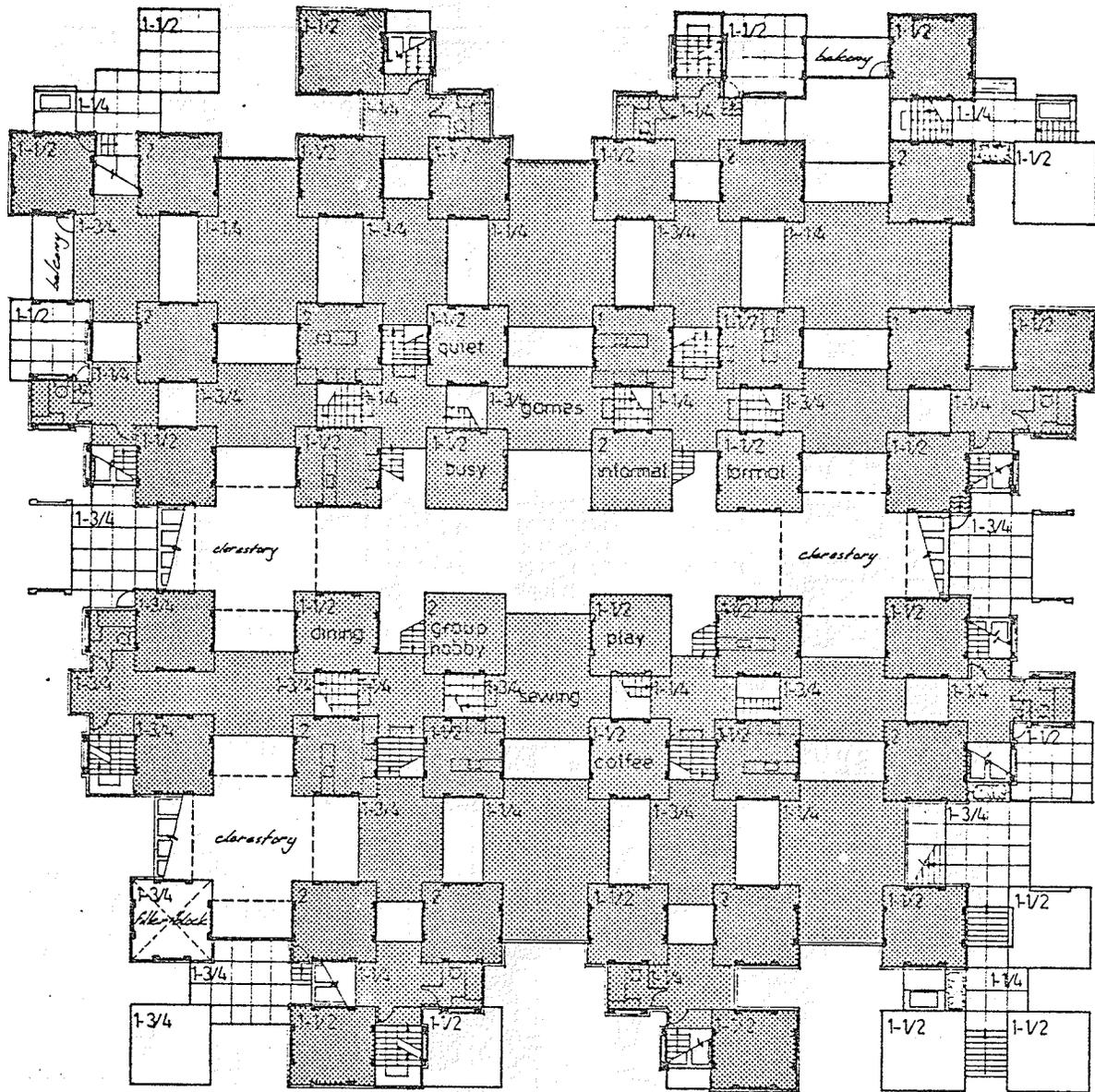
LEVELS 1-1/4 to 2

PERSONAL TERRITORY

FAMILY TERRITORY

GROUP TERRITORY

FIGURE VII-25c
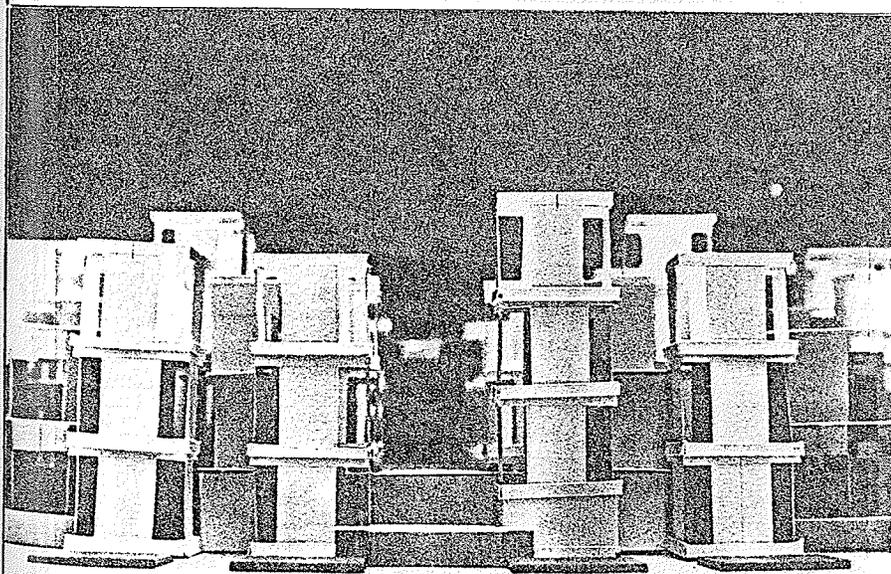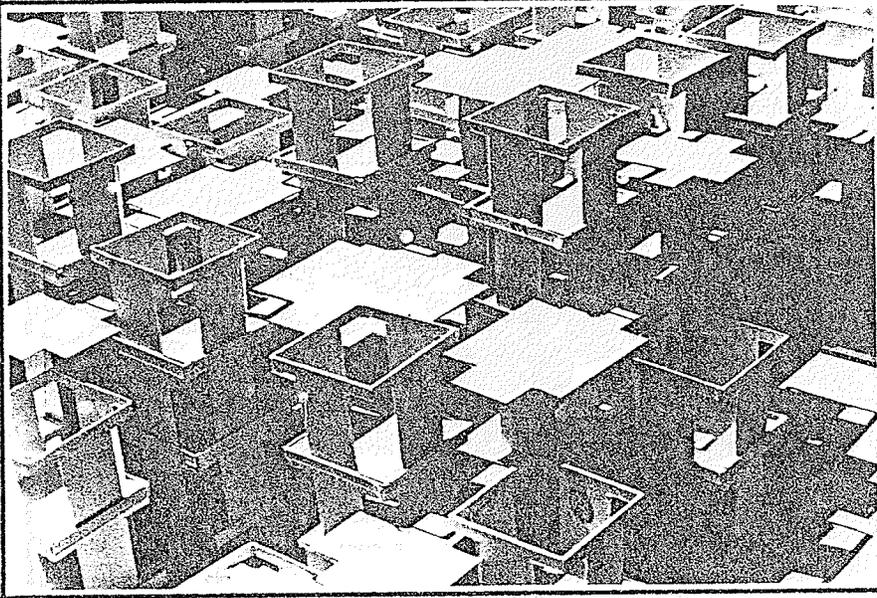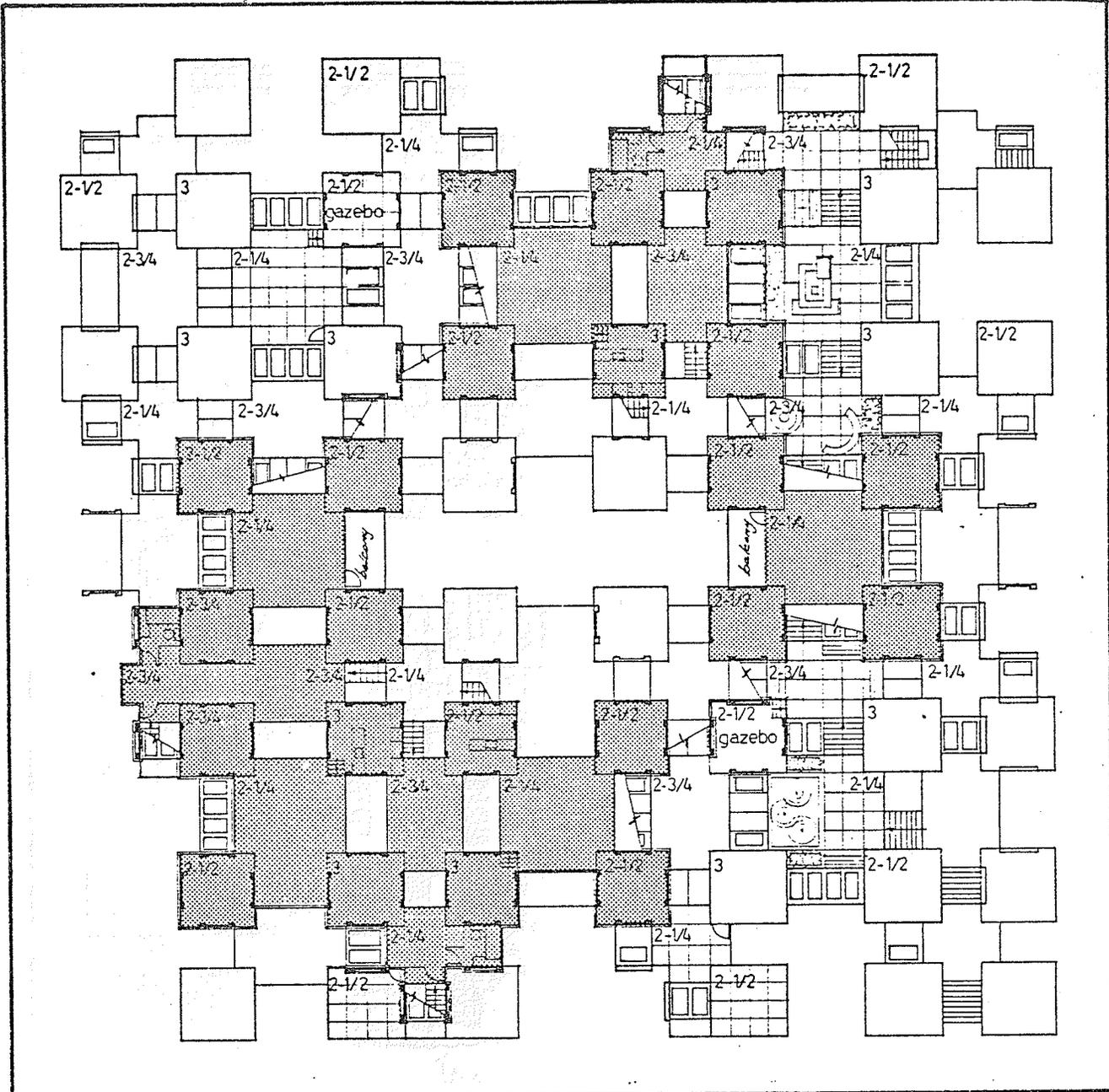
LEVELS 2-1/4 to 3

PERSONAL TERRITORY

FAMILY TERRITORY

FIGURE VII-25d

Labels visible in plan: 3-1/4, 3-1/2, 3-3/4, 4, gazebo, skylighting
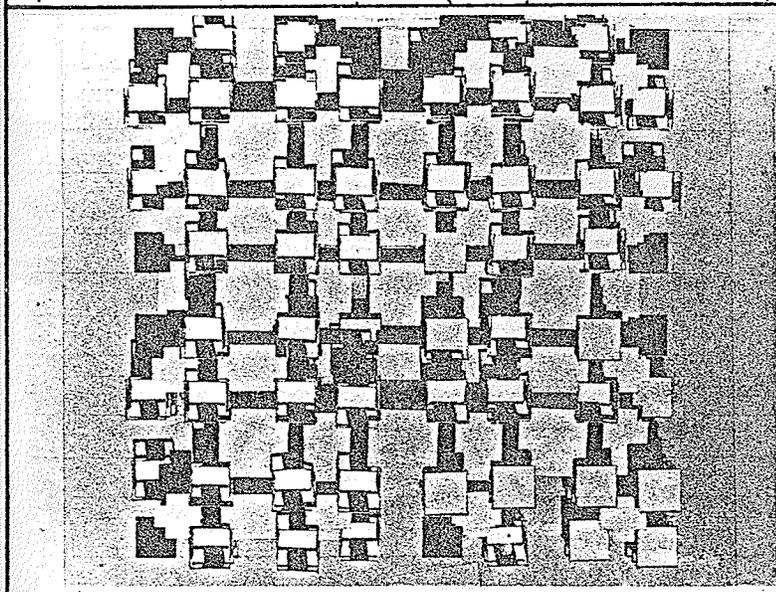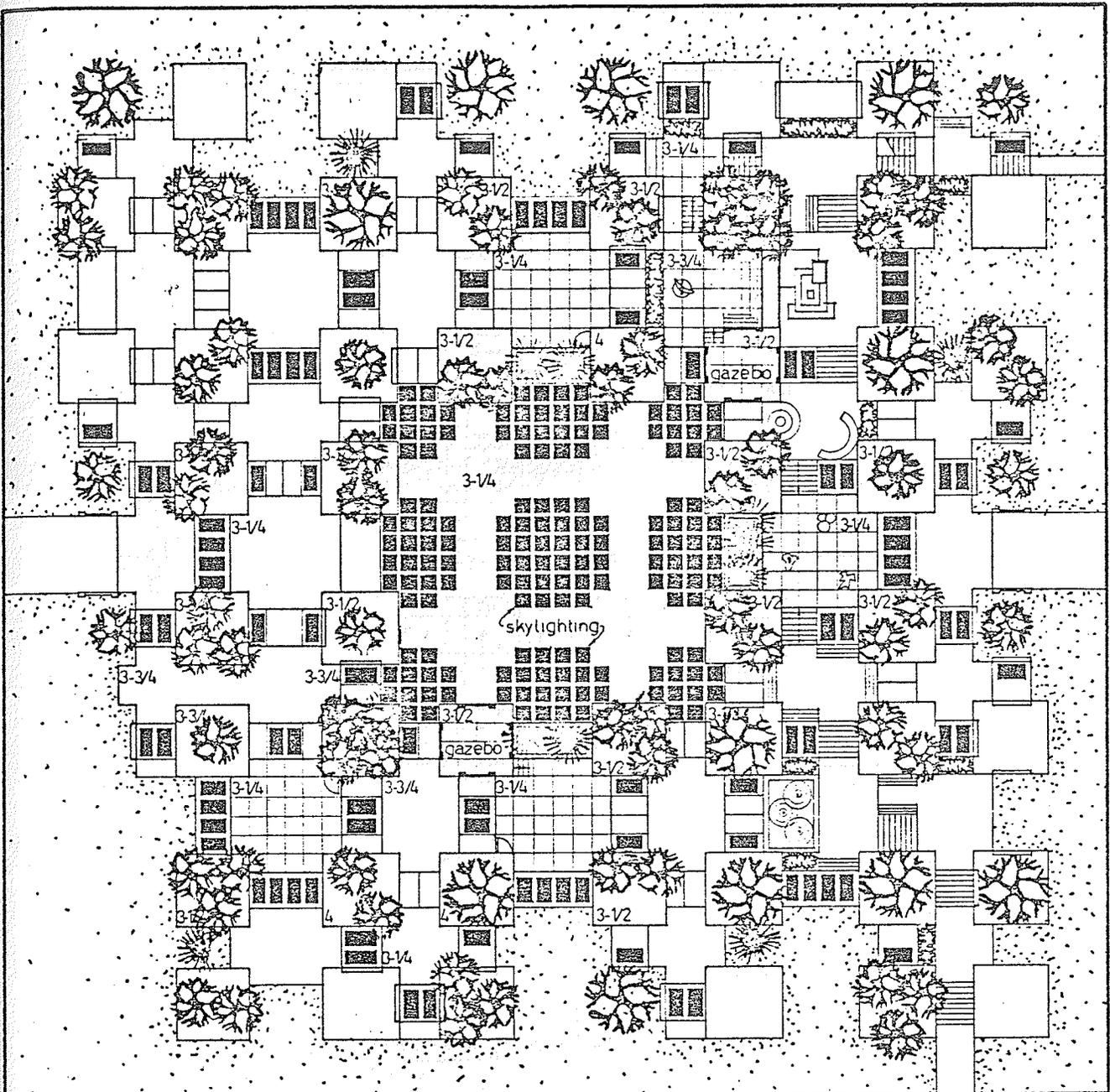
LEVELS 3 1/4 to 4

INCLUDING ROOF PLAN WITH
LANDSCAPING

FIGURE VII-25e

mechanical room   parking - 16 cars
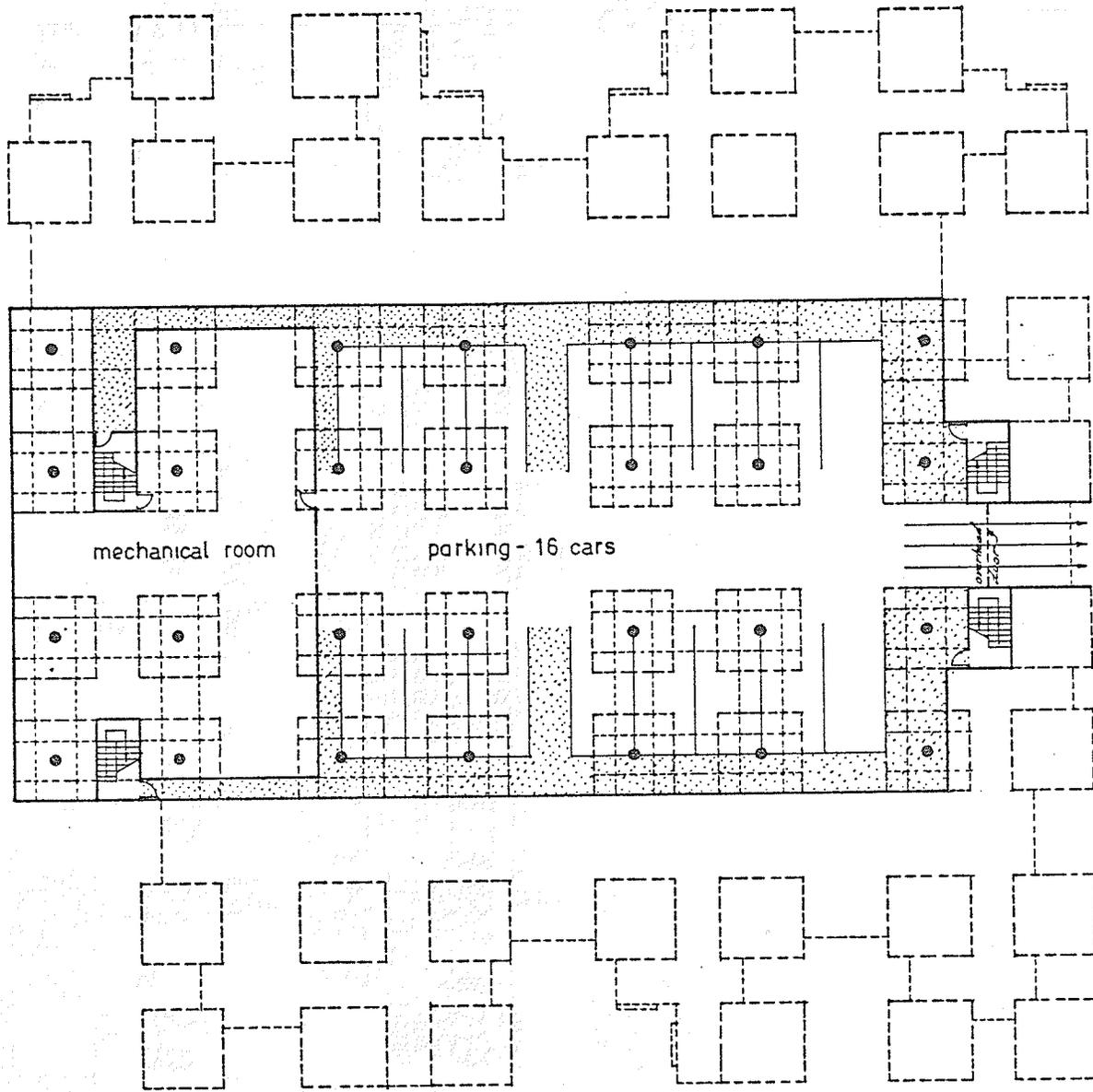
BASEMENT
LEVEL

PARKING AND MECHANICAL ROOM

- dashed lines indicate structure
above

FIGURE VII-25f
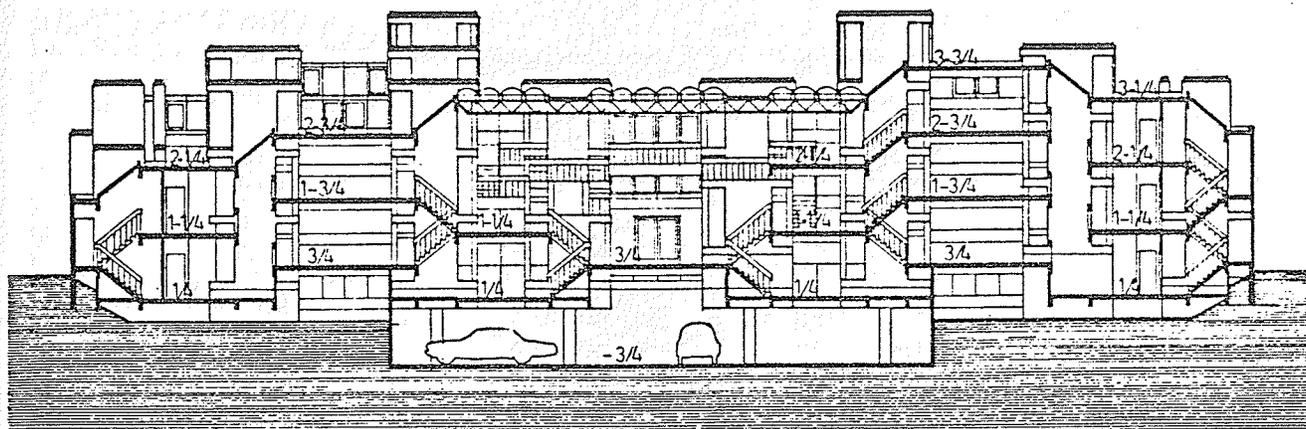
SECTION A-A

FIGURE VII-25g
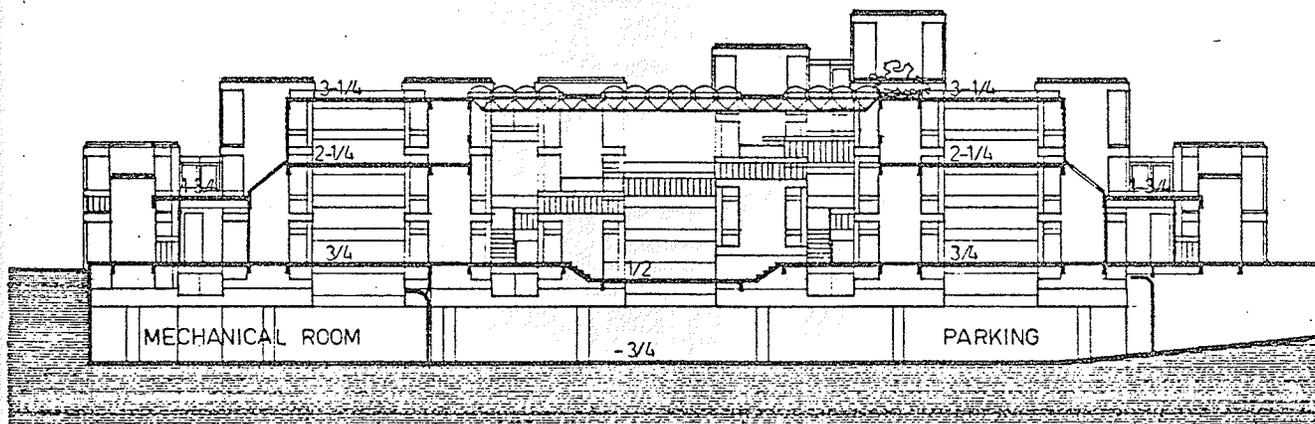
SECTION B-B

FIGURE VII-25h
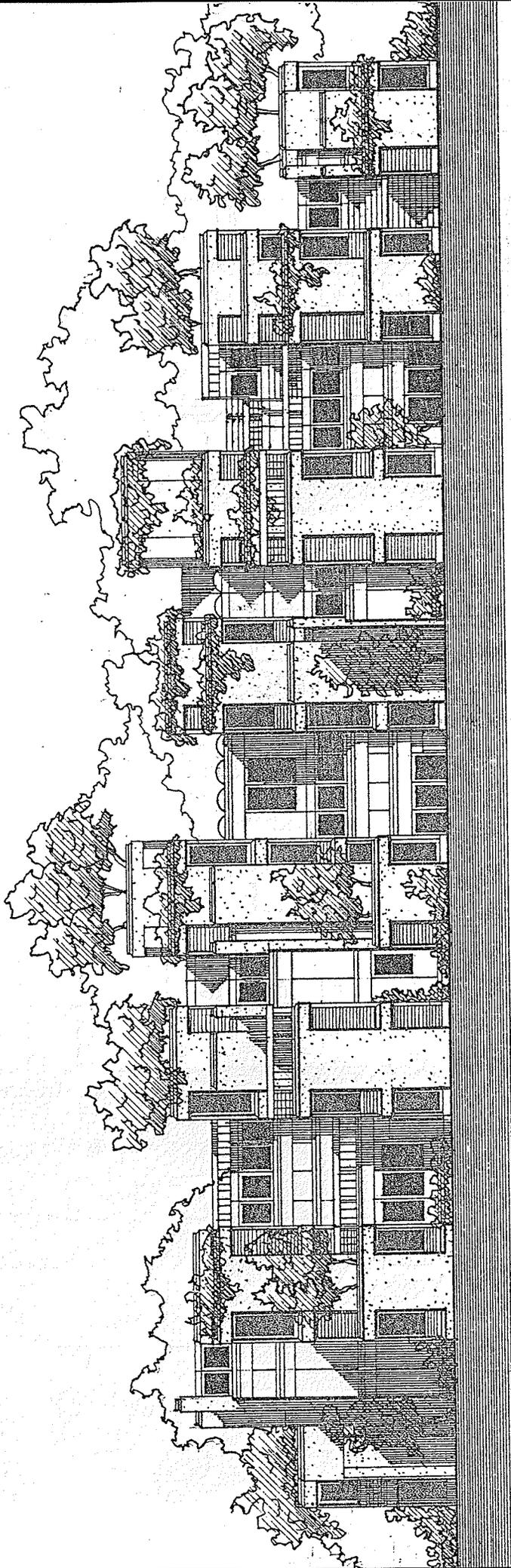
EAST ELEVATION

FIGURE VII-27i
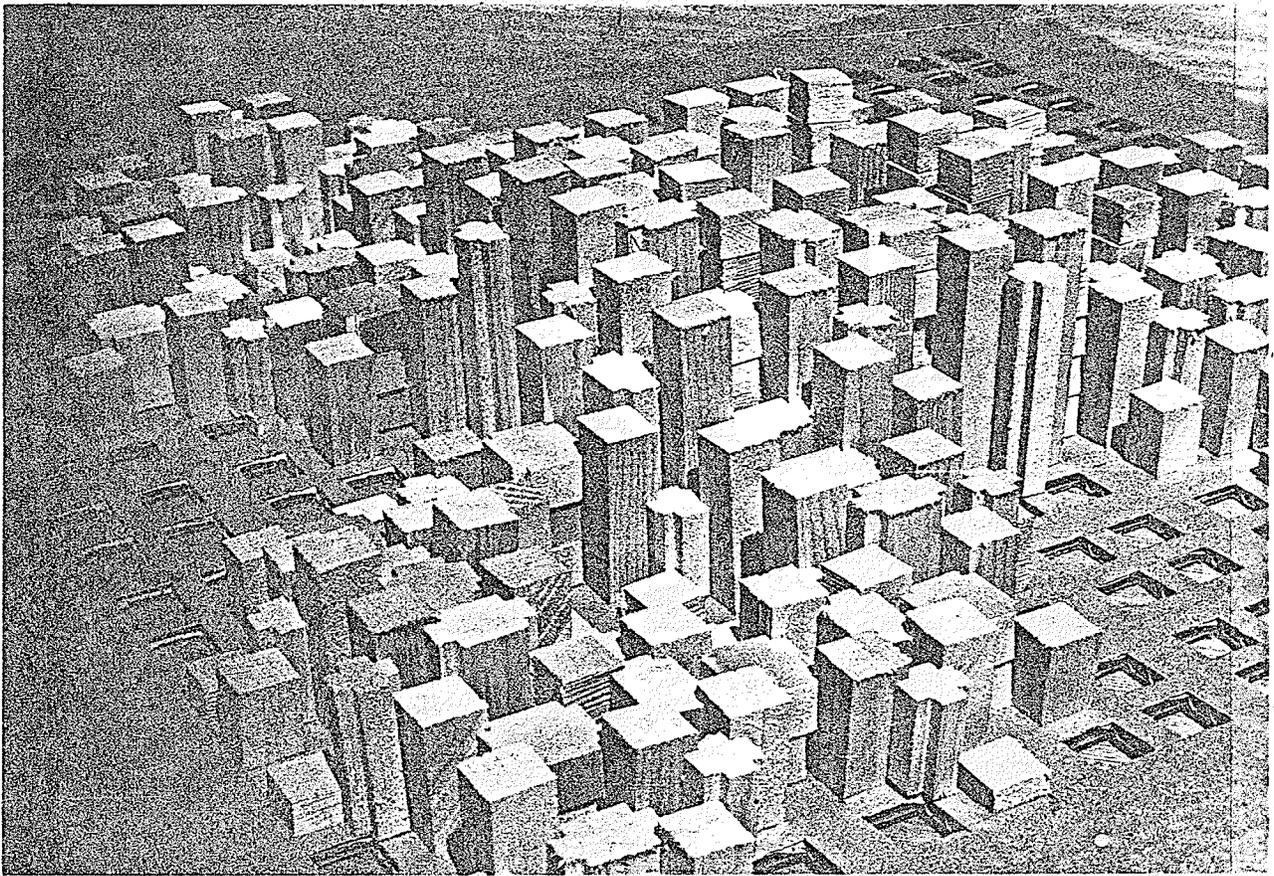
MASSING MODEL

- SHADING ON FOLLOWING DRAWINGS SHOWS HIERARCHY OF COMMUNITY TERRITORIES

- NUMBERS INDICATE ELEVATIONS OF PLATFORMS IN STOREYS

A SECTION FOR 300 PEOPLE

FIGURE VII-26a

FIGURE VII-26b

LEVELS 0 to 3/4

SECTION TERRITORY

UNIT TERRITORY

GROUP TERRITORY

FAMILY TERRITORY

PERSONAL TERRITORY

0   10   20   30

LEVELS 1 to 1-3/4

SECTION TERRITORY

GROUP TERRITORY

FAMILY TERRITORY

PERSONAL TERRITORY
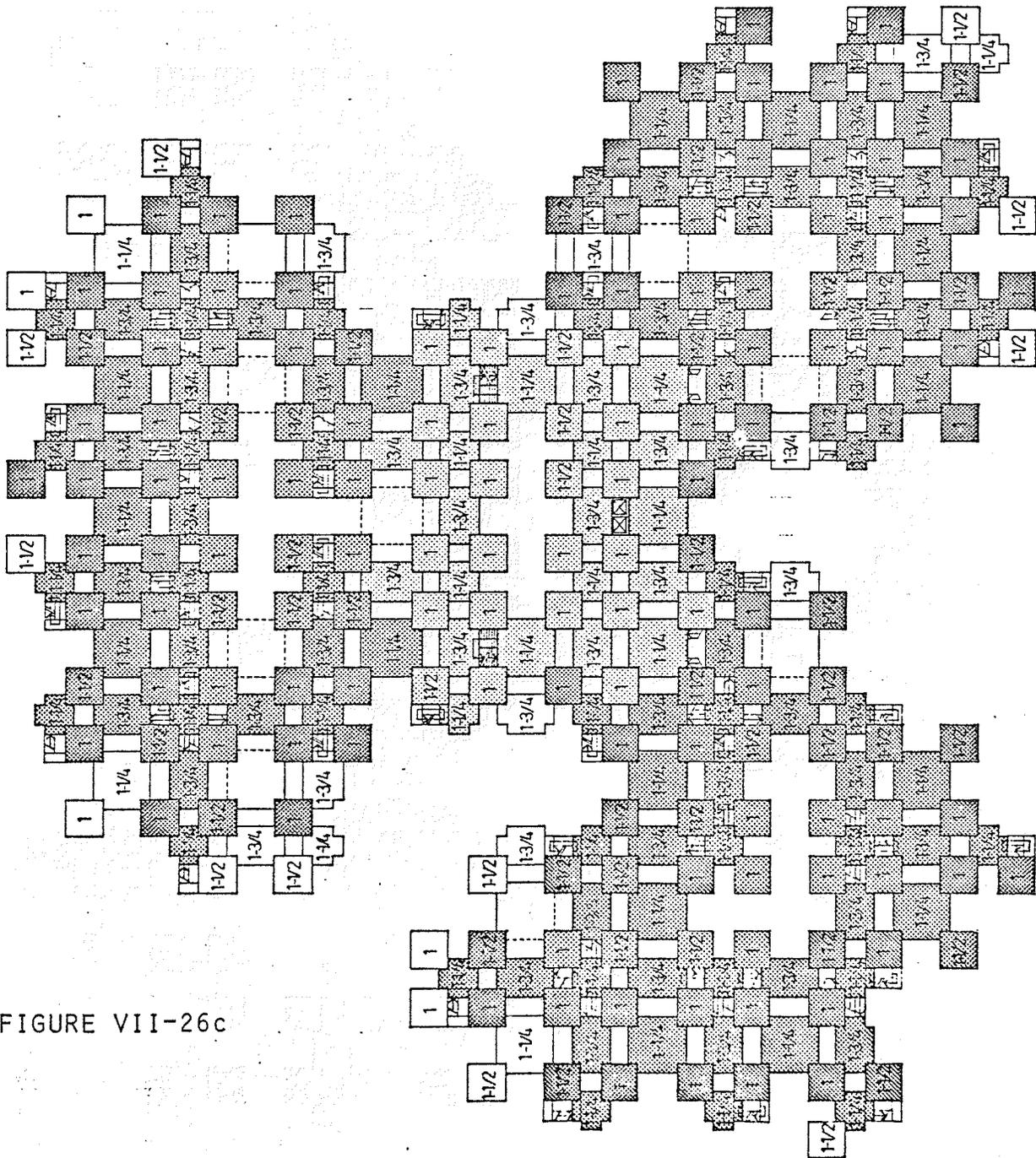
FIGURE VII-26c

LEVELS 2 to 2-3/4.

SECTION TERRITORY

GROUP TERRITORY

FAMILY TERRITORY

PERSONAL TERRITORY
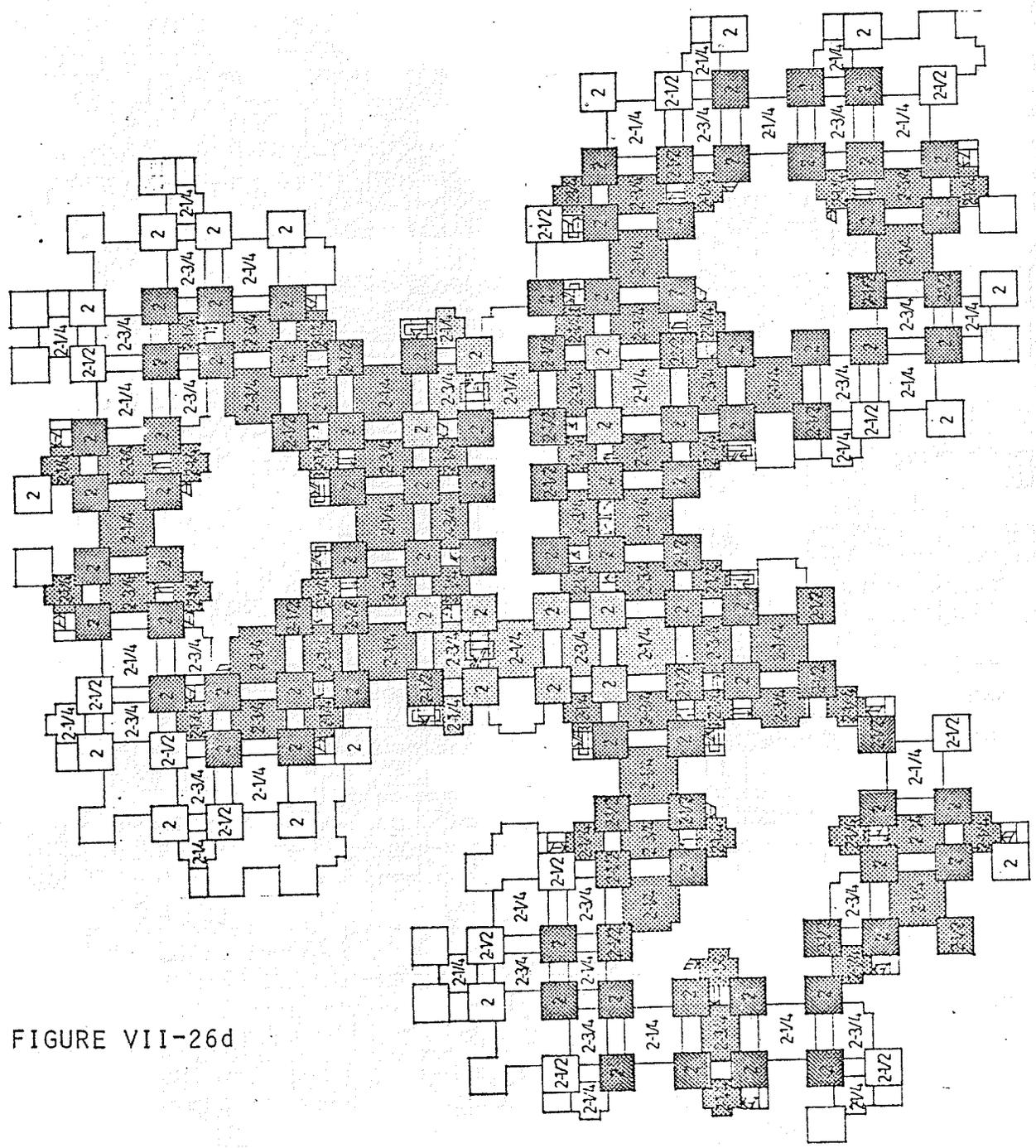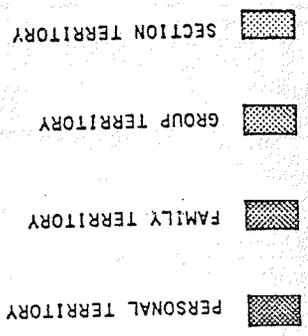
FIGURE VII-26d

LEVELS 3 to 3-3/4

UNIT TERRITORY

FAMILY TERRITORY

PERSONAL TERRITORY
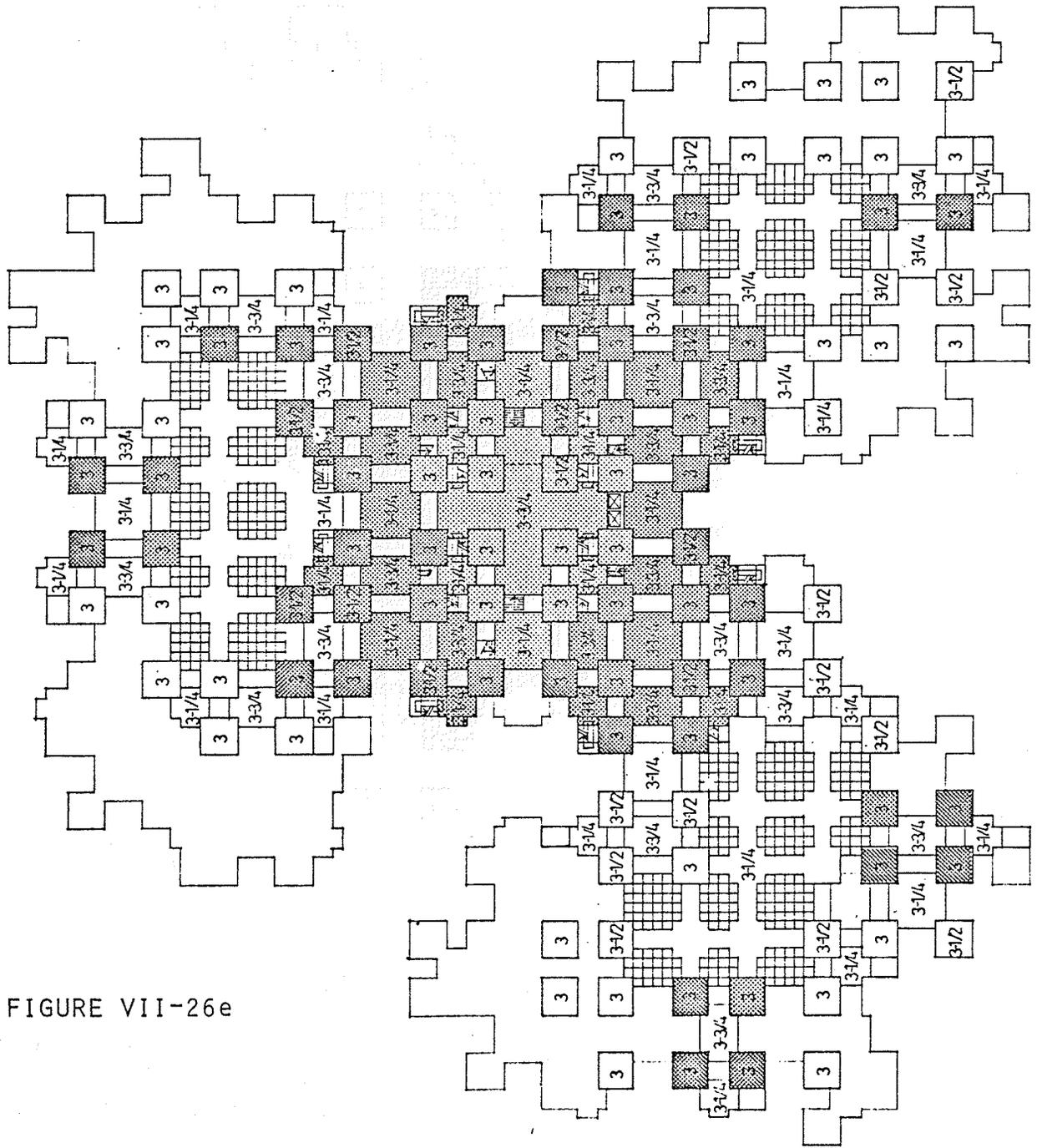
FIGURE VII-26e
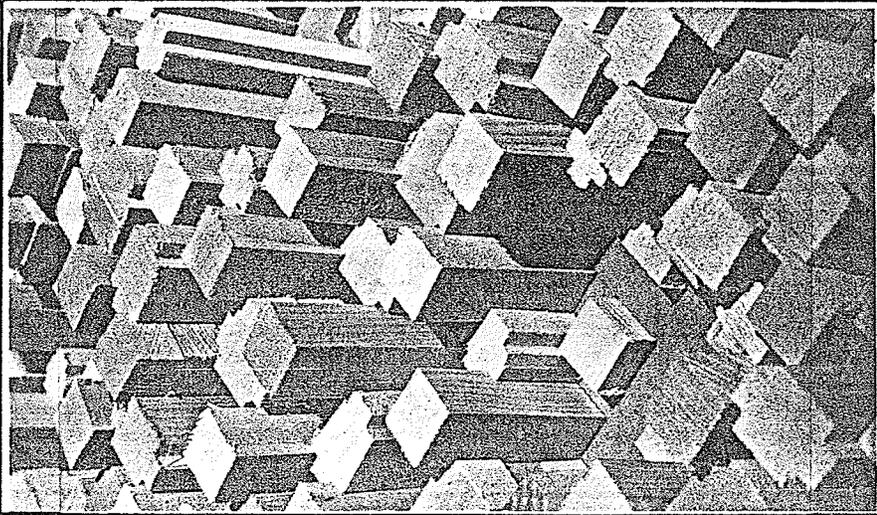
LEVELS 4 to 4-3/4

PERSONAL TERRITORY

FAMILY TERRITORY
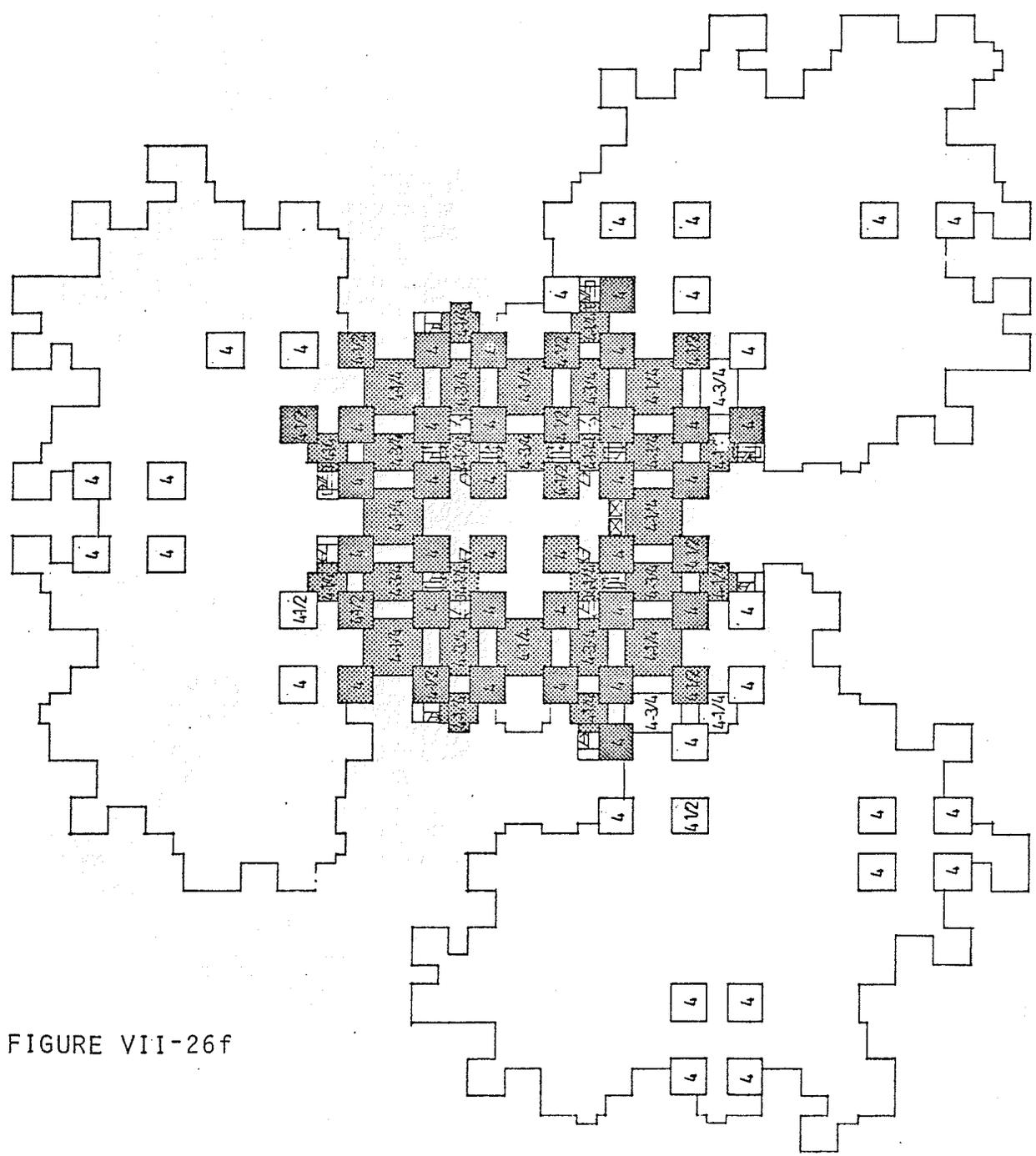
GROUP TERRITORY

FIGURE VII-26f
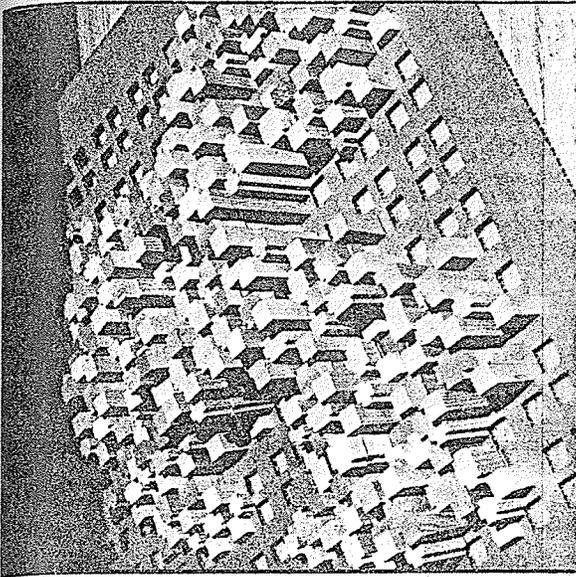
LEVELS 5 to 5-3/4

GROUP TERRITORY

FAMILY TERRITORY

PERSONAL TERRITORY
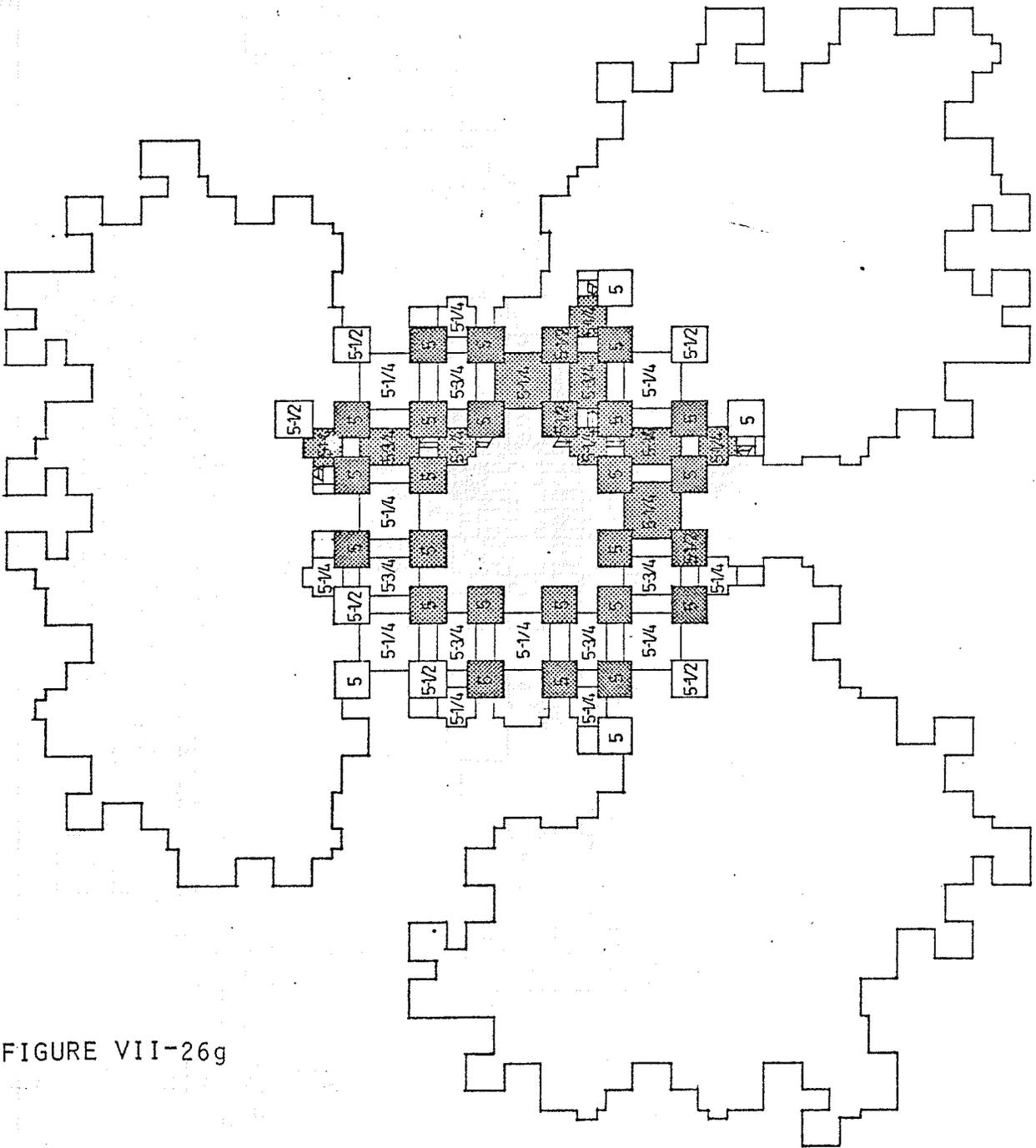
FIGURE VII-26g
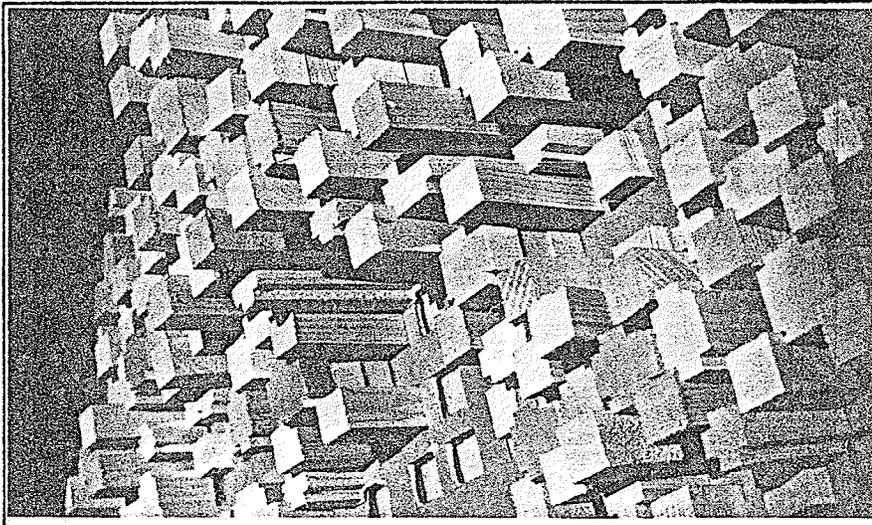
LEVELS 6 to 6-3/4

PERSONAL TERRITORY
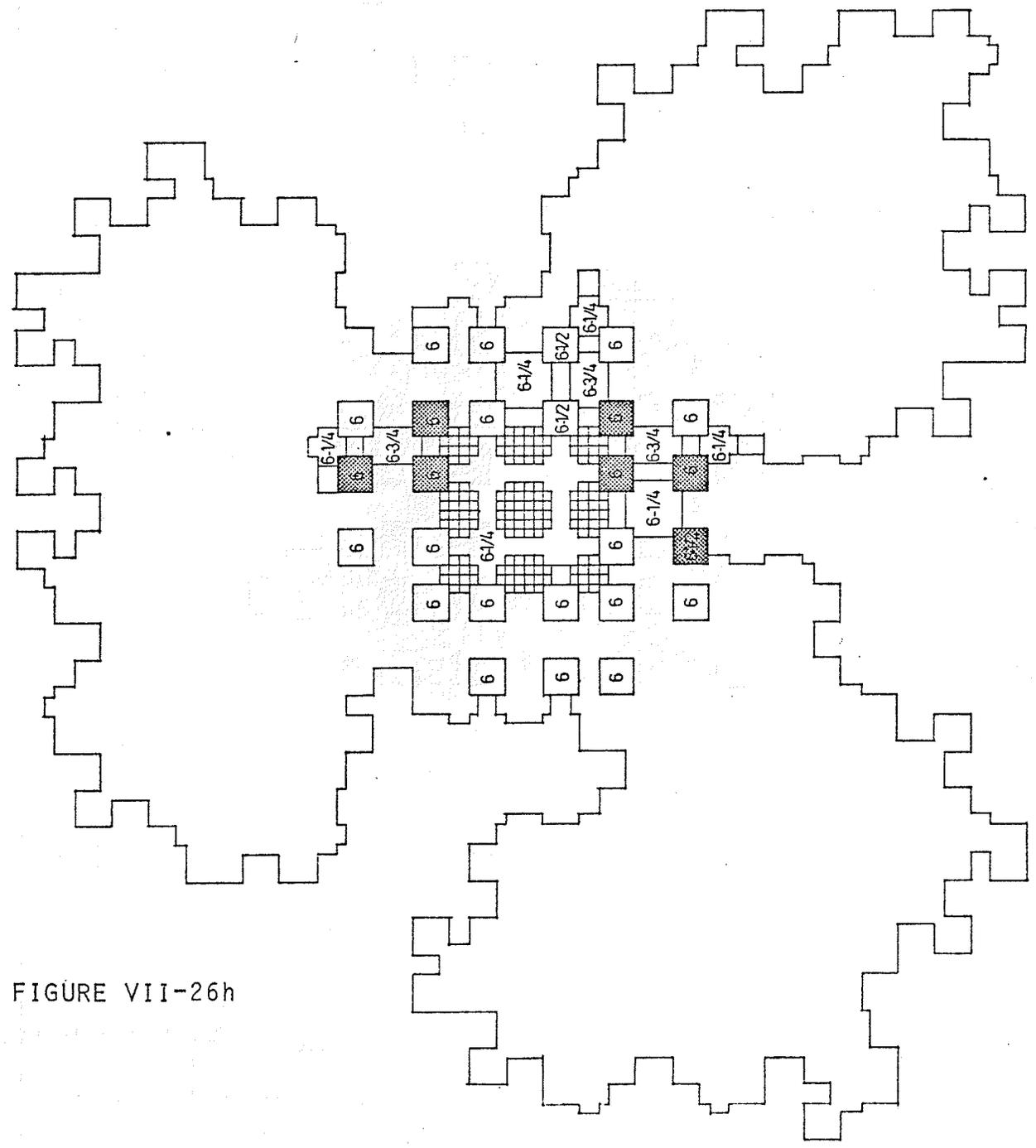
FIGURE VII-26h
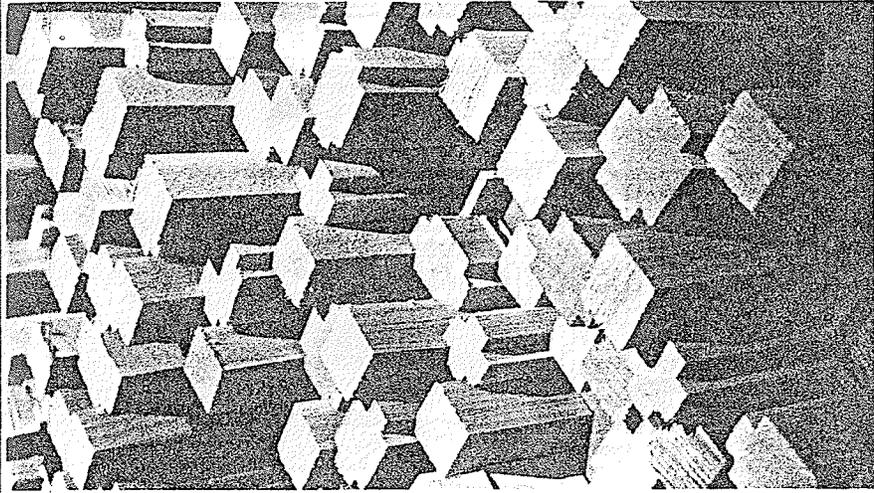
BASEMENT LEVEL

PARKING & MECHANICAL ROOM

FIGURE VII-26i

PARKING - 110 CARS

-1-1/4

MECHANICAL ROOM

ramp to grade

ramp to grade

SECTION A-A

SECTION B-B

SECTION COMMUNITY TERRITORY
shops services

PARKING
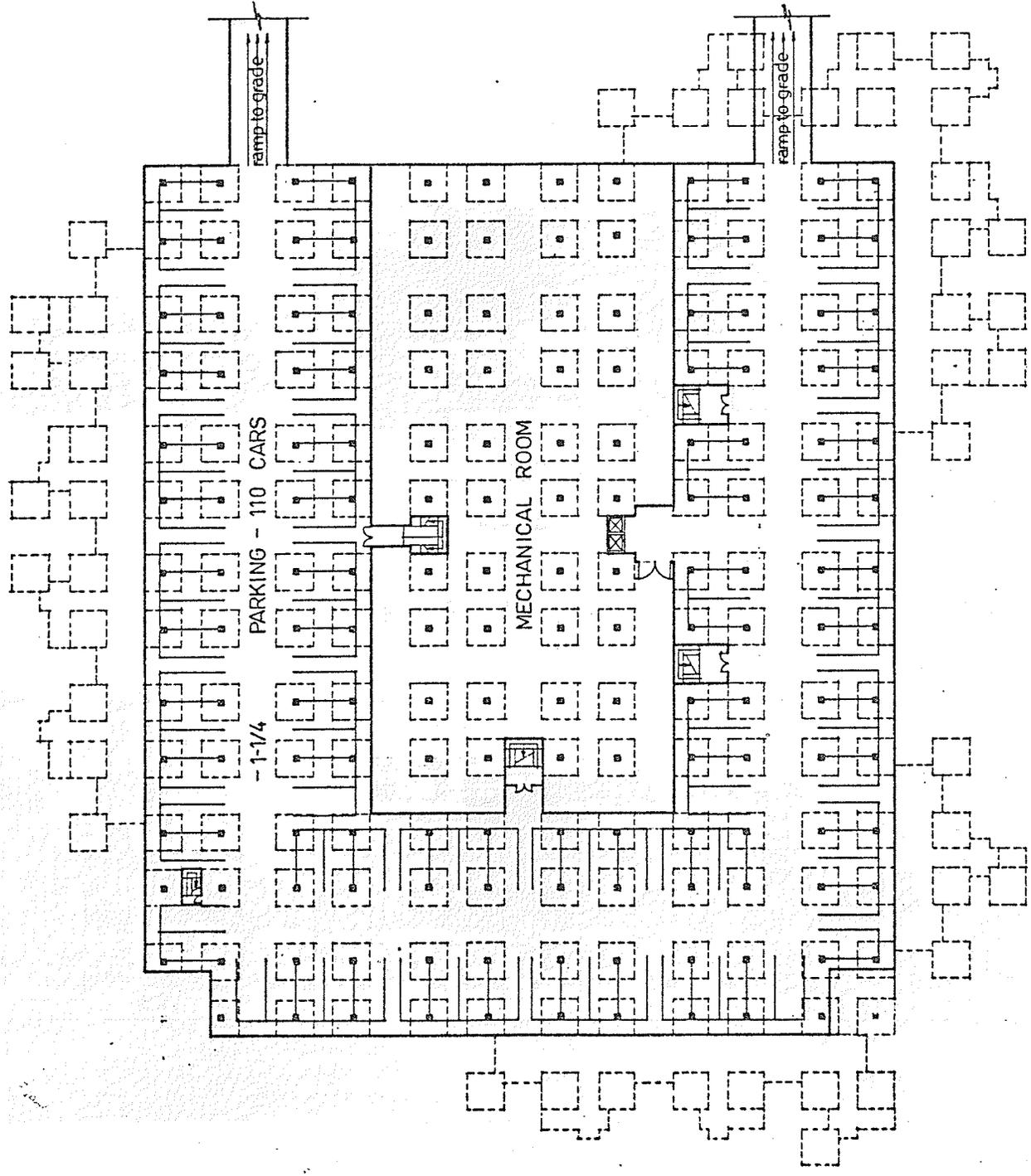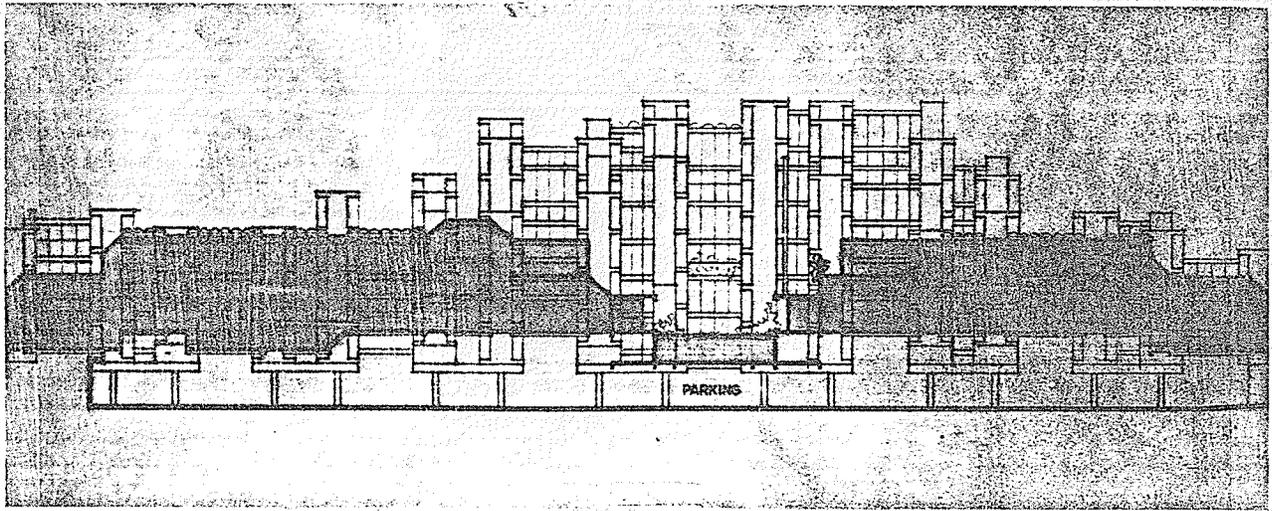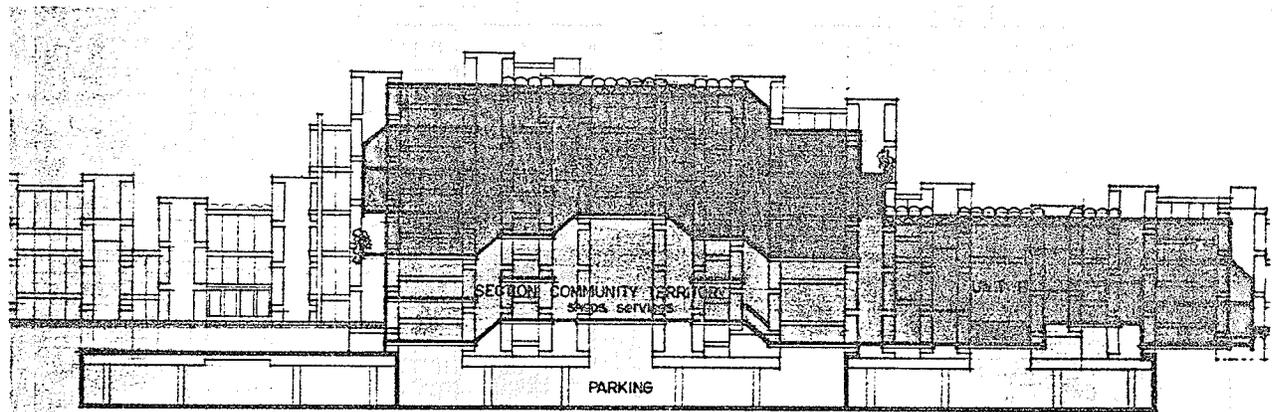
0   5   10
metres
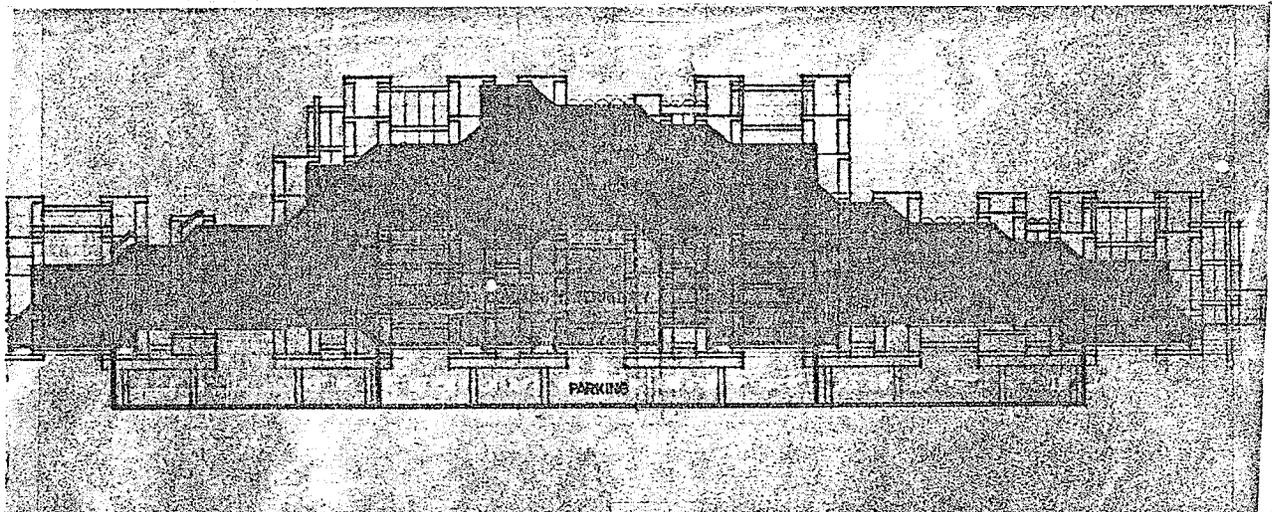
SECTION C-C

FIGURE VII-26j

APPENDIX

TERRITORIAL HIERARCHY BY AREAS

(sq. meters)

POPULATION	COMMUNITY TERRITORY	COMMUNITY AREA	CUMULATIVE COMMUNITY AREA	COMMUNITY AREA PER PERSON	CUMULATIVE COMMUNITY AREA PER PERSON
1	person	15	15	15	15
4	family	25	85	6	21
16	group	40	380	2.5	23.5
60	unit	150	1,670	2.5	26
250	section	250	6,930	1.0	27
1,000	block	1,000	28,720	1.0	28
4,000	neighbourhood	2,000	116,880	0.5	28.5

Figure A-1

HIERARCHY OF COMMUNITY TERRITORIES
level I

POPULATION	–	1
INHERENT COMMUNITY	–	individual or couple
AREA	–	15 sq. m./person – average
AREA PER PERSON	–	15 sq. m.
SOCIAL CONTACT LEVEL	–	intimate and totally private.
ARCHITECTURAL DEFINITION	–	structural module, with exposure to fresh air, or part of larger platform.
NATURAL AMENITIES	–	may have private balcony.
FUNCTIONAL CONTENTS	–	storage, shelving, electronic entertainment, sleeping furniture, furniture required for personal hobbies, clock.
SUGGESTED ACTIVITIES AND INSTITUTIONS	–	sleep, rest, study, hobbies, thinking, praying, intimate intercourse, writing, reading, electronic entertainment, hygiene, personal business.
CRITERIA	–	introverted, freedom of personalization, 3-demensional possibilities, flexibility of arrangement, acoustic isolation, sensitive climate control and lighting, enclosed, textured.
NOTES	–	increased sociability in communal territories should be complemented by increased privacy in personal territory, and by increased potential for private activities.

Figure A-2a

HIERARCHY OF COMMUNITY TERRITORIES
level II

POPULATION	-	4
INHERENT COMMUNITY	-	family - nuclear or non-nuclear
AREA	-	30 sq. m.
AREA PER PERSON	-	approx. 20 m. for 2 people, plus 5 sq. m. per additional person.
SOCIAL CONTACT LEVEL	-	close friends or relatives sharing daily routine - intimate relationship.
ARCHITECTURAL DEFINITION	-	one large module (platform) with accessibility to other platforms.
NATURAL AMENITIES	-	terrace or balconies, planters, use of greenhouse and skylight modules.
FUNCTIONAL CONTENTS	-	bathroom, storage, cooking, telephone, display space (for heirlooms, etc.), flexible built-in components, media entertainment (television, radio, stereo).
SUGGESTED ACTIVITIES AND INSTITUTIONS	-	casual grouping, entertaining guests, cooking and eating, family discussions, baby care, relaxation, rest.
CRITERIA	-	security (lock), some climate control, introverted, textured, high flexibility of layout, intimate and casual, transition to group territory when not locked.
NOTES	-	as the family become familiar with the group community (level III), they may share cooking and eating with the group.

Figure A-2b

HIERARCHY OF COMMUNITY TERRITORIES
level III

POPULATION	–	15
INHERENT COMMUNITY	–	group
AREA	–	40 sq. m.
AREA PER PERSON	–	2.5 sq. m.
SOCIAL CONTACT LEVEL	–	individual social interaction – spontaneous sharing of some personal possessions: food, newspapers, magazines, decorations, tape decks.
ARCHITECTURAL DEFINITION	–	group of small and intermediate –sized modules – partially enclosed – overlooking larger community – level changes for diversity of use.
NATURAL AMENITIES	–	sunshine interior plantings
FUNCTIONAL CONTENTS	–	some built-in furniture allowing multi-use, potted plants, vines, flower boxes, etc.
SUGGESTED ACTIVITIES AND INSTITUTIONS	–	socializable hobbies: weaving, painting, singing, gardening, draughting, etc. – young children's quiet play – relaxation, dinner parties, some meal preparation and eating, participative entertainment, home movies, musicianship, handicraft displays (and other forms of individual creative expression), cards, coffee, drinking, knitting bees, rapping.
CRITERIA	–	informality, group personalization, textured, warm, homey, flexible, open-planned, acoustic control from larger territory, set environmental controls.

Figure A-2c

HIERARCHY OF COMMUNITY TERRITORIES
level IV

POPULATION	–	60
INHERENT COMMUNITY	–	unit
AREA	–	150 sq. m.
AREA PER PERSON	–	2.5 sq. m.
SOCIAL CONTACT LEVEL	–	everyone known by name day-to-day individual inter-action, smallest political unit.
ARCHITECTURAL DEFINITION	–	enclosed space formed among large selection of modules.
NATURAL AMENITIES	–	skylit extension to outdoors, and vice-versa.
FUNCTIONAL CONTENTS	–	sitting areas, lounging areas, perhaps a fireplace, storage for large personal goods (sports equip-ment, boots, trunks), notice board, mail collection, garbage disposal.
SUGGESTED ACTIVITIES AND INSTITUTIONS	–	communal gathering point (non-focal), energetic play for pre-schoolers (can be supervised from group space above), parties, spontaneous get-togethers, individual sports (ping-pong, tennis, catch), unit meetings, activity organization, record-hops.
CRITERIA	–	acoustic control from level III, wearable surfaces, medium lighting level, forms main street, flexible in function, colourful, comfortable, set climate, open ceiling, soft but flat texture.
NOTES	–	active and happy space, architect controlled, level changes between pedestrian street and unit floor spaces.

Figure A-2d

HIERARCHY OF COMMUNITY TERRITORIES
level V

POPULATION	–	250
INHERENT COMMUNITY	–	section
AREA	–	250 sq. m.
AREA PER PERSON	–	1 sq. m. (not counting cars)
SOCIAL CONTACT LEVEL	–	recognized by sight, or known 'of', friendly interaction, but infrequent and irregular (not every day) – usually in groups.
ARCHITECTURAL DEFINITION	–	focal point direction change
NATURAL AMENITIES	–	potted trees and plants water
FUNCTIONAL CONTENTS	–	central figure: sculpture or fountain, etc., car maintenance shop, laundry, workshops, music practice rooms.
SUGGESTED ACTIVITIES AND INSTITUTIONS	–	meeting place regular group interaction
CRITERIA	–	parking access semi-controlled climate
NOTES	–	social amenities giving away to functional amenities.

Figure A-2e

HIERARCHY OF COMMUNITY TERRITORIES
level VI

POPULATION	–	1,000
INHERENT COMMUNITY	–	block
AREA	–	approx. 2 to 3 hectares built-up.
AREA PER PERSON	–	density of 300 to 500 per hectare.
SOCIAL CONTACT LEVEL	–	formal individual interaction, regular unit interaction (teams)
ARCHITECTURAL DEFINITION	–	possible grid change pedestrian domain with buildings and parkland peripheral roads
NATURAL AMENITIES	–	outdoor environment, with shelter transition to total greenery, natural penetration into structure.
FUNCTIONAL CONTENTS	–	semi-formal central plaza, club-rooms, corner enterprises: grocery store, pub, snack bar, news-stand, etc., parkland.
SUGGESTED ACTIVITIES AND INSTITUTIONS	–	active events: dances, intra-mural sports, larger children's play (up to 12 years), strolling and exploring roof-top gardens.
CRITERIA	–	transition from natural to urban increased density towards urban core.

Figure A-2f

HIERARCHY OF COMMUNITY TERRITORIES
level VII

POPULATION	–	4,000
INHERENT COMMUNITY	–	neighbourhood
AREA	–	approx. 20 hectares
AREA PER PERSON	–	approx. 200 per hectare including parks
SOCIAL CONTACT LEVEL	–	share common institutions
ARCHITECTURAL DEFINITION	–	largest scale use of structural system different vocabulaties in arrangement of system ·strong architectural identity.
NATURAL AMENITIES	–	exposed to elements surrounded by greenery
FUNCTIONAL CONTENTS	–	major athletic facilities churches, school, scout troop, basic shops, theatre, medical centre, market place, shopping centre serving external territories, major plaza, transportation node, library.
SUGGESTED ACTIVITIES AND INSTITUTIONS	–	particular quality of environment and society.
CRITERIA	–	local colour urban character distinct architectural vocabulary density concentrated at urban core (centrum) pedestrian links
NOTES	–	community is defined totally by function.

Figure A-2g

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