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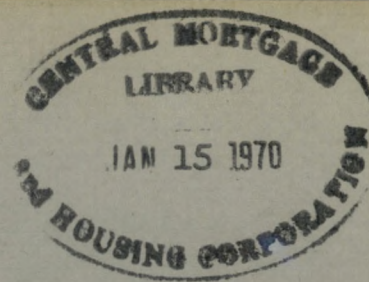
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TRAVELLING SCHOLARSHIP REPORT .
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REPORT ON TOUR

- HIGH DENSITY HOUSING -

SUBMITTED TO CMHC
THE CMHC TRAVELLING SCHOLARSHIP

1969

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PREFACE

In partial fulfillment of my obligations as a recipient of the 1969 CMHC's traveling scholarship, I submit this report. It will be presented in three parts.

The first part shall deal with my experiences gained in the course of the tour; a feeling about cities, the people who live in them and the housing problems as they are today in the United States.

The second part of the report shall deal with my two months stay at CMHC's office in Ottawa. During my stay in the office I chose to undertake a study involving the aspects of high density housing. I committed myself to this study topic because I felt that in view of the rapid growth of cities it is important for me to gain an understanding of what the nature of high density housing is; to understand some of the forces creating this particular form of housing, some of the problems involved

in it and their causes, and the adequacy of such an environment in the context of family needs.

The third part shall be a short concluding statement.

ACKNOWLEDGMENTS

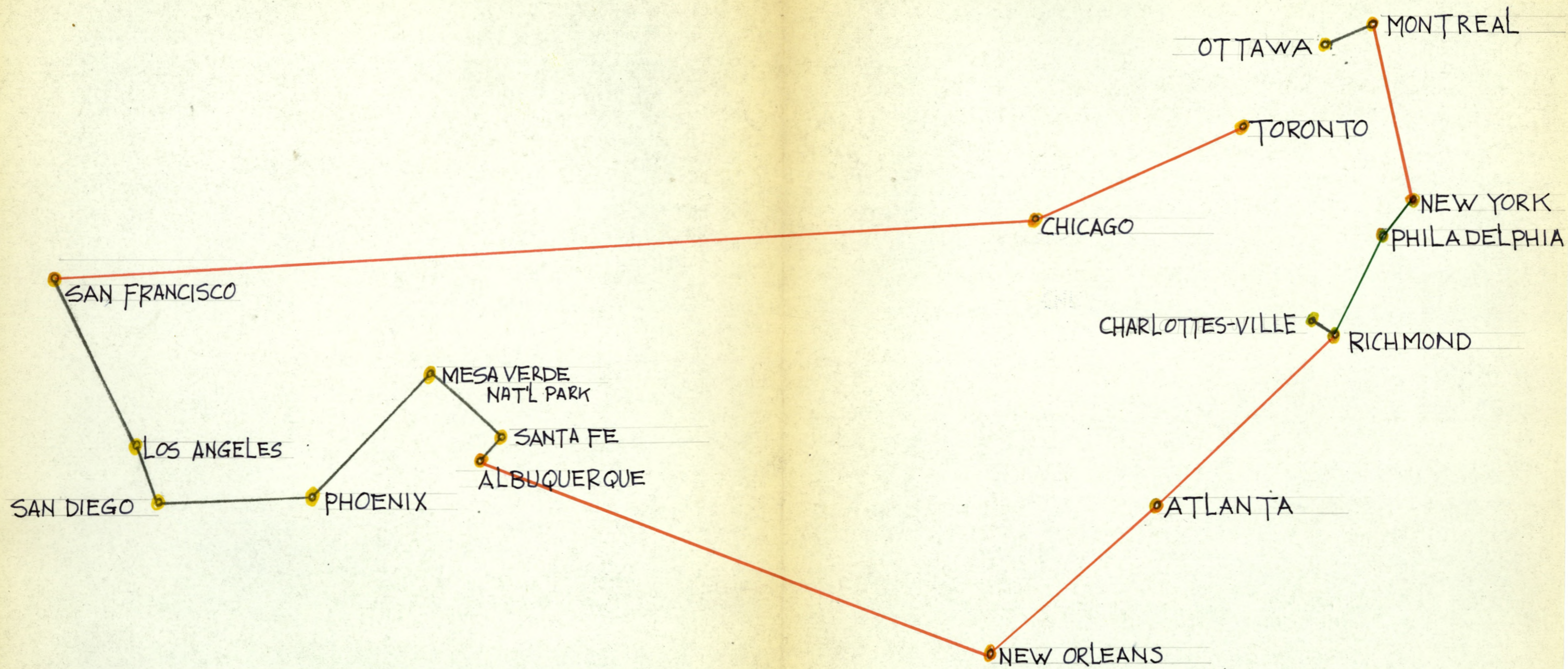
I would like to express my gratitude to CMHC for having given me the opportunity to see at first hand the way people are, and have been housed across the U.S. The tour exposed me to a numerous variety of houses and housing conditions across the country. The experience I gained shall be of great benefit to me in the course of my career.

My special thanks to Mr. McDermit and the Advisory Committee who made the scholarship possible; to Mr. David Crinion and Mr. Michael Pine for devoting their time to us while we were in the office; to all the people in the Corporation not directly involved with us but who also gave us their time; and last but not least to the tour leader, Jeff Stinson, whose personality and wit made the tour a great success and to my fellow students for providing companionship and stimulating topics of conversation in pubs, hotel rooms and car.

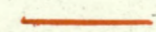
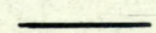

Costanzo Gabriele

C. M. Gabriele

TOUR ROUTE



MEANS OF TRANSPORTATION

-  AIRPLANE
-  CAR
-  TRAIN

PART I

TOUR IN THE U.S.

THE CITY.....How do I see the City?

I see the City as the physical manifestation of the highest form of art produced by man. The form of the City I see as a Museum, and the contents of the Museum as human artifacts which manifest man's superiority over all other living creatures and man's progress through the ages.

What is the City to me?

I see laziness as one of man's basic natural weaknesses and death as one of man's greatest fear. I believe this because every technological innovation made by man seems to be a tool to over-ride his natural physical limitations in order to live longer and with least amount of effort. Thus, to me, the City is an extension of my body. As an extension of my body, the City becomes a living organism. As a living organism, the City makes it possible for me to live my life in one corner of the world if I so

choose. I do not have to wander in search for food and water; I do not have to gather wood for my fire and fuel for my lamp. I phone the supermarket and get food; I open the tap and get water; I turn up the thermostat and get heat; I flick the switch and get light. I can be alone by myself or in a crowd and I can be with people intimately or socially.

As Robert Liston says in his book, Downtown, "...a city, any city is where the action is.

The city is bright lights, fun, excitement, entertainment. A city is museums mirroring our past, planetariums linking us with the unknown, concerts, plays, opera, ballet, lectures, if only on a box in the park. In a city we are enlightend, outraged and amused, sometimes all at the same time. A city is hope, symbolized in universities, libraries, hospitals, factories, offices, banks. A city is challenge, the "big pond" where "big frogs" grow. The most

talented, ablest and luckiest in all walks of life gather there to succeed, to fail and to be glad they tried. But most of all a city is people, beautiful people and ugly, young and old, kindly and vicious, smart and dumb, sensible and foolhardy, white and black, religious and atheist, people of hope and courage and people who live out their lives in quiet (or noisy) desperation. In the city things happen and people make them happen. The city is life..."

How did the City come into being?

The City, as we know it today, is a by-product of the progression of man's technological innovations. Prior to the Industrial Revolution the City was looked at primarily as a place to live; a place safe from enemies and a place for marketing the goods produced by craftsmen in the home. The restricted modes of transportation kept the City small thus maintaining a certain human scale where its inhabitants could lead a peaceful and relaxed

existence. With the advent of the Industrial Revolution the image of the City changed. Technological innovations created the factory. The factory eliminated the production of goods in the home. The result--centralization of employment. The man producing goods in his home in the village or on the farm could no longer compete with the factory. He was forced to leave the house and go to work in the factory.

At the same time agricultural innovations reduced the need for farm labourers and eliminated small farms by uniting them into larger ones. Thus the exodus from the country to the City began. Thousands upon thousands of people crowded into the City looking for employment. As a result of this exodus man began to look upon the City primarily as a place to work and not as a place to live.

With thousands of people coming into the City with no defined place to live and with the opportunity provided by mechanized trans-

portation, the form of the City evolved spontaneously.

This form of growth or evolution was efficient, but only up to a certain limit. The limit was influenced by the same and/or different factors in each City. Some of these factors were: the physical size of the City, the population density, the building density, the location of employment, and the mode of transportation of goods and people. Once the efficient growth limit had been reached, problems began to appear. As the people became aware of the problems the image of the City changed again. It changed back to the old image. But by the time man began to look at the City as a place to live again, the problems he was faced with in the City had become so complex that he has not been able to satisfactorily solve any of them even now. Furthermore, with more and more technological innovations being put on the market faster and faster, greater and greater number of people are needed to use

or manipulate these innovations. And with the anticipated future trend of less working hours and more leisure time, more and more people will be required to produce the same amount of goods if the individual's working time is less. Thus more jobs will be available and more people are needed to occupy them. The incoming migrants in search for one of these jobs or in search for a better place to live coupled with the natural population increase due to births in the City, is causing the City to grow at a fantastic rate. This fantastic rate of growth is compounding the problems so much that man's present piecemeal approach to their solution is rendering his efforts hopeless.

not so

If today's sophisticated level of technology is good enough to land a man on the moon, then, surely, it must be good enough to solve the problems of the City. The Scientists involved with the production of Apollo 11 didn't use a piecemeal approach to make the flight a success. The success

of the flight was due to an all out effort that coordinated all the fields of knowledge pertinent to the problem. The U.S. government committed itself to get a man on the Moon and neither wind nor rain nor snow nor money prevented the man from landing on the Moon. If a problem of such a magnitude can be solved within a period of fifteen years without the aid of a past example, then I am sure that the problems of the City can be solved in the same period of time if it is approached in a similar manner and no efforts are spared.

*a moon
sister
problem
not a good
companion
So far NASA people
who have joined
HUD have given
up.*

If one were to look at the City as man's most sophisticated innovation rather than as an unwanted by-product of his progress, then, like any other innovation, it could be improved. As the improvement of innovation progresses, so then would the improvement of the City. But one must be aware of the fact that a City cannot be discarded like an innovation once a new improved model is manufactured. Thus the structure of the

City must be understood. It must be understood as fully as the scientists understand the structure of Apollo 11. One must know what the building blocks of the City are and what relations exist between them. One must learn to make improvements without discarding the innovation. The patient must be cured without being killed or disabled. One must learn to replace decayed parts of the City successfully like the good doctor replaces an infected kidney.

As I said before, one must understand the structure of the City. When the structure is understood, then and only then, can the problems within the structure be solved. Thus I strongly recommend that all fields related to or concerned with the problems of the City be coordinated and make an all out effort to cure the ills of our urban areas.

THE PEOPLE.....The population of the country is made up of many Races and Ethnic backgrounds. This becomes evident to anyone travelling in the U.S. who is bent on being more than just a tourist. Besides the descendants of the White-Anglo-Saxon-Protestants, there are the Negroes, whom we all know, were brought as slaves to work in the cotton fields prior to the American Civil War and who are now "free" people. There are the Puerto Ricans, the Spanish Americans and the American Indians. There are Chinese, Japanese, Hawaiians or Polynesians, Italians, Germans, Dutch, Hungarians, and many more. In the course of the tour we met: the Negroes, in almost every city, the Puerto Ricans who migrated to the mainland in New York, the Spanish Americans in New Mexico and the American Indians in the plains of Arizona. The white minority groups seem to have assimilated very well but how do you assimilate if your skin is of different color? How can you assimilate within a culture that doesn't want you and doesn't

give you an equal opportunity because of the color of your skin? Or, how can you have equal opportunity if you are placed on a reservation?

The fight for equal opportunity has made the country a fearful place to live in. Beginning with Chicago and continuing right through to New York, everywhere I walked I saw fear and violence in the eyes of the people. In many places you could hardly breathe because of fear. The tension was as palpable as the exhaust fumes in downtown Los Angeles at rush hour. The people gave me the impression that violence was liable to erupt at any time, any place. Violence was as visible in the faces of the people as garbage was in the streets of downtown Manhattan. Not only gettoes were frightful but also universities, airport terminals, hotel lobbies, posh restaurants, streets, coffee shops, parks, subways, bus depots, and railway stations.

Why was I afraid of these places?

People's Park in the Berkley campus made me afraid of university campuses. One man had been shot there three days before we arrived in San Francisco and the army was still patrolling the campus. Stories told to us by people we spoke with related to people getting mugged in elevators, subway stations, bus depots, railway stations, hotel lobbies, etc.

On arriving at our hotel in New Orleans we saw a man get stabbed to death in the street across from the hotel lobby. In a restaurant in Philadelphia the white boss took the tip I had left for the Negro waitress. In New York the Puerto Ricans stole all our bags by breaking in the car while Harry Quintana was giving us a lecture on how the white man is exploiting the "Black Cats and the Puerto Rican Brothers". All the windows of the schools in Chicago's North Side were broken; dozens of holes in each pane. An Indian lady in one of the villages in Arizona complained because we were taking

pictures in the village and made us leave without pictures because we were white men and "white men exploits the Indian."

When we finally arrived in Montreal I felt that I had returned home. I was in Canada, all tension had left my body, the weight of the American problems had been removed from my mind. Even though I had never been in Montreal before, I felt at home there. No more fear of riots, the people were smiling and friendly. Somehow I felt really relaxed. I was and am glad that I live in Canada whether it's in my home of Vancouver or anywhere else.

What are the forces behind the discontentment within the American society?

First, there is the hierarchy of social status, that can be described as the pecking order in society. The hierarchy in order of acceptance from top down as I saw it is:

- White-Anglo-Saxon-Protestants (WASP)
- Other Whites
- Oriental
- American Indians
- Afro-Americans

Out of this hierarchy of social status come all forms of discrimination. If you happen to be a Negro you have no rights according to the pecking order and are forced to do everybody's dirty job. Education and income does not help you here because no one will give you the opportunity to prove that you are as good as they are. The only way for the people at the bottom to better themselves is to fight for their human rights.

But since no form of law can force the individual to like and respect everyone there can be no solution. What the Negroes want in the States now is power. They want power so they can take over and reverse the pecking order. To many of them this is the only foreseeable solution. Whether they succeed or not remains to be seen.

Secondly, there is the notion of the "Affluent Society" which emerged during Johnson's administration; everybody should have the best of everything in America.

The problem with this promise is that not everyone is given the best after someone said that they would. In fact, a hope was instilled in hearts of the people and now that hope isn't even a dream anymore. People saw what they could have and were even told what they should have but no one said how they could get it. So today people are still searching for a way to get what they were told they should have.

Thirdly, technological development has created a high level of standards of any sort. The high level of standards have lowered the people's tolerance level. In Peru people living in "Barriadas" will tolerate having no interior plumbing, people in Hong Kong will tolerate paper shacks, but people in the U.S. (or Canada) will not tolerate a house with one bathroom for a family say of seven people, they will not tolerate living in a high rise if they have children, they even resent it if they have to live in public housing that is as good as private housing.

What good are high standards if all the people cannot live by them? Technology has only provided higher standards, it hasn't provided the means for all the people to live by them, and as such it has only lowered the tolerance level of the economically poorer classes.

Fourthly, with the information explosion and the mass communication media, more and more people know what is going on in the country and the world in general. The people know how and on what grounds the government is making policies; the people in San Francisco know what the people in New York are doing; the people in New York know what the people in Houston are doing; people know what people are doing everywhere. An incident in New York may cause people to react in San Francisco and vice versa. These reactions are forcing the people to choose sides. As the author Paul Goodman has noted "modern society does not let one alone--it is too total--it forces one's hand." And as Bob Hunter said in his daily

column in the Vancouver Sun on October 23, 1969:
"This is precisely what is happening throughout
the country: everyone's hand is being forced.
It is as though the clouds of smog over the
cities were driving everyone out of his or
her private hideout and into the streets...
That was apparent on Moratorium Day. Many,
many in the crowd of 10,000 gathered in the
Chicago Civic Plaza were having their first
taste of public demonstration. And whether
Richard Nixon approves or not, the indications
are that "policy" - foreign or otherwise -
will increasingly be made in the streets,
rather than in the cells of anonymous beehive
bureaucracies."

The point I want to make is that while mass
communication is causing policy to be made
in the streets, at the same time it is
destroying the right of the individual to
voice his or her opinion anonymously. In
times when nothing is guaranteed, voicing
of opinions publicly causes antagonism
between groups in society. This antagonism
often results in street riots and death of

some of the participants, and if carried to the extreme it will bring about revolution and civil war.

The discontentment created by these four factors seems to manifest itself in the form of a housing crises. The Negroes want to live where the whites live, the poor want as good housing as the rich, the rich and well to do don't want to support the poor, the poor don't want to be supported directly by the rich and the well to do, the lower class wants to live next to the middle class, the middle class doesn't want to live next to the lower class, everybody wants public housing and nobody wants it next to where he lives, and on and on. What, then, is the housing crises?

HOUSING IN THE U.S. What is housing?

In trying to describe what housing is I will quote G. H. Beyer. The quotation is the word for word introduction in his book: Housing and Society.

"What is housing? Basically, it is a product--a highly complex product. First, it is a bulky, durable and permanent product. It has a fixed location, being used only in the place where it is built. Once built, it tends to remain in existence for many years--frequently, long after it's usefulness. It becomes almost a part of the land.

Housing, unlike many other industrial products, is not highly standardized. Many types of materials are used in both the structure and in the furnishings. Different kinds of parts and facilities are incorporated. The structure encompasses a complexity of pipes, ducts, wiring, and plumbing. There are single family houses, duplexes, apartments, row-houses, and many other types. There is

no "blue-book" that supplies regular price quotation in the used housing market.

But housing is more than a complex product. It is both an economic and social process. It plays a tremendous role in the economy of this country. Approximately one fourth of our national wealth is in the form of city and village dwellings. Almost one fourth of the personal consumption expenditure of our population is represented in housing expenditures.

Housing is also important for other economic reasons. For a high proportion of the 100,000 builders it represents their livelihoods. For the material manufacturer it represents a vast market for his product. For the banker it represents an outlet for his funds. It has a close relationship to public utilities. A vigorous housing program opens up vast opportunities for employment.

There are certain idiosyncratic economic aspects that must be recognized.

Housing is not only sold but also rented. The purchase of new housing, in contrast to the need for food and clothing, is postponable. Higher income is likely to mean a new automobile and many other consumer goods before it means a new house. This makes the establishment of effective demand at any time a complicated task.

Finally and probably most important of all, housing has highly significant social implications because it provides the shelter for our basic unit--THE FAMILY. Almost every person is affected in his day-to-day living by the kind of house in which he lives. Housing therefore, is also urban planning.

There are many evidences of this. Those families who are forced, of necessity, to live in our slums are not given social opportunities equal to those who are able to live in decent, safe and desirable housing. Unfortunately, houses are socially (but not so readily physically) expansible.

This means that widespread doubling up takes place as a result of economic necessity and under pressure of acute housing shortages.

Since each family is different from every other family, the use of housing remains highly individualistic. Yet, there are some common requirements of housing: it should provide comfort, contentment, health, and aesthetic satisfaction. The idea that "a man's home is his castle" is more than a 350 year adage.

In short, housing is deeply involved in our social order."

Beyer gives an overall general definition of what housing is. But more specifically, housing is where people live, where they spent the most part of their life. It is a place where children are brought up; a place where a man and a woman consummate the relationship of marriage; a place where friends are entertained; a place where one can take refuge from the bustling

life of the city; a place where cultural norms and social behavior are learned; a place where religious education takes place and finally, housing is a centre of consumption and the storage place for personal belongings and sentimental artifacts collected in the course of one's life.

FORCES AT WORK.....Financial

The Dollar is the most powerful force in the creation of housing. The Dollar determines if housing is to be built. It determines the quality, the type and the quantity of housing to be built. And further it determines who should live in what type. The most important and most used means of financing a house is the credit system. Credit is in the form of mortgages, loans insured by the government, private loans, and loans from charitable non-profit organizations. The sources of the loans are: Savings and Loans Associations, Commercial Banks, Mutual Savings Banks, Life Insurance Companies, Private Individuals, Federal Government, Mortgage Companies, Non-profit Organizations such as church groups, Real Estate Firms and Construction Companies.

Types of financing:

- 1) Conventional financing - no direct government intervention.

- 2) F.H.A. - government undertakes to insure loans to guard against loss on the part of the lending institution in the event of default by the borrower.
- 3) Veteran's administration - similar to F.H.A., only borrower must be a veteran.

The problem with the credit method of financing is that it causes long term debts in the housing market. This is due to the fact that a loan is a form of investment. But to make the loan feasible for the borrower the interest rate mustn't be very high. And since the interest rate is not very high, the lender has to collect interest over a great number of years to make a sizable return on his investment.

One other method of financing a house, the only other one as a matter of fact, is the direct cash outlay by the buyer at the time of purchase. This however, represents a very small percentage of the total. It is limited to people in the upper income bracket

and in some cases to immigrants who bring their life savings from the Old country.

Economics

The economic force affecting housing can be described in the form of housing occupancy. There are four forms of housing occupancy in the U.S. today: Owner occupied, Tenant occupied (privately owned), Tenant occupied (publicly owned), and Co-op occupied.

1) Owner occupied

Home ownership is traditional in the U.S. According to the 1960 census, 62% of the housing in the U.S. was owner occupied.

Costs of home ownership: Apparent

- a) down payment - 30% of total cost
- b) closing costs - buyer's attorney, 1% of purchase price
 - bank service, 0.5%
 - advance real estate tax, up to $\frac{1}{2}$ of year's tax

- advance fire insurance, up to 3 years insurance
 - mortgage tax, 0.5% of mortgage
 - mortgage recording fee, \$5.00 to \$20.00
- c) debt service - monthly mortgage payment, 5 to 15% of the family's income
- d) taxes - local property tax
- special assessment
 - relation of assessed to actual appraisal value
 - local tax delinquencies

Not so apparent costs of home ownership:

- a) repair and maintenance
- b) depreciation and obsolescence
- c) loss of interest on equity
- d) commutation expenses

Often times these not so apparent costs are not taken into account by the home buyer and in many cases the buyer thinks he is saving money because he doesn't have to pay rent anymore when in actual fact he is losing money.

2) Tenant occupied (privately owned)

If for some reason the person doesn't want to buy a house, or his financial and/or personal situation do not allow home ownership and he is not on welfare, then an individual will rent a house that is privately owned. If his income is such that he does not qualify for public assistance he has to search for a house in the private rental market.

The only cost of tenancy is the monthly rent although in some cases the tenant has to pay two months rent in advance, make a deposit for damages to the unit made during the rental period and pay his utilities.

3) Tenant occupied (public ownership)

This is known as Public Housing and is controlled by the government. The Tenants are chosen on the basis of their income. The Tenant has to apply for financial assistance to the Local Housing Authority, the authority reviews

the case and if assistance is justified the Tenant is admitted into public housing. While his income remains constant his rent is subsidized partially or totally depending on his income. If his income should increase however, then either his rent goes up or he has to find a house to rent on the private market. In some parts of the country the Local Housing Authority doesn't allow any tenant to stay in public housing if his income increases. He becomes automatically disqualified for Public Housing and has to move out. The reason for this is that there is an acute shortage of this type of housing in the area and the waiting lists are very long.

4) Co-op occupied housing

This is another form of ownership. A group of people get together and build a housing project which they will occupy on a co-op basis. The people involved own shares in the property and pay a

prescribed amount toward the maintenance and the upkeep of the landscape. They are allowed to sell if they wish but not to rent their living quarters. This form of housing reduces the construction expenses and makes efficient use of the land thus reducing the cash outlay.

Political

1) Federal Government Agencies

- a) Federal Housing Administration--FHA
The FHA was established in 1934. It was designed to stimulate the dying housing industry and market by encouraging new construction and the flow of private funds into this market. It's role was to insure loans made by the mortgage companies. A prerequisite for insurance was that the project upon which the mortgage was based must be "economically sound".

- b) Public Housing Administration--PHA
The PHA was created in 1937. The

role of the PHA was to demolish slums and to provide decent, safe and sanitary housing for families that were living in sub standard housing conditions.

The means to be employed were the extension of the federal government's credit and the direct subsidization of the rents of families in the lower income groups.

c) Urban Renewal Administration--URA

The administration was established in 1949. Its programs were intended to shift the burden of slum clearing and blight stoppage from the public housing program to the new programs established by the Housing Act of 1949. The means used to accomplish these goals are the government's credit and funds, supplemented by funds of local government bodies. These funds are used to write down the cost of acquiring and clearing or rehabilitating areas which have

been found by local public authorities to be of such a character as to constitute a menace to the public health, safety and welfare or at the stage of becoming such a menace. Under this program the slums have and are being cleared in many communities. Once a slum has been cleared, the local public agency places the land on the market for use and development by private parties.

d) Department of Housing and Urban Development--HUD

Hud was created in 1965 as part of President Johnson's domestic program. The President recommended national legislation to "redirect, modernize and streamline our housing programs". This Legislation enlarged upon the basic low-rent program and made it more flexible. It authorizes sufficient Federal financial assistance to permit communities to add some 240,000 dwellings to their local public housing

supply over a four year period. Of these, an estimated 140,000 are to be provided through new construction, 60,000 through purchase and rehabilitation as needed, and 40,000 through leasing from private owners.

2) Municipal Agencies

a) Local Housing Authority--LHA

The responsibility of the LHA is to provide and manage public housing locally. There are five ways in which public housing can be made available. The first is "New Construction", the LHA acts as its own developer, employs its own design team, and, when plans are completed, takes competitive bids. The construction contract is awarded to the lowest responsible bidder, subject to HUD review and approval. Second, "Purchase and Rehabilitation". A growing awareness of the feasibility of using existing housing has led to a renewed interest by LHA's in this method. It is encouraged because

unidentified neighbourhood housing has certain social values and it is economical. Upgrading of housing through public investment can often save an otherwise lost neighbourhood and rehabilitation can transform a substandard house into a standard house, thus helping community efforts to stop the slide to slums and provide housing more quickly as well as more economically. Third, "Turnkey", a method that relies heavily on the private market. Under turnkey, developers, residential builders, rehabilitators and remodelers of all types can deal with LHA's in much the same way as with private clients. Any such member of the private building industry with an available and suitable site or structure, or option to buy, may approach an LHA with a proposal to build or rehabilitate in accordance with his own plans and specifications. If the offer is attractively priced

and meets acceptable design standards, the LHA enters into a contract. The contract commits the LHA to purchase the completed property.

The advantage of the turnkey over the traditional method is that it enables the private developers, builders and lenders generally engaged in the private residential field to participate in the program. It thus brings to LHA and HUD the cash and the time economies that flow from the techniques and competitive nature of private industry. Turnkey also permits faster volume production because it taps the resources of the private homebuilder. Fourth, "Leasing From Private Owners". In 1965, Congress authorized a program of federal financial assistance for leasing by LHA of standard private dwellings for low income tenants. The federal share makes up the difference between what the owner receives and what the tenant-occupant pays. Fifth, "Combined Public-Private Ownership".

This is a relatively new method and is a joint venture of LHA with such private nonprofit groups as churches, fraternal organizations and trade unions. It may be also by profit motivated organizations or individuals. The method provides for a combination of some low-rent and some high-rent dwellings within the same development. A number of programing and financing variations are possible. One is for LHA and the private group to share an individual interest in a development. Under this arrangement, neither group owns any particular dwelling. The public therefore cannot tell which tenants are subsidized and which are not. Also, the tenant can remain in the house if income should increase above the level permitted for public housing subsidies. The tenant can transfer from public to private status without moving physically.

b) Zoning By-Laws

The Zoning By-Laws adopted by a city

generally determine where the housing should be built and what type in what location. They also determine the density, conditions of livability and to a certain extent aesthetic control. In most cases, the Zoning By-Laws are enforced by the city's planning department. These By-Laws are not rigid and in many cases are contested in court and if the contestment is successful, either the By-Law in question is changed or the area in question is rezoned.

3) Trade Unions

Trade Unions exert a great influence on the housing industry. Their demands for higher and higher wages is forcing the price of housing out of the reach of just about 60% of the population. The strikes resulting out of the demands for higher wages cause construction slow-down. The division of labour brought about by trade unions is preventing the housing industry from making use of the factory mass production

of components. Each building component is under the control of a separate union. The unions refuse to cooperate in the factory for fear of losing their power over the particular component that they control.

The Building Industry

After the Dollar, the building industry is the most powerful force in the creation of housing. The building industry involves the Builder, the Manufacturer and the Labour force directly and the Client, the Designer and the Legal profession indirectly. The building industry coordinates all the previously mentioned forces to create the physical form.

The Builder, in the form of a licenced construction company, submits bids to the Client after having consulted the Designer's specifications, price of labour and price of materials. If awarded the contract, the Builder takes full responsibility for the construction of the project. The Builder has to employ a labour force and sub trades,

and has to purchase the materials necessary to get the job done, and done within the time specified by the conditions of the contract.

In the past the Client, the Designer and the Builder or Contractor were separate entities. The present and future trends seem to be toward the amalgamation of these entities in the form of a corporation. The need for this trend has come about as a result of the size of projects being developed at present. The single Client can no longer afford to invest the sum of money required by a large project because he doesn't have it, and if the large project were developed in steps it would take too long to complete.

Technology

Technology has made it possible for housing to progress from the cave to the stone house to the brick house to the shiny high rise to the trailer to "Habitat". With the creation of new building materials and new construction

techniques, technology will continue to influence the housing field tremendously in the future.

Computers are being already used to aid the design of housing by large architectural firms in the U.S. Programs have been or are in the process of being developed to optimize living conditions in physically non-existing residential environments, to optimize structural systems and to optimize vehicular and pedestrian traffic in residential areas.

Other parties interested in technology are investigating the possibility of industrializing the building industry. And still others are investigating the possibility of applying system theory to housing. Sooner or later someone is going to make a breakthrough and completely revolutionize the housing industry.

The above mentioned forces, I feel, are the major ones that play a role in the creation of housing. Some of them are negative and some are positive, but all of them are necessary in the production of housing.

PART II

HIGH DENSITY HOUSING

DENSITY.....Density has been defined in many ways:

number of people per gross acre; number of people per net acre; number of families per gross acre; number of families per net acre; number of housing units per gross acre; number of housing units per net acre; percent of site covered by building; floor space ratio and many more. But what does density actually mean? The Concise Oxford Dictionary defines density as "closeness of substance". Thus to the architect and planner it means how close people live in their residential environment happily or adequately. The present day belief seems to be that low density residential areas are better than high density areas. This belief is quite true in practice but not in theory. In theory a high density area can be as good as a low density one if all the necessary requirements for good livability are provided. In practice the belief is true because existing low density areas seem to provide a high level of the requirements of good livability while existing areas of high density seem to provide few of these

requirements. This is due to the fact that architects and planners have not learned how to provide the good livability requirements in areas of high density housing. In fact, if a high level of good livability requirements would be provided in high density areas then they would be as good as low density areas. But since many areas of low density lack the necessary requirements for the good life they are as bad as the areas of high density. Therefore in terms of good livability, density has no meaning. Zoning By-Laws stipulate a certain density for a certain area and do not take into account whether it is possible to provide the necessary requirements for a satisfactory environment. This, I feel, is the main cause of the problems arising out of high density living environments. Density should be arrived at by design and not arrived at by Zoning By-Laws. By specifying zones of density, the By-Laws have created an unstable residential environment. Areas of different density seem to attract different segments of the population: low density suburban areas attract the child

rearing family while the high density core areas attract young married couples with no children, single people and older people. As such these areas are unstable in terms of residence. As soon as the young couple has a child they are forced to move to the suburbs. When the children have grown up and left the older couple returns to the densely populated core. This happens because residential areas serve the need of only one or two groups of life styles and/or life stages. An outstanding principle of planners is to provide stability in our residential areas. One way of achieving this stability is to provide a diversification of dwelling types in all residential areas to accommodate the needs of the single people, the family, from the just married to the aged couples, and the retired pensioner adequately. If this principle can be realized then the problem of density can be resolved.

HIGH DENSITY.....How dense does an environment have to be before it is considered a high density area? Planners consider 12 to 20 families per acre as low density; 21 to 75 families per acre medium density; and above 75 families per acre high density. In terms of people per acre this means that in order for an environment to be classified as a high density environment it has to accommodate at least 225 people per acre.

The city is a conglomeration of these three densities. When densities are planned for they are planned in terms of these three densities thus negating the fourth and most important density, the overall density of the city. For example, one area may be zoned for multiple dwelling units, one for two family units and one for single family units. In section this pattern can be represented in terms of pyramids. (See Figure 1)

In terms of the whole city only the average density matters. And this is the density

that should be developed by the diversification of dwelling types. By developing the city in this matter the same number of people would be housed and housed more adequately especially in terms of stable living environment, schools, parks, recreation, and traffic. This would develop underdeveloped areas fully and thus take some of the strain off the inadequately overdeveloped areas; it would still give maximum choice of dwelling type as well as maintain an adequate level of homogeneity needed for some groups of people to identify with and at the same time it would create the more or less desired stable heterogeneous residential environment. (See Figure 2)

OVERDEVELOPED
AREA

UNDERDEVELOPED
AREA

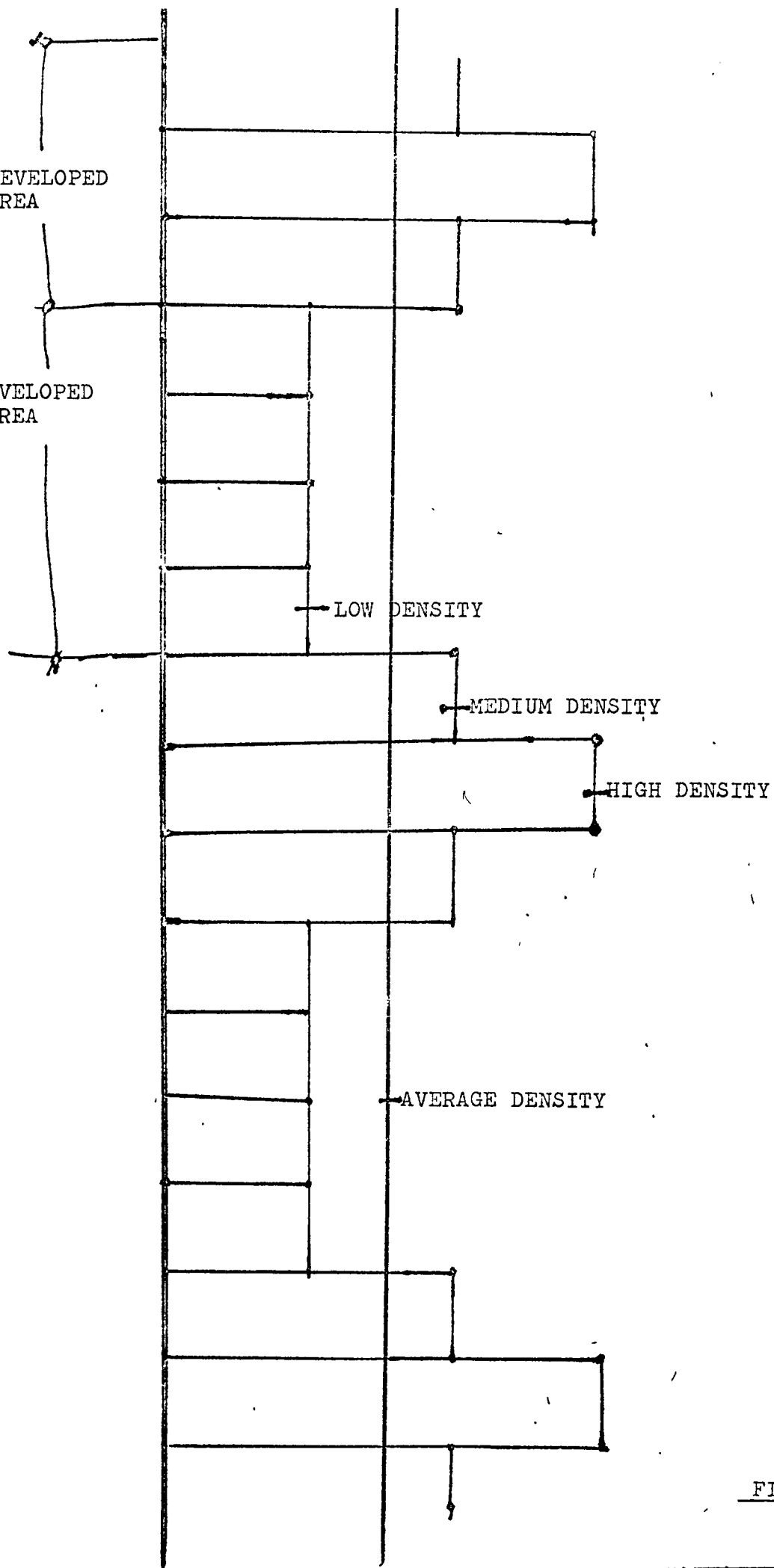
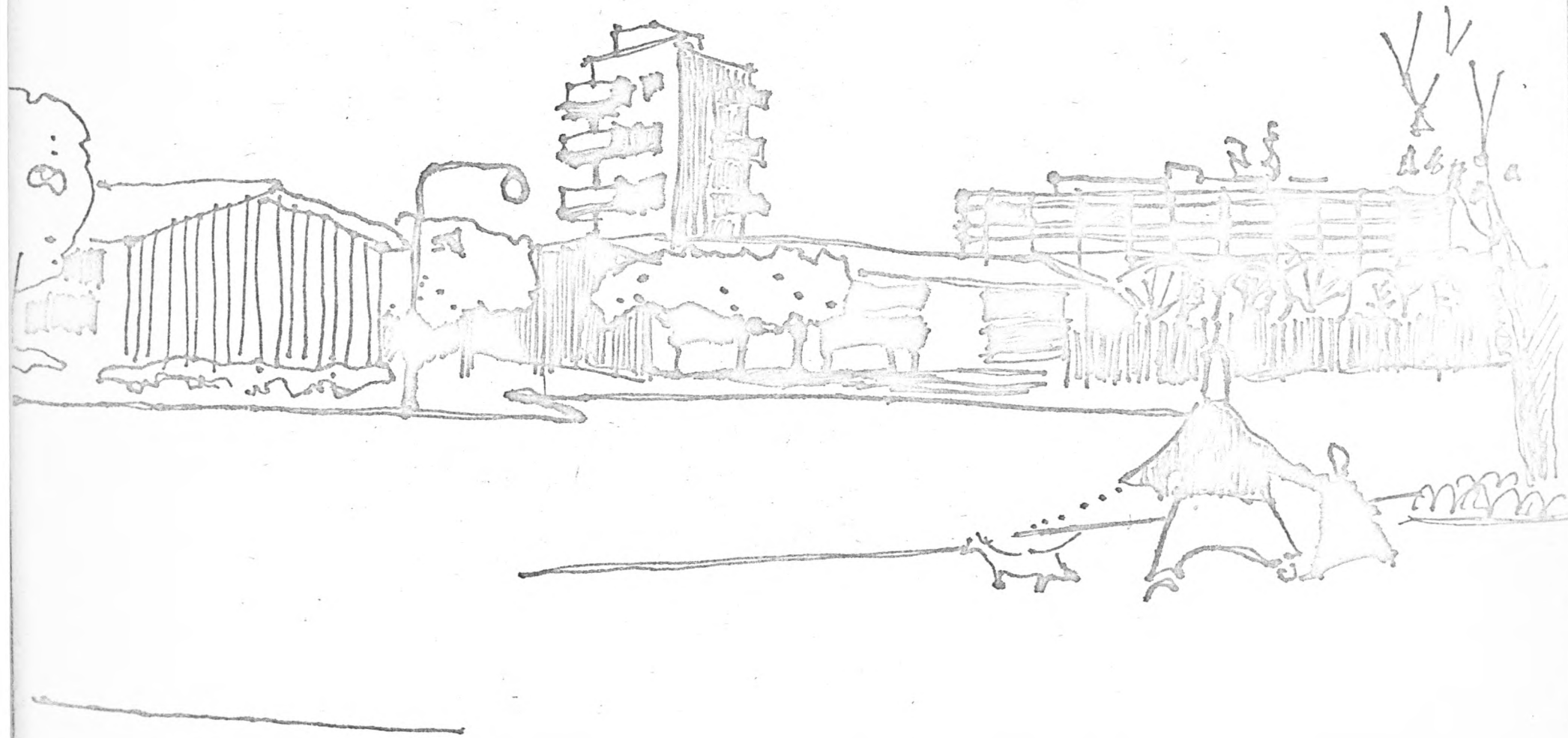


FIG.1

FIG. 2



THE NEED FOR.....The growth of cities today is manifesting
HIGH DENSITY itself in the form of two extremes: suburban
RESIDENTIAL sprawl and urban squeeze. On one hand zoning
ENVIRONMENT for larger and larger lots in the suburbs
forces unending sprawl that can make any city
a future L.A.; on the other hand urban renewal
ordinances force higher and higher densities
in the core that can make any city a future
Manhattan. Since extremes of any form are
not the best or at least not always the best
solutions, a workable density has to be
brought about by design that is between the
extremes.

The Space-Time boundary of the city also
demands a high density residential environment.
By Space-Time boundary, I mean the distance
that can be travelled in one hour while going
from any one point to any other point in the
city. The means of transportation together
with the boundaries of the city should allow
anyone to go from any point to any other point
in the city in one hour or less. People do
not desire to spend more than about two hours
on the road to and from work. Thus to limit
the size of the city area high density is a

necessity. The scarcity of land and land values in preferred areas of the city are also making high density residential environment a necessity. The location of the housing unit creates a demand that is a direct result of the locational amenities. This forces land values up and makes low density developments unfeasible. In general the high market value of real estate is forcing people to rent smaller units that they can afford, and this is what developers provide in form of high density. The smaller units are adequate for everyone except the family with children. The type of high density housing being developed today is not suited for child rearing. This is the problem area of high density housing. Therefore if housing densities must be increased the design must allow for family residence as well because the majority of the people housed belong to families.

FORCES AT WORK.....Population growth

As everyone is aware, the population today is increasing faster than it can be adequately housed. The major increase however is taking place in our urban centres simply because that is where the bulk of the population is living today. This growth is of two types: migration from the rural areas and the city's birth rate.

Migration from rural areas

The shift of population from rural to urban areas in technologically advanced countries is due primarily to the mechanization of agriculture and increasing employment in the city; while in underdeveloped countries migration is due primarily to increasing pressures on the land rather than by the so called scientific method of farming.¹ As a result of these two factors cities are growing in number and size at a fantastic rate. It is this part of the population increase in the cities that creates many

very complex problems. The incoming rural person is unable to participate in urban activities. His background and education have been those of the farm thus adjustment to city living constitutes one of his major problems. He needs to be re-educated to learn to cope and resolve his new and complex problems he is now faced with in the city. His skill and knowledge limit his employment opportunities. Even though employment is abundant, often time it is work that he is not capable of performing because of his limited skills. The age of the individual when he comes to the city may prevent him from being re-educated. If he is too old and set in his ways it is difficult for him to change. Often times these people will have to settle in slum areas due to inability to pay for adequate accommodation since no jobs are open them. When slums are declared unfit for living the inhabitants are usually rehoused in high density housing units which are cheaper at the expenses of the government.

City birth rate

Each city has a natural population increase due to the number of births in the city. These people have to be housed separately when they leave home whether as bachelors or as married men and women. The increase is so great that the present methods of construction cannot create enough housing units for them. But the fastest method and the cheapest method to house these people is the high rise, the only form of high density housing being developed.

Availability of residential land in the urban centres

Urban residential land is available in almost all cities with very few exceptions. The exceptions are those cases where the city is physically defined and contained by its geographic location, making expansion impossible. Thus the problem of urban residential land is not that none is available, rather that none is available in the right

place at the right price. Under present economic conditions it just isn't viable for an entrepreneur or anyone else to build a \$30,000 detached house on a piece of property that has a market value anywhere from \$25,000 to \$50,000. Besides, it is not viable from the social point of view as well because the house would be isolated and overwhelmed by its high density surroundings.

Economics and Technology

Economics

The price of a house has increased substantially in the past few years from about \$16,000 in 1963 to about \$25,000 today. This house is in the suburbs and not in the city. The increase in cost of a house has been much more than the increase in the family's income, thus less and less people are able to buy their own home. If the family income did increase substantially it most likely will mean a new commodity such as a car, boat, television, or any appliance of every conceivable kind before

it will ever mean a new house. These common luxuries seem to be more important to people than the improvement of their housing conditions. This craving for consumers goods is creating a shift from homeownership to renting. Since the demand for rentable units is increasing all the time while available units for rent seems to remain constant, the rents are climbing beyond the point where a family can afford to pay for the amount of space it needs. This shortage of units tends to be combatted by the building of high rise apartments which in the end are not suited for family accommodation. But building apartments in the form of high rise is a good investment for developers and investors. So good, in fact, that where only developers were willing to take the risk of putting up the larger buildings, now conservative insurance companies are getting directly involved in the action. Values can only go up they feel. Investing in apartments is made doubly good by federal tax policy. The lack of capital gains tax in Canada means that

when the value of the property goes up, you get to keep the gain. The federal government also allows liberal depreciation allowances, pretending that building will decline in value. This gives the investors a tax break for the usually non-existent loss. It works out that an investor can make about 38% on his investment in one year by putting up a small apartment building. It's a well known fact that no one builds to lose money.

Technology

Technology has developed means whereby construction costs and time can be substantially reduced. This is achieved by building a large number of relatively similar units, and stacking them in layers. This technique was developed as a concept for office high rise but it has recently been applied to construction of apartments with very few changes. The concept has resolved the problem of land shortage in the right places at the right price because on one small piece of land one can build a large number of units of various sizes. But one of the problems is that a very limited number of

units have ground access or private outdoor space required for children's play, another is that there is lack of diversity and no great choice of dwelling types. The high rise concept is a good one because it makes for fast production of units at a relatively low cost and uses land very efficiently; however this efficiency has been achieved at the expenses of the social and mental well being of the occupants.

Life style

The present form of high density housing (the high rise) seems to appeal to the older people, the young swingers and the loner. The family group is almost entirely excluded. The exception is the family who has no other alternative and has to make do with less space and poorer living conditions. Usually the young bachelor is attracted to the high rise because it is a convenient place to live. He is finished the post high school training, in many cases a university education, and this is his first go at independence. If he is a swinger he can find an apartment in a building full of

other young people of similar background. There will always be several parties going on over the weekend for him to join and blow his mind. If he happens to be more of a square he can always find a quiet building and have all the privacy he wants. And if he happens to be older he can find an apartment full of old people that are similar to himself and live out the rest of his life in peace.

The 20-to-24 year age group between the last two censuses was growing at a rate three times as fast as the rest of the population. The 55-to-64 year olds were increasing above the average rate also. Their growth rate and their preference for high rise living is creating a great demand for this form of housing.

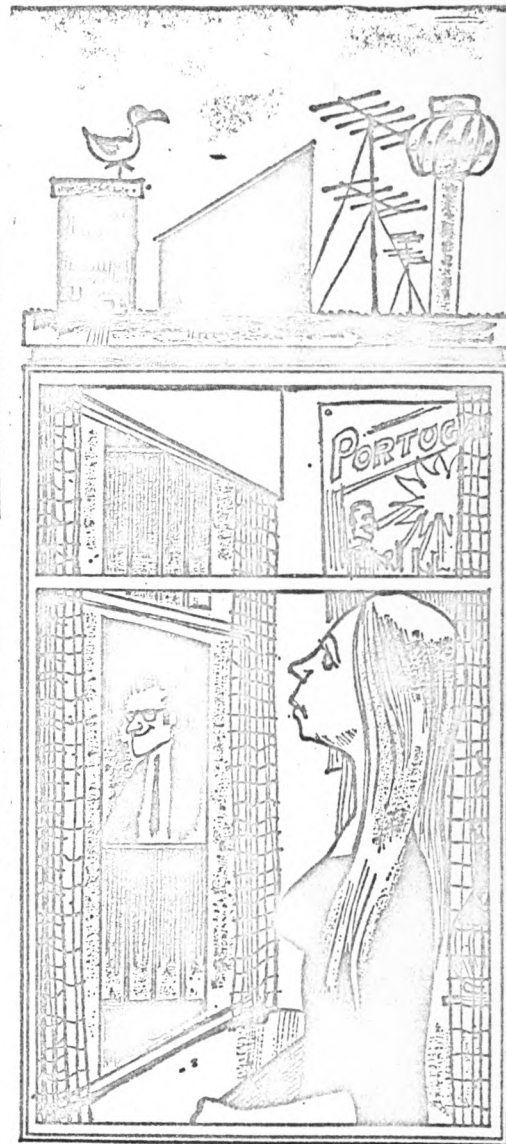
The above mentioned forces seem to be the most pertinent forces creating high density housing. All of these are combined to try and resolve the so called housing shortage in Canada.



THE SWINGERS



THE OLD PEOPLE



THE LONER

FIG. 3 : THE PEOPLE LIVING IN APARTMENTS (HIGH RISE)

THE FAMILY AND.....Apartment living, which used to be closely
HIGH RISE

identified with single people, childless couples, or older people, is now rapidly becoming the most available form of living for many families. This is happening for a variety of reasons. Some families prefer urban living to suburbia; some are forced to live in apartments because they cannot afford any better; others have to live there because the supply of single family houses is scarce; still others live there for the amenities and/or for the opportunity that the life style offers.

There are several trends that indicate the shift in form of family housing. Some of these were reported in an article entitled Design for Urbanity in the Architectural Forum/May 1960.

More points apartments, fewer slabs

Architects Kelly and Gruzen used this method in the New York Chatham Towers. The layout consists of four apartments per floor, with each apartment getting a corner location,

and hence, cross-ventilation. All living rooms have corner location and generous terraces, there is a family space and eating counter off the kitchen and plenty of storage space. (See Figure 4)

New plans with cross-ventilation

Where height limitations make more than four apartments per floor a necessity, new plans have been developed to give all apartments cross-ventilation.

Architects Ballard, Todd and Snibe made a proposal which has duplexes with access corridors on alternate floors and through ventilation on top floor. (See Figure 5)

A new apartment in Boston by Hugh Stubbins has several through apartments on one floor. (See Figure 6)

Private patios in the sky

Apartments with terraces sell much faster than those without terraces. Levit House in Whitestone, New York, has a planting bed covering part of the balcony to increase

the garden feeling. (See Figure 7)

Communal space within the building

For children to get together inside on rainy days, some architects have provided communal lounges every three or four floors. The design for an apartment in Chicago by Holsman, Holsman, Klekamp and Taylor is a partially skip-stop apartment building with lounges bridging the space between apartment towers at every level. A laundry room is located off each of these lounges. (See Figure 8)

Bigger kitchens for eating in

Most families in lower- and middle-income brackets like kitchens big enough to eat in, as well as formal dining space. This is difficult to achieve within a tight budget but several solutions are on record. One by Architects Pomerance and Breines, shows a flexible arrangement of the partition between kitchen and dining area allowing for either a dining alcove off the living room, or a

big kitchen with dining space or both.

(See Figure 9)

An ideal layout is that shown in the Tulsa, Okla. apartments by Architects Harrell and Hamilton which have a large breakfast area within the kitchen, as well as a formal dining space off the living room. (See Figure 10)

More and better storage space

The apartments proposed for San Francisco by Architects Wurster, Bernardi and Emmons and De Mars and Reay have storage facilities directly off the public corridors rather than in the basement areas. (See Figure 11) But even for individual apartments storage is being provided inside as shown by the Charles River Park apartments proposed by Victor Gruen for Boston. There are three large walk-in closets in every three bedroom unit. (See Figure 12)

Dressing room/bathroom combination

Architects Kahn and Jacobs treated dressing

room and bathroom as one unit in the design for the New Haven's University Towers. The two rooms are divided by a sliding door. (See Figure 13)

In short, apartments are being planned more and more to appeal to the family with children and are being designed more and more like single family houses stacked one on top of the other. Better exterior and interior finishes are used; greater plan flexibility; better acoustic privacy; more air conditioning, better equipment, and more parking facilities are being provided; and better site development.

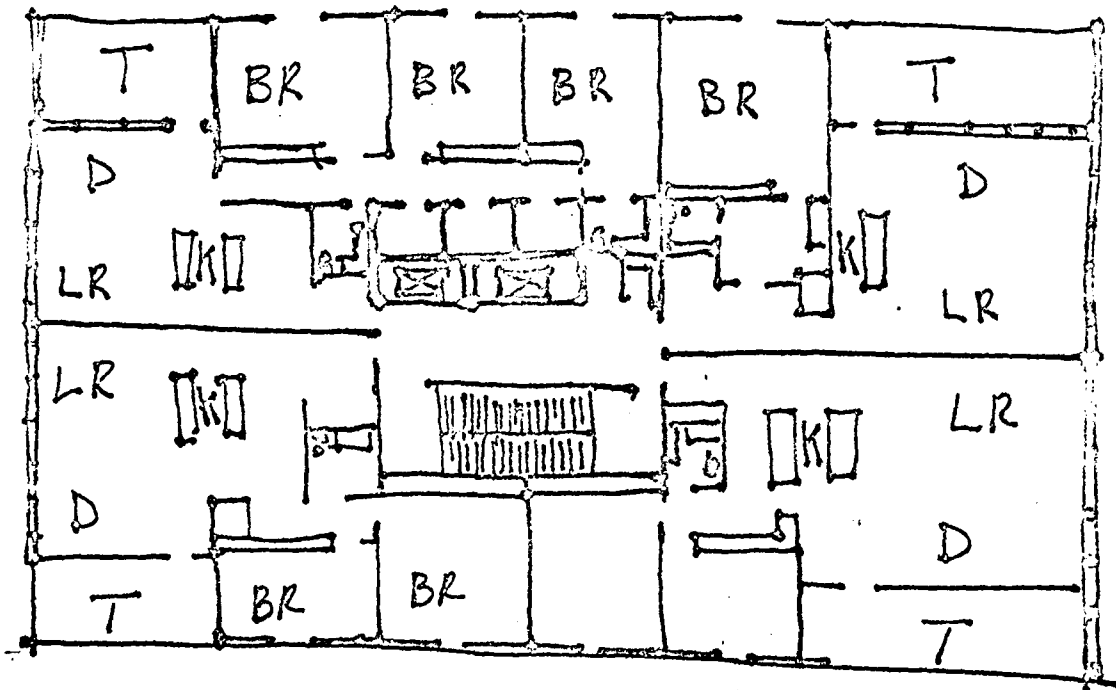


FIG. 4: POINT APARTMENT

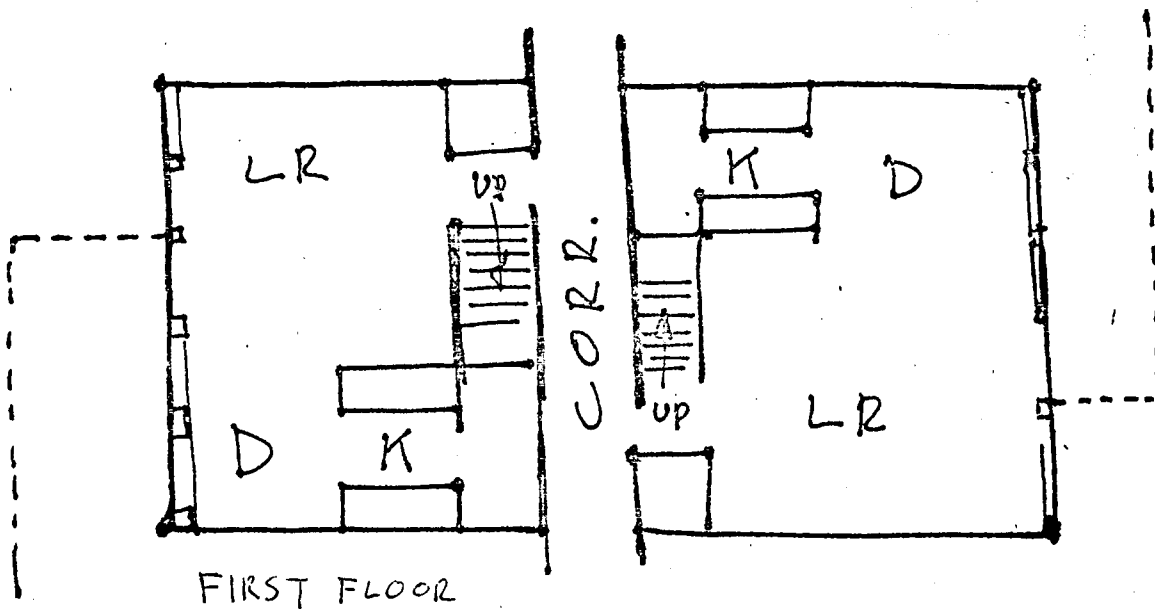
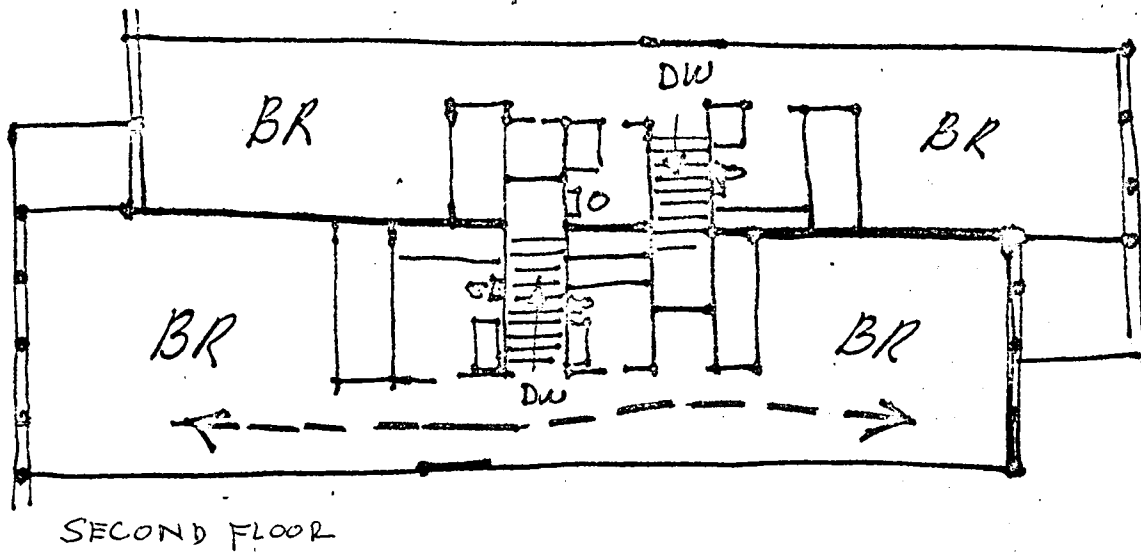


FIG. 5 : CROSS-VENTILATION

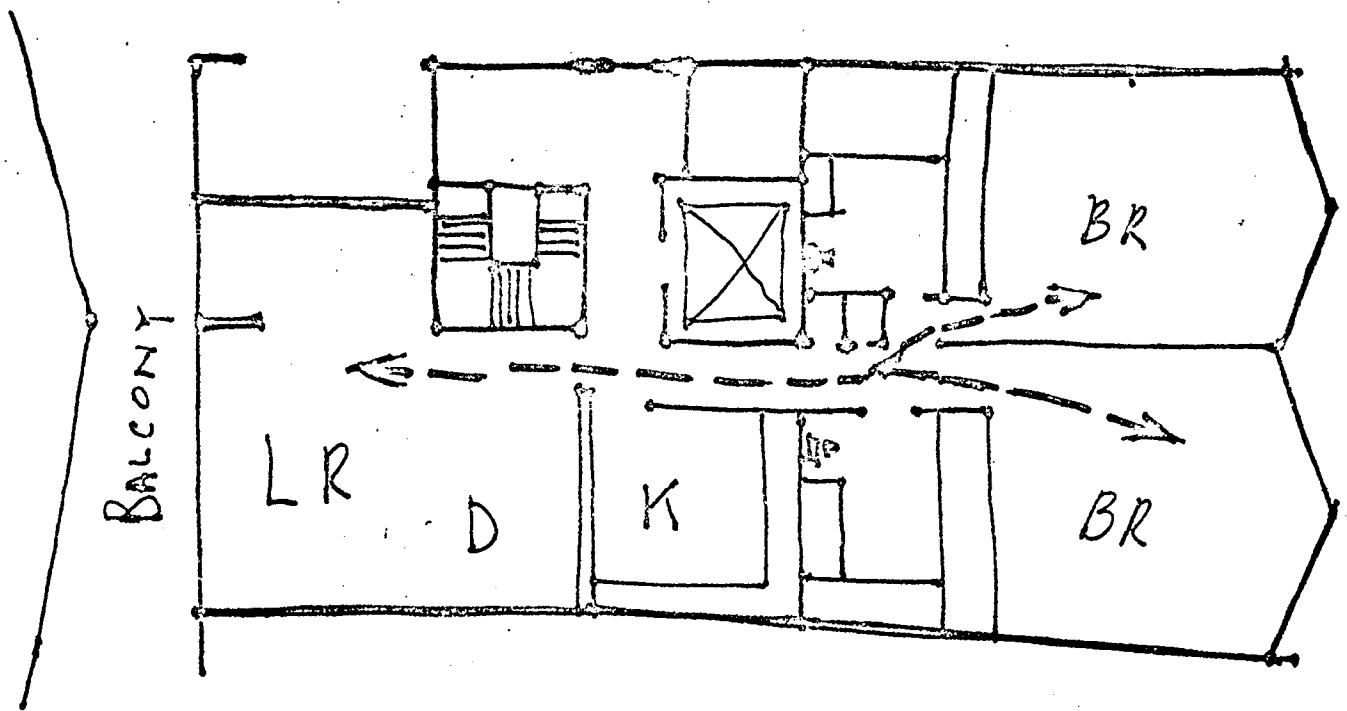


FIG. 6 : CROSS-VENTILATION

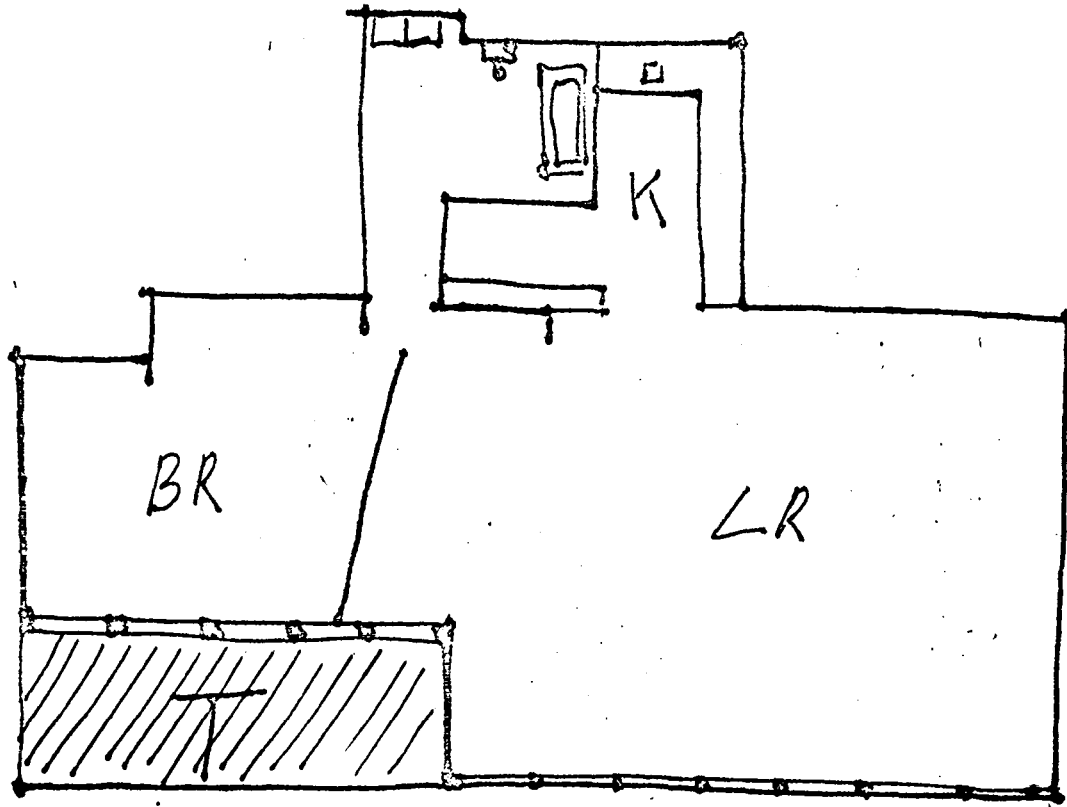


FIG. 7 : PRIVATE PATIOS IN THE SKY

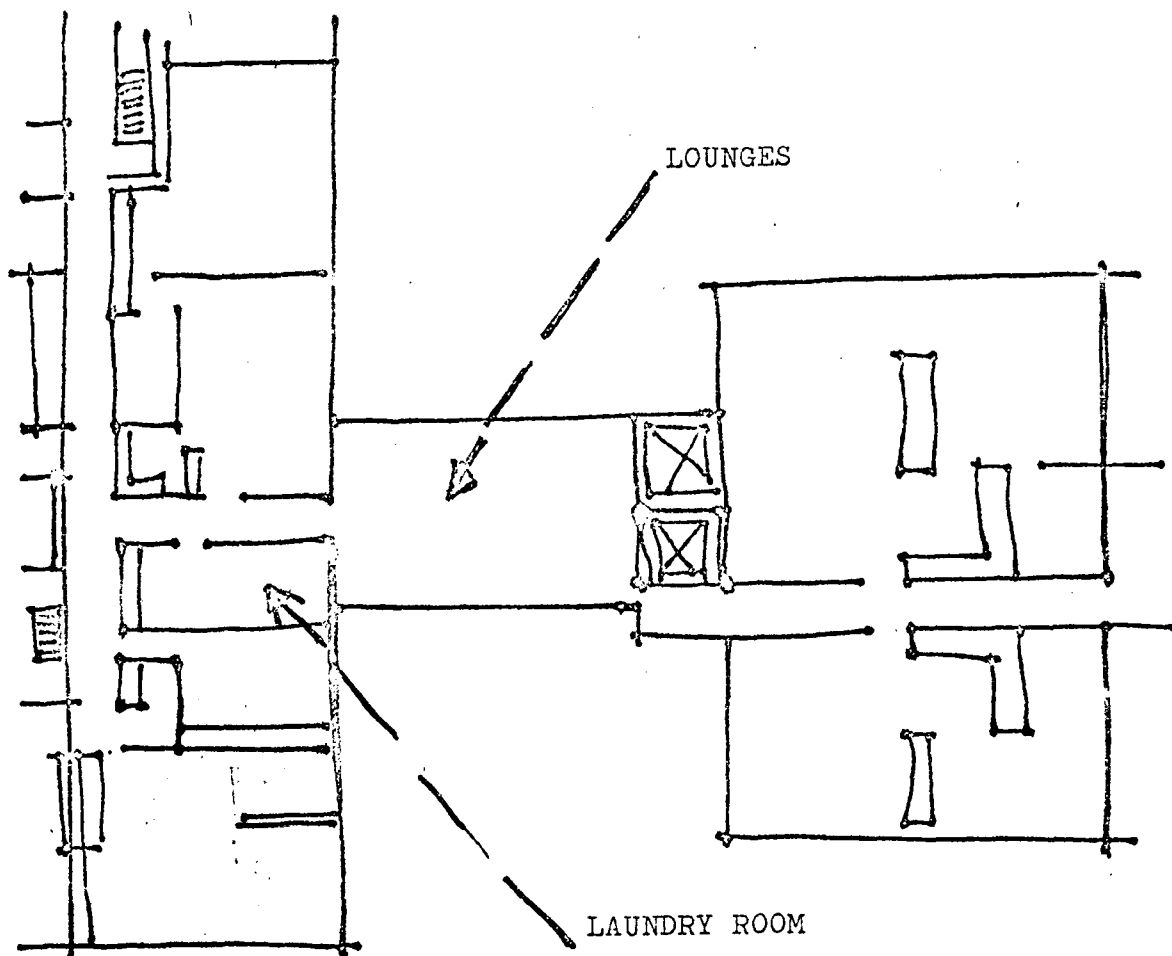


FIG. 8. : COMMUNAL SPACE WITHIN THE BUILDING

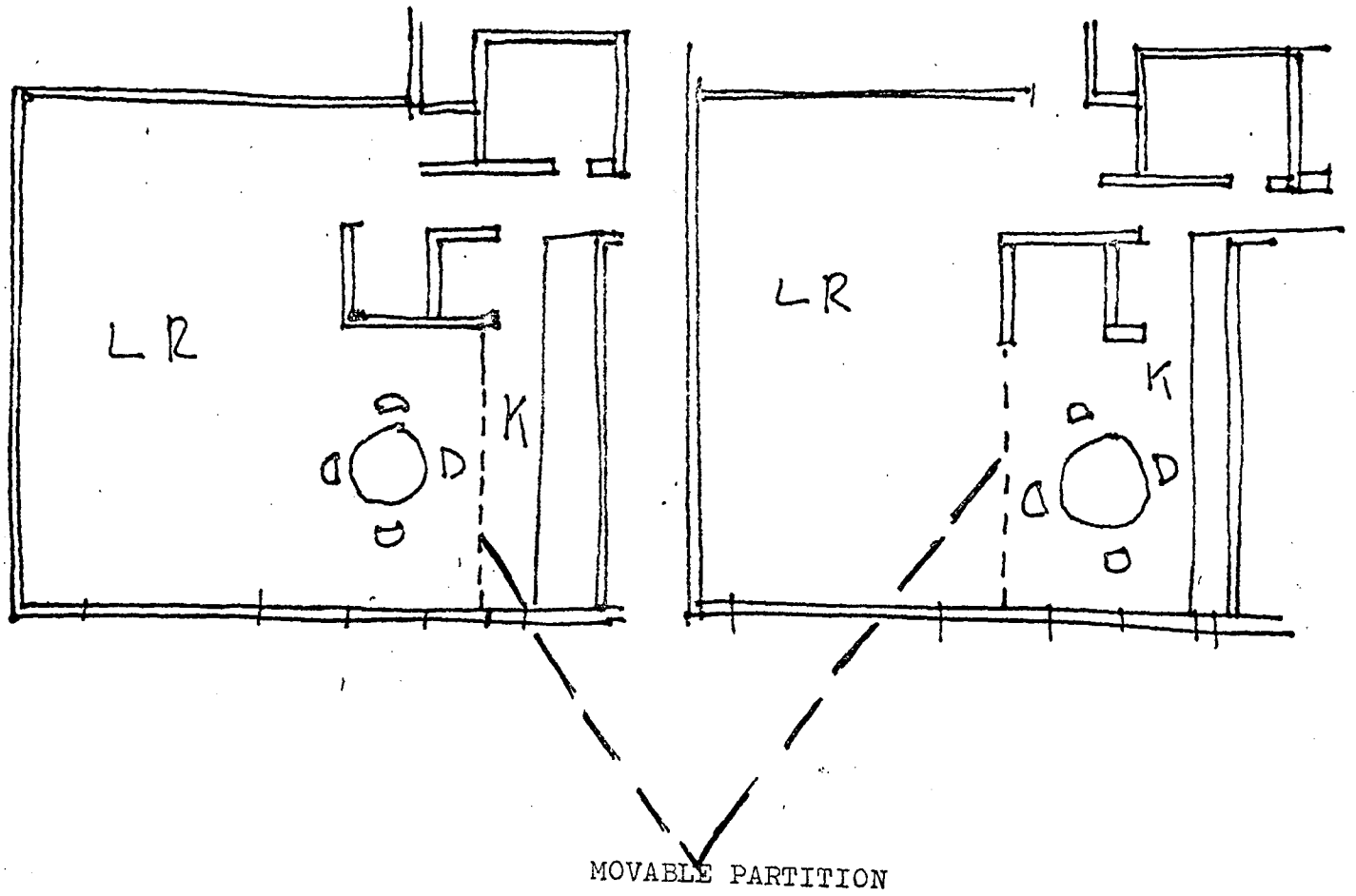


FIG. 9 : BIGGER KITCHENS

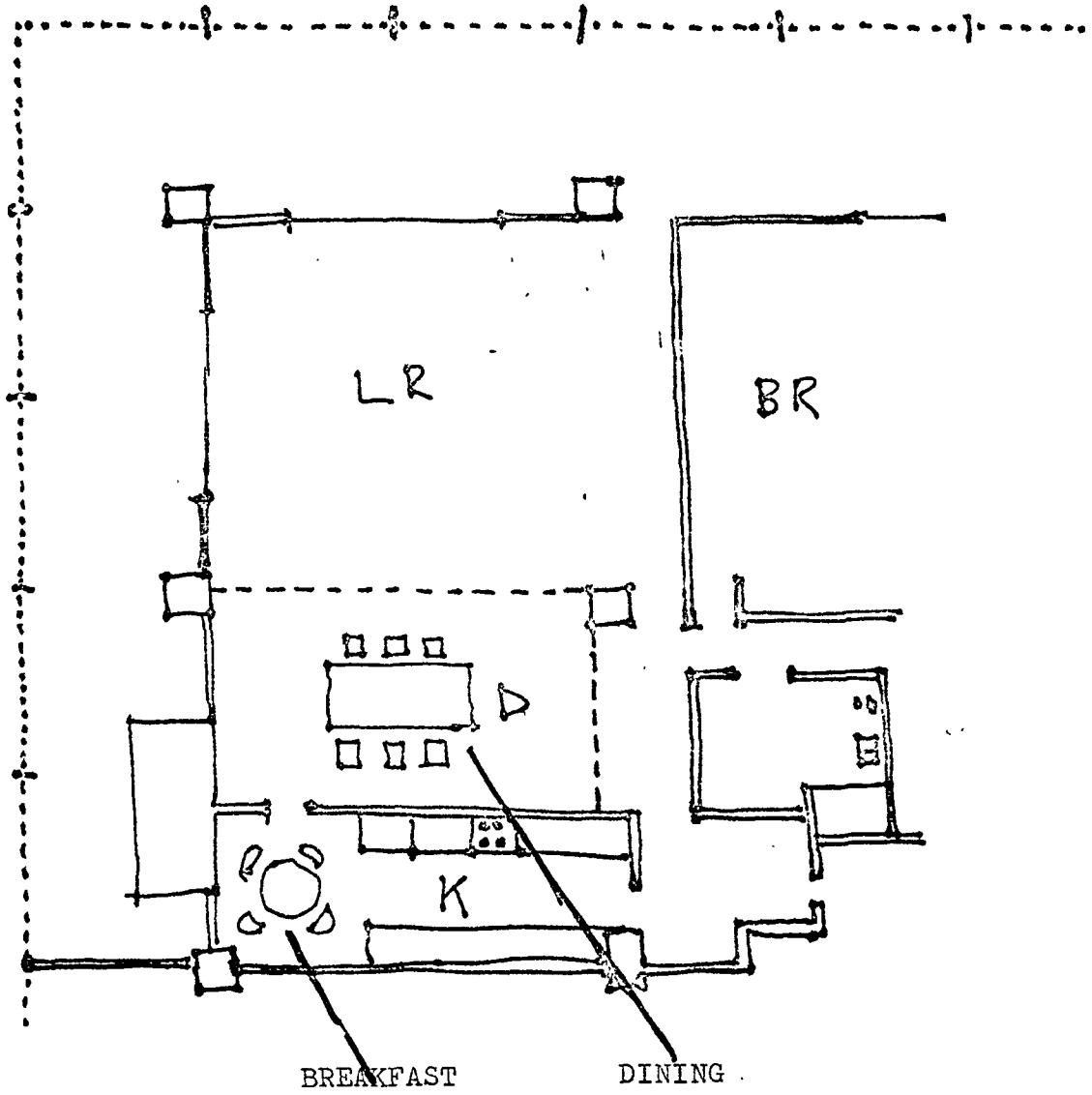


FIG. 10 : KITCHEN-DINING ROOM

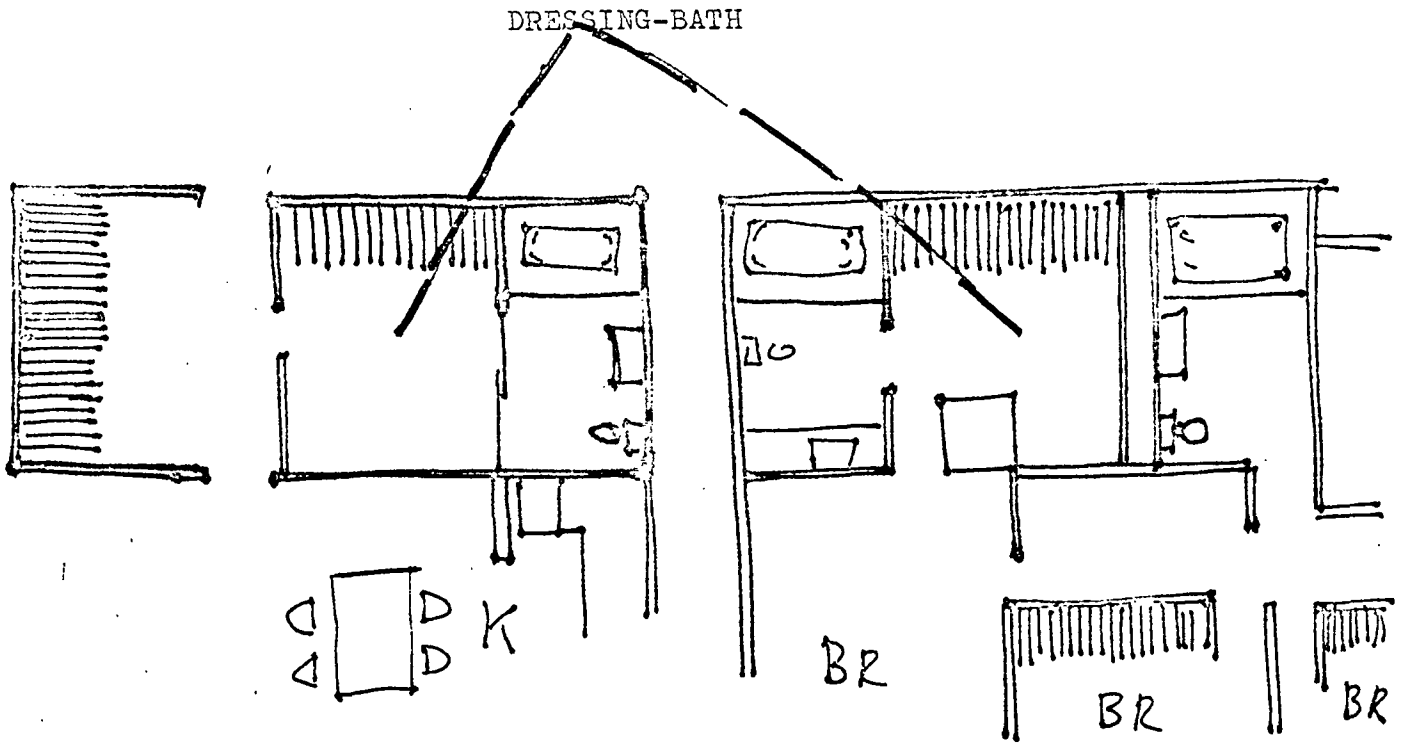


FIG. 13 : DRESSING AND BATHROOM AS ONE UNIT

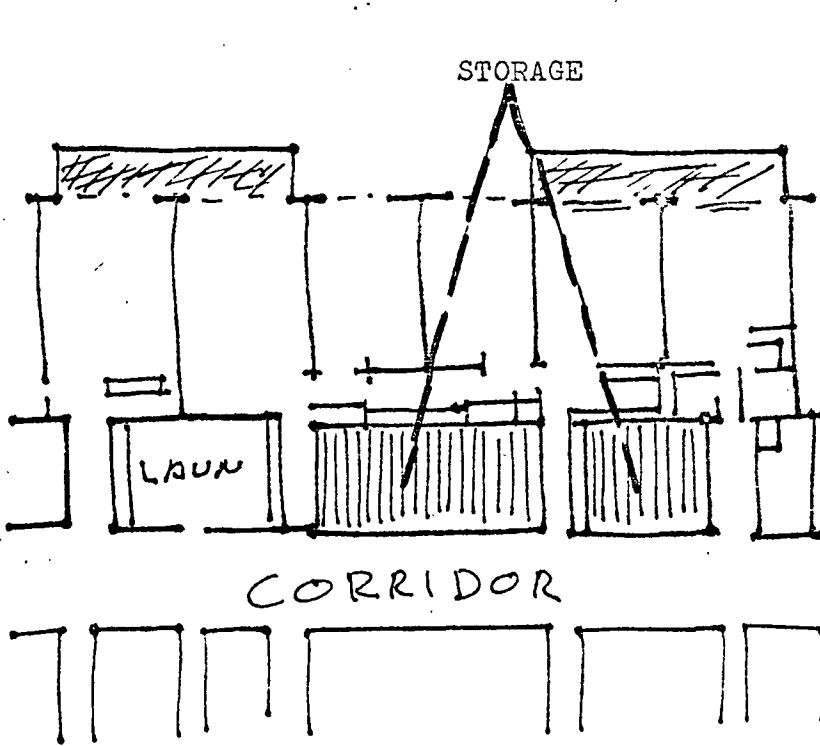


FIG. 11 : STORAGE IN PUBLIC CORRIDORS

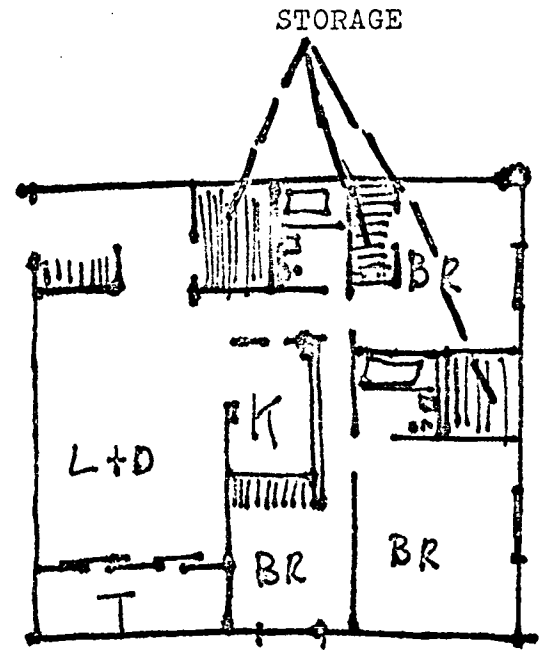


FIG. 12 : WALK-IN CLOSETS

PROBLEMS OF HIGH....Physical problems

DENSITY LIVING

In the high rise rooms tend to be too small and cut up; there is no acoustical privacy; there is a lack of adequate outdoor private space; hardware and fittings are cheap; the paint job is poor; there isn't enough parking; the scale is inhuman; and surroundings are always crowded. Many units lack proper ventilation; sunlight and air. However these physical problems don't seem to bother many of the people who live in the high rise. They seem to be rationalized away by the attractions of the high rise such as swimming pools, sauna baths, murals, doormen, caterers, built in garages, elevators, luxurious lobbies, balconies, and prestige of name, location and views.

Social problems

As Herbert Gans says, "different people live very different lives even though they reside in the same community". A person living on the next floor of an apartment lives a completely different life than someone on

the lower floor, yet they occupy the same amount of space, layed out in the same manner and with the same exterior appearance. People want to be highly individualistic and independent. Most people are trying to fulfill the goal of the so called American dream, that is, to achieve material success and stability. This dream is manifested in the ownership of a single detached house. The separate house represents the individuality of the occupant and permits the expression of his taste in the choice of design.

This is important in a society that is increasingly becoming characterized by large scale conformity. The detached house overcomes this conformity because it permits the owner visual and acoustical privacy and leaves him greater freedom of activity. The high rise does not contribute anything toward the individuality of the occupant, it lacks the necessary diversity and flexibility of the detached house.

Each individual has his own private aspirations in life. These aspirations are fulfilled by human contact on all levels (intimately and socially).

Therefore each individual and each group in society subscribes to a particular life style. As a person grows older his needs change. For example, the needs of an individual are different when he is a bachelor than when he is married. Again they change from being a husband to being a father. As the needs change so do the space requirements. Where a bachelor can live without private outdoor space, the family cannot; the family without children can make do without ground contact while the family with children has to have ground contact around the house. The same differences exist with the senior citizens and the young family. While ground contact may be required by some, human contact is required by all. This contact must be of every kind possible: between young and old, rich and poor, intimate and public, etc. In order for this contact to occur the environment must be diversified. (See Figure 2) A variety of people must come together so as to form a heterogeneous environment and at the same time be homogeneous enough so that each one can identify with his own group. If homogeneity exists in isolation,

the people belonging to the group cannot progress socially because their values and norms become frozen in time. They have no one to compare their values with, thus no progress can be made. The high rise tends to intensify the problem by isolating social groups. It promotes homogeneity because it appeals to only certain groups of the population and even at that these groups are socially isolated from one another. The life in the high rise for most people who live there becomes a fad, the "in thing" to do. For those people who have no choice, the high rise becomes a prison and a thing to hate and despise. The many families who live in the high rise, especially in the U.S. in public housing, makes for a sad situation. It's sad because the facilities offered are not suited for family environment. There is no ground access for the children, so they play in corridors, elevators and up and down stairs. The scale overwhelms the family and its activities. A large percent of the children suffer from what has become known as the "cube syndrome". That is, they are oriented to being indoors, living in

cubes--rooms, apartments, elevators, halls, etc. They have learned to cut off whatever is going on around them to make it possible for them to exist in limited quarters surrounded by a hectic, noisy and oppressive world. They become unresponsive, hyper-active, undisciplined and aggressive. They do not know how to play or communicate. In group activity they become destructive and overt in their behavior which in many cases results in mental health breakdown.

For the adults living in the high rise, the social isolation can lead to a life of loneliness and alienation. There is very little dialogue between tenants living in high rises. What little of it that occurs, it takes place in the laundry rooms, elevators and hallways, and even at that the form of conversation taking place is frequently superficial. While many people are living there because they desire anonymity, solitude and seclusion, they do not choose to be lonely and isolated, and will become involved with other people and the community if the proper opportunities are provided. Most

people do not want to be unfriendly and uncommunicative, but the high rise environment makes them feel alienated and makes them reluctant to relate to anyone else even on a superficial basis.

When boy meets girl and they get married perhaps they leave their bachelor apartments and move into a one bedroom apartment because they are both working and can now afford more living space. But once the first child arrives they have to move either because of the "no-pet-no-children" clause in their contract or because they feel that the environment is not suited for them any more since they no longer belong to the "in group" and cannot participate in the activities with their former friends. Even if they decide to remain in the high rise if their contract allows children, with the growing number of children they would not be able to afford the amount of space they would need because now the wife is not working any more.

And if they could afford it, the community in many cases does not offer any advantages

to the child development because of lack of recreation facilities and adequate institutions. In conclusion, it is evident that all the different age groups living in the high rise have some type of problem, whether it's physical or social, it's not important. The importance is that some means have to be found to solve some of these problems and make the high rise a place fit for living in without losing our humanity.

Technical problems, the root of all the problems

The technical problems arise out of the limitations imposed upon the designer. I will discuss six of these limitations, the ones I feel are the most important.

1) Anonymous Client

When a high rise is designed, the client exists in the form of a statistical figure only. There are no personal identities, nor any human idiosyncrasies to be designed for. The characteristics of the

client are deduced from the market demands as to what form is more likely to make the greatest return on the investment.

2) Undifferentiated Client

Since the client is anonymous, the designer is forced to deal with a very narrow band of the social spectrum. This band lacks character and economic diversity. The result is a monotonous array of similar units that try to appeal to the narrow band in general and to no one in particular.

3) Standardized Technology

The essential logic of stacking layer upon layer of floor planes dictated by the cellular nature of the basic units: Bachelor, 1, 2 or 3 bedrooms suite is imposing restrictions on the freedom of expression of both, the architect and the occupants. Structural and mechanical standardizations do not allow for visual variety. The only concern seems to be how the apartment block meets the ground

and the sky. This is true perhaps because these are the two points where the standardized technology does not impose any restrictions.

4) Standardized Components

Many elements are standardized and repeated throughout the building. This is done so that elements can be mass produced in order to reduce costs and construction time. The result of standardization of components is lack of diversity, personal taste and aesthetics.

5) Economic Constraints

Land costs and lack of suitable financing plans are usurping funds that could be and should be used for things such as acoustical privacy, visual quality, refinement of details, choice of materials, adequate ventilation, larger units and better balconies.

6) Codification of Design

Zoning By-Laws impose arbitrary restrictions on the site development that may prevent

an architect to innovate. The zoning By-Laws tend to take into account only the physical qualities of a building while the social qualities are for the most part ignored. The result of such restrictions is an environment that does not provide a satisfactory relationship between the man-made and the natural components of the human environment.

In view of the problems stated in the foregoing pages, what can be done to make this high density jungle a fit habitat for human beings?

How can future high density housing be designed so that it accommodates the process of life and the social types of every variety, age and circumstance? How can more space be devoted to small areas of active private use and less space to large areas of passive communal use?

PART III

CONCLUSION

CONCLUSION.....In order to solve the problems of high density housing, I feel that all financial restrictions must be removed in order to allow an unlimited amount of money for research and testing of new concepts such as "HABITAT".

The research should be conducted in areas dealing with land costs and land banks, development of plastics as building materials, mass production of housing, unit adaptability, built-in obsolescence, and in areas dealing with materials and construction costs.

Since it is extremely difficult to test new concepts on paper they should be developed physically and tested in reality. With the development of unit adaptability and built-in obsolescence concepts this means of testing could become economically feasible and a great tool for solving some of the problems of high density housing or of housing of any sort.

Furthermore, since housing is of national importance and affects every citizen across

the entire country, I feel that the government should play a larger role in the field than it does at present. Housing is just as much a matter of life and death as medical care and hospitalization yet the government provides a medicare plan why can it also provide housing for everyone instead of just for the low income people? All the government has to do is expand its operations in the field of housing from subsidizing construction to actual involvement in construction.

I know that this would be an infringement on free enterprise but I feel that free enterprise has had its chance and it has not solved the problems of housing, thus public enterprise should be given a chance. I am not advocating the take over of free enterprise rather I am saying that the government should be allowed to work in the same field along side the free enterprise, and perhaps together they can resolve the housing problems, especially those of high density housing.

As for the question of high density family housing, well, at present there isn't any

adequate high density family housing but it is needed and it will be needed even more in the future. The major causes that are preventing good family high density housing is the lack of sufficient funds to build-in the proper facilities needed and the lack of ability of the would be occupants to pay for them if they were made available. So at present, this is not a problem but it is a dilemma. If the facilities are provided the family cannot afford to pay for them, thus the family suffers. If they are not provided because the family cannot afford them, the family suffers just the same. Therefore new concepts of high density housing have to be arrived at and new means of financing have to be implemented so that the family will be able to live in a dense environment satisfactorily. I wish that I could suggest new concepts and new means of financing, but like anyone else I don't have any answers at present.