RICE UNIVERSITY

AN INVESTIGATION INTO THE PROBLEM
OF OPEN URBAN SPACES
IN COMMUNITY PLANNING

by

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Our time is a time of transition, characterized by a crisis of the traditional systems of truth and a generalized confusion of values. The lack of a valid philosophy reflects in single works of architecture as well as in the whole city and consequently in the public lack of interest in architecture.

In order to build a better environment for human life and regain some of its traditional power of communication, we must go back to the essence of architecture, which is the concept of architecture as creation of living space environment for human life.

The concept of open urban spaces as social spaces, recreational spaces within the self-contained community, and a structural system of circulation and transportation will give structure and order to the city and bring us back full turn from urban flight and social disintegration.

The growth of the cities will be absorbed by self-sufficient communities of this type and by simultaneous replanning of the old city in its two contrasting areas:

The archetypal suburb of today must trade some of its excessive biological space for social space, and

The congested city must introduce into its overbuilt quarters sunlight, fresh air, private gardens, parks, public squares and pedestrian malls in order to fulfill the social function of the city and make it as favorable a place as was the older suburb.
The open urban spaces in the community are fundamentally destined for pedestrian circulation, places for activities, spaces to go to, and spaces to go through. This is best expressed physically by a rhythm of enclosure and relief that produces also a modulation of the community into units of different size and character providing a wide choice of convenience, social contacts, and challenges that will enable the child as well as mature man to find his place in the city and in society according to his psychological and social background.

The hearts of these units are always functional open urban spaces which are interlocked, overlapped, and connected by pedestrian circulation.

The open urban spaces are surrounded and defined by residential and community facilities which must express the relative importance of each unit within the total community and city, in order to produce a hierarchy of spaces and buildings, clearly recognizable throughout the whole community, from the single family unit to the central business, cultural and administrative district.

In order to express this symbol powerfully, the architect has to choose a style easily understandable by everybody, a style of biblical simplicity. Nevertheless, the whole environment must be rich and stimulating; it must be enjoyed as a work of art that lives with its inhabitants and is able to teach them that the supreme reward in life is life itself.
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INTRODUCTION
Art is not a world apart for an elite. There are no mysteries in art, only the central and eternal mystery of life. Every masterpiece concerns these mysteries and so will any true philosophy of art.

The right context of art is the context of human life. It is the struggle to create a happier and wiser man.

Seen in this context, art is no darkness but a light in the process of education of man, making him fit for life, integrating him into society and making him feel in harmony with his environment. The response of man to his environment determines the progress of this process of education.

The most typical environment of our civilization is the city, discipliner of the social being and container of all social life.

The city is the maximal creation of architecture; and architecture is an art; therefore, must the whole city be experienced as a masterpiece never to be forgotten even if experienced only once.

One thing we know for sure is that every masterpiece has a spiritual significance which comes from higher levels of experience yet speaks to man directly. Everyone thinks about the aims and the end of this life.

Only free enjoyment and personal interpretation can help lead man back to the city and to society.

To interpret art in a more personal and emotional way is not to deny its abstract qualities. It means responding as a whole human being to a whole work of art. The reply must be felt.

"The enjoyment of art is objectivated self-improvement."¹ Theodore Lipps

¹Sight and Insight, by Alexander Eliot
But....

"How can man learn to know himself? By reflection never – only by action! In the measure that thou sekest to do thy duty, Shalt thou know what is in thee. But what is thy duty? The demand of the hour!"

-Goethe

What is our hour?

Transition – Crisis – Confusion

What is our task?

To investigate the roots of the crisis, and to find a way out.

Our time is a time of transition, characterized by a crisis of the traditional systems of truth and a generalized confusion of values. The lack of a valid philosophy reflects in single works of architecture as well as in the whole city, and consequently in the public lack of interest in architecture.

The challenge of the technical development of the next few decades will force mankind to develop further wisdom in the field of his attitude to the relation of the individual to society, and of human societies to the rest of the nature by which they are surrounded.

The more pressing challenge will come from increasing urbanization. In global terms the problem is that while world population increases by about two per cent a year, the total population of sizeable towns increases by about four per cent a year.

We will see the development of a whole new applied science, "the
discipline of human settlements, which the Greek town-planner Doxiadis has proposed to christen "Ekistics". And, of course, it will be realized that the task, in this connection also, is nothing less than the complete remaking of the setting in which life is to be carried on: the urban landscape.

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2 Architecture in Transition, by Constantinos Doxiadis
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FIRST PART
ARCHITECTURE AS SPACE

The spatial essence of architecture has been divined by many writers though they have not subsequently elaborated a spatial interpretation of architecture.

The ancients, like Lao Tse, affirmed that the reality of a building does not consist in four walls and a roof, but in the space enclosed, the living space.

The treatise writers of the Renaissance who hint at the problem; and later, Riegel, Frobenius and Spengler in studies on "the feeling of space" to the extent that it applies to architecture; and contemporary architects, particularly Frank Lloyd Wright and Mendelsohn, stand out in comprehending the problem.

Often a brilliant intuition of space is followed by entirely extraneous considerations that serve but to generate confusion. This is the case of the historians and critics, Focillon and Vitalo.

Vitale in his "L'Estetica dell' Architettura," p. 40, after expounding the principles of Platonic philosophy, seeks to apply them to architecture in the following way:

"In the field of architectural esthetics, the passage from idea to concept thus marks the passage from pure extension to the concrete space, since the function of architecture is precisely the determination of space as universal container, that is, the fixing of those general relations which it, as container, has with its content, the material, from which the spatial figures are produced. It is this very passage from an absolutely free and indeterminate imaginary space to an empirical concrete space conditioned by the material that marks the creation of the work of art - the effort and the torment of the creator to fix first in conceptual terms, then in tangible relations, the indistinct lines of the idea that is flashed into his mind."
In order to clarify the essence of architecture by differentiating its field of action from the other arts, at first Vitale poses the problem clearly:

"Painting and sculpture indubitably live in space, and in this also they may be considered closer to architecture than to poetry and music. But it is a question of conventional, artificial space that adumbrates but does not entirely embrace reality.

"Painting has in fact a two-dimensional space - the plane; and three-dimensional reality is simulated by technical effort by the play of shadows and the knowable use of perspective.

"Sculpture, it is true, lives in three-dimensional space, like architecture, but in the last analysis this space is only superficial in character and can readily be reduced to a plane. In a certain sense we may say that sculpture revolves around reality, but can never embrace it entirely. A statue is fundamentally a multiple surface, a polihedron; true, it lives in space, but this space remains external to it, is not contained in it.

"In architecture, however, the space is not only external but also and principally internal; it is not used in one of its relationships, as a simple surface, but in the complex of its constructive relations, as a volume and mass. We may say, in a certain sense, that in architecture, space, though maintaining its essential character of pure extension, that is, void, somehow succeeds in achieving a corporeal appearance and in solidifying itself. The architectural work, in short, is not only something that lives in space, but also that makes space live in it."3

This is very clearly put. The same author, however, goes completely astray in the midst of his discourse by negating what he had established earlier.

The confusion between large-scaled, monumental sculpture and architecture persists throughout Vitale's book. Yet it is clear that without being architecture in

3Vitale, op.cit. p. 28
the spatial sense, a construction lacking internal space – a bridge, an aqueduct, an equestrian statue, a monumental fountain, etc. – is still a formative element of external space.

Modern criticism, having abandoned transcendental misconceptions of space on the one hand, and on the other, the biological deductions of the theory of "Einfühlung", is now in a position to study organic space, space as created by man to correspond to all his material, spiritual and psychological requirements, integrally considered.

This is the space that everyone sees and in which everyone lives; the knowledge and experience of it must be evoked not philosophically nor conceptually but directly and concretely.

The history of architecture is primarily the history of spatial conceptions. Judgement of architecture is fundamentally judgement of the space, interior of the building, or open urban spaces.

If the judgement of an architectural space is positive, it must be included in the history of architecture, even if the decoration is ineffectual, even if the building as a whole is not entirely satisfactory.

When the judgement of the spatial concepts of a building, of its volumetrics and of its decorative quality, proves positive, we are then in the presence of one of those rare integral works of art in which all the figurative means combine in a superlative artistic creation.

In conclusion, even if the other arts contribute to architecture, it is interior space, the space which surrounds and includes us, which is the basis of judgement of a building, or of an esthetic pronouncement on architecture.
All the rest can be important, but in a subordinate relation to the spatial idea. Losing sight of this hierarchy creates confusion and accentuates the present disorientation in architecture.

Space-void should be the protagonist of architecture.
2 ARCHITECTURAL SPACE

Architectural space is primarily a reality of sensory perception, an experience. It is a human experience like others; it is a means of expression like others.

Space is a reality, and once it has been comprehended in its essence, it can be grasped according to its own laws and arranged according to them. As a matter of fact, man has constantly tried to use this reality in the service of his urge for expression no less than other realities he has encountered.

"Space experiencing" is not a privilege of gifted architects but a biological function of everyone. The biological base of "space experiencing" is everyone's endowment just as is the experience of color or of tone. By practice and suitable exercise, this capacity can be developed. To be sure, there will be many degrees of difference from minimum to maximum capacity, but basically, "space experiencing" is accessible to everyone even in its rich, complicated forms.

Each of the senses with which we record the position of bodies helps us to grasp space.

Space is known first of all by the sense of vision. This experience of the visible relations of bodies may be checked by movement, by alteration of one's position, and by touch.

From the point of view of the subject, space can be experienced most directly by movement on a higher level in the dance. The dance is an elemental means for the realization of space-creative impulses. It can articulate space and order it. In the same order of space creation are circus, stage, vaudeville, cinema, light display, etc.
Further possibilities for experiencing space lie in the organs of hearing and of balance and in other possible "space experiencing" sensory centers of our body as yet imperfectly localized so far as we know.

In conclusion, the road toward experiencing architecture thus proceeds through a functional capacity for grasping space. This is biologically determined. As in every other field, one has to accumulate much experience before a real appreciation of the essential content, articulated space relations to be experienced as such, can be enjoyed. The actual "felt" quality of spatial creation - the equilibrium of taut forces held in balance, the fluctuating interpenetration of space energies - escapes the perception of most observers. A symptom of our time is that this lack of discrimination is also very common among architects, who look for the essence of architecture in the meaning of the conception of "shelter," the building, exteriors, or stylistic characteristics.

Architecture is more than shape and seeming - it is embodied soul - and can only be understood when seen against its psychological background. Every architectural "frontage" is an interior view of the mind which produced it.

Man is primarily a maker, a builder. He has always made his built environment - the city, the village, the building - a symbol for the total social, economic, cultural, and everyday standard of that time in that place. Works of architecture are like cisterns that hold all thought and intention. In fact, from its very beginning, architecture has been used at the same time as a shelter and container of human activities and as an expression of the social structure, religion, concept of the universe, and psychological background. It is an expression of the
whole human life in a specific community.

Architecture is not art alone, and it is not merely a reflection of concepts of life or a portrait of systems of living.

Architecture is environment, the stage on which our lives unfold.

Architecture is the discipline, not of designing houses, buildings, or monuments but of building the human habitat.

Architecture is the art, the technique, and the science of shaping human environment, giving it structure and meaning. Therefore is the architect responsible for leadership in the field of environmental design and its end-product, the way of life of the people.

This, of course, is not the task of the architect alone, but certainly he can play a very important role in several aspects of this great problem. The architect has to realize that he cannot impose his will on the community; he has not the last word, but he also cannot merely follow the trends which humanity as a whole imposes on him; he has to study contemporary problems and propose solutions, and he has to realize that to a certain point he is bound to follow the general trends of his epoch.
SECOND PART
PLANNING THE COMMUNITY

The town came into being after a long evolutionary period that covers almost the whole of humanity's development. From early paleolithic savagery through neolithic barbarism, the slow process eventually culminated in the birth of the town - the leap from a nomadic or rural pattern of life to a modern, industrialized system.

The town has existed for only some five thousand years out of perhaps five hundred thousand. Nevertheless, the establishment of the town marked a great climax in the history of mankind.

The town, a free organism in nature, disciplined the social being, and this apprenticeship of created human relationships still exists for each one of us in the adaptation to urban environment and to society.

The ever-increasing concentration of people in cities the world over raises several questions for architects and planners, politicians and social scientists:

Will the city remain the traditional center of culture, or will it degenerate?

Will the sprawling shantytowns which make up the cities of Asia, Africa, and Latin America evolve into habitable places which provide adequate services so necessary to urban life?

Will the shabby, decaying, smog-ridden central cities of the industrial West be cleansed of the blight which has been accumulating since the industrial revolution began?

Planning has become a primary necessity, the tool to solve the problems of the cities for habitable and peaceful environments. Planning is based on
the analysis of the values that characterize the human settlements: economic, social, technical, functional, political, esthetic, spatial, and decorative; and its final product is the sum of all these factors, a physical answer based on this synthesis.

When we speak of planning, we refer to it on the broadest type of concept:

1 Planning for the whole or the over-all needs of the city.

This would be philosophical delineations which contemplate our society today and as far into the future as we can reasonably estimate, and basic definition of the social, economic, cultural, religious, educational and practical goals of the municipality.

2 Formulation of the specific and detailed actual objectives which would accomplish and be in harmony with our philosophical goals.

In this sense, and on a universal scale, we understand architecture as a service to humanity instead of a mental exercise in the abstract.

To make culture possible and to build for a life-centered civilization through an environmental design that stimulates the self-realization of man and the development of a maximum of his possibilities within society, we must—with all our creativity and phantasy, our ability to synthesize and our sensitivity, and all our experience gained in everyday life to evaluate less precise values—try to create, through skillful and bold design, a rich human environment.

On a national scale the task is to plan for decentralization of industry
and to set up both city and industry within a rural matrix - the region planned to a human scale. This should bring reciprocal benefits:

For the city, a healthy environment, plenty of fresh air, water, fresh agricultural products, and plenty of recreational space - an urban environment which would be just as favorable to fertility, biological and spiritual, as rural areas still are.

For the country, the economic, social and cultural advantages of being close to a city, its amenities, and facilities.

This is more nearly possible today than ever before, with the help of the transportation and communication of our time.

The new architecture, on its higher plane, will be called upon to remove the conflict between the organic and the artificial, the open space and the enclosed space, between the country and the city - the grand division that emerged out of the long process of evolution of the city and which prevails everywhere today.

On the city scale, we have to realize that metropolitan congestion and suburban scattering are obsolete. Chaos does not have to be planned. Planning must produce radically new patterns for urban growth, a rejuvenation and vitalization of the city based on its most essential elements.

A considerable body of data, not only from medieval Europe but from a variety of cultures, supports the point of view that even given the fact that in any society or culture rapid change occurs frequently or constantly, there are certain structural elements that are universal for all urban centers at all times:

1 A planned town, in contrast to the chaotic growth of past periods, will have to be based consciously on work, housing and amenities linked by circulation.
Mode of production; social, political, and intellectual life; religion; structure of society, and the concept of man were always closely interrelated factors and have to be in harmonious relation in all present and future planning.

II One factor that can give structure and order to the growth of cities is their organization into sectors or "communities" - largely self-sufficient, limited in size and population but big enough to sustain a variety of industries and to satisfy the everyday wants of the population, amenities, and cultural life proper to a town.

There is a general opinion among city-planners and social scientists that this can be achieved by making the community no smaller than fifty thousand in order to secure a meaningful sequence of association as well as a complete cultural life. The community will be conceived as a unit, as self-contained as possible, with centralized functions, institutions, and facilities, possessing its own connection to the transportation system. It will be surrounded by a belt of agricultural land and will have the necessary economic, social and political relation to the surrounding countryside, resulting in a balanced micro-region closely connected to the regional metropolitan center and other similar communities.

The "community" is now the unit of urban design. It has to serve the needs of society, that close human association characterized by:

1 Communication, the fundamental urban value, is the opportunity for men to meet to combine their efforts and to interchange ideas. This interaction is the way for society to bring out the best of its members for leadership. Every time we study the process of a historic change, we find the action by a small group of individuals at the start of the process. We cannot create great men at will, but we can create and multiply the settings within which potential leaders and geniuses will have
the greatest chance of developing and gaining recognition. The more we improve communication among the inhabitants of a community, create workshops and research groups, and activate the fermentation of ideas, the more we will be creating environments receptive to what great men have to offer. In this way we will improve our chances of having the right men in the right places during the crucial moments of history.

2 **Responsibility** should be spread throughout the community, in partnership and leadership, in the grass roots of democracy, local government, identification and in civic pride.

3 **Co-operation at work, in responsibility on local problems, and in sharing facilities.** If we agree to conceive all acts of mutual aid and assistance as barter or exchange, it will be evident that all living together is a continuous exchange of such aid and assistance and that the degree of its intimacy depends upon frequency.

Most social scientists believe that the evolution of cities and civilizations has resulted from an increased cultural interaction and interdependence. If we look back at the factors which made us, first, human beings and then civilized beings, the most striking of all, perhaps, is man's capacity to recognize as members of his own group an ever-growing number of individuals separated by ever-increasing distances from his clan, tribe, nation, religion and hemisphere.

Our society became disunited because it could not adapt itself to the individual's sense of his own integrity. A new social order will be possible only insofar as it provides for personal freedom, and this is largely a question of providing the opportunity for creative activities that can give the individual's life dignity and the feeling that he can contribute to the welfare of his country — that he has had his chance in life and that he has made the most of it.

III Another factor that can provide order and structure to the city is transportation and circulation.

The framework of circulation has expanded with our modern technology and changed the relationship of man to architecture; the problem of scale has now become a problem of scales of man, car, aeroplane, and rocket. This
breaks up the space in which we live and creates our architecture. Circulation can provide order and structure for the human environment.

A good transportation system minimizes unnecessary transportation; and in any event, it provides a change of speed and mode to fit a diversity of human purposes. Each type of transportation has its special use. A good transportation policy must seek to improve each type and make the most of it. There is no "ideal" speed or mode; human purpose should govern the choice of the means of transportation.

The highway in the city will only increase the erosion of its social facilities and accelerate social and civic disintegration. The necessity of clover-leaves, complicated multilevel interchanges and parking facilities and freight yards will use more precious urban space in the heart of the city.

"Regional and transcontinental trunk systems will, therefore, not invade the city, but change to a local artery for drop-off traffic, without breaking the bulk of goods or replacing the vehicle."4

The scale and the esthetics of the machine belong to the highway. Its design should be as clean as possible; it should be neat, combining balance of forms and colors, and natural levels of landscape — but that is all — no other attractions or strain for the driver's attention.

It is doubtful whether the experience of space one has in riding in an automobile, along a straight highway through miles of inhabited flatland, can be defined as an architectural experience in our present use of the term; but it is 4The Highway and the City/Landscape and Townscape, by Lewis Mumford
certain that all urban space wherever the view is screened off, whether by walls or rows of trees or embankments, presents the same features we find in architectural space.

IV A person becomes a citizen in the street and on the city square. Street and square are not for traffic to pass through but spaces for people to remain within. The open urban spaces will, therefore, be controlled by the human being — on human scale, exciting and stimulating communication, interaction and interchange. Without such spaces for market, religion, political forums — planned more or less as enclosures — there is no city.

The urban beauty is a beauty of walking, even in our age of cars and planes. "The esthetic of the machine belongs to the townless highway."5 Cars enter any part of the sector and serve it without crossing it. Between the sectors, bridges which will contain shops and other facilities will attract people to move undisturbed from one sector to the other on foot. The heart of the community will be also reserved exclusively for pedestrians.

Together with the car, the modern means of communication have made for no real occasion for social congregation. This is an irreparable loss because there is no substitute for the spontaneous social conflux. But in most cases we still have to walk to school, recreation, facilities, or work. These elements will be located around open urban spaces on circulation nodes and will have a strong expressive force, symbolic of the community life.

The way of life itself, a well-rounded life in a free community, will be the principal motivation in the design of these "intentional communities,"

5The Highway and the City, by Lewis Mumford
real fellowships in life, regarding community life as a continuous group psycho-
therapy in our sick society.

Ideally, the concepts of the community-block and the open urban
spaces used as social spaces are powerful social forces. From a starting point of
meeting on the street and sharing communal domestic services, the residents be-
come conscious of their common interests. Finally, we must underline that there
is more to the community facilities than the conveniences they offer - community
facilities are the raw material for the construction of social space.
THE CITY:

HOUSING

FACILITIES & AMENITIES

COMMUNITIES

WORK

TRANSPORTATION & CIRCULATION

HIGHWAY

LOCAL ARTERY
According to the plan document, the per capita income has gone up from Rupees 275 to Rupees 325 at 1960-1961 prices.

At the end of the Fourth Plan it will go up to Rupees 417 (Rupees 532 at 1965-1966 prices).

About 28 million new jobs have been created which will further increase to 47 million by the end of the Fourth Plan.

The per capita availability of cloth has increased from 11 meters to 15 meters.

Life expectancy has risen from 32 to 50 years.

About 52,300 villages and towns have been electrified, compared to 3700 in 1950-51. Under the Fourth Plan 57,700 more villages and towns will be electrified.

700,000 wells have been sunk in villages and 17,000 villages have been provided with pipe water supply.

The number of children at school has gone up from 23.5 million to 68 million and will go up to 97.5 million in 1970-71. The number of college students has increased from 300,000 to 1,100,000.

The number of hospitals and dispensaries has risen from 8,600 to 14,600. There are also 8,000 maternity and 48 child welfare centers.

Family planning centers have increased from nothing to 11,474 and will increase to over 48,000 by the end of the Fourth Plan.

The country has 240,000 hospital beds, 86,000 doctors, 45,000 nurses. There will be 3,000,000 hospital beds, 131,000 doctors and 87,000 to 99,000 nurses by the end of the Fourth Plan.
OPEN URBAN SPACES IN THE COMMUNITY

The great function of the city is to give a collective form to what Martin Buber has called the "I-and-thou relation," to encourage meetings, encounters, challenges between varied persons and groups, to provide a stage upon which the drama of social life may be enacted, with the actors taking their turns as spectators. Therefore do the urban spaces have a social function to perform.

The social function of open urban areas in the city is to bring people together. Socially speaking too much open space may prove a burden rather than a blessing. It is the quality of open spaces, their charm and accessibility, that counts far more than gross quantity.

To understand how important the social role of open spaces is, we must take into account three changes that have occurred during the last century:

a Physical congestion is no longer the sole possible way to bring a large population into intimate contact and co-operation.

b The almost antisocial concept of buildings as free-standing structures in a parklike landscape wherever land is available at reasonable prices.

c The general reduction of working hours and the increasing shift of work itself from industrial occupation to services and professional vocations; we have now to provide recreational facilities for a whole leisured population.

The achievement of a fresh form is not a mere external matter. All its factors should be subservient to the daily contents of modern living and to the efforts to find a comprehensive form for these contents.

The Grass Roots of Art, by Herbert Reed
Architecture, as creation of living space, will be brought to its fullest realization when the deepest knowledge of human life as a total event in the biological and sociological whole is available. One of its important components is the ordering of man in space, making space comprehensible by its articulation.

Our concept of architecture will consider and realize beyond the single unit, the group, the town, the region, and the country - in short, the whole tied together by a sequence of articulated spaces.

The concept of open spaces will aim at a continuous and uninterrupted definition of spaces for circulation and places for activities. The walls of the buildings and, specifically, its facades no longer constitute the limit of the interior space of the street or the square and are thus to be characterized in terms of the urbanistic void they help create.

Container and contained are mutually interdependent. The architectural synthesis will be positive in character, and active, that is, sometimes intentionally not balanced for a "fill-in" with the mind - not complete for a stimulation of spiritual experiences. The challenge for the architect is to enable man to feel as much at home in these open spaces as he does inside his own home.

To feel architectural space requires movement and pause; therefore must the open spaces be fundamentally spaces for circulation and places for activities, enclosure and relief - places to go to and spaces to go through. The spatial co-ordination can now be expressed as co-ordination of all architectural elements with one another and with their surroundings.

The whole community will be built up from a hierarchy of associational elements which will express the various levels of association. Therefore
must we seek the creation of proper spatial units and their proper relation to their surroundings. This implies cohesion between the elements and roots in their environment. The open urban spaces become the hearts of this hierarchy of units which ranges from the small cluster of dwellings to the total community.

The first unit within the community is the cluster of dwellings. It contains the smallest open urban areas. This unit must be big enough to produce satisfactory communication and interaction among its inhabitants, but not too big to split the unity of the group. It must provide identification of the individual with the group. The function of this unit is to provide the best environment for the development of the basic social unit, the family.

The study of primitive societies convinces us that the family cell reduced to parents and children is one of the modern world's most regrettable inventions. It is bad for a child to have only his mother or father as a model. The presence of grandparents, uncles, and aunts in the tribal-agricultural society atmosphere enriched the image of masculinity and femininity forming within him. Parents, of course, continue to play lead roles; they represent a stable basis of reference.

In our society we find these models elsewhere - neighbors and friends become putative uncles and aunts; the tribe is no longer a product of heredity but is freely recreated by the parents and those around them.

This unit should also contain people of different economic levels and all age groups. One of the crimes of our society is the segregation of old people to the poorer areas of the cities. They should remain active in the community. A good education of children requires the presence of the whole circle of life - birth as well as death. This can be achieved by making this first unit of an approximate
size of twenty families or one hundred persons, and by making the dwelling units flexible enough to be adapted to the changing size of the family. By this means a cross section of the whole city can be present in each unit, the old, single people, couples without children and complete families of various sizes, and nobody has to move from his group of friends when his space-needs change.

The open urban space, heart of this unit, must, therefore, be conceived as the intimate environment for the first level of social interaction, within the smallest of the extra-familiar social groups. This space will be characterized by quiet activities, informal, neighborly conversation of two to five persons, reading, or doing some handwork while watching the smaller children play. From one point of view this space is an extension of the home, a place for the ones who stay within the unit during the day – housewives, children, the old and retired. There must be a play area for children, protected from wind and excessive sun, and some comfortable benches under a small group of trees.

From another point of view, this space is a street, a space to go through from work and facilities to the home. The pedestrian walk should be tangent to the areas for children's play and quiet adult activities.

By the character of this space, the unit should always be on one level.

The next units represent, in a certain sense, the next levels of human association. In another sense, they are multiples of the basic unit grouped around the corresponding open space. These open spaces change according to the function they perform for ever bigger social groups. They will be provided with the facilities that correspond to them according to the frequency of their use, the walking distance to the homes and the type of service they perform.
"The maximum distance which can be allowed for a sector under full control of man is within a radius of one and a half miles, or a thirty-minute walk to work, theatre and market."\(^7\) The maximum optimum walking distances to the different facilities will be determined by the frequency of use, the age and sex of the pedestrian-users, and the type of service.

Based on these assumptions do we propose the component units for the community represented in the following schemes.

\(^7\)The Home of Man, by Le Corbusier and F. de Pierrefeu
3 SCHEMES OF UNITS AND THEIR SPACES
# Maximum Optimum Walking Distances:

<table>
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<td></td>
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<tr>
<td>- Mail Box</td>
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<tr>
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<tr>
<td>- Junior</td>
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<tr>
<td>- Local</td>
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<tr>
<td>Neigh. Shopping:</td>
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<td></td>
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<tr>
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<td>- Sports</td>
<td>Theater &amp; Exhibitions, Stadium</td>
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<tr>
<td>- Neigh. Park</td>
<td>- Local Park</td>
<td>City Park &amp; Zoo</td>
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To Privacy

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To Community
UNIT A
20 - 25 HOUSING UNITS
100 INHABITANTS

THE UNIT

THE SPACE

PLAY AREA
UNIT B.

12 UNITS A
250 HOUSING UNITS
800 - 1500 INHABITANTS

FACILITIES:
- MAIL
- NEIGHB. SHOPPING
- NEIGHB. PARK.

UNIT A

PARKING

UNIT A
UNIT C.

3-5 UNITS B
3500 - 6000 INHABITANTS

FACILITIES: ELEMENTARY SCHOOL, CHURCH, HEALTH STATION, SPORTS, PARK, LOCAL SHOPPING.
UNIT D.

3 UNITS C
10,000 - 18,000 INHABITANTS

FACILITIES:
POLICE
LOCAL SHOPPING
SPORTS, PARK
JUNIOR H. SCHOOL

1 1/2 MILE
UNIT E
TOTAL COMMUNITY

5 UNITS
60,000 - 100,000 INHABITANTS

FACILITIES:
FIRE STATION, SENIOR H. SCHOOL, HOSPITAL,
REGIONAL SHOPPING, PROFESSIONAL OFFICES,
CITY PARK & ZOO, THEATER & EXHIBITIONS.

INDUSTRY
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