FACILITATING SPACES FOR SOCIAL INTERACTION THROUGH ARCHITECTURE AN EXAMINATION WITH SPECIAL REFERENCE TO MIDDLE INCOME CLASS HOUSING SCHEMES IN COLOMBO AND SUBURBS

A dissertation presented to the
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Abstract

Social interaction is an important factor in any situation. In the journey of the life, people meet different people. Their backgrounds vary from one person to another. With reference to the residential neighborhood housing schemes, this factor is the most vital ingredient contributing to strengthen the harmony in the society. With the industrialization, urbanization and globalization the communal life in the modern society is very intricate and erratic. Due to that, the social bonds vanish from human beings. According to the lack of social values the neighbourhood will not exist for a long time. So the social spaces should be enlivened and to make more cheerful locations to the users to re - create the social bonds. Therefore the main objective of this examination is to identify the degree of social interaction in every space in the housing scheme and formulate the spatial organization to -make livelier the social interaction.

The chapter one of this examination is focused on architecture and social interaction. The attributes of architecture and the social function of architecture will be discussed in the next Then the social interaction will confer by covering the importance of the social interaction, and the modes of social interaction. And under that section, the most valuable parts will be discussed. One of them is the degree of social interaction and the other is the spatial organization for the social interaction.

The chapter two focuses on the middle income class people. Initially, converse the notion of house, home and dwelling. Then talk about the housing phenomena in extensive way. After that the categorization directly comes into the middle income class housing schemes. The determination of social class and the emergence of the middle income class are then mentioned the behavioral attitudes of the middle income class people are discussed. Finally it spotlights the instances for social interacting spaces in the housing schemes.

The chapter three thrashes out the case studies within the framework in chapter one. That gives you an idea about the social interaction space and the spatial organization of that space. In that way this examination has opened new panoramas to enliven the social interaction.

Declaration

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has been previously includes in a thesis, dissertation or report submitted to this university or to another institution for a Degree, Diploma or other qualification.

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An examination of middle income class housing schemes

Introduction

From the beginning of civilization, attention has been paid to the form, placement, and provision of human habitation. House (shelter), is a permanent shelter for human habitation. And also house is a dwelling place, constructed as a home for one or more persons. Whether a crude hut or an elaborate mansion, and whatever its degree of intrinsic architectural interest is a house provides protection from weather and adversaries.

Rapoport, A. (1969) declares,
"Shelter is of supreme importance to man. It is the prime factor in his constant struggle for survival"

(Rapoport, A., 1969: 18)

As time went by the requirements of the man has changed. Due to Industrialization, Urbanization and Globalization the people moved to the city centres to work and live. In this scenario, accommodation was fulfilled from the Housing schemes, Flats and Apartments.

Observation

Due to above reasons the words like Housing schemes, Flats and Apartments are more common words in the present society. Most of the people are living in one of these categories with the families. According to the demand the property developers and construction companies are seeking out to address this issue eagerly and enthusiastically. These companies only consider the number of the houses per land rather than their quality. The fundamental objective is only the profit maximization of these companies.

These Housing schemes, Flats and Apartments are designed by the well – known architects and as well as non – architects. But in the end, whoever the designer the ultimate product goes to the public. Public refers to people in general, who are the social animals living in the society.

Rapoport, A. (1969) affirms,

"The meeting of people is also a basic need, since the man has been defined as a social animal"

(Rapoport, A., 1969: 68)

But the so called "meeting" or "social interaction" concept does not enhance, but dilutes in the present Housing schemes, Flats and Apartments. In other words the social interaction happens in a lesser degree in the present Housing schemes, Flats and Apartments.

Criticality

The lesser degree of social interaction means the people are very individualized persons. They live in their own worlds with lot of dreams. They do not know what community living is on sharing, with other persons in the society. At least they don't know who the next door person it.

In the past, our society was very interdependent. They exchanged their goods, crops etc. with each other. Then the society was self sufficient and survived very well. The interactions, integrations were in a higher degree. With the time those qualities have diminished one by one.

But the society is a web of relationships and interactions among human beings. Understanding of how society works or ought to work has been sought in philosophy, economics, psychology, and religion. Society sustains with the social bonds. Due to lack of social bonds, interconnections, integrations and being individualizing the society will no more perform in the future. As a result the social conflicts and contradictions will come into view in the country. Then the whole nation will have to suffer that issue in any country.

Probable causes

As "place makers" the architects have to take part in an imperative role in this condition. The architects must have knowledge vast enough to create these Housing schemes, Flats and Apartments. Otherwise it affects the innocent, helpless people and the society. The identifiable causes for a lesser degree of social interaction are as follows.

1. The architect may not have that vast knowledge of how to design the Housing schemes, Flats and Apartments to enhance the social interaction in a given community.

2. The architect knows the importance of the social interaction in the Housing schemes, Flats and Apartments and also knows the way to achieve that. But the architect does not pay attention to meet that aspect very much due to other reasons (number of houses, income, profit etc.).

3. The architect knows that the social interaction is very essential in the Housing schemes, Flats and Apartments. But the architect does not have a proper guideline to get to the best design.

Method of study

As mentioned earlier, this analogical study focuses on studying the reasons for the lesser degree of social interaction in Housing schemes, Flats and Apartments as an architect and how the architect overcome that issue through the design aspect by manipulating the physical environment.

To give an idea through the dissertation more clearly it requires a proper sequence it. Therefore, the method of study is as follow.

1. Discussion of the attributes of Architecture, the social function of Architecture and the social interaction.

2. Examination of the field of housing and the social interaction.

3. Analogical study of the social interaction of housing.

4. Identification of how to manipulate the physical environment to enhance the social interaction in the Housing schemes, Flats and Apartments.

5. Examination of the correlation with social interaction and architecture with special reference to the Housing schemes, Flats and Apartments by using local and foreign examples.

Scope and limitation

Social bonds, interactions become major parts in the Housing schemes, Flats and Apartments because it influences the living pattern of the people in the society. The scope of this dissertation is to examine the social interaction in the Housing schemes, Flats and Apartments and its reflection in the physical environment.

The field of housing can be categorizing upon various parameters such as income, occupation, attitudes etc. of the people in the society. This examination mainly focuses on "Middle – income class" category in the city of Colombo and its outskirts. Moreover, it takes into consideration the low – rise buildings and carrying out the examinations and studies with an architectural point of view.

Chapter One

Chapter One – Social function of Architecture

1.1 Attributes of Architecture

Architecture is many things in one component. Some things are visible, some things are invisible, some things are tangible and some things are intangible. Where all things, tangible and intangible, visible and invisible, are in balanced harmony among themselves and with the rest of the world, constituting a useful and mind elevating whole, then this whole is "architecture".

Architecture is the practice of building design and its resulting products; customary usage refers only to those designs and structures that are culturally significant. Architecture is to building as literature is to the printed word. Vitruvius, a 1st-century BC Roman, wrote encyclopedically about architecture, and the English poet Sir Henry Wotton was quoting him in his charmingly phrased dictum: "Well building hath three conditions: Commoditie, Firmness, and Delight."

Ching mentions,

"Architecture is normally conceived (designer) and realized (built) in response to an existing set of conditions. The conditions may be purely functional in nature, or they may reflect, in varying degrees, social, economic, political, even whimsical or symbolic intentions". (Ching, 1979: Introduction)

Architecture is the combination of art and science. It is the mother of all art forms.
As an art, architecture satisfies more than the purely functional requirements of a building programme. More prosaically, one would say today that architecture must satisfy its intended uses, must be technically sound, and must convey aesthetic meaning.

According to Frank Lloyd Wright,

"Architecture is that great living creative spirit which from generation to generation, from age to age, proceeds, persists, creates, according to the nature of man, and his circumstances as they change. That is really architecture."

Architecture deals with forms and spaces. Therefore, architecture manipulates spaces, orchestrates spaces and organizes spaces in such a way that it induces (or deduces) human attraction. As a social art, the architecture fulfills the needs of human beings.

1.2 Functions of Architecture

This section discusses the role of architecture. The functions may be discussed along with the physical, psychological and social aspects relevant to the architecture.

1.2.1 Physical function

According to the Oxford dictionary architecture is the 'design and construction of buildings'. In other words, it arranges the spaces according to the aspirations of human beings and built it. As earlier said, architecture supplies a tangible and visual component. By building, it gives tangible, visible objects to the nation. To score this physical function it plays with form and shape, solids and voids and interior and exterior.

In referring to construction, architecture can produce many buildings with various designs. That is a quantitative aspect of architecture. It is very easy to build some buildings and wait in relating to physical function of the architecture. Apart from that, architecture must hold the qualitative aspects of the architectural product.

1.2.2 Psychological function

Along with the physical function of the architecture, it fulfills the psychological function in the building or the context. For an example a house is built in the best way to good quality. If the owner does not feel the quality of "homeliness", it is difficult to live in that house though the owner spends millions and millions of rupees to build it. Because the architectural space of the product should contemplate the mind very well of the user. Then the architectural space has a close relationship with the behaviour pattern of the user.

1.2.3 Social function

Architecture as a social art, it is very much concerned with the social issues. According to Francis D. K. Ching; Architecture is also a problem solving method. At last the whole benefits of architecture go to the people. That is the important task of this process. For example, the public building directly deals with the public. If the design process of architecture is not in a good level, then that architectural product cannot achieve the public's aspirations. That means the architectural product does not cater to the social needs. Therefore, a social function of architecture comes into being.

1.3 Social interaction as a social function

Interaction is a kind of action that occurs as two or more objects have an effect upon one another. The idea of a two-way effect is essential in the concept of interaction, as opposed to a one-way causal effect.

Social interaction, or the responses of individuals to each other, is perhaps the basic sociological concept, because such interaction is the elementary component of all relationships and groups that make up human society.

In sociology, social interaction is a dynamic, changing sequence of social actions between individuals (or groups) who modify their actions and reactions due to the actions by their interaction partner(s). In other words they are events in whicb people attach meaning to a situation, interpret what others are meaning, and respond accordingly. In sociological hierarchy, social interaction is more advanced than behavior, action, social behavior, social action and social contact, and is in turn followed by more advanced concept of social relation. In other words, social interactions, which consist of social actions, form the basis for social relations.

From the times of kinship, until today the social interactions are happening in a certain degree. Kinship is important in anthropological study because it is a universal phenomenon. It connotes certain basic human attachments made by all people, and it

reflects the way in which people give meaning and ascribe importance to human interactions.

In the feudal system the people had to work for the lords. The people had to perform activities in one profession throughout their lives. In that society, people had to share their harvest among themselves without exchanging money. In that sense, within that era, the social interaction happened very well. Nowadays in the market or Pola the same event takes place to a certain degree due to the individualization triggered by globalization. As far as it is concerned, with the complexities of our needs, the human beings have to move towards to the early systems which were familiar to us.

Social interaction can be differentiated into accidental, repeated, regular, and regulated. Some interactions can be differentiated in to:

- **Accidental** (also known as social contact) - not planned not likely to be repeated. For example, asking a stranger for directions or shopkeeper for product availability.
- **Repeated** - not planned, bound to happen from time to time. For example, accidentally meeting a neighbor from time to time when walking on your street, etc.
- **Regular** - not planned, but very common, likely to raise questions when missed. Meeting a doorman or a security guard every workday in your workplace, dining every day in the same restaurant, etc.
- **Regulated** - planned and regulated by customs or law, will definitely raise questions when missed. Interaction in a workplace (coming to work, staff meetings, etc.), family, etc.

1.3.1 Importance of social interaction

Ray Oldenburg (1989) calls these social interaction spaces as the "third places". The first being the home and the second being the work places. These third places are crucial to a community.

They are distinctive informal gathering places, they make the citizen feel at home, nourish relationships and the diversity of human contact, help create a sense of place and community, invoke a sense of civic pride, provide numerous opportunities for serendipity, promote companionship, allow people to relax and unwind after a long day at work, are socially binding, encourage sociability instead of isolation, make life more colorful, and enrich public life and democracy. Their disappearance in our culture is unhealthy for our cities because they are the bedrock of community life and all the benefits that come from such interaction.

So the importance of this so called "social interaction" can be basically discussed in four main streams. The development of trust in sharing nature, development of personality, protection of the neighborhood and diminution of ethnic and group discrimination are the most importance aspects of social interaction.

1.3.1.1 The development of trust in sharing nature

Sharing is most imperative issue in social interaction. By observing others and their activities and participating in them is a shared task, such as communal activities, celebrations and events etc., can confirm their communal quality.

According to Carr,

"With the assembly of people, sharing and unity are the possible that can give expressions to communal feelings"

(Carr, 1992:34)

This is the basis in confirming the existence of a society. This enables people to feel that they are apart and parcel of the community and also makes them feel a "sense of

belongingness" within them. Anyhow, these activities gradually develop a sharing attitude which is very important in ensuring a "trust" among them.

These shared interests may vary with different life cycles. According to Christopher Alexander,

"Men seek corner beer shops, where they spend hours talking and drinking; teenagers, especially boys, choose special corners too, where they hang around, waiting for their friends. Old people like to special spot to go to, where they can expect to find others; small children need sand lots, mud, plants, and water to play with in the open."

(Alexander, 1977:349)

In these spaces, people share their experiences as well as the space itself. Observation is the most crucial factor in the development and strengthening of contacts that encourage further participation. The most vital task is the distance which makes it comfortable to talk and hear and also to recognize the facial expressions of others. Face to face contact plays a vital role in the communication scenario. One person can read the other person's way of thinking through the expressions of the face. Any truth or falsehood can be traced through the expressions of one's face. From the experiments of Alexander, shows that two people with normal vision can communicate, comfortably up to a distance of 70 feet (Alexander, 1977:312).

As architects it is our duty to create such spaces that enhance the sharing quality.

1.3.1.2 Development of personality

Personality is deeply ingrained and relatively enduring patterns of thought, feeling, and behavior. Personality usually refers to that, which is unique about a person, the characteristics that distinguish him or her from other people. Thought, emotion, and behavior as such do not constitute a personality, which is, rather, the dispositions that underlie these elements. Personality implies predictability about how a person will act or react under different circumstances.

The capability of the community space to generate interpersonal experience within individuals is the most influential factor in the nature of human development and the characteristics of daily life. Therefore, it is essential to mention the contribution of positive nature of

communal life in modifying the human behaviour and emotional growth in shaping one's personality. Contacts with a wider range of people of different ages, socio-cultural and ethnic groups can be considered as the most zealous learning experience in terms of personal development. Copying others in these settings and learning to find one's place within them help to define the sense of self.

The play ground, park and the street can be the settings in which children and adolescents loam to negotiate with others, testing their abilities of a wide range. This process continues although the profile of places and activities changes with the passage of time.

In modifying the human behaviour, the basic functional basis would be to create safe and secure sanctuaries in appropriate locations and giving consideration to the human scale and spatial qualities with potential personal meanings that can do much in enhancing one's personality.

The experiences within one's home or within his immediate neighborhood are acquired by children when interacting at play, while the youth and the adults gain such experiences when they exchange their personal views or explore the behaviour of others. These positive experiences which occur within a successful neighborhood community space, contribute immensely for their development. This will improve their sense of identity and personality.

1.3.1.3 Protection of the neighborhood

The social interaction in active public life is declining due to non – supportive activities such as drugs, crimes, kidnappings and the presence of other anti – social activities.

Many of the socio – economic and environmental factors are doggedly involved with the above mentioned anti – social activities. The combination of low – income housing with upper and middle income housing, high rates of unemployment specially among school leavers, high density and over crowding associated with sub divisions and multi occupied spaces and increasing degree of spatial mixing amongst ethnically and socially distinct population are the prime factors for negative social interaction.

Crime is a common concern and a reality in many housing schemes. Prevention of crime and other anti – social activities can be attained through the community itself. Due to good social interaction each and everybody knows who's who in the neighborhood. Therefore it is an easy task to prevent those barriers. Therefore, the healthy social interactions among the neighbours will help to identify strangers and take actions against them.

1.3.1.4 Space diminution of ethnic and group discrimination

The size of the community and the heterogeneity affects the nature of the community. In increasingly diverse communities, it is difficult to develop positive social interactions in the public realm, unless people are able to identify others with similar interests and backgrounds.

Heterogeneity, in the most residential neighbourhoods have led people to confinement within the private realm due to the simple reason being the vast number of strangers living in a common territory. The Asian community is multi – faceted along religious, language, class, cast national lines. These differences contain differences in social control, behaviour motivation, outlook and aspiration which are greatly affect by lifestyle. This encourages private behaviour and retreat into private spaces. Under this prevailing state of affairs, formation of positive social interaction is very distrustful.

Alexander states,

"The mosaic of subcultures requires that hundreds of different cultures live, in their own way, at full intensity, next door to one another. But subcultures have their own ecology. They can only live at full intensity, unhampered by their neighbours, if they are physically separated by physical boundaries."

(Alexander, 1977:76)

Referring to the above statement, the existence among the sub – cultures is not an easy assignment in practice. But through the social interaction the neighbouring communities can get an idea of the other neighbouring people. It facilitates to understand the other people. Therefore enhancing the social interaction can help to overcome that issue very successfully.

1.3.2 Modes of social interaction

Basically, the social interaction transpires in two modes.

1. Human – Human interaction
2. Human – Built environment interaction

1.3.2.1 Human – Human interaction

From the ancient times, humans appreciated the interaction among themselves. They went for hunting as a group. After hunting, they came to one place and shared their prey. They sat around in a circle and fried the flesh and danced singing songs. Like wise early people had interactive culture.

According to Maslow,

Need for companionship – our primitive need is to feel accepted by, and part of, a group of other people. We need to feel we belong to (are accepted by) a family, tribe, group, or clan. The alternative is feeling we're alone in the world, which is not only lonely, but less safe. For infants, being alone too long means dying. People abandoned emotionally or physically too often as infants unconsciously grow personality sub selves who remain terrified of abandonment in adulthood. Alternatively, their sub selves protect them from (another) devastating abandonment by (unconsciously) never bonding with anyone.

Fig. 01 - Maslow proposed that every child and adult has overlapping needs that fall into natural ranked **levels** or priorities

The above statement also proves by the Amos Rapoport.,
"Meeting of people is also a basic need since man has been defined as a social animal"
(Rapoport, 1969: 68)

Also the necessity of interdependency and the stimulation of gesture cause casual meetings. Frequent meetings lead to friendliness, trustworthiness and reliability of the people. This helps to develop the attitude of "living together". Through this process individuals are related to one another while preserving their individuality. With the passage of time this develops as an inevitable need of the society.

The chance to meet other people on our own familiar ground and to see them performing their everyday activities is stimulating. The desired level of stimulation from the physical and social environment varies among individuals, but simulation, which embraces human contact – interaction is always necessary for any one to function normally in society. The interaction of the people on their own ground provides information about the society and its members; and about their own neighbours. It is particularly important for the social development of children, that they are able to acquire knowledge of their lives through observing their social surroundings and exchanging their views with each other.

When talking about the old people they very much need the social interaction. They need to share their sorrows and joys with each other in the neighbourhood and discuss about them in the latter part of their lives. In a design for old people, the designer has to think about it very seriously.

Regnier pronounces,
"Social interaction counters depression by allowing older people to share problems, life experiences, and daily events".
(Regnier, 1994:44)
As said earlier the social interaction comes across with the human and built environment.

1.3.2.2 Human – Built environment interaction

After the occurrence of the human - human interaction, the human – built environment come in to the scene. In here it provides a user friendly environment to the humans who are to interact. These designed places are known as the "third places". These places evoke these qualities.

According to Ray Oldenburg an American Sociologist who coined this term, third places are "distinctive informal gathering places (first being the home and the second being work).

- Make the one feel at home
- Nourish relationships and a diversity of human contact
- Help create a sense of place and community
- Provide numerous opportunities for serendipity
- Promote companionship
- Allow people to relax and unwind after a long day at work
- Socially binding
- Encourage sociability instead of isolation
- Make life more colorful

These are essential ingredients to a well-functioning third place. They must be free or quite inexpensive to enter and purchase food and drink within. They must be highly accessible to neighborhoods so that people find it easy to make the place a regular part of their routine, in other words, a lot of people should be able to comfortably walk to the place from their home. They should be places where a number of people regularly go on a daily basis. These should be places where people feel welcome and comfortable, and where it is easy to enter into conversation. And a person who goes there should be able to expect to find both old and new friends each time she or he goes there.

Oldenburg identifies third places, or "great good places," as the public places on neutral ground where people can gather and interact. In contrast to first places (home) and second places (work), third places allow people to put aside their concerns and simply enjoy the company and conversation around them. Third places "host the regular, voluntary,

informal, and happily anticipated gatherings of individuals beyond the realms of home and work." Oldenburg suggests that beer gardens, main streets, pubs, cafés, coffeehouses, post offices, and other third places are the heart of a community's social vitality and the foundation of a functioning democracy. They promote social equality by leveling the status of guests, provide a setting for grassroots politics, create habits of public association, and offer psychological support to individuals and communities.

- Sense of entry
- Seating
- Maintenance
- Shade
- Things to Look at
- Art
- Formal and Informal Qualities
- Welcoming
- Flexibility

After addressing the above qualities to the social interaction place, the human – built environment interaction will happen successfully. Having the above qualities, social interaction happens in several degrees.

1.3.3 Degree of social interaction

Social interaction means how people communicates contacts, interfaces, deals and making relationships with the society. Basically, each human being is very different from one another. They are not identical to each other. So their behavior in the society, levels of interaction and the degree of interactions are very different in any neighbourhood. The nature of the community living or the degree of preference for social interaction varies from one social group to another. It consists of a common framework which is similar to all types of situations, societies or social groups. When a person living in a social group, it is plain as the nose on your face that, person has to interact with four different neighbourhoods or sub – cultures.

According to Charles Correa, four major elements can be discussed in a hierarchical order. These are,

A. With the family members – space needed by the family for exclusively private use, such as cooking, sleeping, storage, and so forth.

B. With the intimate neighbours – areas of intimate contact i.e. the front doorstep where children play, you meet your neighbour, etc.

C. With the immediate community – neighbourhood places (e.g. the city water tap or the village well) where you become part of your community.

D. With the whole community – the principal urban area – e.g. the "meydan" – used by the whole city.

(Charles Correa, 1984: 52 – 53)

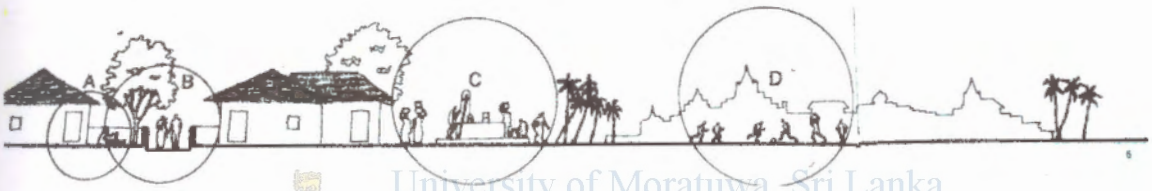


Fig. 02 – Degree of social interaction

Fig.03 – Courtyard

Fig.04 – Doorstep

Fig.05 – Water tap

Fig. 06 – D. Community space

And Desmond Morris distinguishes the various types of communities or tribes which can be found in the present society.

To him,

"First he has his personal friends, and acquaintances Together they form his social pseudo – tribe. Secondly he has his local community his regional pseudo-tribe. Thirdly he has his specializations, his profession, craft or employment and past time hobbies or sports. They make up his specialist pseudo - tribes. Fourthly he has the remnants of a clan tribe and a new age tribe"

Like wise, when considering a human being living in a large scale housing scheme, he has to interact with four different sub cultures. These are,

1. **Immediate neighbours** within the housing scheme
2. **Intimate friends** within the housing scheme
3. **Community** of the particular housing scheme
4. **Outside people** who are living in the immediate neighbourhood of that particular housing scheme

Though the social integration happens in several degrees, there should be an appropriate spatial organization to those degrees. They should be well designed and well organized.

1.3.4 Spatial organization for social interaction

Any action and interaction in the world happens in space. These actions and reactions may be happen naturally and artificially. Most of the artificial actions can occur through the human being. Likewise all the interactions happen in space. Mostly, social interactions happen among human beings. Therefore, there is a close relationship between the society and the space with regard to social interaction. As mentioned earlier, there should be a well organized spatial arrangement to facilitate the social interaction in any degree.

Fundamentally, there will be discussion along with the space. Space is a multi-dimensional concept that is at once economic, political, semiotic and experiential, and in this sense it is an integral component of social interaction. The duality of the space can be discussed with this. Dual roles of space, as the "producer" of social interaction and the space as the "production" of social interaction will be discussed in the context of spatial organization for social interaction.

Lefebvre's ontology asserts a greater importance for space as being present and implicit in the acts of creation and being, whereby the process of life itself is linked with the production of different spaces. People create space; thus the production of space is an inherently political project in which space is a mediating force that integrates an infinite number of active and dynamic cultural processes.

According to Henri Lefebvre (1974), "Space is never empty: it always embodies a meaning". Due to this people tend create their living places in those places permanently or temporary. So the "production" spaces for social interaction would be one way of this creation.

At the core of his project are the concepts of production and the act of producing space, leading to the premise that social space is a social product. Lefebvre's triad of spatial practice, representations of space, and representational spaces offer a useful framework for understanding how the multiple forms of perceiving, conceiving of, and living in space have not only been produced historically, but also imbue with cultural. Lefebvre contended that spaces are produced from social relations and from nature, as such spaces

are both the product of and the condition of possibility for social relations. As a social relation, space therefore involves a relation between society and nature through which society produces it as it appropriates and transforms nature (Lefebvre, 1974). Lefebvre's work also elucidates relations of power in spatial analysis, by highlighting the fact that spaces are always constructed culturally through social interactions. Spatial practices are dynamic principles of organization, linked to dominant social relations of production, as such they embrace "production and reproduction, and the particular locations and spatial sets of characteristics of each social formation" (Lefebvre, 1974, p.33).

In this context the social interaction is the producer of space. Within this scenario, by the normal behavioral systems of the human being, some spaces automatically activate as social interaction spaces which can be "production". These spaces may function due to the qualities which enhances the social interaction. These are not pre – planned, not designed spaces for the sake of social interaction. But eventually those places act as successful interactive places in the society rather than well designed and pre planned places.

Edward Flanders Ricketts' Lab on Cannery Row was a "Gathering Place." It provided friends shelter from Monterey Bay's cold and stormy weather and it provided a social environment where free and open discussion could be enjoyed by friends.

Fig. 07 – Space as "Production"

According to the Design Guide, January 1976, four main principles for spatial organizations can be discussed. Spatial organization for social interaction is primarily based on,

1. Adaptation to site and climate variables (Location)
2. Layout pattern
3. Interrelatedness of activities
4. Maximum flexibility of the space
5. Possible spaces for expansion

1.3.4.1 Adaptation to site and climatic variables (Location)

The spatial organization must consider the site variables (size, shape, contours, orientation, views, and natural features) and climatic variables (severe or temperate). For an example, a recreation center which is to be constructed on a site with natural beauty, proper solar orientation and temperate climate may be outwardly oriented, with the activity spaces focused toward the outside of the building; if the Center is to be built in an area with a severe climate and generally unattractive surroundings, its spatial organization should be focused toward the interior of the Center.

Location bestows by it's the idea where it is located. When talking about the physical environment it is a fundamental factor that anybody would ask "what is the site? & where is it?". When referring to any scheme, obviously it is the primary query that customer asks about the site. In the macro context the location plays a vital role.

When referring to the micro level according to social interaction, the location plays imperative role. If the location of the social interaction place contacts with the adjacent place or else in the middle of the communication paths, it is a plus point for the interaction place for its success.

Rapoport says,

"....location relative to tbe larger environment, and the nature of that environment (relationship among elements, distances, directions, paths, obstacles and barriers)."

(Rapoport, 1977:142)

According to "Making places" – October 2005, a location must have these qualities.

- **Visible**
- **Accessible**
- **Memorable**
- **Flow** (easy to navigate and orient yourself)
- **Parking** (requires management to ensure regular turnover)
- **Adjacencies** (restaurants, retail, housing, transit, office workers in the neighborhood)
- **Confluence** (places where people naturally come together)
- **Neutral** (should welcome everyone and not be any one group's 'turf')
- **Scale** (size should feel 'right' and be appropriate for the place)
- **Spin Off Opportunities** (activity should offer valuable source of customers for neighboring businesses)

Many markets around the world still operate in cathedral squares and other sacred locations. Guatemala's Chichicastenango market sets up in front of the cathedral to provide the devout with a convenient location to take care of both earthly and spiritual needs.

Fig. 08 – Market on church ground

1.3.4.2 Layout pattern

The layout becomes the one of the most important factors in any context in relation to the spatial organization. It conveys an idea of how the overall design links with the macro context. The distribution of plots, network of internal pathways and landscaping are the prominent features of the layout. In ancient times this effect was clearly seen along the pathways and river banks.

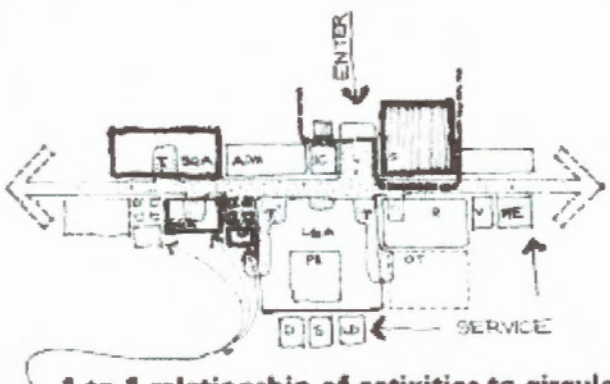
With reference to social interaction spaces, those spaces should be located in the right place in the right way. Within the layout the social interaction should arouse by itself.

Several basic spatial organization schemes can be developed by manipulating the transitional space. Each scheme is evaluated in terms of activity interrelationships, flexibility of use, adaptation to site and climate variables, and provision for expansion.

a. Linear spatial organization
b. Central spatial organization
c. Axial spatial organization
d. Dispersed spatial organization

a. Linear spatial organization –

The linear scheme is characterized by a single transitional spine along which activity spaces are arranged; central program is centrally located.



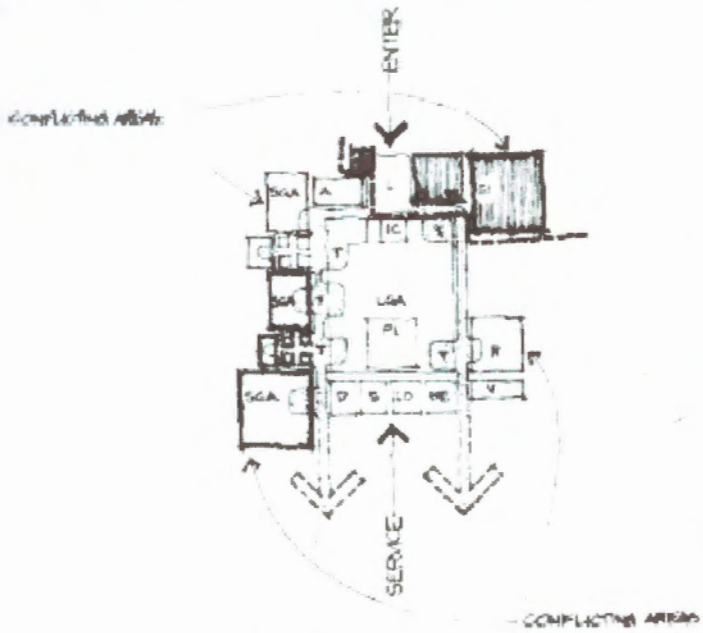
1 to 1 relationship of activities to circulation minimizing the number of adjacent relationships and consequently conflicts.

Fig. 09 – Linear scheme

Linear plan maximizes distance between activities which facilitates noise control but inhibits visual control. However, in smaller centers the proximity of activities necessitates a technological approach to sound control as well as planning considerations.

b. Central spatial organization

The Central scheme places the central program area in a core position with small group activities encircling it; the transitional space separates the two elements.

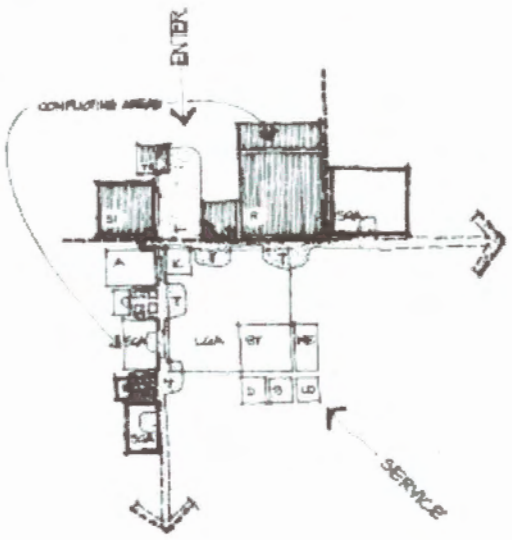


The large group activity area is central and separates conflicting small group activities. Since the large group area is adjacent to all Other areas across the transitional area, opportunities for social interaction are maximized.

Fig. 10 – Central scheme

c. Axial spatial organization

The Axial scheme combines intents of the Linear and Central schemes; the transitional space is divided into two axial paths around the central program area which separate incompatible small group activities.



The central large group area separates conflicting small group activities and is adjacent to most areas including the lobby across the transitional area. This arrangement should maximize opportunities for social interaction.

Fig. 11 – Axial scheme

d. Dispersed spatial organization

The Dispersed scheme scatters spaces to reduce conflicts, uses enclosed spaces to buffer sound and separate open spaces. The transitional space acts as a decentralized link that both connects and separates activities.

Buffer activities separate the large group area from peripheral small group activities. This arrangement decreases opportunities for social interaction but allows diverse activities to occur within a relatively constricted area. Taking advantage of site conditions when possible, the roofs of buffer areas should become mezzanines or overlooks which visually connect peripheral areas and the large group area.

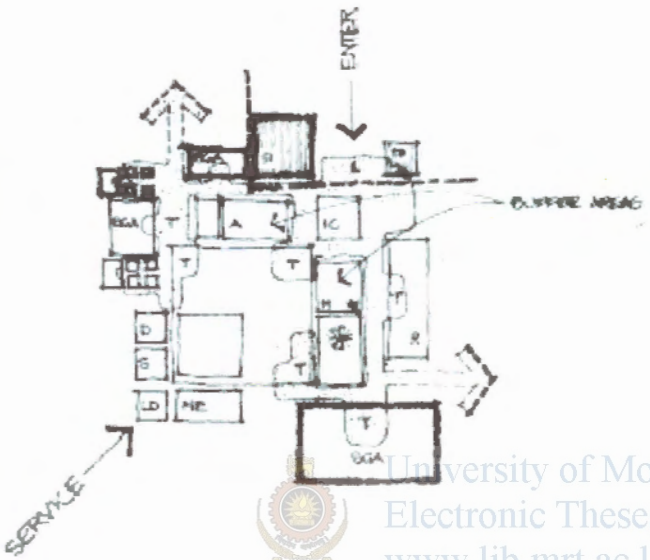


Fig. 12 – Dispersed scheme

There are benefits and loses of these spatial organizations. According to Design Guide – Spatial Organization – January 1976, those are listed as follows:

PRINCIPLES	LINEAR SCHEME	CENTRAL SCHEME	DISPERSED SCHEME	AXIAL SCHEME
Activity Interrelationships	Facilitates noise control Inhibits visual control Works best with Centers of 12,700 SF or less	Separates conflicting activities Facilitates visual control	Sound control excellent Reduces visual/physical access to all spaces	Separates areas with conflicting acoustical requirements well Visual/physical access facilitated
Flexibility of Use	More opportunities for social interaction Highly flexible	Maximum opportunity for social interaction because of visual and physical access	Spontaneous social interaction hampered Houses many diverse activities well with no dysfunctions	Locate popular activities at ends of axes to encourage movement past new activities
Adaptation to Site	Can be focused outwardly Requires solar path orientation Suitable for temperate climates Natural cooling results from orientation to prevailing winds	Focused inwardly Suitable for severe climates Plan level changes carefully for sloped sites	Similar to site adaptation for Central Scheme	"Functions well in all climates Adaptable to any site condition
Expansion Potential	Can be expanded at either end	Restrictive	Limited	Expansion can occur at ends of axes

Fig. 13 – Table 1 – Comparison of spatial organizations

1.3.4.3 Inter relatedness of activities

Activities should be grouped to maximize desirable effects (accessibility, control, multiuse) or separated to minimize conflicts (noise, activity incompatibility).

Four variables which affect spatial organization should be analyzed in activity.

a. Physical Access – Physical access is the most important factor in spatial organization; its primary concerns are convenience of circulation, ease of administrative control and potential for social interaction.

b. Acoustics – The next most important criterion is acoustics, or the generation of disruptive noise by an activity. If a conflict arises between accessibility and acoustics, the accessibility requirements should govern location with the acoustical problem being treated technologically.

c. Visual Access – The third factor governing spatial organization is visual access which is the capability of seeing from one area to another. This is important for administrative control and increasing awareness of alternative activities.

d. Compatibility – Compatibility of activities, the fourth criterion, measures the level of interference one activity can tolerate another without disturbance; gives consideration to requirements for privacy, concentration, and attention of the users; conflicting elements are noise, physical activity, and administration policy.

1.3.4.4 Flexibility of use

The spatial organization must allow the simultaneous occurrence of many diverse activities, from planned activities to spontaneously self generated activities, by diverse groups of people. Activity areas must be arranged to encourage casual interaction by using the waiting areas and by enabling participants to see from one area into another.

1.3.4.5 Expansion

If a space exhibits a strong likelihood for expansion of activities, the spatial organization should be planned to permit a functional growth by increasing the number of spaces or by enlarging the existing spaces. As it expands, the necessity for flexibility decreases, because space usage is determined by administrative control.

Chapter Two

Chapter two – Social interaction in Housing schemes

2.1 Socio – spatial continuum in House, Home and Dwelling

Human beings construct houses primarily as dwelling – spaces for human habitation. Such dwellings generally feature enclosing walls and a roof to protect against precipitation, wind, heat, cold and intruders. The word "house" may also apply to a building provided to shelter animals, especially within a zoo.

House is man's most intimate place of living. Similar to the term "man' which denotes an impersonal and a generalized meaning, the term house too brings out a generalized version as the shelter of man.

According to Norberg Schulz,
"In general, the house expresses the structure of dwelling with all its physical and psychic aspects. It is imagined as a system of meaningful activities concretized as a space consisting of places with varying character".
(Schulz, N.C., 1971:30 – 31)

The house often provides a permanent residence for a family or for a similar social unit. English-speaking people may call this house as their "home". People may leave their house most of the day for work and recreation, but typically return 'home", to their house, at least for sleeping.

"Home" and "House" are not same; both aspects of the living place may be quite different from each other. Thousands of houses can be built up within a one week or two weeks. It depends on the method of construction system. But nobody can supply any number of "Homes" because it is a process that is fulfilled by the user. So this is a particular aspect of a house, when the human being makes it a livable place, it becomes a "Home". This process may show users personality as well as the identity. Home is the foundation of our identity as individual and as a member of a community, the dwelling place of being.

Home is not a just a house to live in, not similar to anything anywhere, not exchangeable, but an irreplaceable centre of significance.

Every person has a private existence and as well as a public existence. Houses are also the same. The house, demonstrate these two realms into a particular ratio depending on the occupant. In this process that house gets itself transformed into a home. Within this realm, a house essentially has to satisfy certain psychological requirements such as privacy, identity and territoriality to become a home. At this point that the human component or the occupant is brought into the house, he adjusts, modifies and changes it continuously, due to the changing needs.

According to Oakley, D.,

"The fabric of the house (the architecture) and the character of the family organization (the institution) together make up 'home'. The form of the house, and the way of living of the family, minor and mould one another"

(Oakley, D., 1970: 27)

Dwelling is as well as being a term for a house, or for living somewhere, or for lingering somewhere and it is a philosophical concept. Making a home is entirely a private, personal affair. Dwelling is the process by which homes are made and enabling dwelling is to make the home making possible. This is the ultimate aim of housing; the process of enabling dwelling and home making. Dwelling is also a place, the tangible spatial enwrapper; the extent of home. Home is a dream and emotive bond built between the person and the world around the human manifested through the dwelling.

Dayarathne R. mentions that house designing and settlement issues inter – wined and enabling relationship between housing and dwelling,

"Housing is the process enabling the act of dwelling, establishing ones existence as appropriate for his living on earth, in the form of making homes. House designs and the settlements are intricately inter – twined in the process, and architects have a great deal to offer. But this is possible only if the architects understand the broader perspective of "housing dwellings, and homes".

(Dayarathne, R., 1995)

2.2 Housing as a need

A need is something that is deemed necessary, especially something that is considered necessary for the survival of a person, organization, or whatever. The concept is widely used in the social sciences, with especial attention being placed on so-called human needs.

Housing is also one of the human needs space. Housing is a permanent shelter for human habitation. Because shelter is necessary for everyone, the problem of providing adequate housing has long been a concern, not only of individuals but of governments as well. Thus, housing is inseparable from the social, economic, and political development of humankind. The design of housing is a more complex process than designing any type of building, due to the complexity of relationship between numerous users and the environment. In the other designs the client and his requirements are known, hut in housing the actual user who will occupy it is unknown. Therefore it is important to design housing according to values, attitudes related to at the target group.

However, housing as a need is linked with industrialization, urbanization, social factors, economic factors and political factors. By the 19th century, with the Industrial Revolution, people moved to cities in unprecedented numbers. Workers lived in sheds, railroad yards, and factory cellars, typically without sanitation facilities and water supply. So there was a need in housing.

Due to the urbanization, migration of people into urban centers became a widespread phenomenon all over the world. As a result a rapid population growth took place in the city centers parallel to a great expansion of the employment opportunities. Since migrant people have to stay in the city limits to go to their workshops, the need of housing came into the scene.

New local and state housing programs were initiated or expanded to ease the pressure. Cities like Boston, Providence, New York, Milwaukee, Chicago, Denver, and others developed low rent housing programs attempting to meet the requirements of low and middle income groups by providing some form of public subsidy.

Housing is a critical component in the social and economic fabric of all nations. No country is yet satisfied that adequate housing has been delivered to the various economic groups that make up its populace. Thus, most nations, in one form or another, continue to claim a housing problem.

2.3 Middle income class housing schemes

2.3.1 Determinants for social classes

There are several ways of defining social classes. Sociologists defined classes as aggregates of people who show similar characteristics and share common interests. Another school of sociologist explains class mainly based on the occupational characteristics on the basis that work determines access to income, power and status. Others see the class as more than occupational aggregates that are as strata in the society at large, each consisting of distinctive relationships, behaviour patterns and attitudes.

A social class is made up of people of similar social status who regard one another as social equals. Each class is a sub – culture, with same attitudes, beliefs and behaviour patterns. Social class is based on the total social and economic background of the community.

Occupation is one of the determinant factors of class status. In early times, the medicine man (Weda Mahathmaya) holds a high – level of social status due to his work and knowledge. The high prestigious occupations normally gained high income. Hence occupation is an exceedingly important aspect of social class because so many other facts of life are connected with occupation. Knowing one's occupation one can assume their education, standard of living etc. Through those assumptions reading tastes, recreational interests and morals, too, can be predicted.

Money is another determinant factor of class status. It is necessary for the positioning an upper class. One's class position is not directly proportional to income. The social class is basically based upon the "way of life". A person who enters the business activities newly, may have a house in the same style as an upper class one, but may not find upper class

person's way of life through the new one. Occasionally, the newcomer may use wrong words and attitudes which may reflect his incompatibility, unsuitability to the upper class level. The education of social manners over a long period of time will gradually acquire the upper class status.

But considering income wise, class can be identified as low – income category, middle – income category and high – income category. In this instance, it will focused on the middle – income category.

Patric Hutber introduces the middle – income class as follows.

- The people who postpone their immediate satisfaction in order to achieve higher goals in the future.
- The people who tend to be "Inner directed" rather than "Outer directed".
- The people who are "Individualists".
- The people who pursue their goals essentially by individual action as opposed to the working class which tends to pursue their goals by collective action.

2.3.2 Emergence of middle income class

From the beginning of the 20th century until the 1970s, the French Revolution was most commonly described as the result of the growing economic and social importance of the bourgeoisie. Bourgeoisie, originally, were the free residents of European towns during the Middle Ages. The bourgeoisie later became synonymous with the middle class. The term was first applied to those inhabitants of medieval towns in France who occupied a position somewhere between the peasants and the landowning nobility; soon it was extended to the middle class of other nations. These people were usually merchants, trades people, and artisans and later bankers and entrepreneurs. With tbe development of medieval cities as centers of commerce, the bourgeoisie began to emerge as an important socio-economic class. Frequently they banded together into corporations or guilds to protect their mutual interests from the more powerful landed gentry.

The industrial revolution was also helped to perform that middle – class category in the world. Prior to the industrial revolution, however, commerce and handicrafts industries expanded rapidly. The manufactured articles sold in far away places increased in large scale and gave strength to the rising middle – class.

In early periods of Sri Lanka, inhabitants were based on the agriculture. The civilization was bonded with agriculture and irrigation. Religious influences affected their way of life. They used to simple and comfortable living patterns. The social level was determined by occupation. It was known as the "Caste system". Therefore the people differentiated to different social classes. In relation to that, the 'Govi' community was the highest class. Therefore class system ruled people's occupation, their living patterns and social positions.

Later on, the Portuguese, Dutch and the English people ruled the Sri Lanka. Under the British reign made a great influence to the traditional society. The British reign made a great influence on the traditional society. The English people introduced the commercial law to the Sri Lanka. Then the whole society tuned towards to the commercial economy. They planted the commercial crops such as tea, rubber, coconut and coffee. These economic activities neglected the caste, race systems in the traditional society. English knowledge was a necessary qualification for a high wage. Education system and administration system too were changed due to this invasion. This situation created a new class between the aristocratic rulers and traditional cultivators. This new class is known as the present middle class in Sri Lanka.

The middle class in Sri Lanka is not restricted to the government workers and the professionals only. It includes middle class workers who seek better standard of living. Due to the differences in education, income and social backgrounds middle class can be discussed under three categories known as upper middle class, middle class and artisan.

2.3.3 Behaviour and attitudes of middle income class

Though it is hard to identify the middle class, there are some characteristics which enable to categorize people in to middle class and other classes. Each social class has certain system of behaviour, set of values and way of life which is specific to them.

According to V. S. Nammuni,
"By middle class what is implied is a category of people who are generally associated with a certain set of values, or social moral by which they conduct themselves in society and set up goals and aspirations for themselves. These values, at the risk of inviting the scorn of the more knowledgeable sociologists may be identified as a strong desire for social mobility, status consciousness, high value placed on education as a reflector or vehicle for the above etc.,"
(Nammuni Vidura Sri, 1992)

Above mentioned uniqueness varied in diverse degrees according to the sub division of middle class. When considering the middle class and upper middle class, they are highly image conscious classes. The people in those classes worry much on the image they project to the society and base their identity with the desire and nature of the link with the existing community.

Upper middle class do not need social interaction. It exists in a very minimal scale. Their main desire to live with the society is to maintain their status. In the Sri Lankan context, the people who are in the upper middle class join so many clubs such as Lion's club, Rotary club etc. Hence their selectiveness of association with other has been used as a device to protect their identity from other groups. But the middle class needs social interaction than the upper middle class category to a certain degree. At the same time the middle class people, too, are also independent. But at the artisan level, people strappingly require social interaction for the reason that those people are very inter-reliant on the fundamental human needs.

2.4 Socially interactive housing configurations

Some times the housing scheme may not enhance the social interaction. And vise – versa, the hosing scheme may enhance the social interaction very well. In other words the "talking effect" of the housing scheme with the users varies from one another. The local and foreign situations in terms of social interaction will be discussed in this segment.

2.4.1 Local housing configurations

2.4.1.1 CHELTA neighbourhood – Niwanthipura project

The site, (at Mirihana, Nugegoda) and services had been provided by the ministry of Housing and Construction. The construction was sponsored by the Rotary Club for 250 houses.

The three main aspects namely the human, economic and environment dimensions of sustainability had been investigated in the neighbourhood design for the resettlement of canal bank dwellers. Middle income and Low income people are mixed in this context.

Fig. 14 – CHELTA – Layout plan

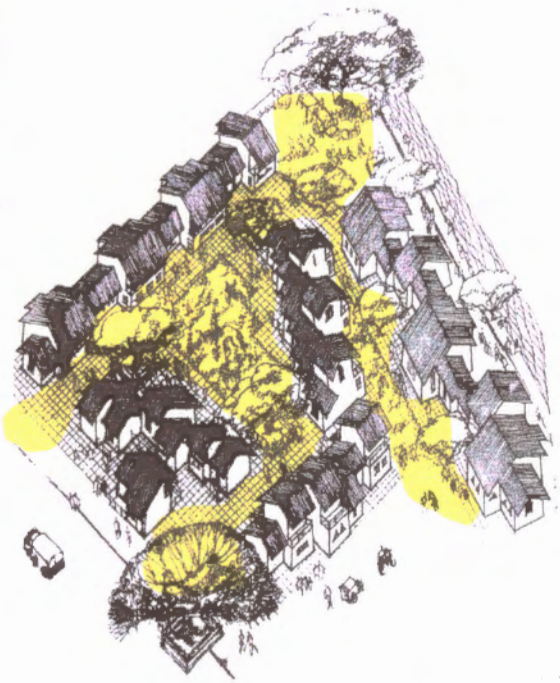


Fig. 15 – CHELTA – 3D form

Fig. 16 – CHELTA – Section

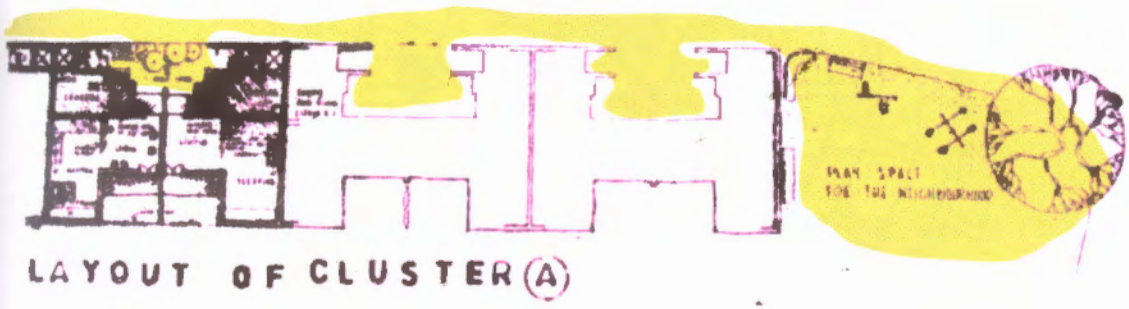


Fig. 17 – CHELTA – Layout of a cluster

2.4.1.2. Mahaweli settlements

The Danish Architect Ulrik Plesner was the designer of the Mahaweli settlements. Plesner says that the town and the settlement patterns associated with major multi purpose development schemes, in the past, particularly in the dry zone areas, have been on the basis of a "Dispersed town". The town and its attendant areas have been planned to accommodate vehicular through pass.

Plesner had put forward that settlement should be grouped in hamlets of 250 families each and such hamlets should relate to the village center where facilities as primary schools, shops, a co – operative store, post box, a community center is arranged and form the village centre.

Design and location and inter – relationship of, public squares, market places, civic centre where high public gathering is intended. And also the Main bazaar, recreational areas for the generation of high public movements had been intended in the design.

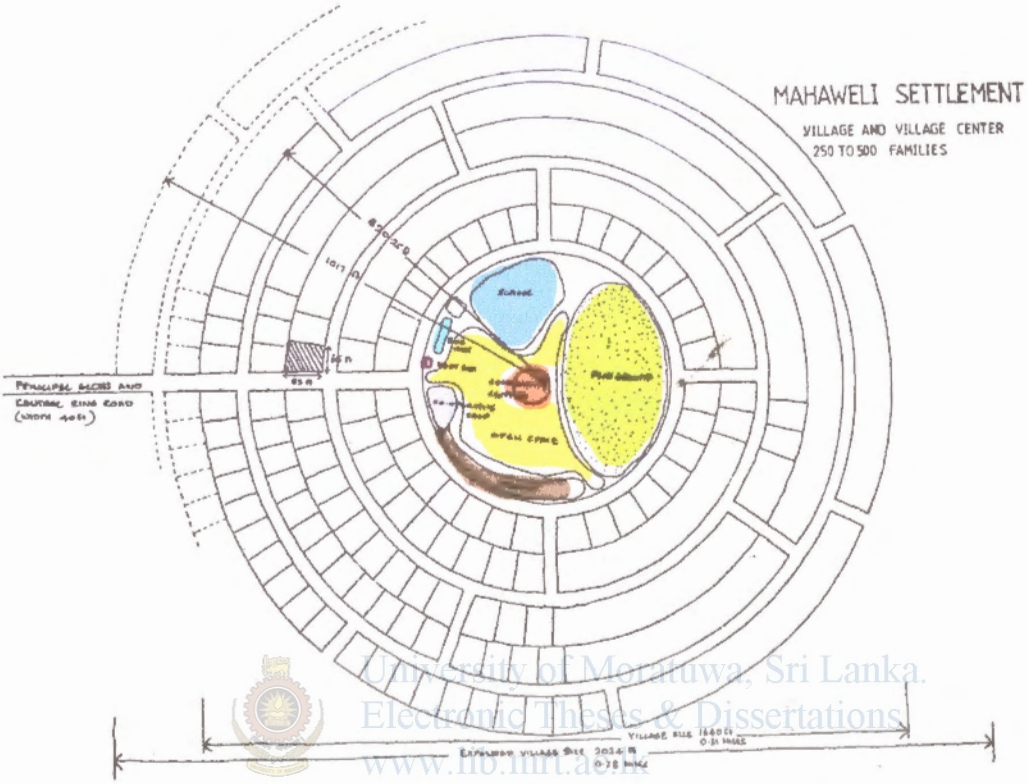


Fig. 18 – Mahaweli settlement – village and village centre

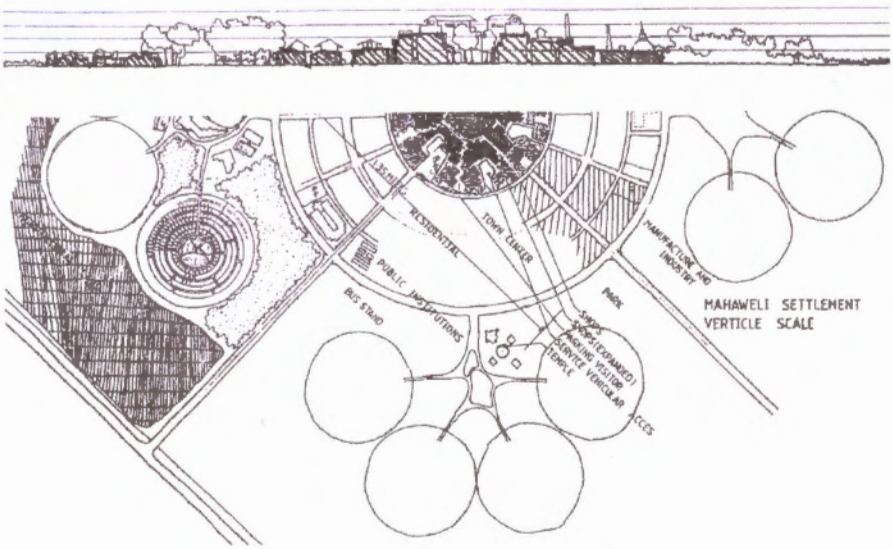


Fig. 19 – Mahaweli settlement – section

2.4.2 Foreign housing configurations

2.4.2.1 Aranya housing project

The Vastu – Shilpa Foundation, directed by architect B.V. Doshi, has been conducting studies with a view of understanding the traditional Indian habitat and evolving planning and design norms in the context of prevailing social, economic and technological conditions, thereby deriving lessons for actual implementation.

The Indore Development Authority site is off the Bombay – Agra road to the north of the town and is little over 80 hectares. A total of 6,500 plots were provided. The idea has been to mix some middle income plots of about 475 m^2 with those of the "Economically Weaker Section" (EWS), then to use the profits to raise capital towards the development of local trades. It was obvious that a livelihood must be guaranteed within the settlement itself for the majority, otherwise the project could not hope to work. An innovative site planning approach has resulted in a balanced vehicular and pedestrian access systems to each plot and the sizes and pattern of open spaces which fully integrates itself with pedestrian network.

Moreover, the infrastructure planning from the scale of the entire network layout to the scale of individual plot has achieved significant economy which has been widely acclaimed by national and international agencies.

Aranya demonstrates an innovative approach to the integrated development creating holistic environment, rooted in a socio cultural and economic milieu of the place while being sympathetic to the way of life of the Urban Poor.

Design Considerations had been as follows:

- Promote person-to-person contact through cluster of human scale
- Provide an individual character to each other
- Create functionally sympathetic and aesthetically pleasing street environments
- Provide spaces for social and religious activities
- Promote income generation at cluster level
- Provide all essential amenities and utilities to every street
- Define clearly each cluster's territory and the sense of entry
- Have regard for pedestrians
- Optimize cluster patterns for economy
- Integration of a mix of High Income Groups (HIG) and Economically Weaker Sections (EWS), with the former cross subsidizing the later
- Participation of the dweller, in his own house
- Better quality of public space

Moreover, the township also provides spaces with facilities and amenities such as Community science centre, playground, Formal and informal commercial activities, police station, swimming pool, fire station, police station, sports club, library, museum, open air theatre, auditorium, community Hall, petrol pump. However, these facilities have not let come up in totality. But, perhaps, it may be the right time for the commercial development to come up with the population already at the site. Because of the increased real estate value of the spaces, 20 years later, it would be more commercially feasible.

Fig. 20 – Elevation of Aranya

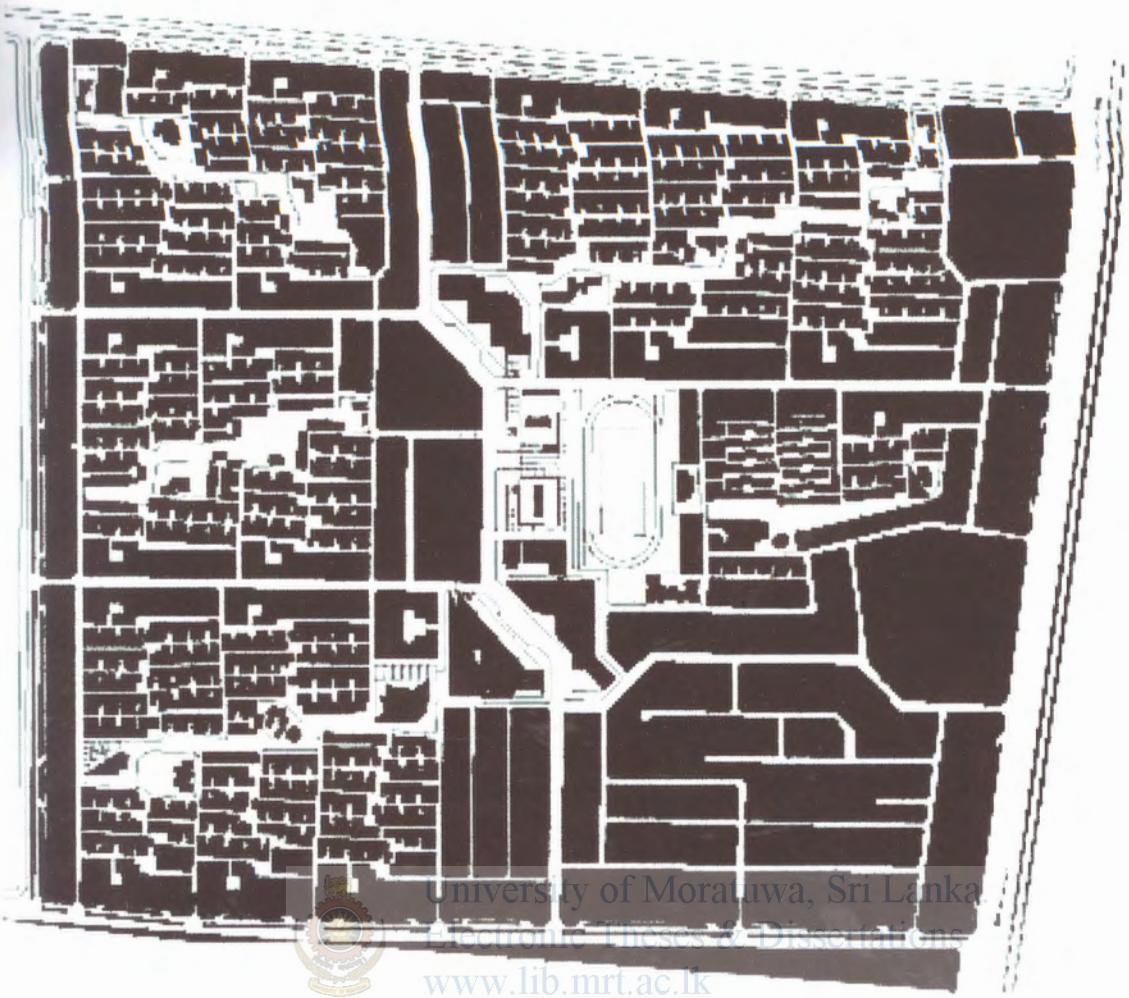


Fig. 21 – Layout of Aranya

When considering the location of social interaction places, they are located in the vicinity. The front of the house has more communication with the street. As discussed in the 1.3.3, it holds the social interaction with the intimate neighbours, immediate community and as well as whole community. The back garden holds a personalized space for the dwellers.

According to Jeyanathan,

"The houses are designed with the traditional otta (multi – purpose platform) as a transitional space between the dwelling and the street, followed by a verandah or the public face of the house which can be used for a small home industry, while the secluded courtyard at the rear extends the private space of the house."

(Ruchi D. Jeyanathan, 1995:33)

In the pedestrian movement a path, a larger volume has consisted as a social interaction space. According to the 1.3.4, it contains the visibility, accessibility, flow, confluence, scale etc.

Fig. 22 – Interconnected spaces

When considering the layout of the interaction spaces they are located in a linear way. According to the table in the 1.3.4 it enhances social interaction. The large spaces are designed according to the axial path. The interaction of two activities can happen very often. The Cul – de – sacs between the two houses enhance the social interaction.

Fig. 23 – Space as a "Production"

Fig. 24 – Space as a "Producer"

Fig. 25 – Space as a "Production"

Small open spaces play a vital role, especially in a low-income neighbourhood. Such places are used differently, such as: a small shrine storage place for festival gathering and resting platforms, planting trees, drying clothes. As for large open spaces, people have used some of them as temples, beautiful landscapes, and large gathering spaces. But unfortunately, a lot of large open spaces have been left empty, and some are even full of garbage.

Fig. 26 – Peeping balcony

Fig. 27 – Interrelated activities

Under the interrelatedness of activities, the physical and visual accesses are in first-rate intensity.

In the house, flexibility of the space can be seen very clearly. The front space of the house acts a dual role. In one way it is the verandah of the house while it issued it uses for a small industry. It proves the above statement. The pedestrian way is used as a part of the house in a temporal way.

Fig. 28 – Cheerful environment

2.4.2.2 Belapur housing scheme

The housing scheme in Belapur, commissioned by the government (by City and Industrial Corporation of Bombay), lies two kilometers from the centre of New Bombay. The site covers an area of 5.5 hectares. The planning brief specifies the range of income groups from the lowest to middle income families, although the range of income groups is large (ratio of 1:5).

The incremental housing developed in Belapur, Navi Mumbai, had been completed in 1986. The project demonstrates how high density housing (500 people per hectare) can be achieved in a low-rise typology, while including open spaces and services, such as

schools, that the community requires. The overriding principle for this development was to give each unit its own site to allow for expansion. Consequently, families do not share walls with their neighbours, allowing each to expand his own house. The houses are constructed simply and can be built by traditional masons and craftsmen, generating employment for local workers. Moreover, several plans exist that cover the gamut of social spectrum, from squatters to upper income families. Yet, the footprint of each plan varies little in size (from 45 m^2 to 70 m^2), maintaining equity in the community.

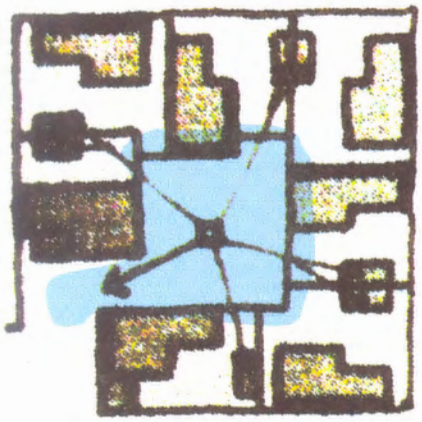


Fig. 29 – Plan – Intimate courtyard

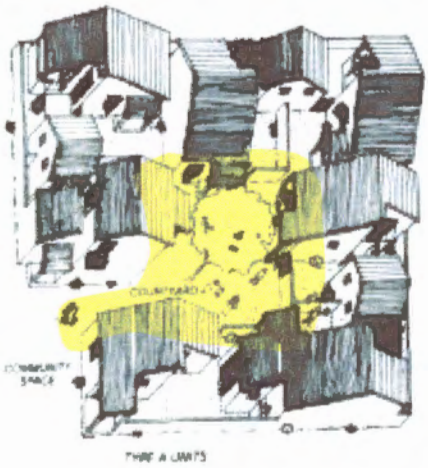


Fig. 30 – 3D form – Intimate courtyard

The spatial ordering of structure in this low – rise, high – density scheme creates a clearly ordered hierarchy of open spaces. Firstly, within each plot, the family has open space to augment the built up area. Seven such units are clustered around an intimate courtyard of 8 m x 8 m. Three such clusters combine to form a bigger module around a 12 m x 12 m yard, and three such modules interlock around a 20 m x 20 m community space. This spatial hierarchy continues till neighbourhood spaces, to accommodate school and other public facilities are formed. All neighbourhood spaces provide a panoramic view of the hills behind. A bazaar has been proposed along a diagonal running through the site.

Fig. 31 – Intimate courtyard

Fig. 32 – Incremental houses

Chapter Three

Chapter three – Spatial organization for social interaction

An examination of middle income class housing schemes

3.1 Methodology

According to prior discussion, the social interaction in the housing schemes is essential one in the community level, since half their lives are spent in the housing schemes. According to chapter one the built environment should facilitates those spaces to activate social interaction.

In accordance with chapter one, clear out the degree of social interaction and some basic guidelines which should be considered in such a place of interaction. It is known as the spatial organization for social interaction. They are as follows:

- Adaptation to site and climatic variables (Location)
- Layout pattern
- Interrelatedness of activities
    - Physical access
    - Acoustic
    - Visual access
    - Compatibility
- Maximum flexibility of space
- Possible spaces for expansion

The selected middle income class housing schemes will be discussed within these parameters. Firstly, the location, socio – economic character, built - environment character is to be identified and secondly, the above mentioned spatial organization criteria is to be discussed. In the latter part of the discussion, is to be focused on the essential and non essential components which should be considered in spatial organization for social interaction in the middle income class housing schemes.

As discussed in 1.3.3, the social interaction varies from space to space.
The degrees are,

- With the family members
- With the intimate neighbours
- With the immediate community
- With the whole community

3.2 Selection criteria

The social interaction can be questioned in several areas. It would be in the public places (open air), religious places, commercial places, working places, housing etc. In relation to housing schemes they vary from low – income category to high – income category. The middle income category as its name suggests is in the middle of this categorization.

As discussed in chapter two, middle – income class category has certain values and attitudes. But in the low – income category, those values and attitudes change drastically from time to time. The high – income people are not suitable for the discussion through this topic, since most of them are very individualized people. They do not care about social interaction as much.

When considering the middle income class housing schemes, they are located in the various parts of the Sri Lanka. Some are close to the city centers and some are away.
This discussion goes ahead with the middle income class housing schemes in the city of Colombo and sub – urbs.

This middle – income class housing schemes are done by the government and as well as the private sector. Middle – income class housing schemes appear as vertical (apartments) and horizontal (spread on the ground) outputs. This topic covers the middle income class housing schemes, which were done by the government as low – rise developments.

3.3 Case study one – Summit Flats, Keppetipola Mawatha, Colombo 07.

3.3.1 Location

'Summit flats' is situated in the highly residential and developed urban area known as Thimbirigasyaya in Colombo 07. It is blocked by Bauddhaloka Mawatha, Havelock Road and Jawatta Road.

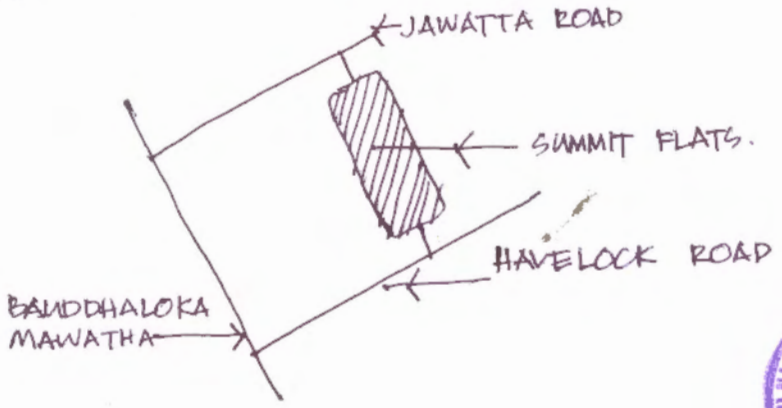


Fig. 33 – Location map – Summit flats

3.3.2 Socio – economic character

In comparison with other housing schemes it is a medium density development consisting of middle income families of government servants. However, the social profile is now has changed. Due to the security reasons, the ministers and the ministry secretaries occupy most parts. But also has a good relation with each other.

3.3.3 Built environment character

The housing scheme consists of four storey blocks of identical type plans and equal number of units in each block. These are introverted blocks facing an internal path, both on ground and at second floor levels. These are arranged in a number of linear clusters, interwoven with low scale old colonial bungalows that impose an exclusiveness of that sub – culture. There are several traffic ways which connect with the Jawatta Road, Bauddhaloka Mawatha and Havelock Road.

3.3.4 Spatial organization for social interaction

3.3.4.1 With the family members

Fig. 34 – Ground and Second floor plan

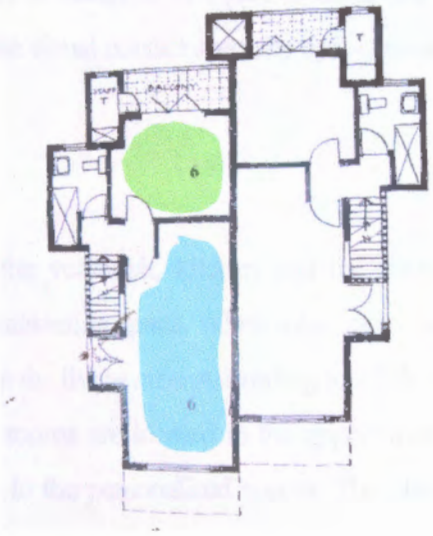


Fig. 35 – First and Third floor plan

1. Entrance court
2. Verandah
3. Living
4. Dining area
5. Kitchen
6. Bed room

Under this, it explains the spaces in the house and the way it enhances the social interaction in the house. In the social interaction scenario, it basically talks about the family interaction.

Adaptation to the site and climatic variables (Location)

In a house, normally family interaction happens in the living area. Other spaces are linked to that space. Therefore the living space should be located in the core area or in the middle. In these houses the living area connects the other spaces very well. One who works in the kitchen, one who climbs down the staircase from the upper rooms is interconnected through this living area. That centrality enhances the family interaction in the house very well. Visibility, accessibility, flow, scale and confluence which were discussed in chapter one is clearly evident in this layout.

Layout pattern

The living and dining areas are not segregated ones. The living area is located in a central point. According to the table in 1.3.4, the central scheme has maximum opportunity for social interaction because of visual and physical access. The living area acts as a tangent to the communication paths. The kitchen area is not a segregated entity. Automatically it becomes as a part of the living and dining area through the window. Due to these methods, the visual contact specially eye – contact is established in the house.

Interrelatedness of activities

The living area is a place of interaction, enclosed by the verandah, kitchen and the stairway. Therefore obviously there is a close relationship with the interacting space. When someone cooks in the kitchen can come into contact with the person who is in the living area. According to 1.3.4, there is visual access and as well as physical access. The bed rooms are located in the upper floor. So there is no disturbance to the interaction place as well as to the personalized spaces. The place of interaction is positioned in an acoustically sound location. The bed rooms are in quiet area.

But the kitchen is located near to the living area. So the noise comes from the kitchen goes directly through the living area. The window that separate the kitchen and dining space can control it. However, it is not a big issue compared to the family members being isolated.

Maximum flexibility of the space

As shown in the plan the space close to the verandah is used to meet visitors. The space which is close to the kitchen area used for personnel activities. The living area is a large space without any obstacles like walls and partitions. So there is a potential to use other spaces as the interaction place.

Possible space for expansion

The house is located in a very compact way. The only expansion can be done by using the verandah area. The kitchen area is added to the interacting space visually. It is also an extensive advantage to the interaction space because it portrays the spaciousness of the interaction space.

3.3.4.2. With the intimate neighbours

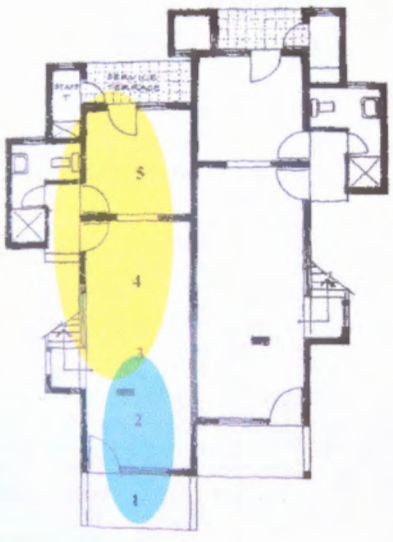


Fig. 36 – Ground and Second floor plan

Fig. 37
Entrance court in ground

Fig. 38
Entrance court in second floor

In relation to the social interaction with the intimate neighbours, it happens in the verandah area and if they have close relations with the users, they are entertained in the space up to the diming area as well.

Adaptation to site and climatic variables (Location)

Normally, the interaction among the intimate neighbours happens in the verandah or in the entrance court. When someone enters the house, thus can pause in this space. According to the degree of intimacy that person may come in to the house. So the location plays a good role in the interaction with neighbours.

The entrance court is clearly visible from any space in the surrounding. In the ground floor level it is a secluded place to maintain the intimacy. And it is also a double height space at the entrance. In the ground floor, it is covered by the second floor level balcony and the bridge. So it makes a comfortable place for people to stay and have contact with the household.

With regard to the upper floor, is setback one. That space makes the human before enter to the house. After climbing the narrow steps, one suddenly enters in to a more spacious place. Due to the scale of the half wall, the visibility of the other houses, memorable,

flow, confluence makes the user comfortable and the household has privacy. If the balcony area is covered by a roof or built up, the entrance quality and the degree of intimacy cannot be held thoroughly.

Layout pattern

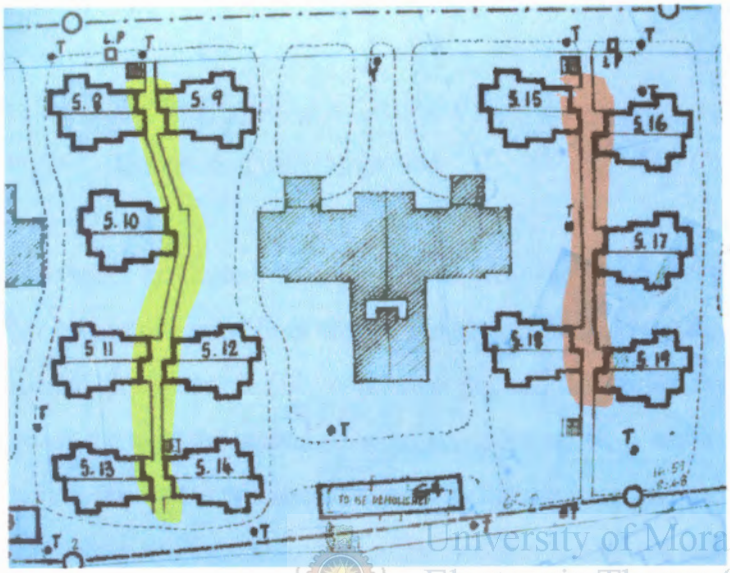


Fig. 39 – Connected balconies

Fig. 40 – Balcony

All the balconies are designed in a linear way. It is joined in the second floor level. According to 2.3.1, the middle income class people are not more much extroverted. It gives a certain degree of privacy to the user. Table 1 (in chapter one) states the linear arrangement of the interacton spaces create more stabilized interaction spaces.

Fig. 41 – Inter connectedness

Fig. 42 – Flowing spaces

Interrelatedness of activities

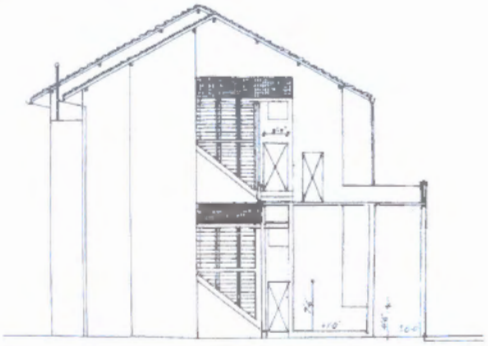


Fig. 43 – Connection with the ground

Fig. 44 – Connection with the ground

This space is located outside of the house. The degree of visual access is at a higher level. The person in the ground floor can see the second floor person through the girded structure. Ground and second floors are visually connected through the girded structure. The physical access has been given through the staircase. In an acoustics sense, it has a clam environment. Nowadays, some houses are vacant and some are used by the ministers and secretaries of Ministries. In compatibility, the houses are located in such a distance that it does not make any obstruction to any house. So it feels more private and relaxing.

Maximum flexibility of the space

In the ground floor entrance court and the upper floor balcony is used as a gathering space in the event of a funeral or any other special occasion.

Possible space for expansion

In the ground floor the entrance court and the verandah space can expand temporary to the garden area. In the upper floor it can be expand along the bridge running along the second floor level.

3.3.4.3 With the immediate community

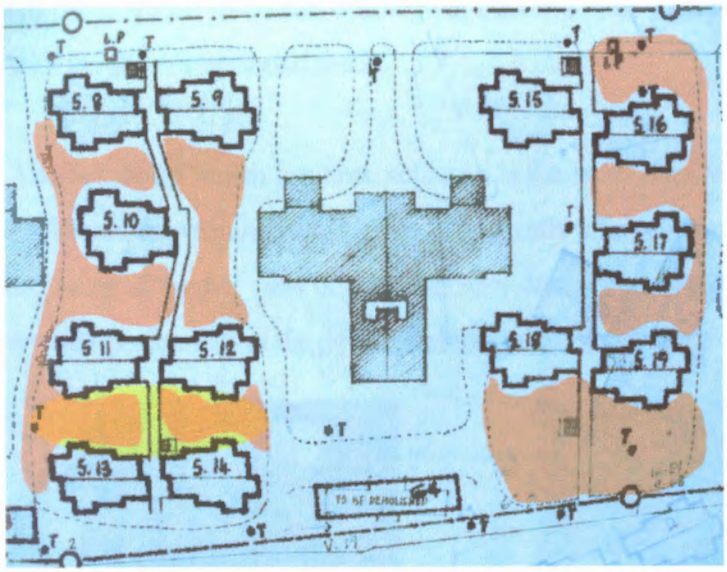


Fig. 45 – Common ground

Fig. 46 – Space among the columns

The social interaction with the immediate community occurs in the ground or on the bridge. Sometimes the bridge is only for the intimate neighbours only. Some times the people who are using the bridge are in the community.

Adaptation to site and climatic variables (Location)

The interaction spaces (red spaces) are placed in between the eight housing units. Each householder can participate in activities of the interaction place in the ground. Due to the column grid the interaction space inter – penetrates every where (yellow space). In the ground, the solid void ratio is approximately one to one. So there is a big area in the ground similar to the area in the house. But the space has no limit in the ground.

When considering the characteristics of the location, scale plays a big role in this housing scheme. Friendly expressions evoked by the intimate forms and proportions of the elements are vital in the development of contacts, from the semi – public space. Even though these blocks have a height of four storeys, it is visually reduced to pleasing proportions by the use of concrete handrails that runs horizontally demarcating the bridge of the upper levels. These intimate proportions seem to play a prominent role in supplementing social solidity among the community.

The visibility is another factor that leads the location. The housing blocks are arranged in such a way

then it enhances the natural visibility over the semi – public and private spaces. That means the other spaces; open spaces, are located in an uplifting way to enhance the social interaction. Open balconies at rear space and openings in the front facade are helpful to have visual contacts directly with the above mentioned spaces.

Another aspect which has been achieved is the relative intimacy and well demarcated community pockets in between housing blocks. This greatly affects the extension of the visual capacity and the capturing of the full view of space, thereby enhancing contacts with the space, since these contacts are basic necessities of the development of social interaction.

Fig. 47 - Spaciousness

Fig. 48 - Connectivity

Layout pattern

The social interaction spaces are located in a linear manner. According to the table the linear scheme enhances the social interaction very well. A space within four houses becomes a central place for these four houses (yellow space). The ground level social interaction spaces can easily be combine with the traffic way which runs in front of the houses.

Interrelatedness of activities

The interrelatedness of activities discusses about the visual access, physical access, acoustics and compatibility. Considering the visual access about the social interaction space, it is more accessible than other spaces. The quality of the double height space boosts the visibility. The gaps between the houses improve the visibility to the social interaction space. Obviously the physical access is in the ground. Furthermore the staircases too provide physical access to the social interaction space. This interaction spaces are located in such a way that the disturbance from the vehicular traffic is less.

Nowadays, due to security reasons these roads are not in use. Pedestrian movement is much higher than the small number of official vehicles. In compatibility, the interaction space is located next to the entrance court and the verandah area. Therefore the activities which happen in those areas extend to the verandah.

Fig. 49 – Links between two levels

Maximum flexibility of space

Temporary adaptations have occurred by the use of natural or physical features, as space demarcations or as visual enhancement. This is essential in order to gain an identity to the particular cluster or household concern. These partially defined pockets in between housing blocks seem to play a major role in the generation of a particular activity, giving identity to the neighbouring physical context. Conversions of such areas, as temporary play spaces or as successful socializing spaces are common features. Thus the ability of the social interaction space to be converted to multi – functional space can be seen as an aspect of increasing the accessibility and further enhancing the social interaction in higher range.

Possible space for expansion

It is difficult to expand this type of social interaction space, because the boundary is the traffic way and these spaces are very large.

3.3.4.4 With the whole community

In this category the social interaction is confers to the activities in the playground and to the roads. According to observation, nowadays the play ground and the public roads bear an uninhabited quality. Therefore it has not been taken for discussion.

Fig. 50 – Layout – Summit flats

3.4 Case study two – Raddoluwa Housing Scheme, Raddolugama, Seeduwa.

3.4.1 Location

Raddoluwa housing scheme is situated close to the Seeduwa town in an area with close proximity to the Colombo district. This is one of the largest middle – income, low – rises, high density housing schemes so far undertaken in Sri Lanka. Since it was developed in a some what suburban site, most of the support structures had been introduced in to the scheme.

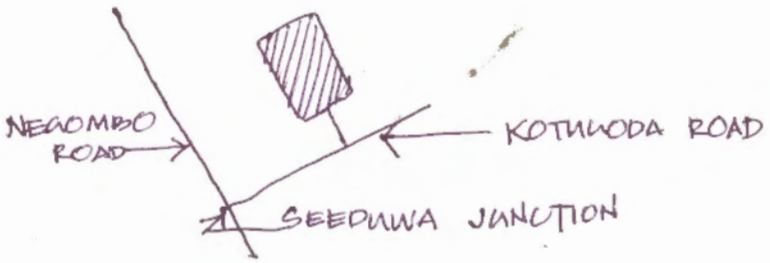


Fig. 51 – Location map

3.4.2 Socio – economic character

It is a high density development, reporting the highest density within the area. The social profile reveals a mixture of upper – middle income and middle income population. However, relatively middle income population takes a higher percentage. It consists of a variety of age groups with a higher percentage of working population.

3.4.3 Built environment character

The scheme consists of mainly two storey structures of basically three type plans. But due to the recent modifications by the owners or buyers, it has been given a variety of plans and facades. These housing appear in attached and detached layouts. There are two commercial development zones; One at the entrance to the housing scheme and the other after the entry point. The scheme is equipped with a library, community centre, health centre and a primary school. This housing scheme was built in 1981 – 1983. The land extent is 106 acres 2 roots 09 perches. There are two thousand and twenty two houses in this premise. It bears nine units per acre housing density.

Type B

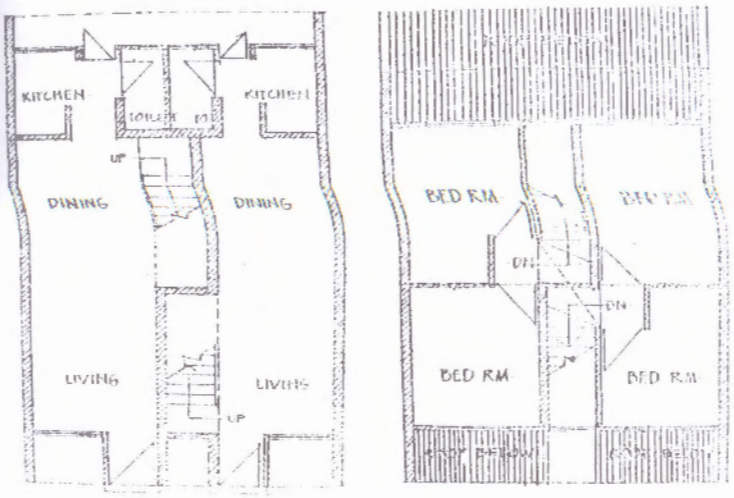


Fig. 52 – Type B – Ground floor and First floor

Type D

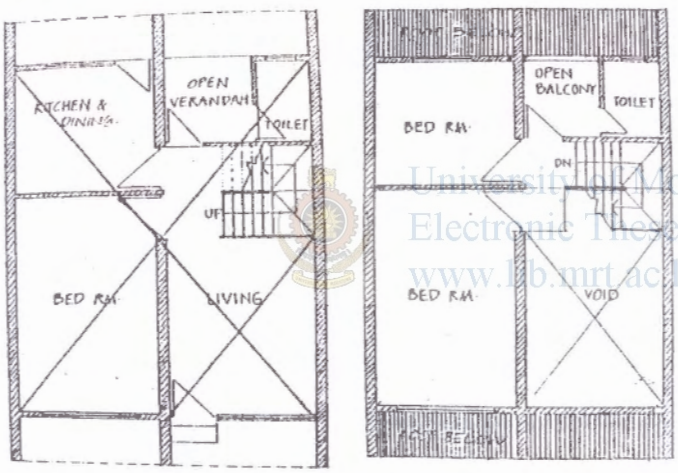


Fig. 53 – Type D – Ground floor and First floor

Type F

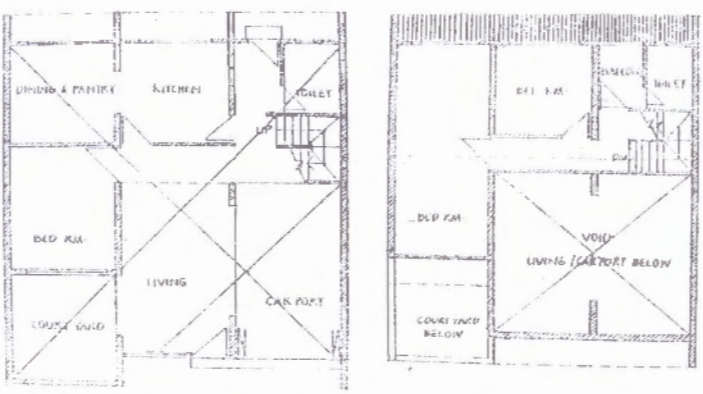


Fig. 54 – Type F – Ground floor and First floor

3.4.4 Spatial organization for Social interaction

3.4.4.1 With the family members

Type B

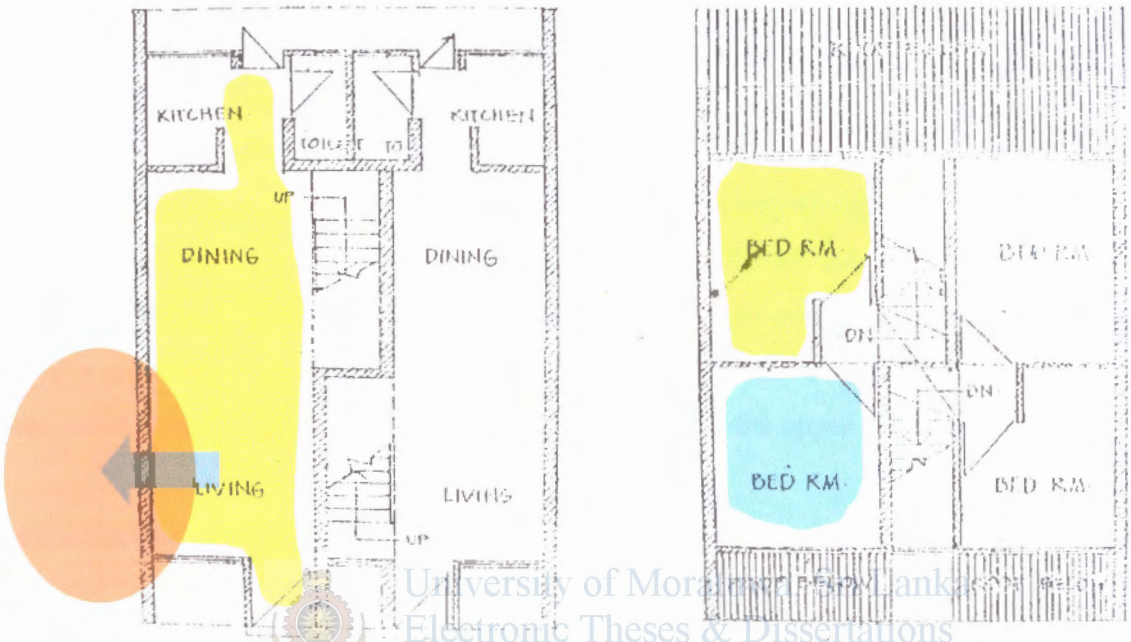


Fig. 55 – Type B – Expansion in the Ground floor Upper floor

The house type B is the smallest one in the housing scheme. There is one thousand six hundred and ninety six no. of units in the housing scheme. One unit has four hundred square feet only and it spreads over four perches of land. The value for a house was seventy thousand rupees only.

Adaptation to site and climatic variables (Location)

This segment focuses mainly on the living area. The members of the family gather mostly in this space very often. According to the location, this space is located adjacent to the kitchen and dining area. One who goes to the kitchen through the house or to the upper bed rooms has to go through the living area. Then the family interaction occurs very strongly. The factors affecting the location discussed in 1.3.4 is also applicable to here.

Layout pattern

Fundamentally the interaction place is laid near the dining area and the stair case. So the two communication paths interchange here enhancing family interaction. In this instance the interaction space is located in a linear way. According to the Table 1 the linear scheme enhances the interaction.

Interrelatedness of activities

Near the living area, the kitchen area, dining area and the way to upper floor are located. Therefore the activities of these spaces are interconnected with the living area. Physical and visual accesses are evident here. Acoustically, the noise coming from the kitchen may not be a problem to the users. The partition wall pauses that nuisance. The interaction place is not a barrier to the bed rooms since it is located in the upper floor.

Maximum flexibility of the space

It is difficult to talk about the flexibility in this space due to the minimal space allocation. For instance, if there was a funeral, that interaction place is used to keep the body. Therefore, the flexibility is very minimal.

Possible space for expansion

The interaction space can extend to the outside by changing the structure (shown in the ground floor plan).

Type D

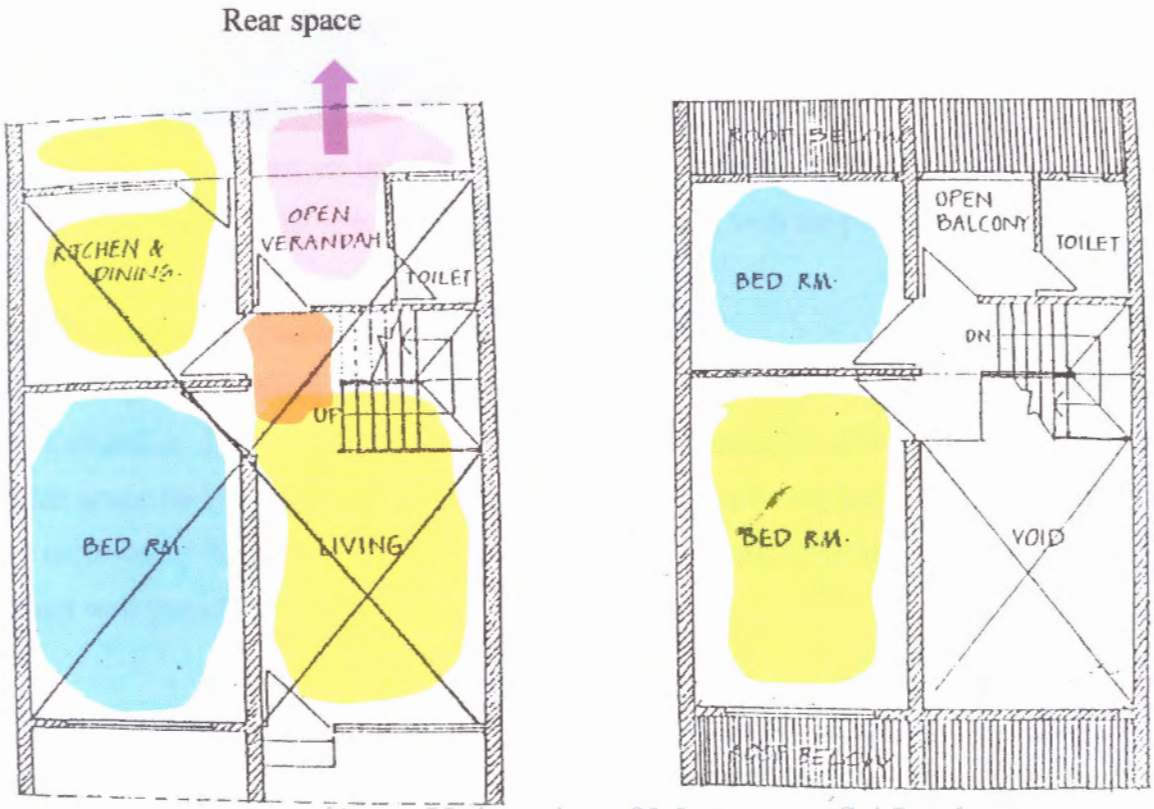


Fig. 56 – Expansion in the Ground floor Upper floor

This is the medium size house in the scheme. Now it is used by the workers of Ceylon Petroleum Corporation. There are two hundred and forty seven houses of this type. Each house contains eight hundred square feet and spread on eight perches of land. One of these houses cost approximately one hundred and forty thousand rupees.

Adaptation to the site and climatic variables

This is more different to the other housing unit type B. In this house there are several interacting spaces in different degrees. Basically the living area (yellow area) is the key interacting space among the members of the family. It is located in a visible, accessible way. The scale of the space suits a family. This space is next to the staircase. So the stair space confluence the members to a single space. In the rear verandah, dining area and the kitchen area there are possibilities for family interaction in the house. But the interaction

space makes a disturbance to the bed room. And on the other side the bed room controls the living area in another way.

Layout pattern

If the degree of interaction is varied, the living and verandah are laid in a linear way. So it is easy to categorize the space according to the intimacy with the people.

Interrelatedness of activities

The living area is covered by a bed room, staircase and entries to the kitchen, dining and rear verandah. The bed room and the living area are drastically different spaces. And the other space (red area) dilutes the connection between the living and rear verandah due to its narrowness. Though it has physical access, visual access, compatibility, the living area is not well linked with the other activities of the house.

Maximum flexibility of the space

In the living area the flexibility is minimal. But the rear verandah is used by family members very frequently. Some times they extend their cooking activities to the rear verandah. And the rear verandah makes more connection with the rear garden. If the children are playing in the rear garden the mother is always in contact with the children in the rear garden. So there is an opportunity to liven up the family interaction in such a way.

Possible spaces for expansion

In the living area the possibility for extension is very lacking. Rear verandah can extend to the rear garden without any effort. So the rear verandah and the rear space make a huge interacting space for the family members to enhance the family interaction.

Type F

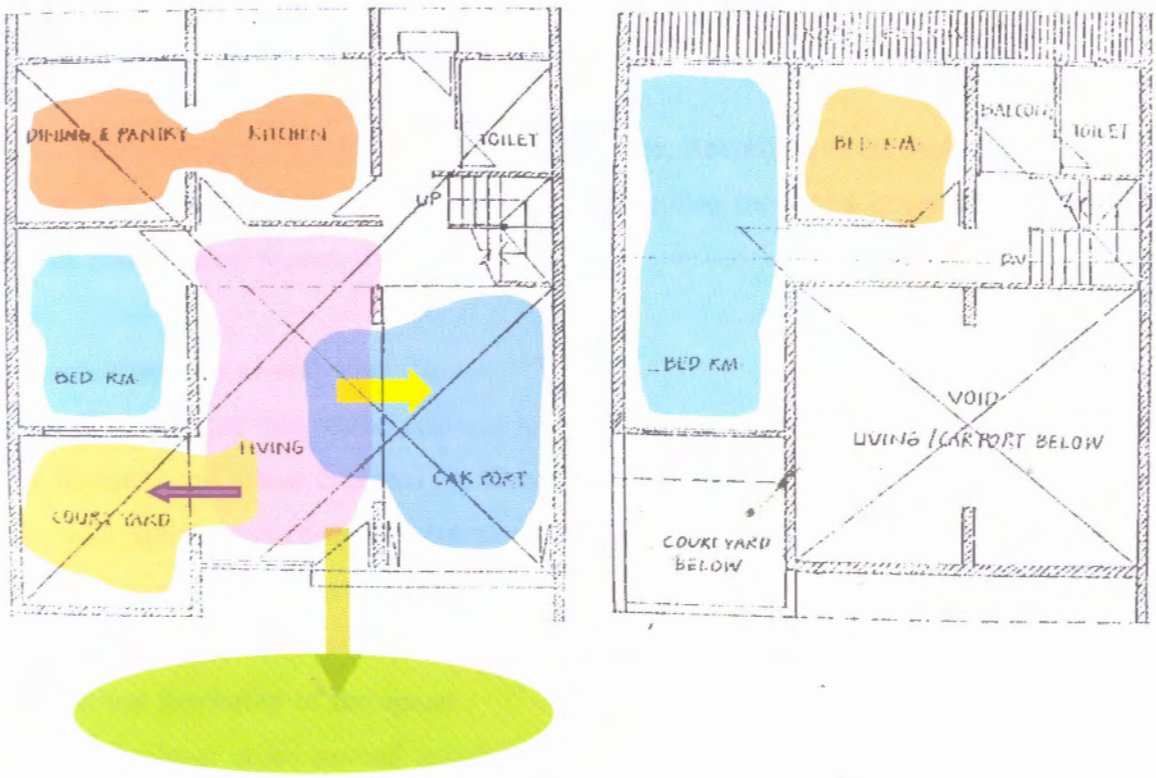


Fig. 57 – Expansion in the Ground floor Upper floor

This is the most luxurious one among these house types. There are seventy eight units in the scheme. Each one has one thousand and two hundred square feet. Eleven perches are allocated for one house. This type of a house costs around one hundred and seventy nine thousand rupees.

Adaptation to site and climatic variables

With the exclusiveness of the houses the living, dining, kitchen areas are very much segregated. It is quite similar with the Type D planning arrangement. The living space is boarded by the bed room, kitchen, dining and pantry areas. On the other side there is a car port. This interaction space (pink area) has visual connection from the above spaces except dining and pantry area. The accessibility is depicted very strongly. All the spaces flow well through this space (pink area). Due to adjacencies the bed room does not expedite the interaction process. The scale of this interaction space is familiar to the users.

But most of the people use the car port as an extension to the living area. The courtyard provides a very celebrating quality to the house. That enhances the family interaction.

Layout pattern

The interaction space is laid out in a central scheme. According to the table (chapter one – 1.3.4) the central scheme maximizes the opportunities for social interaction because of visual and physical access.

Interrelatedness of activities

As said earlier the interaction space is located in the central way to the other spaces. So the physical and visual accesses are directly combined with the interaction space. Those accesses stimulate the family interaction very well. The double height space also enlivens the family interaction due to the visual accessibilities.

Maximum flexibility of the space

Due to the large space several activities can simultaneously exist in the house. Also the level difference between the living space and car port makes different degrees of social interaction.

Possible spaces for expansion

The expansion of the living area in the car port area is the only way for the expansion. And the garden area can be used as an expansion to the living space.

3.4.4.2 With the intimate neighbours

As a result of lack of space in the house or in the garden the social interaction with the intimate neighbours is taking place in the community space which is nearer to them. Therefore the social interaction with the immediate community and the intimate neighbours happen in the same interaction space.

3.4.4.3 With the immediate community

Type B is the most successful house type in the way of promoting social interaction. Six houses of the type B are located around a small court. That space creates a very private and neutral space to the householders in those six houses.

Earlier there were no boundary walls and fences in this type of houses. But today the situation is a different one. By that government has imposed rules not to build any structure in front of house. Therefore they wanted to maximize the interaction with the neighbours through this space. Only wooden fences were allowed.

With reference to Type D, there is a small garden in front of the house and they used that space. Or else the road is the alternative for them. In these Type D house people are not very interactive people. Because most of them are government servants, they try to keep their status by being individualists.

The house type F also has to face this situation as in the type D. because this house type F also has no community area adjoining these plots. If one who wants to talk to another, that person has to come to the neighbouring house or come to the road and talk. Or else that person can talk with each other from his or her own house.

Type B

Fig. 58 – Type B – Cul – de - sac

The cul – de – sacs create a more interacted space among the neighbouring families. This space is not such a gigantic space. It creates a territorial effect to these six houses only. Some houses do not build the boundary walls in front of those houses but have plinths. That enhances the community interaction. Some people have used hedges or trees to sustain their privacy from the others. But it is not a big issue here. Therefore, they maintain strong connections with each other. Some householders have tried to make a connection with the street by keeping some steps in front of the house. While in some instances, it has contributed to maintaining privacy of the house.

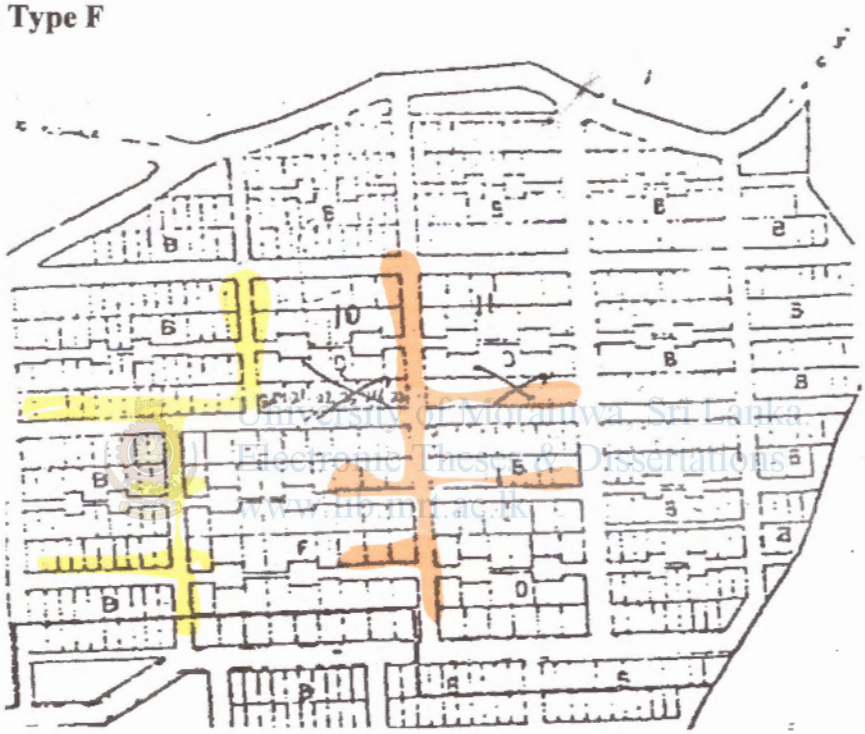
Fig. 59 - Cul – de – sac produces social cohesion

Fig. 60 - Plinth instead of the boundary wall

Fig. 61- Trees and hedges instead of boundary wall

Fig. 62 Steps formulate connection with the street

Type D and Type F



Type D – Low boundary wall and steel gate

Type D – Without any barrier

The type D and the type F have built their fences, keeping a see through effect with the road and neighbours. Mostly, they meet on the road.

Fig. 63
Type F – Garden area

3.4.4.4 With the whole community

The housing scheme has provided a good quality infrastructure system. The provided infrastructure facilities are post office, library, shops, transport service, play ground, children's park, religious places, community centre, paved roads, pipe borne water, three phase electricity, storm water drains and common sewerage network.

Adaptation to site and climatic variables

The shops (yellow area), which are in the entrance to the housing scheme, generate marvelous social interaction. Though these householders are middle income class people they interact very well in these shops. The bus park (maroon area) also makes good social interaction due to its location. It is located adjacent to the shopping area. The parking facilities are along the road. The scale of the shopping area is more close to human beings. The shopping activities confluence the people to interact.

The play ground (green area) is located in the central position, so that the people have a chance to interact with the playground. It is visible and accessible from everywhere. The parking for this area is given along the road. Because these roads are not very busy. The play ground is tangent to the public access very well. So the flow is well. According to the adjacencies, Raddolugama secondary school (blue area) is located next to the play ground. Therefore school enlivens the ground very well.

Children's park (pink area) is away from the main common spaces. It has been done for the safety of the children.

Religious places are located in the entrance and as well as in the middle of the housing scheme. It gives direction to the people. They are visible, accessible as well as memorable.

The community centre (orange area) is located near the play ground. It is used for meetings, book sales and amusement activities. This is also visible and accessible. It also bears the location qualities which were discussed in the chapter one under 1.3.4.

Layout pattern

The community activities are laid out in a spontaneous way. According to the table the dispersed scheme leads to a hampered social interaction. As mentioned earlier the children's park is a more segregated one. It has weak communication with other activities.

Interrelatedness of activities

Except the children's park others have some degree of interaction. So it reflects through human interaction. Physically and visually all the activities are interconnected. In compatibility and acoustically, it does not disturb any activity in the housing scheme.

Maximum flexibility of the space

Accordance to this there is a good flexibility due to its space.

Possible spaces for expansion

If there is a function in the housing scheme the whole community facilities act in one way. If there is a function in the play ground, the community centre will be the other expanded space for it. Like wise there is a possibility for space expansion.

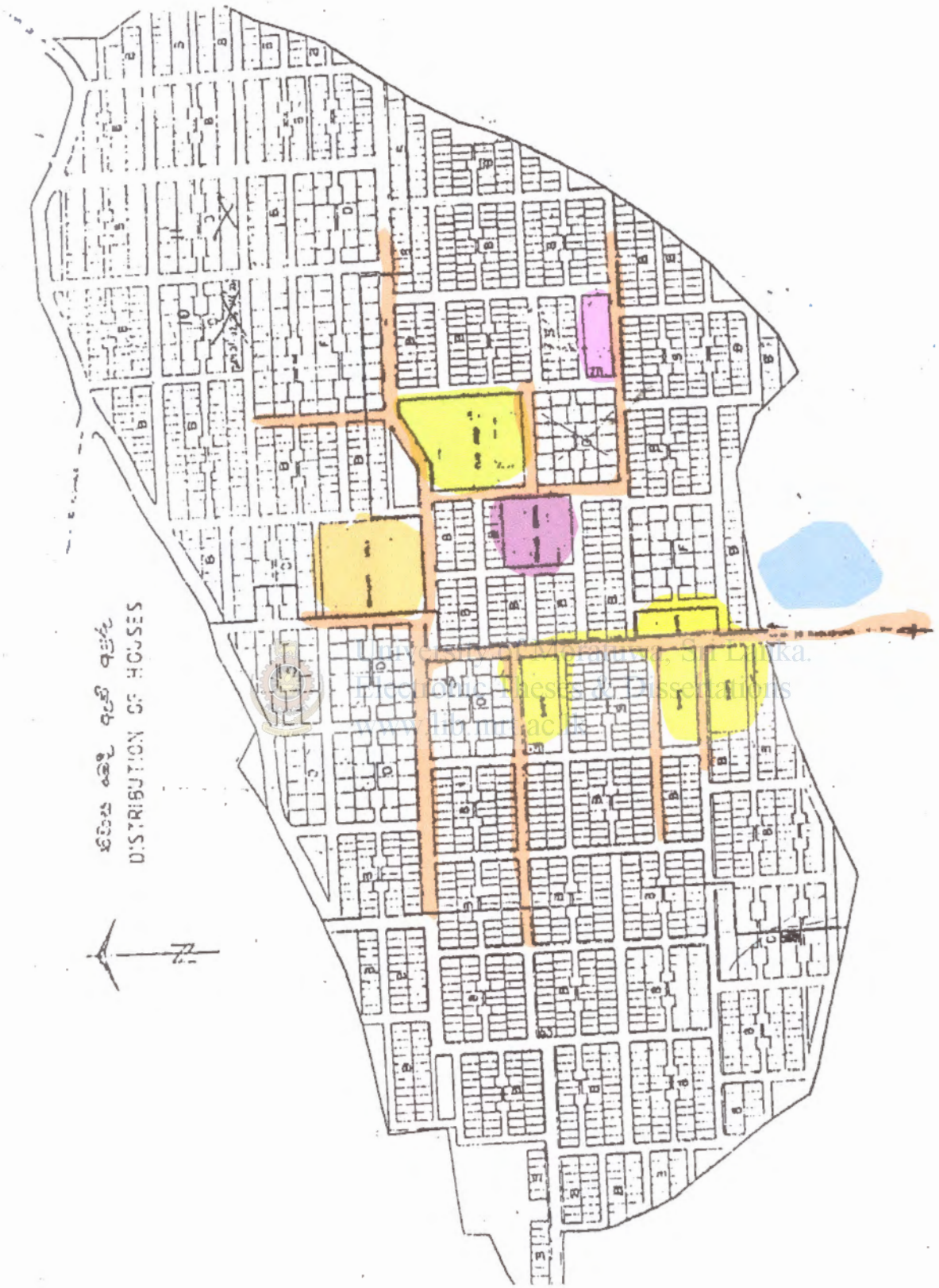


Fig. 64 - Layout - Raddolugama housing scheme

Fig. 65 - Shopping area

Fig. 66 - Bus stand area

Fig. 67 - Play ground

Fig. 68- Religious place

Fig. 69 - Children's park

Conclusion

The foregoing examination has attempted to identify the nature of social interaction of the middle income class people and to identify the spatial organization that has been given in the middle income class housing schemes to enhance the social interaction.

Through the theoretical analysis in the chapter one, it reveals that the social interaction spreads in four levels or degrees and the degree of preference for those levels can be shown as follows.

Levels of social interaction	Degree of preference
▪ With the family members	High
▪ With the intimate neighbours	Medium
▪ With the immediate community	Low
▪ With the whole community	Low

This observatory examination was done based on five key elements. They are as follows.

- Adaptation to site and climatic variables
- Layout pattern
- Interrelatedness of activities
- Maximum flexibility of the space
- Possible spaces for expansion

According to the discussion in the chapter two, the middle income class people have certain set of values. According to Cooper, the hierarchy of needs of any human being is shelter, security, comfort, socialization and self expression and aesthetics. But the middle income class people fulfill their needs with certain limitations. They keep their privacy, territoriality and identity to a certain degree when they interact with others.

The third chapter discussed about the given spatial organization for the social interaction in the middle income class housing schemes according to the above frame work.

Accordance with social interaction, the first phase discussed about the family interaction. It is not worth declaring; obviously the interaction in the house is at a high degree. But in some cases this aspect was questionable. House is basically a personal space. Keeping its' privacy, if the house is a robust space, this problem will be overcome. The obstructions means structural frame work pays a vital role in this process. The temporal partitioning ways may triumph over this issue. Furthermore defining the spaces for several activities is another critical matter. Normally, the activity of the adjacent space should be enliven, make livelier or cheer up the activity which happens in the nearer space. Specially like the spaces for gathering. If there is a bed room or store room near the interaction space, the whole atmosphere dilutes and stagnated always.

When relating to the intimate neighbours, the intimacy is put in the picture through the degree of interaction. Middle income class people always compare with each other. They peep out and look around at what happens in the next door etc. But these types of housing schemes are filled with people of the middle income category. So the difference between two houses is less. In these houses most of the time the husband goes to the work and the wife stays at home. Then she goes to the other house or has a chat near the fence. Thus, the woman holds authoritativeness over it. The rear space, fence and the windows do a perfect job to enhance the social interaction.

With regard to the immediate community, social interaction exists in a very low scale. These spaces hold uninhabited quality among the houses. Only the small children play in this area. Middle income class people have connections with certain families. But such instances occur in a low scale. Middle income class people care about the self – dignity extensively. Some times, theses families instruct their children not to play or associate with other children. This expresses their self – esteem very well. Therefore, if the families who are around are not compatible with other's attitudes and values the degree of social interaction is very low. Each individual's attitudes and values, too contribute to this affair. The education, age, sex and other related factors have an effect on this dilemma. In this instance, the attitudes are more powerful rather than the built environment or else spatial organization. In respect to spatial organizational, at least a sharing court or a garden space will give a solution to this concern by forming eye contact with other families.

In relation to the social interaction with the whole community, it reflects a dreadful situation. Normally people tend to make sub – societies as they wish according to their likes or dislikes. But the middle income people form sub – cultures in the housing schemes which are very different. As mentioned earlier, the middle income people have varied attitudes and values and above mentioned factors. Some sub societies are not open to the scheme. They live in their own worlds. Some times it is the way of the world with the urbanization and globalization. Most of the middle income class people do not have clearly seen conversation with the whole community very much. When they meet in a shop, market, post office, bus stand or in a religious place, they say 'Hi' or 'Bye' and wave. If somebody meets someone who is in their group or sub society, go to the café shop and wait and talk for hours and hours.

With this scenario, the spatial organization cannot do everything to enhance the social interaction of the middle income class people. Their attitudes and values should be changed accordingly, too, to enliven the social interaction.

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