

PERSONALIZATION OF THE DWELLING -
A STUDY OF THE TRANSFORMATION OF THE GENERIC FORM,
WITH SPECIAL REFERENCE TO THE RE-FORMING OF HOUSES
FOR INTERNALLY DISPLACED COMMUNITIES AFFECTED BY FLOOD
IN BADDEGAMA, GALLE DISTRICT

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A Dissertation

Submitted to The Department of Architecture of the
University of Moratuwa in partial fulfilment of the
requirements for the degree of

Master of Science

In

Architecture

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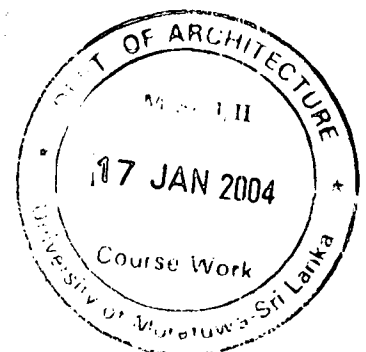
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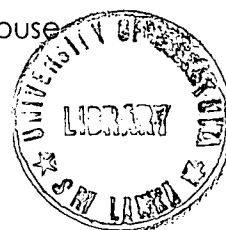
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PREAMBLE

PREAMBLE

Over many thousands of years, human societies have tackled the basic problem of providing shelter in a wide variety of ways, adapting to the natural environment and making use of the materials it provides for the construction (or adaptation) of sheltered space. The most basic motive for building has been to provide shelter for a defined Kinship group, often within a clearly marked, protected area.

The shelter always had two purposes. That is qualitative aspect and the quantitative aspects. Privacy, Identity,^o Territoriality and Sense of belongingness are considered as some of those qualitative aspects of a shelter. The meaning of shelter varies from, the single housing unit to a settlement which is the manifestation of self to community level.

As a result of social hierarchies, cultural beliefs, and economic and political aspirations, such communities being segregated and that has resulted in so many settlement patterns within one community itself. The settlement patterns exist, as a result of **socio-spatial** organizations which co-existed within a society, and to establish one's reaction to a **specific place**, which one refers to. When someone become place or location specific, he has to be in a two-way conversation with the particular place, in order to make his roots to that place.

Human, place relationships carry **opportunities** as well as **threats** to its inhabitants, which some may be avoidable or unavoidable. Opportunities, no doubt, may result for the upliftment of a society. But threats would come in the guise of natural and man-made disasters, which cause numerous harm to the society.

Most instances "**displacement**" being the ultimate result of a disaster, it uproots people from their original places, with severe physical, social and

psychological losses, which may reflect throughout many generations. This losses, the very communal base of a society and make them placeless. Even though, these threats does occur changes, long term or short term, in the society, but the society has to exist some how, somewhere in the world. Also life has to be continued. To keep this process in motion people **“re-built”** and **“re-place”** themselves either in the same locality or in a nearby area. By doing so, people generally **“re-align”** themselves for the continuous process of place making.

Nevertheless, the act of dwelling may happen, based on social, cultural, political and economical aspects, in varying degrees. To understand these varying aspects, one has to have a deeper understanding and experience regarding certain characteristics of a particular society.

This study thus, unravels the spatial experiences of the individuals and in communal level, in their re-making or re-forming of places, after being suddenly displaced by different disaster situations.



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DECLARATION

DECLARATION

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this university or to any other institution for a degree, diploma or other qualification.

Signed: ***UOM Verified Signature***
A.R.Karunasinghe ✓



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INTRODUCTION

➤ THE STUDY PREMISE

Human is a social animal. So it creates inter-relationships between, the living and the non-living things together. Existence of these inter-relationships facilitates the **“act of living”**. In this scenario **‘home’** becomes the primarily enabling space, which facilitate this process. **“Home”** as a purposeful human creation of spaces gives meaning to architecture. **HOME, therefore as a work of Architecture concretises socio-spatial relationships.**

“Home” as the basic social entity, which facilitate social relationships, act as the central place of human existence. Man is deeply rooted to this centre and it reflects all the things known in contrast to the unknown world around him. These deep existential ties of “home” provide man mental comfort in terms of sense of belongingness, identity, territoriality, orientation, privacy security and personalization. So it is psychologically hard to detach from home within a short time. Home as the core of this kind of place attachment a person can psychologically **“resides”** rather than physically, because it becomes the starting point in our daily routine. Therefore the house fulfils the psychological, physical, socio-cultural needs of the family.

The concept of home is a universal language representing archetypes and symbols, common to all human society. But the form of the dwelling, throughout the world differs largely, in relation to the uniqueness of a specific location or country/ region. It results a location specific architecture, which is composed and manifested through a generic form for the dwelling.

This ongoing process of human habitation, act of dwelling and the continuous social relationships embedded deep inside, will get shattered and destroyed due to catastrophic situations. It will result **sudden displacement** and refugees

are connected to detachment to home, which **cannot be under-estimated or under-valued.**

Ultimate result of displacement is known as **placelessness**. Placelessness refers to an occasion which all its socio-spatial relationships and references for places being lost. Loosing one's point of reference in the world, not only in its physical construction, also the social and psychological attachment to place, make the situation more critical.

So the solution has to be a **multi disciplinary approach** regarding a purposeful re-orientation, which address all issues of place making in Architecture.

The initial observation is that, the depth of this problem not been envisaged by people who are responsible, including professionals in all fields related to architecture. Unsuccessful instant solutions are introduced without analysing the needs & expectations of the threatened people.

The key observation in this situation is the use of type plans being the general practice in the process of **re-structuring, re-aligning or re-placing** the displaced people due to any reason. The level of personalization which is a determinant factor in re-orientation, is neglected in most situations when providing dwellings, for the physically and mentally distressed people who need to **re-fabricate** their "**webs of life**" quickly to enable their act of dwelling.

▼ THE IMPORTANCE OF THE STUDY

As it is discussed, disasters like flood, landslides, earthquakes, war & civil conflicts can cause instant displacements.

This may demand an instant supply of spaces where people can easily re-orientate. In such situations the supply of houses for displaced people who are placeless been a special task in the act of dwelling.

In case of placelessness all spatial orientations and rootings will come to an end and necessity of the act of re-forming and re-orientation becomes vital. To facilitate such an act, an architect as the prime place maker, has a greater responsibility.



Place making is not merely an object making exercise. But most of the reconstruction of dwellings, neighbourhoods & settlements are done as "object making" in a vast scale by ignoring the essential importance of place making. The importance of this issue becomes more sharpened when it is connected with disaster situations, because it is a challenge to provide "Places and Dwellings" for displaced.

At the moment, though this seems to be a problematic situation, reconstruction does not provide the kind of "dwellings" they had cherished as the part of their life in the new location to improve the existing opportunities and to up-lift the quality of life. In this scenario it comes the importance of the architect above the engineer, planner or sociologists, as the only professional, who can combine other professionals together throughout this multi-disciplinary exercise.

Architecture of a region can be changed due to several factors such as socio-economic, cultural, political, environmental and technological. So each region should have a pertinent generic form with variations or options depending on the contributory factors. This pertinent generic form may create an outer frame for a particular architectural character, which may be personalized by the inhabitants on their personal aspirations.

The importance of the study is that, personalization becomes the determinant factor in transforming the generic form in to differentiated personal dwelling units, with facilitating all other psychological attributes such as territoriality, privacy, orientation, sense of belongingness, identity, etc... of an enabling place.



➤ INTENTION OF THE STUDY

The intention of the study is to establish the importance of personalization and the degree of architects involvement needed in the re-construction process for the internally displaced people, due to disaster situation.

Home is the most personalized unit of human habitation. It concretises all kinds of socio-spatial relationships and reflects the desires, aspirations and psyche perceptions deeply rooted inside the inhabitants. So one intention of this particular study is to **discuss the importance of act of dwelling and the physical, psychological and socio-cultural attributes regarding attachment to home place.**



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The event of disaster makes people loose their "homes" and "places", and not mere buildings. And it will detach people from their rooting places and reference points and make them disoriented and disjointed, in the unknown world. **Therefore to establish the criticality of the issue of displacement and placelessness due to catastrophic situation is another intention of this study.**

An energetic solution is needed through architecture, which strengthens the ego, sustain life and empower the individual family unit of the displaced people. So the intention is to **discuss the need for a meaningful reconstruction process, which re-orientate and re-fabricate the "webs of life" of the homeless.** And the common re-construction methods such as type plan and core house solutions and their contribution to establish and re-establish the lost attitudes, are taken in to discussion.

But the main intention will be to establish the importance of personalization in the process of reconstruction of homes for the mentally and physically

Personalization of the dwelling

*A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District*

INTRODUCTION

distressed people, and to examine the degree of personalization in past and on-going reconstruction approaches. **To conduct a detail discussion about the "generic form solution" as a recently experimented re-construction method and its contribution to transform the generic form to differentiated personal dwelling units is another intention of this study. As well as the results, merits and weaknesses of the "generic form solution" in comparison to other commonly used re-construction methods are discussed, with the intention to apply a more meaningful and successful result oriented method in the future situations.**



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➤ **METHOD OF THE STUDY**

The subject area of the study, comprise of "**dwelling**", "**act of dwelling**", and "**personalization of generic form of the dwelling in re-settlement process**", with special reference to the psychological, physical and sociological aspects. Study of 'dwelling' has to be base on a phenomenological approach. The study of act of dwelling is more of a qualitative experience than being quantitative, so it should take an epistemological approach to the study. In this respect "Dwelling" and "The act of dwelling" have been established in general, on its theoretical basis, as a general concept. The latter part of the study will be a case study approach, which would look into specific methods and principles.



For the case study, one village from Galle district, which gone through the recent flooding, is identified. An in-depth study will be conducted using the **Sample Survey Method**. Interviews to be conducted in a face-to-face setting and some particular data may gather in form of plans, elevations and sections. Before going to the field, the interviewing method will preplanned, to conduct the interviews by adhering to a set of questionnaire (check list) in order to obtain particular information of the study.

In this respect, the researcher plays an important role in the study. The discoveries are exploratory, focused and generated through built forms, information, insights and understandings. Thus, the research would be looking at transformation of the generic form to individual dwelling units through personalization that could be identified physically and socially and how it can influence the peoples', social and psychological attribute to a home.

• SCOPE AND LIMITATIONS

Only the local examples were selected for the case studies, which have been recently affected by flood in Galle district.

Due to time constraints only one village will be selected for the in-depth study. So it becomes a limitation in arriving to some conclusions.

And there will be many assumptions due to the fact that the re-settlement process has been recently done and the long-term results cannot be discussed.

The study will be focussed on the individual housing units and therefore the re-settlement theories & aspects will not be discussed in details.



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In the case of considering only flood prone areas, the social issues related to many other disaster situations may not be examined.

The study may mainly focus only on social and psychological attributes and least consideration will be given on physical attributes. So it may carry limitations.

Its scope is limited to psychological attribute of personalization, of act of dwelling and the associated physical and socio-spatial factors.

Perception of dwelling begins, on the more tangible physical settings, which are given symbolic meanings by the people whose life happens in such settings overtime. Observing such a situation by a "Third person" therefore carry a limitation, as it is almost impossible for such a person to align himself in this dynamic process.

To overcome the communication and language problems and to facilitate the smooth flow of discussions, the help of a "third person" was vital. This situation carry a limitation, and the strength of an idea can be reduced while it transfers via the third person.





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CHAPTER ONE

ACT OF DWELLING - A HOLISTIC VIEW

CHAPTER ONE: Act of Dwelling - A Holistic View

1.1. Dwelling/ Home – A Definition



Fig. 01 – Home as a spatial entity,
which gives warmth &
comfort

“Our home is our corner of the world, our first universe, a real cosmos in every sense of the word” (Bachelard, 1964:4), from a similar perspective sees home as the foundation of our identity as individuals and as members of a community.

Quoting Vycinas (1976) he further describes home as an overwhelming, in exchangeable something to which we are subordinate and from which our way of life is oriented and directed.

Therefore home is the most personalized unit of human habitation. It in the meantime, as a social concept is strongly associated with the notion of family the parental home, the marital home & the ancestral home, etc. ... Home conjures up such images as personal warmth, comfort, stability, privacy and security.

According to Marc (1977:14), as he explains **“To build a house is to create an area of peace, calm and security, a replica of our own mother’s womb,**

where we can leave the world and listen to our own rhythm; it is to create a place of our very own, safe from danger. For once we have crossed the threshold and shut the door behind us, we can be at one with ourselves.”

Home bestow warmth, as mother's affection. It memorizes the love, care, security and affection from mother to an infant in her womb.

Fig. 02 – House as a place where one
can listen to his own rhythm by
recollecting memories



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According to Porteous (1976), home is **“the territorial core”**, **“a proffered space and a fixed point of reference”** for daily activities. The home becomes the fixed point of reference in ones life, as it reflects the nature of its inhabitants and socio spatial relationships deeply rooted in between home, inhabitants and the space beyond them.

In this study the concept of home has been considered in a broader perceptive. Though the home is a fixed point of reference in our routine activities, it cannot exist alone as an isolated spatial entity.

Home as an initial point of reference, has many links with related activities, in its locality. Such as place of worship, market place, school, work place, communal bathing place and paddy field, etc. Man makes attachments

with such places, which are in and outside of his specific location. Then he creates and re-creates his own places, which he uses to make references to other points.

In this sense home becomes one's personal experience where one exists with his own desires and aspirations. When home becomes the personalized core of a person's existence, it begins to reflect the identity of its inhabitants.

House on the contrary, is the generalised version of such a place and does not carry the meaning beyond a physical structure for habitation. The sense of personalization and related psychological aspects are not imbibed in it. A house can be anybody's place of residence once this "**anybody**" is named, identified and the house is related to his specific psychological needs, it qualifies to be his home.



Dwelling implies a closer tie to home than to house as it too signifies a degree of personalization as Paul Oliver puts it, "the dwelling place is more than the structure, as the soul is more than the body that contains it. All houses are dwellings; but all dwellings are not houses. To dwell is to make one's abode: to live in, or at, or on, or about a place. For some this implies a permanent structure, for others a temporary accommodation, for still others it is where they live, even if there is evidence of building."

1.1.1. A Historical Overview

Primitive man lived in natural shelters like caves, grottoes and later started a nomadic life, which does not include permanent settlements. The environment in which they lived, whether built or un-built, shelter was not the mere aspect they sought. More important; symbolic, place-defining and socio-cultural attributes were addressed by them, consciously or unconsciously.

For example the Aborigines who were hunters and gatherers moved about a great deal, though their movement was restricted and confined to specific areas. Their families consist of small groups and had a defined territory, home range, core area & a place for jurisdiction.

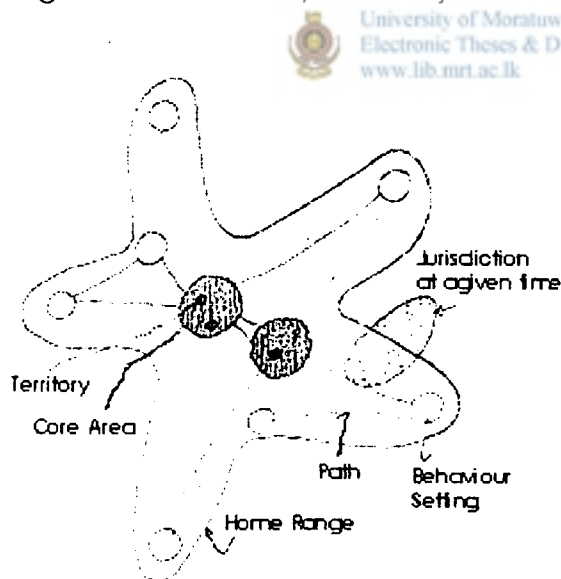


Fig. 03 - Diagrammatic representation of home range, core area, territory and jurisdictions in the way Aborigines used the space

That means it is evident that the early man had the initial idea about the "place" and aspects of identity, territoriality and belongingness within the tribe. This reveals that the basic attributes of the house had emerged in the minds of the primitive man.

1.1.1.1. The Birth of the House

According to Oliver Marc the early man left the natural shelters and built the first house, not because he found perfect protection from bad weather and animals, but because he had a deeper motive to do so.

"Birth is a break with unity, and the split is caused by an evolutionary demand: a child cannot keep from being born; a mother cannot keep giving birth."

(Marc, 1977:12)

Likewise an inner compulsion, which was unpreventable, separated man from the earth's womb, and led him to build the first house. It is a break from unity to build his own universe. The perception of house was already hidden inside as an interior image of self, which enable him to give form for the house.

Man first conceived the form of house, inside his mother's womb. So the early houses built by African tribes, took form of mother's womb seen from inside. These were called "**womb houses**" and consisted of slightly attenuated pouches, with a vertical thick-lipped slit along one side. With this particular kind of house, he tried to express his memory of the unity of life in his mother's womb and symbolize the interior peace, which he desired to re-experience.



Fig. 04 – Early house of an African tribe as a manifestation of mother's womb



1.1.1.2. The Roots of the House

From the existence of primitive man, humans expressed their emotions and thinking which are deep inside them, through various symbols. These symbols, which reflect the inner image of the self, are expressed through any work of art, even without knowing so.



Fig. 05 – The similarity between the imaginary house drawn by a child using basic geometric forms and a Congolese hut as an inspiration of the origin



Child, as well for the first man, the **“circle”** was the first and foremost symbol which expressed the perfect universe.

“Man first choose the circle in order to create a space symbolic of himself. His spirit was young, and so near its origins that it was deeply impregnated with a

circular perception of the universe; this he now expressed spatially, in order to identify himself more closely with it.

(Marc, 1977:51)

According to Oliver Marc, this universal roundness gave the man, the basic inspiration to make a circular space around himself. Man, created an enclosed space, which is an area of his own where he becomes the 'centre'.

"Man's house became a microcosm in the centre of the microcosm: the womb house became the circle house."

(Marc, 1977:51)

The **circle house symbolises the man and his relationships with the cosmos and the unity**, which was rooted deep inside him. Later the **house became square shaped symbolizing the man and his family**.

1.1.1.3. The Universal Language of the House

As symbolised, by the cross, vertical and the horizontal are the two directions along which the house is organised in the image of man. The conquest of the world outside, indispensable to the expansion of consciousness, has been carried on since our ancestors left their caves: first, the instinctive conquest of humanity grounds; next, the conquest of a region; then of the world by the human mind; the insatiable appetite for conquest which has finally wretched us away from earth's gravity to hurl us into planetary space.

According to Oliver Marc (1972), as the city spreads out, the language of the house demonstrates our need for the vertical, from the cellar dug deep in to the ground to the attic high in the sky, protected by the sloping, pointed roof.

Also the pyramid appears as a roof placed on the ground, recalling sacred mountains, and the mount Meru of the east. Oliver Marc also refers his idea to the following, which is in the bible; Moses too received gods' commandment from the top of the mountain, which like the roof, symbolizes the point where earth comes closest to heaven.

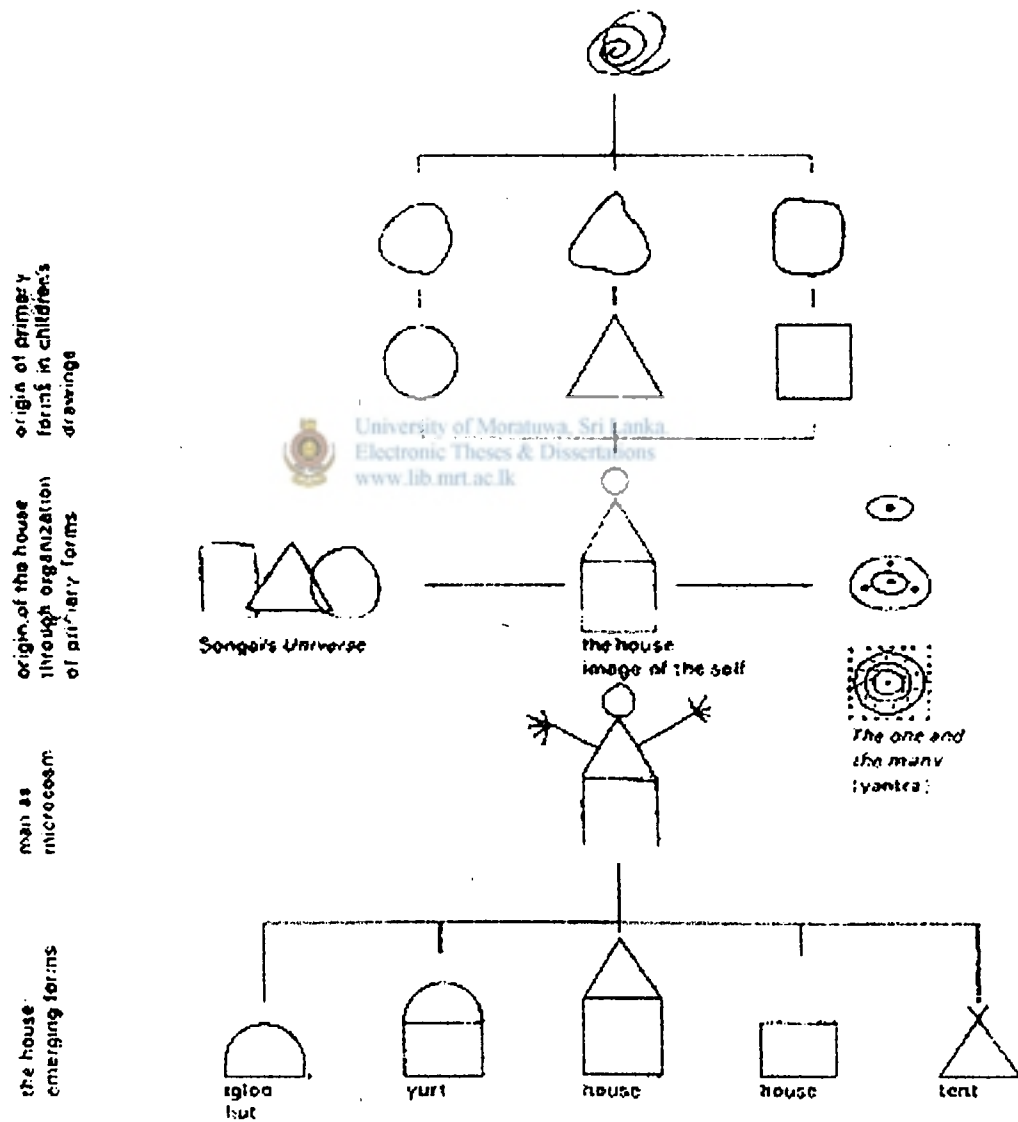


Fig. 06 – House is organised with primary forms in the image of man in vertical and horizontal directions

1.1.2 Attributes of Act of Dwelling

House is one of the fundamental needs of man. It is the place where, the basic social unit or the **"family"** exists, originating social linkages. For the family members, it is the space, which concretise, their emotions & feelings towards each other, the desires, ambitions, achievements and turning points of lifetime and the special moments that are treasured deep inside. So it is evident that people have deep psychological and essential ties to the place they dwell.

These physical, social and psychological meanings are reflected in a house through various aspects such as decoration, personalisation and use. Therefore the house should not only be a shelter against the elements and the protection against the intruder, although they remain important functions. It should be a setting for compact social unity, the family, which should fulfil their psychological, physical and cultural, needs.

1.1.2.1 Psychological Attributes

Psychologically man needs to attach himself to a place. The concept of home explains this attachment as a deeply routed human feeling. People perceive the built environment thorough their particular needs, memories, feelings, past experiences and present concerns. Places are perceived with all their senses, not only with visual perception. Orientation, identity, territoriality, privacy, personalisation, security and sense of belongingness are some o the psychological concepts, which are significant in bringing about a sense of home.

1.1.2.1.a Orientation

Man needs to orientate himself with the living environment. According to Norberg Schultz **"to gain existential foothold, man has to be able to orientate himself. He has to know where he is."** Orientation gives the basic identity, or a specific meaning to a place and its inhabitants, to establish their existence in the world.

"Home in its most profound form is an attachment to a particular setting, a particular environment, in comparison with which all other associations with places have only a limited significance. **It is the point of departure from which we orient ourselves and take possession of the world.**"

(Relph, 1975:40)



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People introduce themselves in relation to their orientation in the world. The first and the foremost reference point or the fixed point by which they knew their position in the world, is the home.

Orientation of spaces within a home enables to create activities more meaningfully. In past cultures orientation was a mythical concept rather than a perceptual or a logical requirement. For example, in the traditional domestic houses in Jaffna, the exact location of the house in the plot is determined astrologically based on the horoscope of the chief occupant.

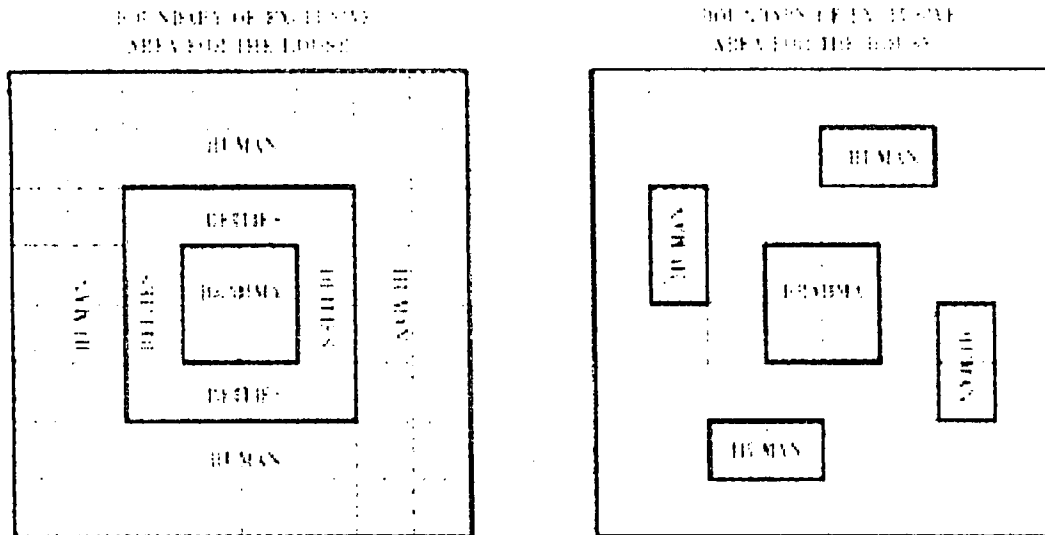


Fig. 07 – Plot orientation for the exclusive area of the house in Hindu culture

1.1.2.1.b Identity



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"Home is the foundation of our identity as individuals and as members of a community, the dwelling place of being. Home is not just the house you happen to live in, it is not something that can be anywhere, that can be exchanged, but an irreplaceable centre of significance."

(Relph, 1975:39)

Man needs to identify himself within the environment, to establish his rooting in the world. The "home" acts as the key element, which expresses the distinctive identity of a particular person. Form, interior decoration and personal possessions are mediums, through which the identity of a house is expressed. They are means of self-expressions.

"Individuality is not an abstract and mysterious quality, but the sum of many tangible details, with whom he is masterful. There is a strong psychological

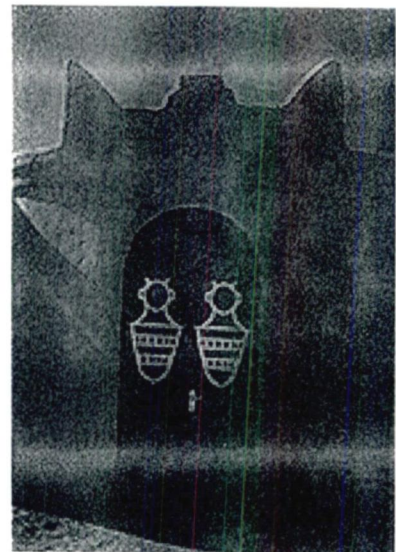
connection between the individuality and the home, not anything else, that is his home, where he gets maximum psychological satisfaction."

(Fathy, 1976)

So that the individual expresses his psychological perceptions through his root place, the 'home'. Home differs from person to person, because it is a combination of their characteristics and socio-cultural backgrounds. Therefore the "house" as a way of self-expression is identical to a particular person and cannot be of others.

Also the identity within the society is one of the basic needs and each and every dwelling unit has a significance of its own colours, textures, materials, landscaping...etc. In the general sense their desire will be to convey their social status, which is the position or recognition acquired by them in the society. The desire to do so varies to different social groups.

Fig. 08 – A dwelling unit with significance of its own colours, textures and materials



1.1.2.1.c Territoriality

Territoriality is one of the man's indispensable needs. The tendency to define territories is clearly seen in the animal world, which seems to indicate that territorial behaviour is instinctive, not a learned behaviour.

"Territoriality is usually defined as the behaviour by which an organism characteristically lays claim to an area and defends it against members of its own species... territoriality provide the frame in which things are done – places to learn, places to play, safe places to hide... basically the territoriality is a sharp sense of the limits that mark the distance to be maintained between individuals."

(Hall, 1996)



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As human beings, man want to develop a sense of belongingness with definite demarcations to develop his own identity, within a territory. They define spaces for specific uses by creating visible and invisible or even symbolic boundaries making it possible to defend the territory against unwanted intrusions. These demarcated territories bring about an emotional security to the inhabitants and provide a place to learn, play, feel free, secured and as their own.

"Human territoriality emanates from the feeling of personal space, and show the sense of individual and group belongings. It is the act of organism to establish boundaries around there confuse to lay calm to and defend on area against outsiders."

(Ekistics, 1972)

The physical expression of territoriality may be from different forms and symbols. In the group sense, the traditional layout patterns of various

settlements attempt to give a certain feeling of territoriality. In the individual sense, the need of territoriality would be to demarcate an area of one's own, around the individual housing unit.

1.1.2.1.d Privacy

Privacy does not mean merely being isolated or being alone. It can be defined as **the need to control the unwanted external forces and interactions**. Or simply the option to act, as you desire within the confines of your own four walls.

The degree of privacy required might vary from person to person according to the nature of the community or the social class to which the individual belongs. The following general statements quoted in Watson (1986:95-96) can be taken as further explanations of this concept of privacy in different degrees, compared to one's home place.

"Somewhere that I have my own keys to and I can be private in - have my own things so I don't always have to share with some one."

"A place where I can choose the décor, and where who comes and goes to my choice only. Somewhere I can control the environment. Home is one's own place, it allows one's own taste to flow out and then come back to you to enjoy."

Privacy creates a sense of individuality to allow limited and selective interpersonal communications and to provide self-evaluation and self-identity. Thus privacy has both psychological and socio-cultural aspects, which are reflected in the organization of spaces. It is manifested differently in

cultures, where different methods are established to guard against invasion of privacy, such as norms and rituals to enforce surveillance opportunities.

1.1.2.1.e Personalization

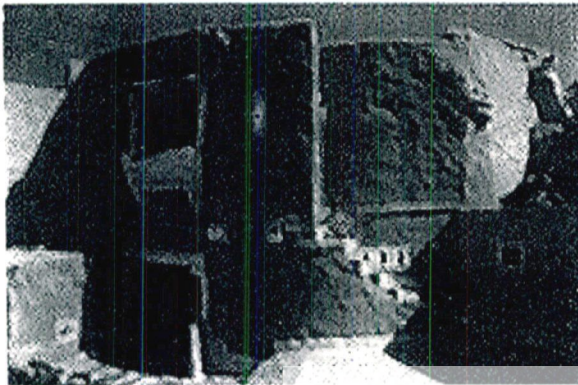


Fig. 09 – Personalised private domain with architectural details, colours and textures



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“My house cannot be someone else's work of art- because it is mine”

(Irvin Attman, 1982:19)

In that sense Irvin Attman reminds us what architects should do in the act of dwelling. As the creator or as the initiator of a place to live, he makes the skeleton or the framework of a place, and let the inhabitants to change it according to their needs and aspirations and to personalize their living environment.

Personalization: the ability to create for oneself or to put a distinctive stamp on one's personal environment.”

(Tiesdell & Oc)

Personalization usually takes place as a transition between public and private domains, specifically the judicial boundary of the property or territory of the

inhabitant. Small-scale architectural details, furniture arrangements, use of colours, textures and decor contribute to the cultural and social symbolism of such spaces,

1.1.2.1.f Security

“Security relates to the perceived necessity for a sanctuary from which to address and deal with the external world.”

(Tiesdell & Oc)

Security has become a major issue in terms of physical and psychological implications. Through security, the unwanted invasions & burglary is minimized and a sense of protection is given to the inhabitant who is living in the distressing environment. Security is achieved by physical implications such as boundary walls, fences and in historical periods by creating moats around a palace or a sacred place.

Home represents a place of safety and security. It is a space whose boundaries can be regulated and access can be controlled. Within the boundaries occupants have a private space. This space provides freedom from public scrutiny, although certain rooms (living/front/best room) are also used as a public display of personal identity. For many people the home is an area over which they have a large degree of control, which is expressed through its decoration and contents.

In most tribal societies, security was fulfilled in many ways. Within a single house unit there were clearly defined places for spouseless women, children and the aged.

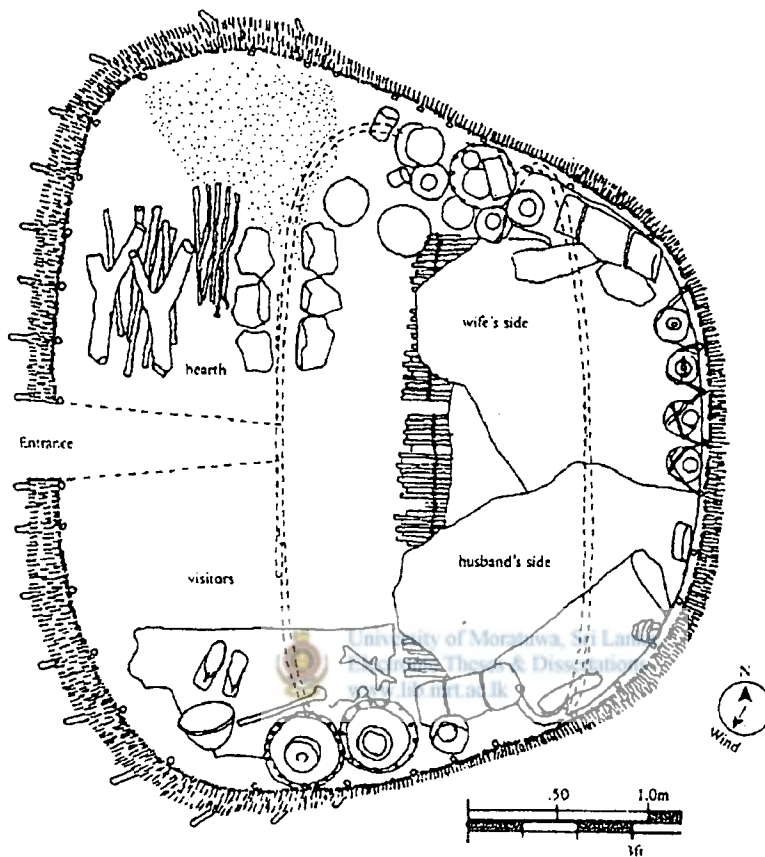


Fig. 10 – Plan of a typical Rendille Tent – Deeper space was reserved for women and children and shallow space for visitors to provide a sense of security

In most situations men were accommodated at the entrance, in the middle were the women and deep in to the house were children. Also they tend to use various symbols and images of god, animals and weapons, to make them psychologically comfortable and feel secure from environmental forces.

1.1.2.1.g Sense of Belongingness

In most situations the degree of personalization creates a huge impact on one's belongingness, to a place. When something is highly personalized there is a higher degree of sense of belongingness. Belongingness to a house can happen, according to the way someone make emotional attachments with the house and on how it becomes a starting point in one's daily life style.

Fig. 11 – Verandah space of a street house, personalised by the children as their play area



1.1.2.2 Physical Attributes

Physical demarcation helps us to understand the public and private relationship and the activity pattern of the living environment. The physical constituents (walls, floors, ceiling...etc) contribute to the understanding of the structure of the built form, which helps to define spaces and evoke activity patterns. Physical spaces have symbolic qualities, the meaning of which goes beyond physical elements. The meanings are derived by the dweller's experience of the world. These experiences of spaces and built forms, physical features and the way they are located and organized, the behaviour and ideas of people, contribute to a **sense of place**.

The management and organisation of the elements of form and space determine how Architecture may communicate meaning. The relationship of these elements to one another and the nature of their organizations, communicate sense of place, movement, hierarchy and order. A good composition would affect the qualities of centre, enclosure and continuity, which are the essential principles in the making of places, thus enabling a sense of belonging. So the qualities of centre, enclosure and continuity become the essential physical attributes of home.

1.1.2.2.a Centre

The principle of centre defines **anchorage to a specific locality**. The centre is the **place for action and interaction**. The centre unifies the social action of a place, according to E. Relph's can be understood as centres of meaning or **focuses of attention and purpose**. These means and functions vary from culture to culture.

In ancient times man symbolised a vertical axis by a tree or a pillar. His life existence was associated with this central point and it gave a sense of security and territoriality. Man in other words developed an emotional attachment to the central place. This is further explained when all human groups tend to regard their own home, homeland or region as the centre of the world.

"The notion of home as the centre of one's world goes back to childhood. The first points of reference are tied to the home and house, and the child only becomes able to cross its borders very slowly."

(Schultz, 1971:19)

A child as well as any adult, introduce himself beginning from the primary reference point he has in this world; the "home" and describes all the other things in relation to it. So, for any person his "home" becomes the central point, which represent the known in contrast to the unknown world around him. They developed an emotional attachment to the home, which they identified as a place that represents their social values.

In a physical sense the centre of almost all the primitive houses had been the geometrical centre of the physical structure. The centre acts as the point of reference for their orientation within the house, the centre helps to organize the spatial structure of the dwelling in a hierarchical order, and has a community importance as well because; often it is allocated for an important activity or important person in life.

"The radial plan of Eskimo, which is the most characteristic feature of their dwelling, is closely related to the ceremonial and the hierarchical aspects of the dance. Hence private rooms open off a dance room."

(Rapoport, 1969:55)

Here the dance room creates the centre. In most cultures, setting of the house is done in accordance with their myths and beliefs. Any displacement of setting they believed, caused misfortune for the occupants. In Sri Lanka the site in which the house is built has been divided into nine padas and the central place of the house is planned in the central square, the Brahma pada.

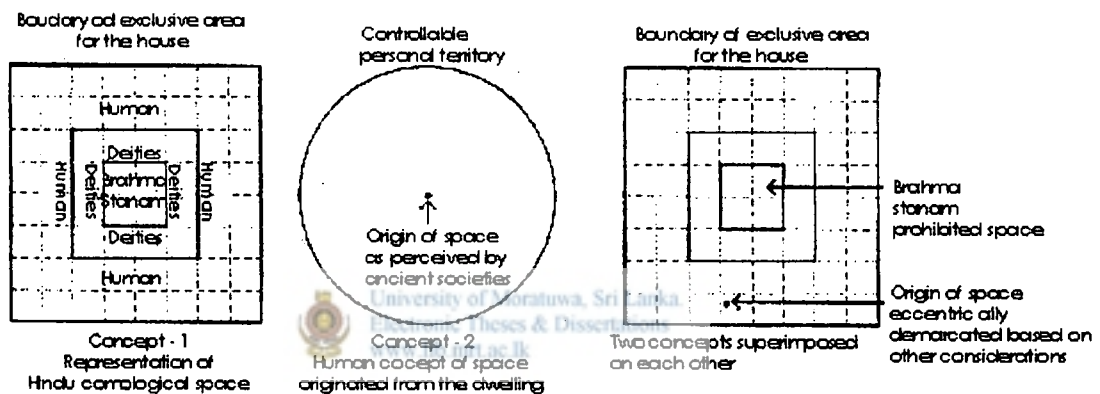


Fig. 12 – Central space was located at geometrical centre of the site, accordance with their myths and beliefs

1.1.2.2.b Enclosure

Enclosure is a significant attribute that creates a sense of place. Therefore the spaces in a house should be consciously designed to evoke specific feelings within the user. The qualities of enclosed space, whether large, small, high, low, wide or narrow has certain characteristics related to human reactions and feelings. Enclosure defines the contrast between interior and the exterior of the house. The degree of enclosure can vary depending on the feeling that needs to be communicated.

A strong enclosure can create a powerful sense of location and privacy; also enclosure is needed to evoke different feelings. Therefore varying the degree of enclosure from space to space is important to achieve contrast and variety. It is said that an external enclosure is most comfortable when its walls are one half or one third as high as width of the space enclosed. People are emotionally more comfortable in limited spaces enclosed from immensity and also human scale volumes make people feel at home.

"Aborigines have enclosed their region in which they move in a system unique to them. Rather than in normal way of physical barriers. They have enclosed their territory by emotional and spiritual links with the land. Even their dwellings, have been less important than most other cultures."

(Oliver, 1975:41)



Fig. 13 – Enclosure define a
territory of a place

1.1.2.2.c Continuity

Activities taking place in a house are placed in an order according to their importance. That is all the spaces in a house are linked or inter-related in a systematic order. They are linked by sub-centres, which are ultimately linked to the main centre. This harmonious link of spaces help the user to perceive it conveniently, which means continuity, is always provided with legibility.

In Mongolian house, it is entered from the east through symbolised transitional space. All the spaces inside are arranged around the central hearth, starting from south corner to north. And the movements around central hearth link these spaces, which is in accordance with their symbolism. Further the smoke hole in the roof, which regard as the eye of the heaven, symbolise the continuity in vertical axis. Even within this house itself there is a continuation from one space to another.

1.1.2.3 Sociological Attributes

Human beings are social creatures and cannot live in isolation. Interaction is essential among individuals not only within a home, but among neighbours, as well. Thus sociability is an important aspect to consider in home environments. Further a 'home' plays an important role in providing man a position in the society. Social identity affects what people perceive. And the way they interpret the features of the built environment changes according to who they are. Home serves both functional and symbolic purpose. For instance a home at a good address is more than a shelter, it is a symbol of the residents status. Therefore in addition to sociability it is necessary to have qualitative attributes, which would reflects one's class, status & power. Thus in



formulating a design, careful analysis should be done from a social, cultural and temporal perspective.

1.1.2.3.a Social-Grouping / Organizations

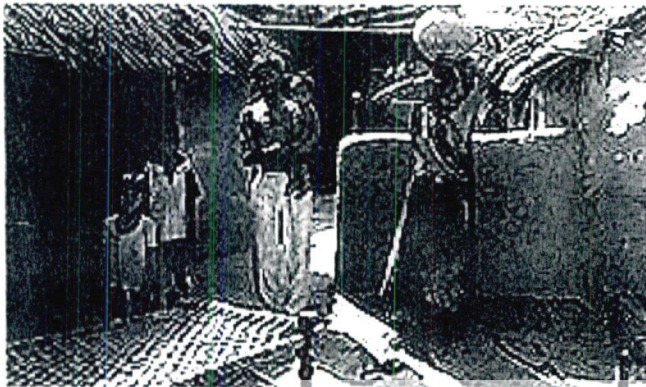


Fig. 14 – House acts as the basis for a family organization



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Human beings are social creatures and cannot live in isolation. Interaction is essential among individuals not only within a home, but among neighbours, as well. Family as the most elementary social group/ organisation creates immediate interactions with home, which gives the first experience of the personal space. Further a "home" plays an important role in providing man a position in the society. The basis for evolving a social group is always becomes place-oriented or place-specific.

For example house acts as the basis for a family organization; village or a city acts as the basis for several neighbourhoods etc. each social organisation exists within a defined space, which facilitate the inter relationships in varying degrees, within and outside as well. Ones attachment to a place creates a particular kind of social relationship or social bond with other objects & other inhabitants. When the attachments are strengthen the tendency of forming new social organizations is more.

1.1.2.3.b Socio-Cultural Activities

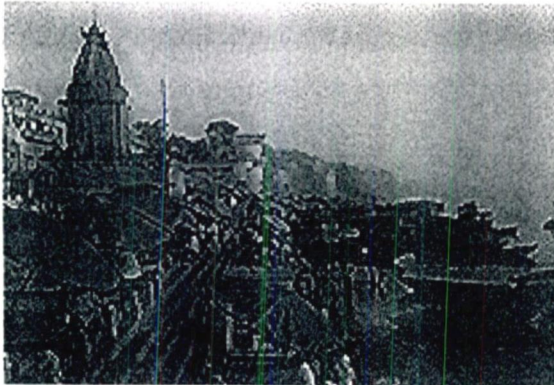


Fig. 15 – Socio-cultural activities take at the riverbank in Varanasi, India



A culture of a community can be defined as the way of life of the people. Thus the community can be identified by its culture. It may change due to influences like impart of foreign cultures, political, administrative and occupational factors etc.

Each specific place has its own culture. These socio-cultural activities are always location specific, i.e. in various locations, the cultural attributes varies and it is easily reflected in the house as the man's most primitive structure in the world.

The design and use of houses reflect certain cultural and social values and ideas. People perceive reality - what is there, and experience it within the conceptual framework of their own culture. Language, customs and other elements of culture, provide the context in which people perceive the built environment. Within that broad cultural context, there are often sub-cultural meanings. It was established that there are association between forms of shelter and cultural habits of people, and that there are spatial and activity patterns which are universal to culture.

1.1.2.3.c Behaviour Patterns

Numerous studies by social anthropologist and sociologists illustrate how social attributes regulate design and behaviour patterns and how the quest for status governs the design and layout of houses.

Occupation, education, income level and life style of any family may directly control the behaviour pattern of the people, who belongs to that particular society. Also a person's social status and class becomes the secondary determinants of ones behaviour pattern.

Thus the '**class**' may define socially as how people stand in the socio-economic hierarchy with respect to occupation, education, income and resources. And it may define culturally in terms of their way of life. People of the same social status could have similar habits, values and beliefs, which form a lifestyle that shape a settlement.

Fig. 16 – Social class define socio-economic hierarchy with respect to occupation



1.1.3 Home – Attachment to Place

After man refuse to be a wanderer he settle down to a single place with a strong desire to make belongingness to the place where he inhabit. Man as a social animal wanted to live in groups or tribes. This was clearly manifested in the primitive societies, where the systems of cultures came into being. This resulted a strong relationship, which came into existence between people and places. In modern society, these people-place relationships exist in numerous forms, between individuals & personal places, families and dwellings, communities and neighbourhoods, peasants and villages, urbanites and urban places and between citizens and countries.

Likewise attachment to a place or attachment to one's home as his personal space is a common human emotion. In different cultures & historical periods its strength and power varied. When a higher degree of place/ home attachment exists; much stronger will be the emotional bond.

Rudimentary attachment is the most powerful kind of attachment, which primarily exists between a person and his home. Loss of this sort of

attachments makes the “**Home Sickness**” which is common among people who are away from their homes. Even physically segregated from home, it is hard to detach psychologically, within a short time. As it use the word “**home**” it also include the place attachment that result from the sense of belonging to a family, and thus to family tree.

1.2 Identity of a Place

1.2.1 Place/ Location – A definition

As it is discussed earlier a persons' attachment to a “**place**” gives an identity to that particular place, which can be either, his home or the other. Place can be defined in variety of ways. According to the general definition of a ‘**place**’, it is a particular part of space or part of space occupied by a person or a thing. When one refers to “**place**” it generally gives the idea that it means either a location or an area one is truly attached to by personalizing it.



Fig. 17 – Attachment to places in the day-to-day life of people

In different cultures & in different time periods in our history the notion of **"place"** had been manipulated in various degrees. Among these variety of definitions; place is in a way defined; **"what ever stable object catches our attention"**. Yi-fu Tuan has elaborated this concept, as we look in a panoramic scene our eyes suddenly stops at a certain point which our eyes pause with some sort of an interest. **So, in one way a place can be defined as an object or collection of objects, which has the ability to hold our eyes on it and to create a vivid picture or an image in our psyche.**

In some other way an **individual's place can be where part of his/ her daily routine is performed in day-to-day life**. So for someone, the armchair, which he use to read newspapers or to rest, may be the places he remember the most. In this sense the magnitude of place can vary depending on the perceivable level of a person and his level of understanding. So it varies from a small object to a country or the world in the larger context.

A place is felt in terms of our own attachment to it. For my way of thinking, **place is a result of total experience, interpretation & meanings which emerges through our own attachment to it**. In this same manner house we reside becomes a **"place"**, as we experience it, interpret it & when giving a purposeful meaning to it.

1.2.2 Location Specific Identity

In the term “**location specific identity**”, the word “**location**” or “**place**” has numeric meanings. It refers basically to a specific area, which has a common character and which is unique from other areas. This specific area may vary from a broader context such as continent, number of countries, a country, and a region to a micro context such as a district, city, town or a village.



Fig. 18 – City of Kandy with it's
unique identity

According to Lynch, K (1960; 6) the identity of a specific location is, that which provides its individuality or distinction from other places and serves as the basis for its recognition as a separable entity. That means it can be described as a specific area, which has a persistent sameness, and unity, which allows it to be differentiated from others.

There are various factors, which derive the identity of a specific location. It can be mentioned as follows.

1. Physical setting (Physical context)
 - a. Natural setting/ topography
 - b. Built/ created environment
2. Social context (Activities of people)
3. Meaning – Human intentions and experiences

4. Spirit of place/ sense of place/ genius of place – Character or personality

Identity of a specific location, results an overall image, which reflects the spirit of that place. This unique character can be identified as a result of one of the above factors or as a combination of number of factors. Whichever the way the identity of a specific location is derived, always there is a prominent factor that reflects strongly in the overall image. For example, the identity of Nuwara Eliya is derived mainly from its natural setting with hilltops, steep slopes and valleys. But there are other factors like the British influence and the activity pattern/ life style of the tea plantation workers (social context) that contribute to the overall identity of Nuwara Eliya.

Therefore, the identity of a specific location means not just the built environment of the physical setting, but the collective measure of various factors. The identity is important because in a way it gives meaning to capture a location specific architecture unique and distinctive and to retain the character of that specific area.

1.2.3 Location Specific Architecture

As history records, the oldest built-form by man was his own dwelling, the seed, which nurtured a discipline, named architecture. From that moment of time as man started habituating various parts of the world, he evolved various forms of dwellings that were unique to each country or region as was its language, dress or folklore. It resulted a **location specific architecture**, which reflected a distinctive and identical character for specific areas or regions. Thus in Australia it was the sense of "place" developed by the Aborigines rather than a physical structures, in Greenland – the Igloo of the Eskimo and

so on and so forth. In Sri Lanka too the earliest forms of dwellings are manifested as history records by the mud huts with thatched roofs.

With the passage of time as various forces started influencing these societies that were in existence, the early house forms too started changing and evolving into various other newer forms. Although the causes or the forces prompted such a change that the **house form changed and evolved from its original, pure one to various others, unique to each country or region**. But the **generic form** for each house was identical and remained unchanged because it reflected the **"spirit of the location"**.

Sri Lanka too is no exception to this rule. The house form of Sri Lanka is not a mud hut consisting of a simple room or two, with a thatched roof any more. It is different. It is something else, which has evolved from the original; perhaps still evolving further.

Therefore if one were to focus attention on the house forms that are in existence today, it is evident that Sri Lanka too, now in the late 20th century, has witnessed this evolution in the house forms that has taken place. Although one may not logically or consciously bring to surface this fact, it is evident that this fact has been re-organised and acknowledged when describing a particular **"kind"** of house. So there are various types of houses in existence at this very moment of time, as a result of evolution of it's generic form.

1.2.4 Identification of a Generic Form

Shelter is of supreme importance to man. It is the prime factor in his constant struggle for survival. In his efforts to shelter himself against the extremes of weather & climate he has, over the ages, evolved many types of dwellings.

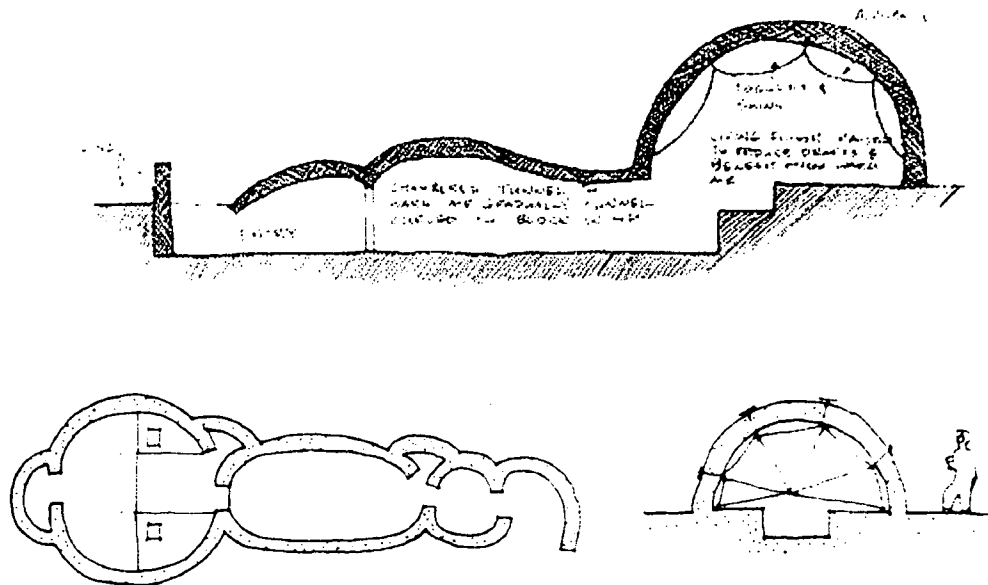
Differentiation of conditions in climate, geography, materials, construction, technology, economy & political situation creates a unique architectural character to each identifiable place/ location in a particular region. **Very basic kinds of images that give a basic structure to a particular architectural character of a place can be defined as a generic form.** The following are few examples for the identification & usage of a particular "**generic form**" to give an identity to a certain place/ location.

1.2.4.1 Eskimo – Igloo House

In a severe climate, such as the arctic, the forms of the dwelling of different people may vary, like wise the dwellings of the Eskimo & the Athabascans. These forms are not the results of climate alone but the contribution of many other determinant factors.

For example, the Eskimo summer & winter dwelling (the tent and the Igloo house) have a similar plan consisting of a central space with radially arranged rooms. This plan cannot find any where in the world in any culture in similar climates.

When considering the structure, the igloo dome encloses the greatest volume for the smallest surface area of any wide-based structure. So heat losses through wind chill are minimized. The igloo is made from a single material; snow, which has not become too dense through setting, cut into rectangular blocks and laid in spiral courses. This mean that the structure is self-supporting and the blocks being trimmed to slope inwards until the key block is added from outside. The builder then makes an exit, adding tunnel of snow blocks, which is below the level of the living quarters in order to drain cold airway by convection.



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Fig. 19 – Unique architectural character of the Igloo house, as a reflection of its generic form

1.2.4.2 Australian Aboriginal Dwelling

It is generally thought that **Aborigines** only had windbreaks but this is an over simplification. In fact aborigines had a considerable variety of dwelling although simple shelters were most common, at least in central Australia.

Descriptions can be found of even more elaborate houses such as permanent huts plastered with clay over sods (Hutt river); bee hive shape Log huts 4 ft high 9 ft dia. (Han. over bay)

These houses with circular stonewalls at White Lake with a central upright carrying roof members covered with Bark and grass coated with clay, and with a smoke hall, could have been influences Malay or Indonesian example.

The general point, however, is that Aborigine had a much greater variety of dwelling types, and often much more substantial, than is commonly thought.

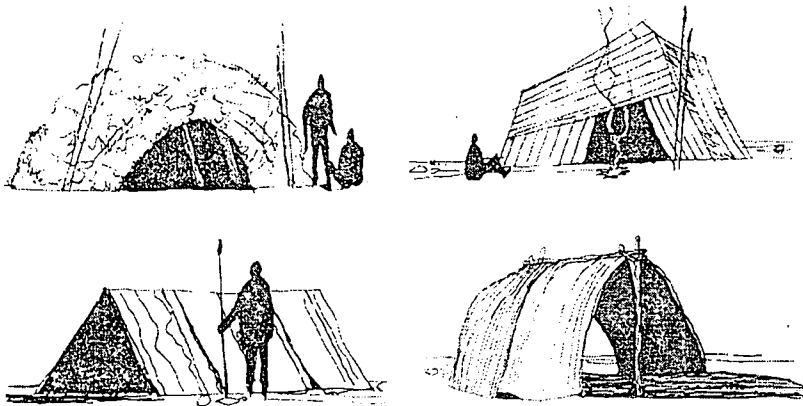


Fig. 20 – Unique architectural character of the Aborigine house – With variations of its generic form



1.2.4.3 Sri Lankan Traditional House

House is a meaningful idea in any culture, which is considered to be an item of a settlement system. Sri Lanka "Home" is known by the words "භෙ" or "භෙඳ" from the time immemorial. Especially in cultures like ours the house has an identical role to play, regarding our cultural needs. The Sri Lankan house that has existed in here for more than two thousand years was an outcome of a strong philosophy of Buddhist vision like the simplicity and the impermanent nature of life.

Traditional Sri Lankan house manipulated the above-mentioned Buddhist philosophies by its inherent nature. Prof. Nimal De Silva has further expressed this idea, in relation to traditional Sri Lankan house.

"The house was part and parcel of nature, the material were borrowed from the nature and returned to the nature. The traditional concept was to live in and around the open areas of the house and not within the enclosed compartments of the house and it was the most suitable solution for Sri Lankan climatic conditions. A house built in this nature, needs regular maintenance and it was continuously embodied in customs".

The evolution traditional Sri Lankan houses, from its very basic state; was taken place due to following factors like culture, climate, social order and technology that used.

The same idea can be understand by the following statement by Mr. Sarath Kotagama; who deals with this subject for many years.

ඉංශ්‍රීසියෙන් house කියන්නේ "ගෙය". ගෙය කියන්නේ අපේ මුලික අවශ්‍යතාවයන් කිපයක් සපුරන ව්‍යවස්ථාපිත ව්‍යවස්ථාපිතයකි. මෙහිදී මුලික අවශ්‍යතාවයන් යනුවෙන් අදහස් කරන්නේ පරිසර අභියෝග වලින් ආරක්ෂා වීම එනම් අවිච්ඡිද්‍ය, වැස්ස, පින්න වගේ පරිසර තත්වයන් තමා සතු ද්‍රව්‍යමය රැස්කිරීම් ආරක්ෂා කිරීම වගේ දේවල්. මෙහිදී වැඩි අධ්‍යාපනය යොමු කරන්නේ තමා ආරක්ෂා වීමට වඩා ව්‍යවස්ථාපිතයන් ආරක්ෂා කිරීමට. "ගෙය" කියන්නේ ආරක්ෂා ව්‍යවස්ථාපිතයකි. ව්‍යවස්ථාපිතයක් මුලිකවම වේ.

When studying domestic houses of different periods in Sri Lanka the earliest and the most primitive type is the traditional rural house (which exist even today in several area), the others are belonging to the Kandyan period, the Dutch period, the British period, Pre-Independent period and Post-Independent period and the era after introducing the open economy.

The basic traditional rural house did not have lavish subdivision of spaces. It had two small inner rooms totally enclosed to the outside, one for sleeping of women and children and the other for storage and cooking. The traditional rural house was always an important part of the whole settlement in which it

situated. The main living area was the "Pila" or the front veranda-, which was an outer open space.

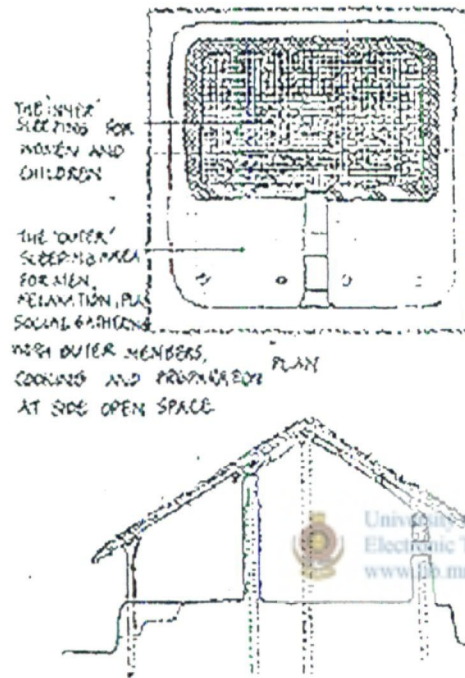


Fig. 21 – Plan & section of a traditional rural house with front verandah or "pila" and the centre post

All houses were of the same physical expression and the changing needs of the families were adopted by making additions to the existing houses.



Fig. 22 – Additions done to the house and its generic idea to suit day to day socio-spatial relationships



Fig. 23 – Traditional house with
“Vee Bissa” as an
additional feature to
the generic idea

1.3 Concluding Remarks

Human as a social animal creates inter relationships, which facilitate the **act of living**. “Home” act as the primarily enabling space, which facilitate this process. It is a purposeful human creation, a work of architecture, which concretises **socio-spatial relationships**. Though man-made shelters not existed in primitive societies, the existence of socio-spatial relationships was highly emphasised.

As time passed on, the primitive man left the natural shelters and gave birth to the house. **The house symbolized the psychic perceptions deeply rooted inside man**. Though the house is the perfect expression of self, it is a universal language of archetypes and symbols common to all human beings. Accordingly the house as the basic social unit of the mankind, have to fulfil the psychological, physical, socio cultural attributes of the “**act of dwelling**”. These psychological needs such as identity, territoriality, orientation, privacy, personalization, security and sense of belongingness, make man deeply attached and embedded to the place he dwell.

House as the “**centre**” of one’s world becomes the primary reference point of the self. The form of the dwelling created by man, varied immensely, when

man started to reside in various parts of the world. Finally a generic form for the house is identified which reveals the basic character of the location.

So in summery, the first chapter discusses the act of dwelling, which includes the birth & the transformation of the house, its various attributes and it's importance to place attachment. Along with the concept of place, the location specific identity and an identification of a generic form for a specific location.

This continuous on-going nature of the process of human habitation, act of dwelling and it's socio-spatial rhythm get destroyed and shattered due to natural & man-made disaster.

Therefore the second chapter is focussed on disasters, their impacts and the issue of displacement.





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CHAPTER TWO

DISASTERS AND THE ISSUE OF DISPLACEMENT

CHAPTER TWO: Disasters and the Issue of Displacement

2.1 Disaster – A Definition

The term '**disaster**' is used broadly to include so-called, 'natural' disasters and 'man made' disasters, which has a clear human and technological origin. It refers to events from the small-scale to the large-scale but generally refers to major incidents, which overwhelm local response capabilities. For example, the recent flooding in this country may - rightly - be termed as a disaster, even though it cannot be compared in scale to floods such as those in Bangladesh.




Fig. 24 – Disastrous condition of the recent flooding in Kiriweldola, Deniyaya

The term “**disaster**” continues to be used in a variety of ways. In general usage, “**disaster**”, implies a misfortune or calamity, hard luck, or anything of a ruinous or distressing nature and an “emerging” implies a sudden or unexpected event requiring immediate action.

Disasters have been classified or defined in many ways by various persons or organizations.

“An event, either man-made or natural, sudden or progressive, the impact of which is such that the affected community must respond through exceptional measures.”

- Asian Disaster Preparedness Centre definition -

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“Disasters are exceptional events which suddenly kill or injure a large number of people or cause major economic losses.”

- World Disaster Report Definition 1998 -

“An event, concentrated in time and space in which a society or a community undergoes severe danger and incurs such losses to its members and physical appurtences that the social structure is disrupted and the fulfilment of all or some of essential factors of the society is prevented.”

- US disaster relief office definition -

Also this has defined sociologically, as an event, located in time & space, that produce the conditions where by the continuity of the structure and process of social units become problematic. Disaster agents may differ as to their cause, frequency, controllability, speed of onset, lengthen of forewarning, duration, scope of impact and destructive potential. (Dynes, 1975)

With the help of all the above-mentioned ideas, a generalized simple definition for disaster is that,

It is **a breakage of links and ties of physiological, social, psychological & economical conditions and patterns and prevalence of living and non-living beings and physical objects in any form or state in this hemisphere.**

2.1.1 Types of Disaster

From inception to date, the human race has faced many disasters. They thought everything that happened in the past was due to the wishes of the gods. But as time passed, man has come to know that these things happen due to various natural reasons, such as environmental, biological and geological activities, which take place from time to time.

Due to these calamities and disasters they have lost lives and belongings. They migrated to places where they thought they would be out of danger. The environmental and natural changes brought them disasters as well as benefits. So they sometimes welcomed the eruption of volcanoes, which brought fly ash and floods, which brought fertile soil to their farmlands in which they cultivated their crops and they considered the lands as their precious wealth. These lands supplied food and settlements for them.

From his long-standing links with the environment, man learnt to understand and live with the natural changes that occurred in phenomena of the earth. But later man sometimes acted contrary to the laws of nature, and attempted to build his own world. This aggravated "natural disasters" and caused "man-made disasters", which interfaced with the evenness of nature and the environment.

Therefore disaster can be categorised in to two types, according to the way it occurs, as **natural disasters & man-made disasters**. Floods, landslides, droughts are the natural disasters & war or internal civil conflicts comes under man-made disasters, common in Sri Lanka. Further, natural disasters or hazards can be categorised as,

- Atmospheric -Cyclones, lightning, tropical storms, hurricanes, earthquakes and tsunamis
- Hydrologic -Coastal flooding, desertification, salinization, drought, erosion & sedimentation, river flooding, storm surges
- Volcanic -Gases, lava flows, mud flows
- Other geologic -Landslides, rock falls, land subsidence, submarine slides, debris avalanches
- Wild fire -Forest fire, bush fire & grass fire

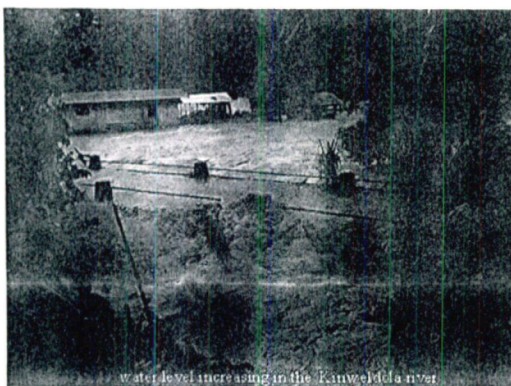


Fig. 25 – Flooding, as a common natural disaster in Sri Lanka

Fig. 26 – War – The most
disastrous & terrified
man-made disaster on
earth



2.1.2 Impacts of Disaster

There are various kinds of physical, social & psychological impacts that can be identified due to disaster situations. Disaster causes damages to the human being in two ways. That is the **tangible/ physical loss** of family members & property and the **intangible loss** of social relationships among families, neighbourhoods and communities and the psychological loss of identity, territoriality, orientation, privacy, sense of belongingness, security and self esteem.

Physical Impacts

Physical impacts have been studied widely and statistically as loss of lives or deaths and as damage to physical property. The most disastrous of all kind of physical impacts are the loss of human lives which include death of family members, relatives, friends & neighbours, etc which can not be accounted or valued or neglected by any means. It also includes the rescued injured and disabled people who have sacrifice their healthy lives to floods or landslides or what ever the disaster could be. Death of animals such as pets like cats,

dogs and animals like cattle who help to earn a living, is another, which results a feeling similar to losing a loved person.

Fig. 27 – A completely ruined house
due to the recent flood
in Baddegama area



Complete or partial damage to buildings, such as houses, educational institutes, shrines & public buildings, which are closely attached with every day life and that carry unforgettable memories of the past, is another severe physical impact. From all sorts of buildings, loss of home is the most critical impact, which pulls out all the rooting & primary attachment man has with the surrounding world. Loss of belongings such as cloths, books, furniture and other day to day things, which were kept with care and safety and damage to agricultural land which results loss of harvest, are also physical impacts.

Fig. 28 – Perished materials of a
school child, which is drying
out on a cadjan leaf



All the social & psychological impacts that occur due to disaster situations are direct and indirect causes of physical impacts.

Social Impacts

Damage to rooting places which act as starting points of every day activities & loss of human lives & belongings will change and paralyse the overall life style & day to day routine of work of the people who are subjected to disasters. It will results the loss of social relationships, links and internal bonds with the family, neighbourhood, and community and makes people physically & socially isolated and powerless in the world.

Staying in refuge camps, or temporary shelters with large number of refugees of various social backgrounds & also without a proper meal, clothing and care will make the displaced loose their self-esteem, and egos of life. It damages a fraction of social strata causing a collapse in the society, its life, industry, system, etc.



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Fig. 29 – Displaced children who had lost their social bonds with families



Psychological Impacts

The psychological impact is the most imperative factor of all, which affects the individual and challenges the human feeling of belongingness. Value of life cannot be estimated by any means. Therefore loss of lives of their loved ones make people mentally retarded, and loss of belongingness make people miserable, helpless and mentally and physically sick. These social & mental depression and backwardness make people refugees in every aspect of life. Specially with the destruction of places they dwell, they loose their orientation, identity, territoriality, privacy, security, sense of belongingness and personalization in the world. It will shatter all their dreams, desires, aspirations and perceptions and make them psychologically sick & paralysed in life.



Fig. 30 – A mentally retarded child who has lost his attachments due to war

These physical, social & psychological impacts of disaster cannot be clearly separated from each other because all have a close inter-relationship with each other, that when one impact is identified it will cause other forms of direct, as well as indirect damages.

2.2 Displacement – A Definition

“Displacement” can be defined as the act of “loosing one’s place” which he refers to, or the process, which results loss of one’s rooting point in this world. It looses not only the physical attribute, but also the socio-spatial attribute and past experiences and memories.

According to Relph, E. (1976, 83) in experiencing “home”, whether a house, a village, a region, or a nation, is a central point of existence and individual identity from which you look out on the rest of the world.

Therefore **“home”** or **“rooting place”** becomes very important to man, because he is attached deeply and strongly to this centre he creates, as his own point of reference. Such “places” not only constitute the physical environment, but essentially the social and cultural roots and emotional characteristics, which reflects the personal identity. Disasters, which create an immense impact on man and his environment, destroy “places” and result “displacement”. People loose their homes and neighbourhoods becoming displaced. In a post disaster situation getting displaced is a social and psychological pain to mankind. It is hard to know how much a person is attached to a “place”, till he experiences the sudden displacement.

“Displacement” is a situation created by disasters, in which man does not have a place to belong to, to claim ownership, from where he can relate to the rest of the world. Displacement seizes the links one had to his immediate surrounding, village and rest of the country and the kind of “places” he had cherished as the part of his life and make him loose his individual & communal identity.

This act of displacement is two fold. Firstly the displacement from one location to another, and secondly, displacement with in the same location. This kind of internal displacement from one location to another, results people/ community internally displaced. As people displace from their point of reference all other physical, psychological & social-cultural linkages come to an end resulting placelessness.

2.2.1 Physical Displacement

Loosing ones place or the point of reference in this world is known as displacement. The quantifiable component of displacement is known as physical displacement. It can be the loss of house or loss of land, etc. As we are detached from our linkages we have with objects we use in our day today life we feel physically displaced. For example wars are about "places" and it results physical displacement by some one invading the other land or homeland who has a right to it. It very much deals with the loss of sense of ownership, control and independence of man, to a certain place that he belongs, which is not a piece of land but much more.



Fig. 31 – People who had lost their possession to land after the war in Afghanistan

2.2.2 Social Displacement

Fig. 32 – Refugees of war, who have lost their homes



Home can be used to cover a much wider spatial scale, from the local neighbourhood to the nation state. However at whatever scale the term is used, unseen social factors are at least as important as physical structures, probably more so. These social factors include both personal social relationships (family, friends & neighbours etc) of the past and present and the wider social context in which an individual lives. Therefore, factors such as gender, age, culture, social class, sexual orientation etc. are important in shaping individual meanings of home.

Home is not simply the physical structure in which we currently live. Disasters frequently reveal the importance of aspects of home, which cannot be seen. These social factors can be loosely grouped into two types. Social categories, such as gender, ethnicity, age, culture, sexual orientation etc. and personal social networks operating largely at the local level but increasingly being linked in complex ways at the global level.

2.2.3 Psychological Displacement

Physical and social displacement result various kinds of mental sickness, retardness and backwardness for the internally displaced people. Therefore the psychological displacement acts as the most critical kind of result, which is directly connected with the human thought, feeling and the psychological well-being.



Fig. 33 – 'In a crumbling world" -
Disaster as an event of
psychological displacement

"You can't replace memories. What disasters reveal about home and identity." (Coates T., Fordham M.)

From the moment someone loses his "home" or the "routine place", it displaces him from all the psychological attachment he was welded with. Home is the most personalised physical structure of an individual of a society. It carry the meanings, moments and haunting memories of the childhood as the ancestral/ prenatal home, lifetime achievements and special events of the marital home and images as personal warmth, comfort, stability, privacy, control and security.

Sense of privacy is a significant psychological attribute, which give meaning to individual identity. With the loss of identity along with the established

historical pride in the society, people become mere living things in a lost world without a self-esteem, ego, orientation, belongingness, territoriality and personalisation.

Also psychological displacement may cause due to the break through of the control and sense of security. It can be shown using following examples of the domestic and community level.

One English flood victim described; the house thus:

"It's been invaded hasn't it really, it's almost as bad as having burglars"

(Tapsell, 1999: 52)

Scottish women in temporary housing after being flooded, felt their homes were no longer their own, as they lost control over who had access to them while workmen were carrying out repairs. Some women experienced this as a form of violation and felt that their homes were being defiled again (Fordham, 1998: 132). Even where little remains of the house the issue of control remains important.

For some their home, once seen as a place of safety becomes a place of fear. After being flooded one Scottish woman explained how,

"At first I didn't want to go back I was terrified. I'm still frightened to go back. I want to move back but I'm frightened. ... I do like it that house, and I want to move back but obviously I'm going to be frightened for a long time."

(Fordham, 1998:135)

Loss of control is also felt over a wider spatial scale at the community level. In 1974 cyclone Tracy destroyed most of the city of Darwin in Australia. Many people were evacuated, often unwillingly. One long term resident described the detrimental effects of being away:

"The missed experience, ... not knowing what went on, not having a part to play in it and, in fact, losing control over your own life in your own town by being absent while other people make decisions and do things. When you come back it's no longer your town, it's been alienated, and you've been alienated from it."

(1996:157)

This clearly expresses how important it is to feel you have control to feel that you belong and that you are at home. Once that control is lost, for many the feeling of home is lost.

2.3 Placelessness – A Definition

Lack of a point of reference or a **"Little Corner of the Universe"** leads to the feeling of placelessness/ homelessness. As home is man's most personalized and intimate place of living, lack of such a place leads essentially to serious physical as well as psychological consequences.



Fig. 34 – Placelessness/ homelessness
created by war

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Placelessness is mainly twofold. On one hand, there is the lack of place to live; the quantity problem; lack of accommodation of space, the housing units and the plots of land. On the other hand, there is the lack of opportunity in the place one lives to make the home, the problem of quality; the houses are mere enclosures of human bodies, especially when they have been built and provided by others.

In the contemporary rural situations, mostly the poor are faced with placelessness/ homelessness both quantitatively as well as qualitatively. For them, there is often very limited space to live. What are left for them are only a few square meters of land covered in a very temporary nature. Further, such places do not get adequate service facilities.

Within this particular study on act of dwelling and its implications on disaster situations, the idea of placelessness should take into account in a wider perspective.

Within the scope of the study placelessness can be define as the phenomenon; **which loose one's point of reference in the world, not only in its physical construction, also the social and psychological attachment to a place.**

2.4 Concluding Remarks

Second chapter discusses disasters, their impacts and the issue of displacement in terms of physical, psychological & social aspects.



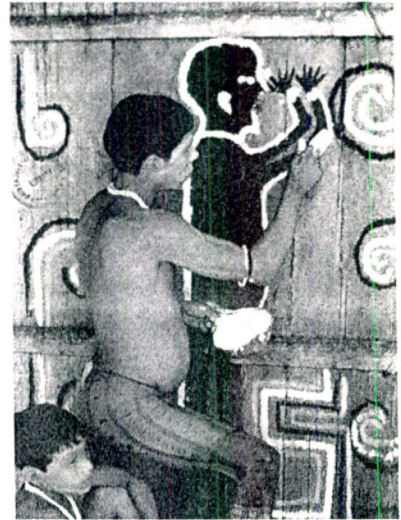
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Disaster either man-made or natural is a burden in every sense which shatters the continuous on going nature of the process of human habitation, act of dwelling and it's socio-spatial relationships. The ultimate result will be **displacement** or **disorientation** and **placelessness**, which cause various psychological, physical and social fatalities to the **internally displaced people**. They include the **tangible, physical loss** of family members & property and the **intangible loss** of social relationships among families, neighbourhoods and communities and the loss of identity, territoriality, orientation, privacy, sense of belongingness, security and self esteem.

So to **re-establish** and **restore** the shattered ongoing process of human habitation and to re-orientate the homeless people, have to provide a strong, powerful and energetic solution through architecture. Therefore the next chapter is focussed on the importance of re-construction as a multi-disciplinary exercise where the architectural component has a significant role to play.



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CHAPTER THREE

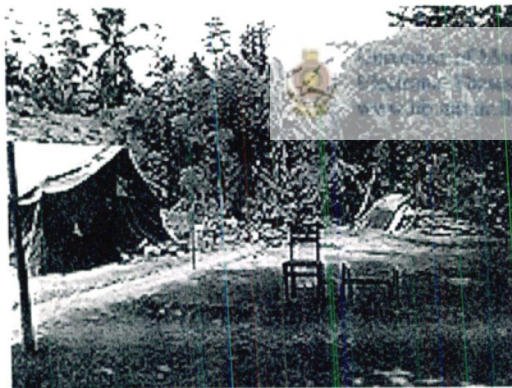
RE-CONSTRUCTION AS A PLACE ENABLING PROCESS

CHAPTER THREE: Re-Construction as a Place Enabling Process

3.1 Re-construction after a Disaster – An Overview



Fig. 35 – Critical need to restore the shattered on-going process of human habitation & act of dwelling through a meaningful re-construction process



The event of disaster makes people lose their “homes” and “places”, and not mere buildings. Homes at a micro level and places at a macro level are the reflection to the community and the environment.

Re-construction after disaster is found often, geared towards the mere replacement of lost houses and buildings as “objects”. The problems of the past, clearly portrays that the importance of the individual identity, identity of the community, community spirit, personalization and the flexibility in design to personalize were the main factors which were totally or partially ignored,

and overlooked in design, which made people to suffer in difficulties or reject the **"products"** given to them through the process of re-construction of the built environment.

There can be two basic issues, which should be considered as basic ingredients to a design process of re-construction. Restoration of identity, personalization, cultural and symbolic importance of a community, etc, which would lead to a "Place Making" approach in the design of the built environment, could be one issue, and the opportunity to create a refined environment, having not lost the above, could be the other.

The affected and the displaced thus seem to desire through re-construction a return to places that was familiar and to which they can relate. This unfortunately does not seem to happen. People do not want to be alienated, again after re-construction, which would create another disastrous living condition. When they are **"re-placed"**, they would want their identity and the cultural and symbolic importance of the community restored in terms of the built environment, for them to restart their lives with self-confidence and pride.

This raises the issue of **"Place making"**, the issue; everyone involved in the process of re-construction should necessarily put forward and deal with. In normal terms when one talks about re-construction, he talks about only individual buildings, bridges, infrastructure facilities etc, but hardly and never the priority is given to place it back, as close as possible where they belong to and to replace the networks of those places that were cherished and celebrated.

Therefore it is essential to understand the whole idea of re-construction of the built environment, is to help people to recover from the trauma and tragedy.

In other words the built environment that is produced through the process of re-construction has to **"heal"** the pain caused by the event of disaster. To do this, "Place-Making" becomes the key issue, which the other becomes secondary. In place making, it is not the final products, materials and the finishes, which matter, but it is the experimental and the emotional entities that which matter, together with which come the bonds, which existed, between man and his place. What is necessary is, for the re-construction of the built environment, to help **"places"** to grow back.

The other issue of importance would be for the re-construction to be considered as a vital opportunity for development and growth, moving forward, along with the issue of place making. Such opportunities should be exploited with advantages, so that the re-construction programmes become meaningful.



Disaster can affect the whole social structure of a community. This can be separate in to several layers, by considering the locality of which this harm would have an adverse effect on. Family and the domestic space or the house units would be the layer, which are mostly affected, and it has the least ability to withstand a disaster situation. When it becomes larger in population, that is neighbourhood level or in village or community level the intensity of damage will be less. So the reconstruction should implement taking the family or the house as an initiating point in reconstruction process, and work from micro to macro level, to achieve social and psychological upliftment. In the resettlement, we have something to work from nothingness to something, rather than working to achieve nothingness to everything.

3.1.1 Transformation of Domestic Space

As soon after a disaster, the sudden results could be seen in domestic level, as the lowest level in physical organization. In the reconstruction process transformation could be seen in the arrangement of spaces, and their relationships. Clear variation could be seen between spaces and their relationship to, external environment. To obtain certain level of internal and external connection, the number of openings, door and window sizes were changed. Verandah as an external element plays a vital role to enhance the social interaction. Multi-functional spaces were added, and later individual spaces were transformed in to common or multi-functional spaces to find a solution to the less space availability in domestic situation.

Later, with this so called transition, of internal space to the external environment, adequate amount of light and ventilation could transfer in to the house. Change in size and shape of the individual spaces, affected the overall form of the house.



Fig. 36 – Relationship of the internal spaces with the external environment - An African tribal village house

3.1.2 Transformation of Neighbourhood

Fig. 37 – Social relationships in
a neighbourhood of
an African tribal village



After the domestic space, immediate transformation was occurred in neighbourhoods. This transformation was reflected in a layout pattern of a neighbourhood. The intensity of overlapped spaces, in a neighbourhood creates an atmosphere to the public activities to take place. Higher the overlapped spaces, it increases the public interaction, and when the overlapped spaces are less, the level of interaction is reduced. The degree of the sense of common gathering space for each neighbourhood was varied in different levels, and its connection to the road, became an extension of individual activities to a communal one.

3.1.3 Transformation of Community

Each change in domestic level and in neighbourhood level affects the village or the larger community in transformation process. Village layout pattern can influence by the degree of transformation in other lower levels, and several options could be assumed, that transformation would lead towards. Among the possible situations there would be, cluster patterns, linear arrangements, Gridiron patterns or a combination, with slight deviations.

3.2 Personalization as a Determinant factor in Re-settlement Process

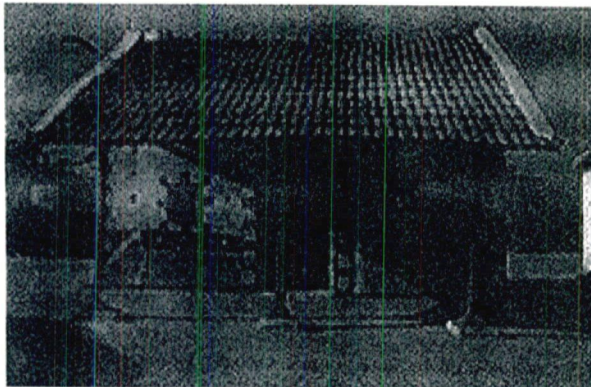


Fig. 38 – A house that reflects the personal identity of the inhabitants through its front facade

Personalisation is the sum of the time and money spent on a home to make it unique and as the occupants want it. The monetary value is less important than the thought, time, effort and associated memories that have gone into all the small details that together make a home unique. As one victim of the Easter floods in the UK (1998) explains;

“ ... There is no compensation for all the time, all the hassle, all the mental side of it, the home that you built up over so many years just totally destroyed in a matter of hours...”

(Tapsell, 1999:51)

Another Scottish flood victim describes how “It didn’t feel like home ... I suppose all the personal bits and pieces, there was nothing personal because that had all gone out ... apart from ... two items there was nothing that said “this is my home.” So I didn’t like it.”


(Fordham, 1998: 136)

Replacing the lost items does not restore the feeling of home. “When you move back to the house, it was **just a house** with a smell of new paint and a

lot of new furniture that you didn't really like anyway, because you hadn't chosen it in the right frame of mind."

(Fordham, 1998:136)

The phrase '**just a house**' clearly shows that for this woman a home is more than simply the physical building. Yet, it is often assumed that once residents move back into their repaired houses that the problems are over. Relevant organisations and persons work towards this point, where the situation is returned to seeming normality. This shows though the differing definitions of home, used by residents and officials. The officials concentrate on the physical aspects of the building, but for the residents less tangible aspects are at least as important.


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'**Personalisation**' is a way of making homes unique and a reflection of ourselves. They express our taste, our incomes, our past, our interests, and our families. With a disaster this is wiped away, leaving an empty building, which the occupants no longer feel, is theirs, because it is no longer familiar – it may not even smell the same. It is no longer an expression of their identity so they no longer feel that they belong there.

Barbara Bode (1989), working in Peru in 1970 after a devastating earthquake found that many survivors spoke of a "**detachment from things**". Both she and Anthony Oliver-Smith (1986) found that earthquake survivors had a very strong attachment to place, rather than particular objects. It was very important to survivors to be in their place; they wanted to rebuild their houses where they had been before.

"I want to live where I was born, where I grew up, where my own history has been enacted."



Creating and recreating the feeling of home in a new location is essential in the re-forming of houses and as well as providing the familiarity and continuity that was once provided by the building itself and the land on which it stood.

Therefore personalization becomes a very important factor that has to be considered thoroughly in the re-construction process for the displaced people.

3.3 Different Design Approaches to Housing & the Level of Personalization

3.3.1 Type Plan Solution

Type plan solution for housing is considered as a ready-made system, which has practiced for several years all over the world. Basically this type plans are adopted in housing schemes where all the houses are provided with a similar character. As every one gets a same kind of housing unit the level of personalisation is less, and the possibility for any alteration is also very low. So this can be identified merely as an object making exercise, which does not take the user (people) aspirations and desires and other place making principles in to consideration. Economic level of the focused strata is the only fact that is taken in to consideration while other social and psychological aspects of a dwelling are neglected. While providing this kind of architecture the specific character of a particular location will not be considered, or less consideration will be given.

Type plan method is not a people oriented one, so it cannot be a multi-disciplinary approach for providing housing for any category of our society. So this can be considered as a pre-determined and pre-designed block.

which can be planted at any given location without any intervention of people.

In case of displaced people, this typical way of providing houses becomes more critical; as their social and psychological backgrounds are much poorer than the others. So, for this kind of special situations, providing houses must happen as a meaningful place making exercise, which can uplift them for a better condition.

3.3.2 Core-House Solution

Core house solution for housing is a much-advanced method, which has overcome the demerits of type plan method, to some extent. In this method, designer provides only the defined enclosure, which the user has to personalise according to his aspirations. Freedom is given to the user to select colours, internal room sizes etc, But in away it is incomplete and depressive because, after providing the enclosure the architects involvement is not there for further guidance. As the same kinds of enclosures are provided, the outer appearance may look alike, with the limited level of personalisation they were given.

3.4 Concluding Remarks

Third chapter recollects the importance of re-construction as a place enabling process, which restore the devastated on going process of human habitation, act of dwelling and socio-spatial relationships.

Re-construction approaches have to be multi-disciplinary, where the architectural component is imperative. **Architects** are the only stakeholders who consider the socio-spatial behaviour and inter-relationships deeply rooted in a dwelling, in a neighbourhood & in a community, regarding the **place making** exercise. Therefore the transformation of domestic space, neighbourhood, and community are discussed as prime factors connected with the re-construction process.



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But most of the re-construction approaches are mere object making exercises, providing **type plans** and **core houses** for placeless people. In such situations the “**level of personalization**” is neglected, though it is the key determinant factor, which facilitates a purposeful re-orientation or re-formation.

Personalization is important because these people are mentally and physically distressed due to undergoing a disastrous situation and losing their rooting or point of reference in the world, that they need to **re-fabricate** their “**webs of life**” quickly to enable their act of dwelling.

The level of personalization in different housing design approaches, such as type plans & core houses, have been further discussed.

Personalization of the dwelling

*A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District*

RE-CONSTRUCTION AS A PLACE ENABLING PROCESS

The following chapter will be focussed to visualize the recent “**Generic form solution**” in the re-construction process, for internally displaced communities affected by flood in Baddegama area. It will be discussed as an in depth study and the contribution of architect, in personalizing these dwellings are taken in to consideration and compared with the earlier situations.



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CHAPTER FOUR: Case Study

4.1 Basis for the Selection of Case Studies

Displacement due to disaster situations such as floods, spread over many socio-economic aspects such as loss of life and property, psychological tension of individuals and families, disruption of socio-economic activities, i.e. transport and communication disturbance of agricultural process and commercial activities etc. In other words, it disorients people from their localities, points of references as discussed earlier.

According to the statistics it is very clear that one of the highest physical, social and psychological damages have been occurred due to floods, which are very frequent in Sri Lanka and the most devastating incident has been occurred in the recent past.

Among many other districts such as Kaluthara, Mathara & Hambanthota; Galle and Ratnapura were identified as highly affected areas, which caused severe damages, due to recent floods. For all these affected areas the generic form solution was adopted by considering it's locational specificity.

After 5 months period the Galle district was identified as the mostly recovered area in all physical, social and psychological aspects. For the selection purpose of particular houses Baddegama was given the priority after visiting several other villages.

To make it easy to identify and discuss the different levels of transformation of the generic form with the level of personalization, different social stratas were considered. This was based on the income level of the family and level of recovery.

4.2 The Process of Conducting Case Studies

While conducting case studies all social layers were considered, including individuals & families. However, family was taken as the main social entity of consideration, as it is the basic social unit of society and, home is the basic point of reference of place making.

As the first step, focus group discussions were held, in order to get an overall view of the past and present scenarios. Selected people were men, women, elders, youth and children, in order to represent all social layers, with a variety of experiences, and social-spatial perceptions. These focus group discussions were aimed at conjecturing the image of their homes and surrounding as their place.



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Major part of the study was based on three individual housing units in Baddegama area, which have basically completed construction and that have been occupied for some time.

The following check list was used as a guide to facilitate and carryout the discussions in an informal way.

Checklist on General Details

Family Background

- Name of the interviewee
- His/ her relationship to the family head
- Number of family members in the family
- Occupations and income levels of the family

Questions Related to Previous Location

- Types of damages or damage caused by the disaster
 - a) Death of family members/close relations
 - b) Damage for the land
 - c) Damage for the house (fully damaged o partially damage)
 - d) Damage for the surrounding
 - e) Death of animals (example: cattle)
- What sort of memory you have still, of your previous house?
- Sketch the arrangement of the house & the immediate surrounding
 - Location, boundaries & orientation
 - External appearance
 - Size & scale
 - Spaces and their inter-relationships
 - Verandahs, porches...etc.
 - Door and window positions
 - Colour scheme
 - Furniture arrangement
 - Personal choices/ corners

- How did those arrangements influenced the personal and family interaction as well as family and communal interaction?

Questions Related to the Present Situation

- What are the main reasons for you to select the particular option of the generic form?
 - Income level
 - External appearance
 - Internal space arrangement
 - Size of the house
 - Other
- What are the changes you asked to do (from the architect), when transforming the option to an individual housing unit?
- Are you satisfied with it?
- If not, did you made further changes during the construction and occupying? If so, what are they?
- Did the new house design successfully achieve the personal & family interactions and your aspirations?
- What is the level of family recovery acquired at present, compared to the previous location
- Is it better than providing type plans for everyone?
- If so, what are the advantages you got?
- What are the failures and weaknesses that have to be taken in to consideration?
- What is your opinion about the level of involvement of the architect in designing houses for internally displaced people?
- Are you satisfied with it or do you need further assistance?



4.3 Case Studies – The Generic Form Solution to Housing, in the Re-Construction Process for Internally Displaced Communities Affected by Flood in Baddegama, Galle District

4.3.1 Problem Analysis

Throughout this study, disaster situations are identified as occasions, which can shatter the whole process of human habitation. This makes people suddenly traumatized, and displaced from their points of origin or from the points, which they were most attached to.

With a sudden displacement, it breaks all their relationships with people and places by making them totally disoriented and disjointed. The most crucial thing is the detachment of a person from his or her home.

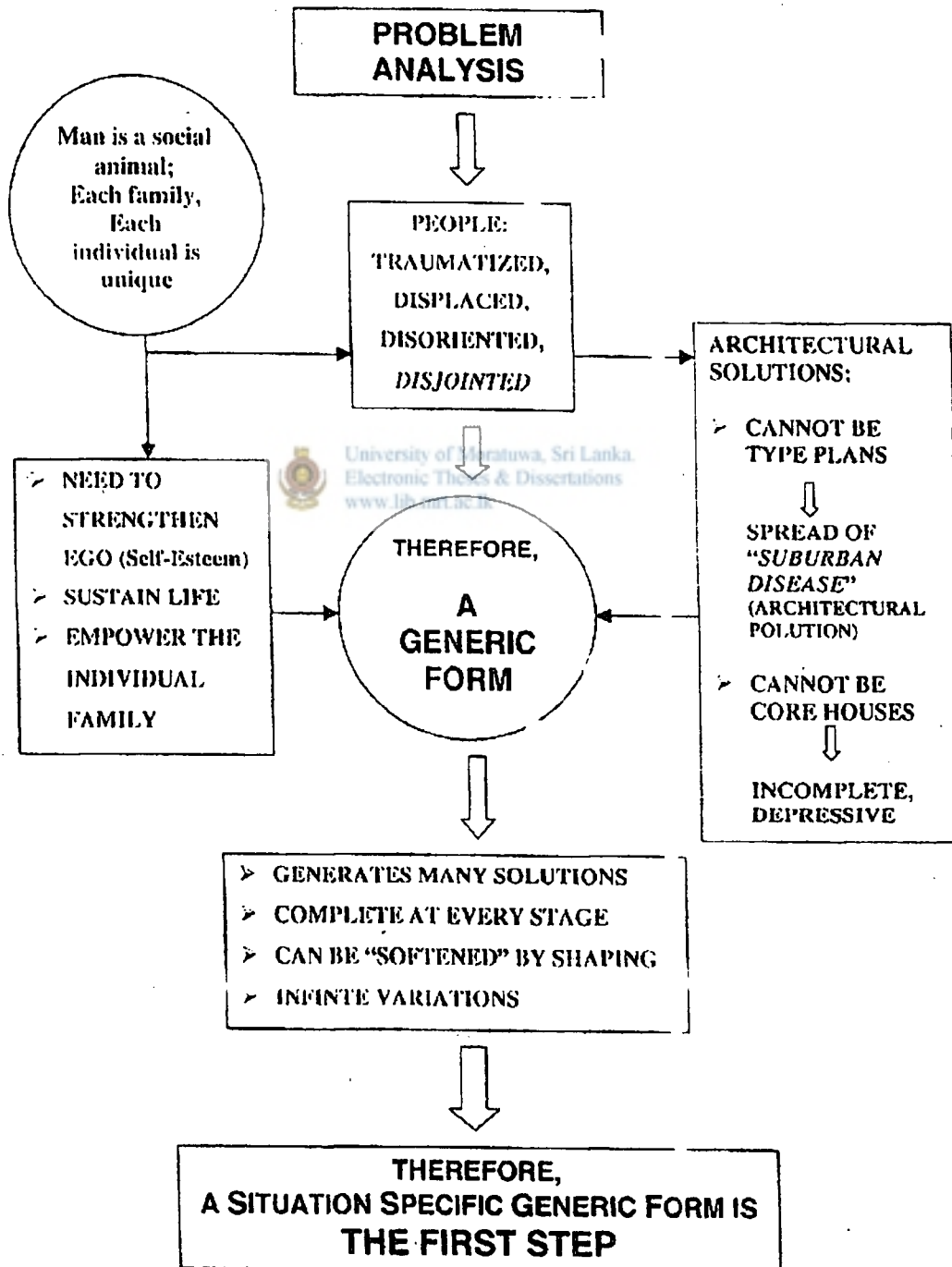
Architecture as a process, which helps to create better places for people, has identified the need of an architectural solution to re-form these people who are displaced. Any longer, this architectural solution cannot be type plan or core house methods, which had been an utter failure, as our history reveals.

After considering all these factors a new method was introduced which can be known as "**GENERIC FORM SOLUTION**" which can overcome most of the de-merits identified in the other two.

Especially for the displaced people who have different social and psychological desolation, only applicable solution should be strong and powerful in order to re-establish the devastated socio-spatial relationships.

This generic form solution is a method, which can generate many options that are completed at every stage. Also this has the tendency to carry out

shaping according to user aspirations. Finally, a situation specific generic form could be derived as the first step to find a long-term architectural solution to the problem.



4.3.2 Situation Specific Generic Form for Flooding

Situation specific generic form was evolved based on the "**Flood Situation**", mainly to fulfil two purposes. Firstly, to give an architectural solution to the problem and secondly, to achieve a higher purpose, which means boosting up the damaged psychological condition of the placeless.

To evolve the generic form following fundamental aspects was primarily considered.

- ◆ House form
- ◆ Built- unbuilt ratio
- ◆ Orientation
- ◆ Stability, etc



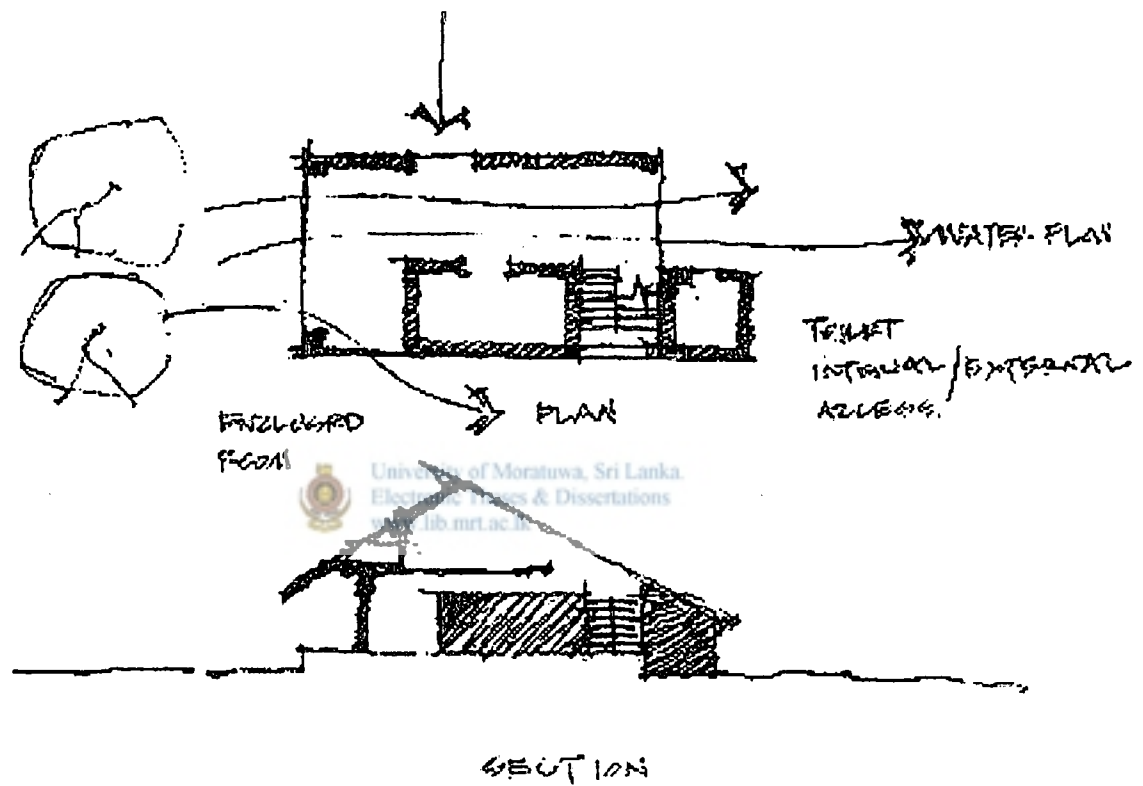
Under stability, it is checked whether the house can withstand or keep in balance in a flood situation without just been carried away.

In many other ways, generic form was responded to the flood situation, by

- ◆ Adding lockable rooms
- ◆ Allowing provisions for water flow across the house
- ◆ Orientating walls parallel to the water flow in a flood situation

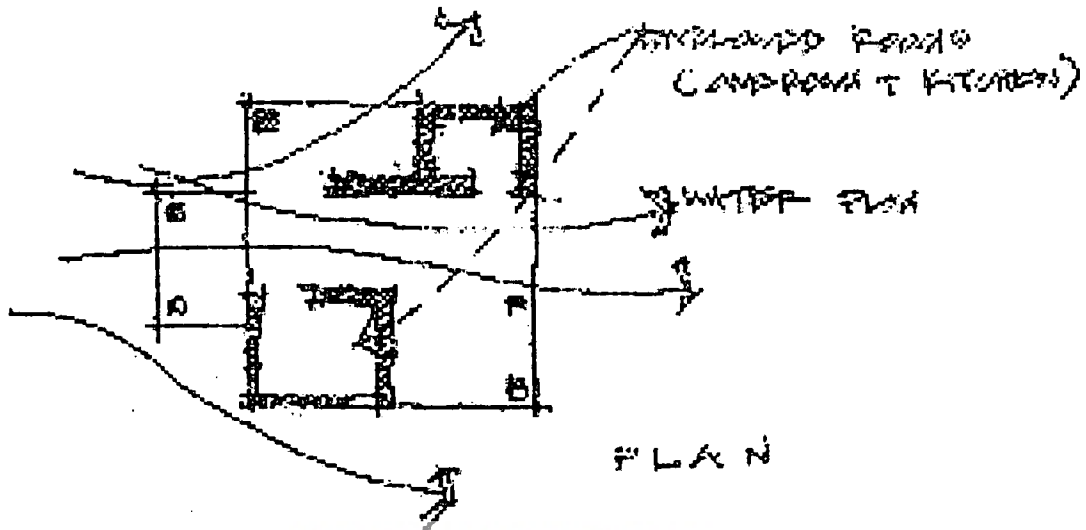
By analysing all the above factors, 03 generic forms were derived which are unique to a "flood situation"

GENERIC FORM - 1

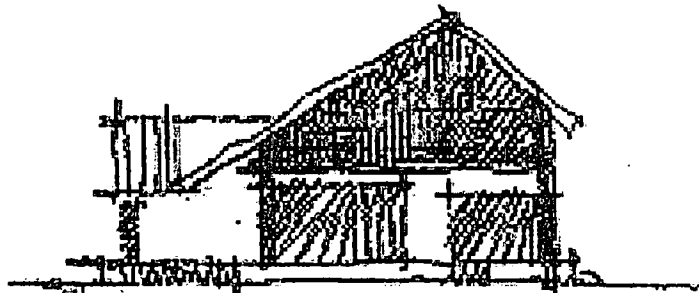


- Open verandah
- Single lockable room
- Toilet with external access
- Walls parallel to the flow of water
- Mezzanine floor with roof opening

GENERIC FORM - 2



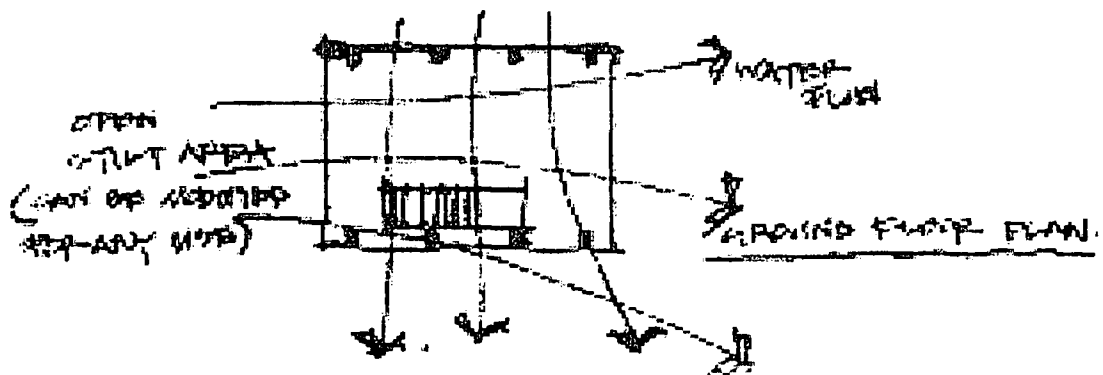
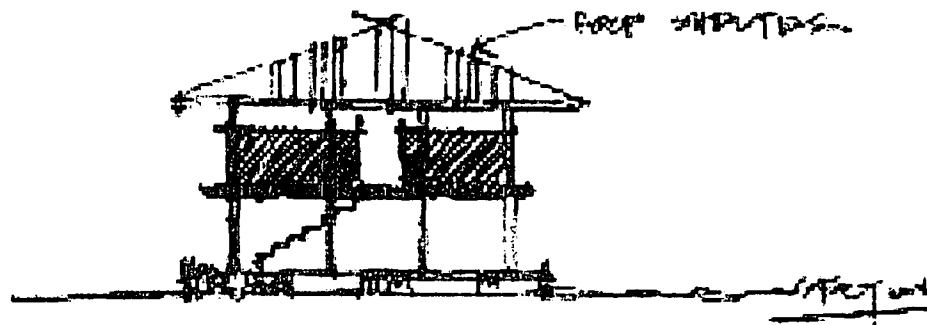
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SECTION

- Provisions for water flow across the house
- Two enclosed corners for stability
- Gable roof with porch

GENERIC FORM - 3



WATER FLOW TO BE PROVIDED AS FLOOD STRUCTURE.

4.3.3 Transformation to a Location Specific Generic Form for Baddegama Area

4.3.3.1 Identity of Baddegama

Baddegama as a village which is in close proximity to Galle town, had been influenced very much by the colonial architectural character. So there are many Dutch influenced houses, which contribute very much for the grandeur quality of the area.

The well-built linkage between wewa (tank), dagaba (temple) and gama (village) has simplified the social pattern of the people in Baddegama. This particular way of living has created a very communal and socially extroverted behaviour pattern in the total system, emphasizing the religion based agricultural lifestyle of the villagers, thus overwhelming the grandeur appearance of the set-up.

4.3.3.2 Architecture of Baddegama

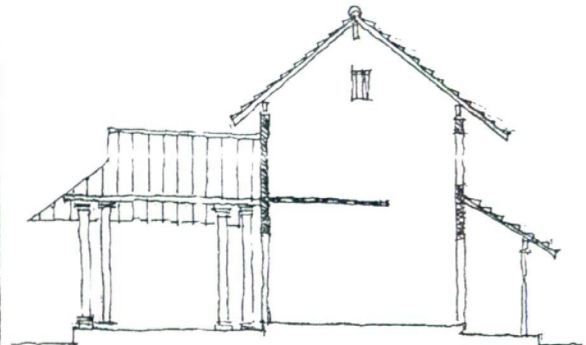
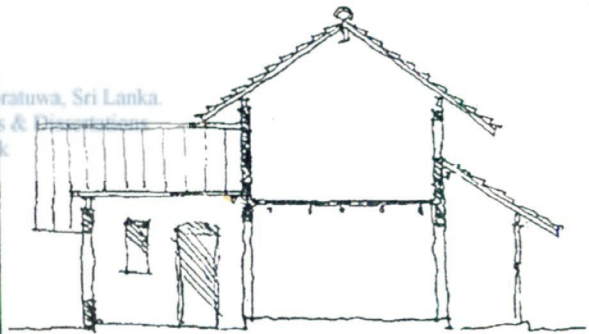
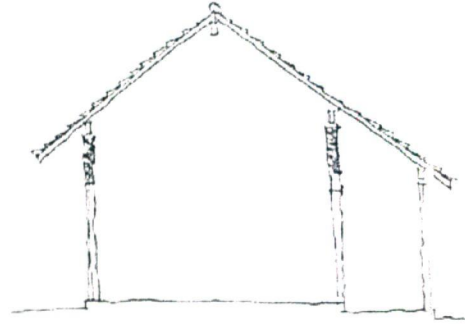
In the process of identifying an architectural pattern to Baddegama, the existing old houses were thoroughly examined, to capture their common features such as verandahs, internal space arrangements, roof patterns, indoor and outdoor spatial relationships etc. It was assumed that the old houses, which were selected, reflected the typical architectural character of Baddegama.

Gradually this led to an architectural idiom for the area. Situation specific generic form, which was derived in relation to the flood situation, was further transformed to a location specific generic form by adding the unique architectural features, which were common to Baddegama area.

Personalization of the dwelling

A study of the transformation of the generic form, with special reference to the re-forming of houses for internally displaced communities affected by flood in Baddegama, Galle District

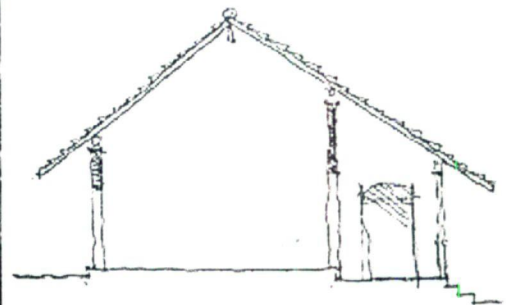
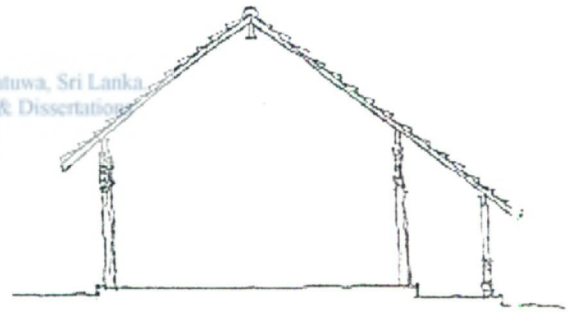
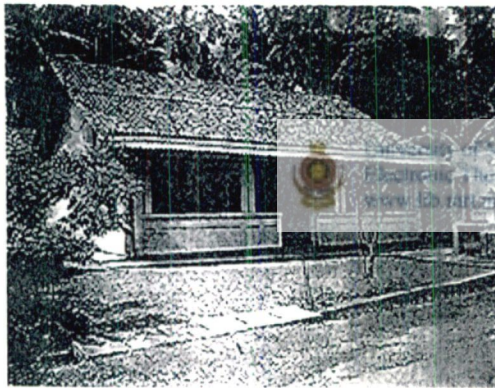
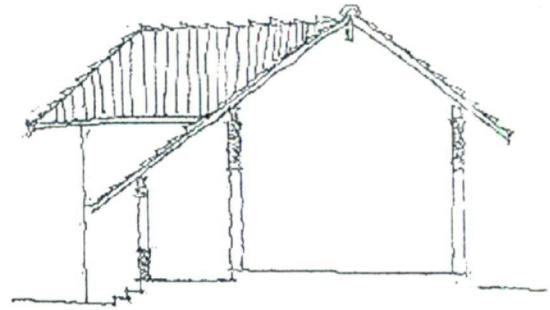
CASE STUDY



Personalization of the dwelling

A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District

CASE STUDY



Personalization of the dwelling

A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District

CASE STUDY

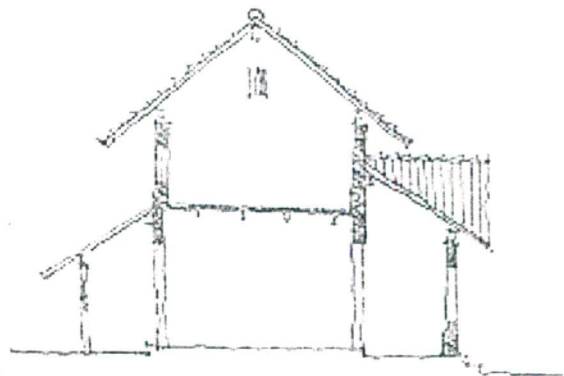
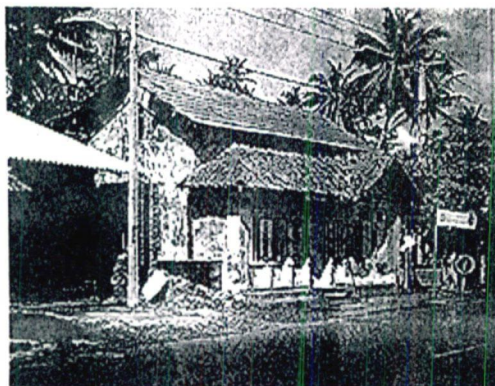
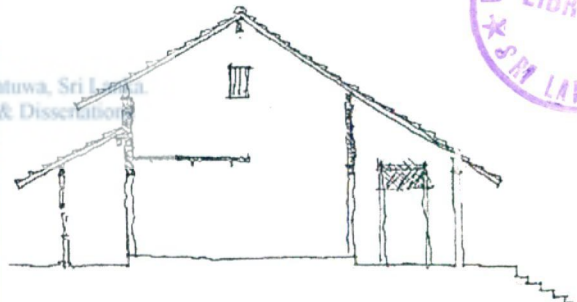
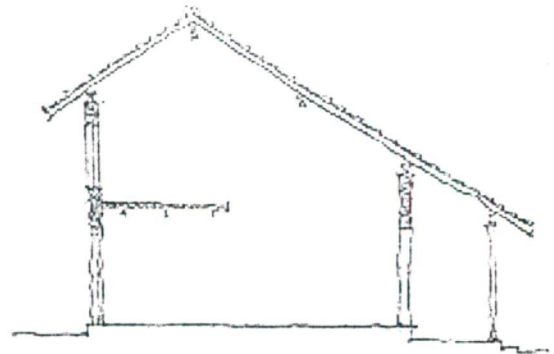
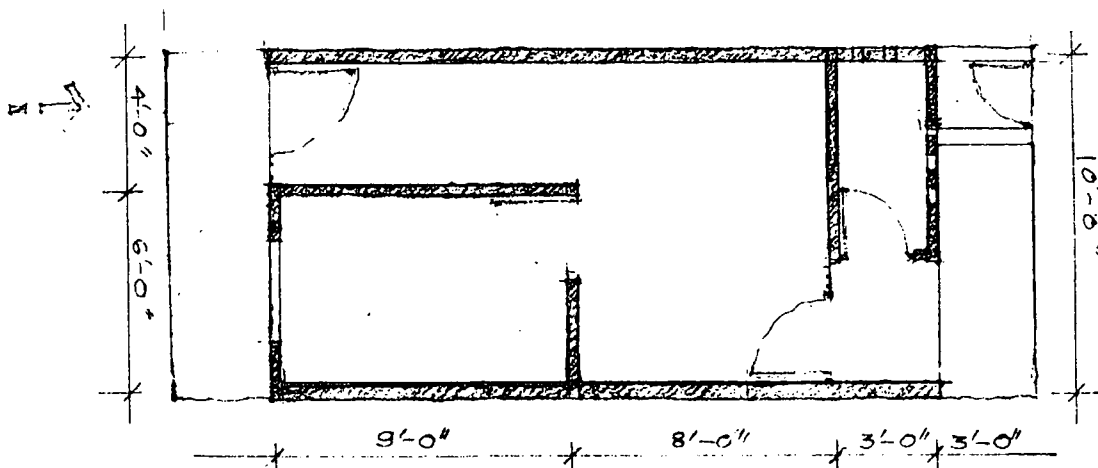
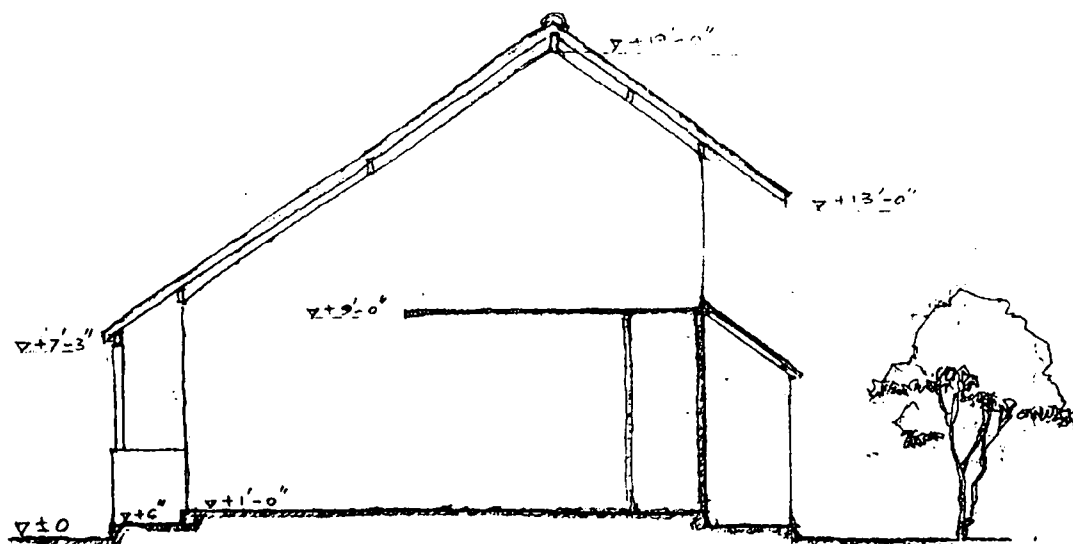


Fig. 39 – 3 dimensional views and sections that describes the architectural pattern of Baddegama

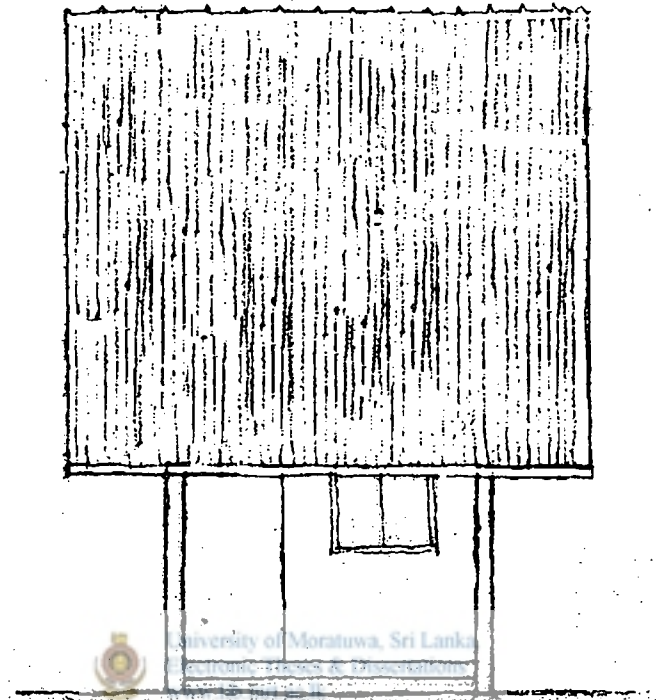
4.3.3.3 Identification of a Generic Form for Baddegama



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SECTION



ELEVATION

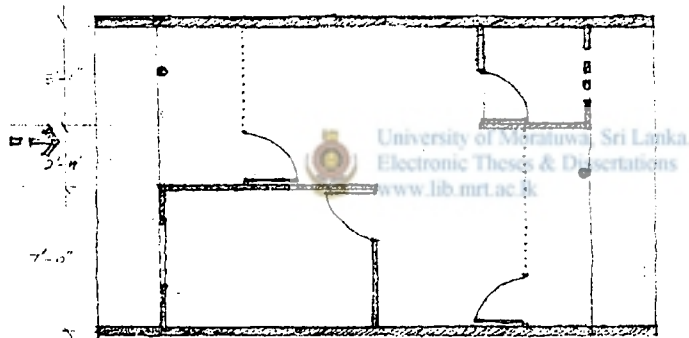
- Rural situation
- Introverted but also "extroverted"
- Connection with outside is stronger

4.3.4 Transformation of the Location Specific Generic Form & the Level of Personalisation

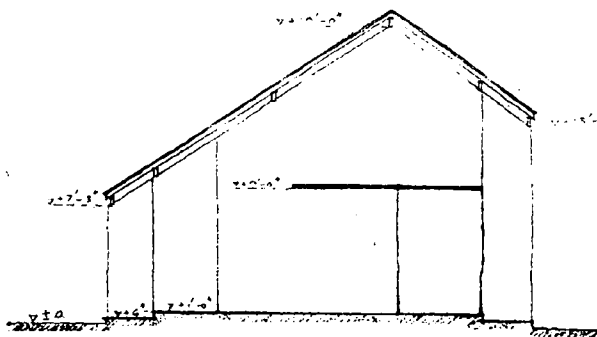
4.3.4.1 Possible Options

For this study purposes selected 4 options were included, out of 15 (approximate) options derived from the Generic form for Baddegama area.

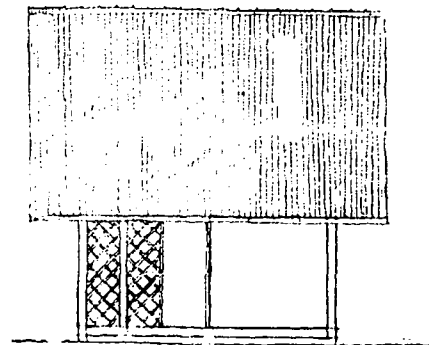
Option 01



Plan

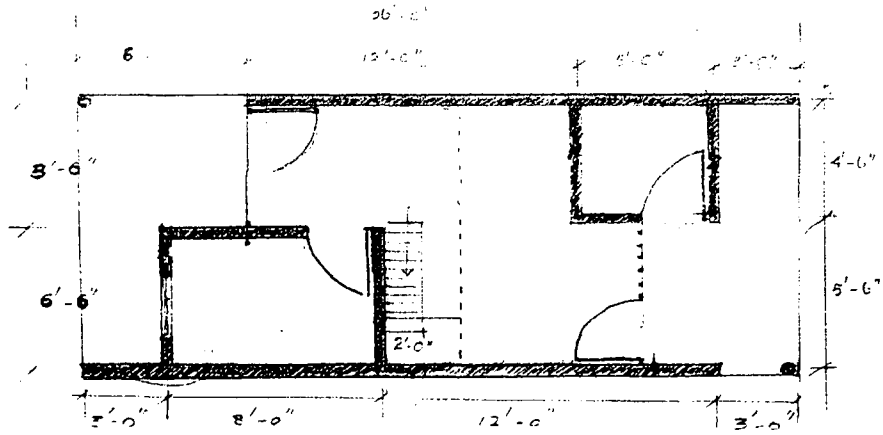


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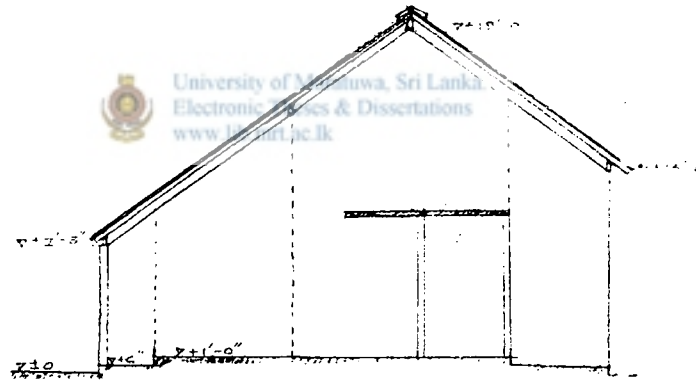


Elevation

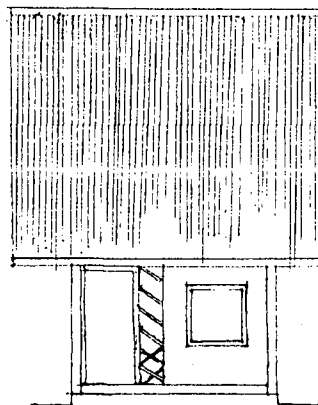
Option 02



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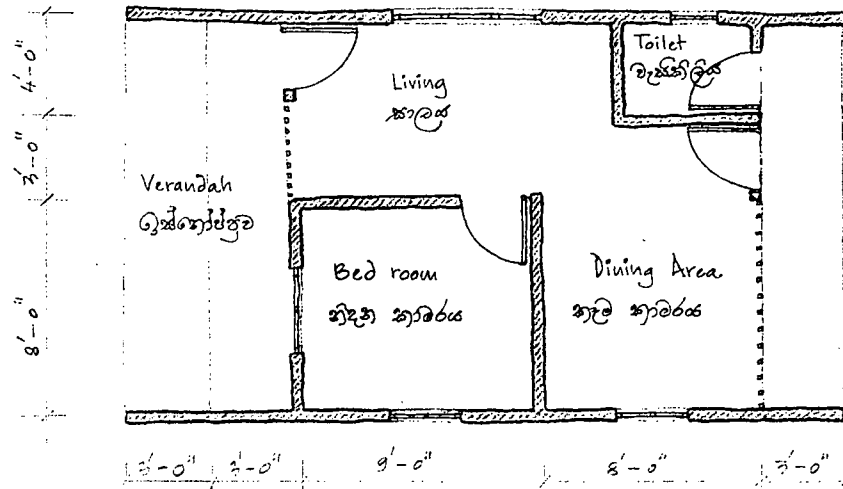


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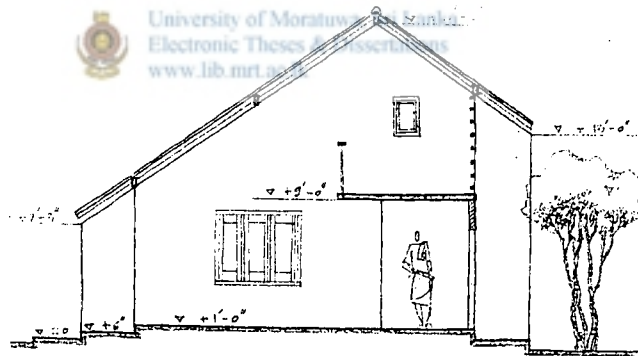


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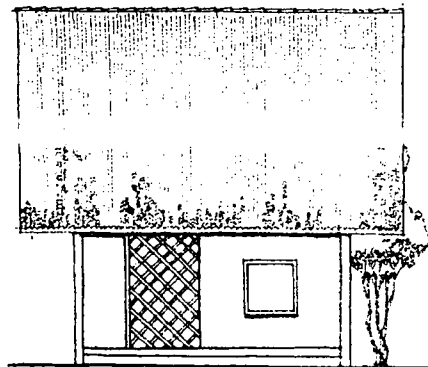
Option 03



Plan

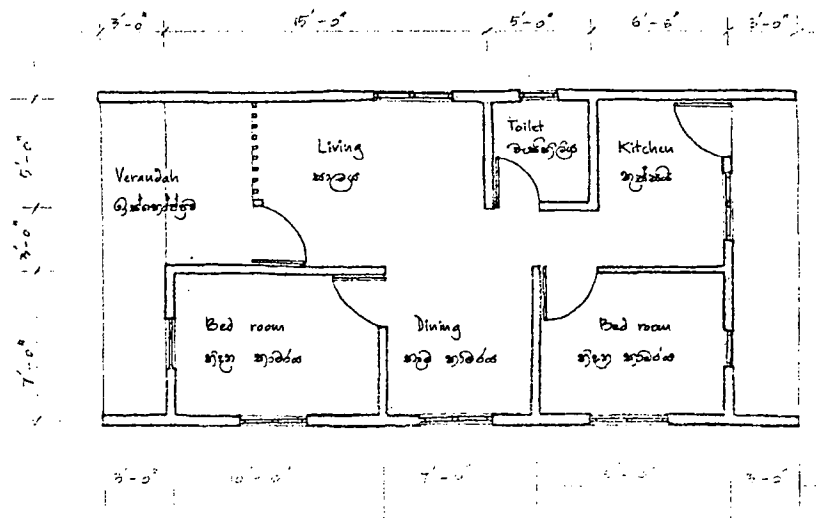


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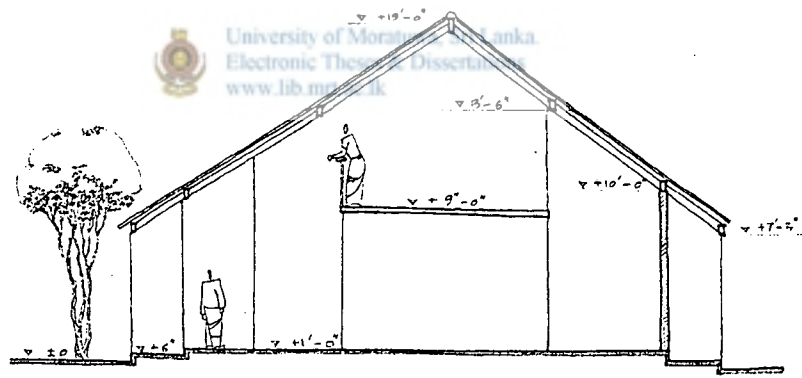


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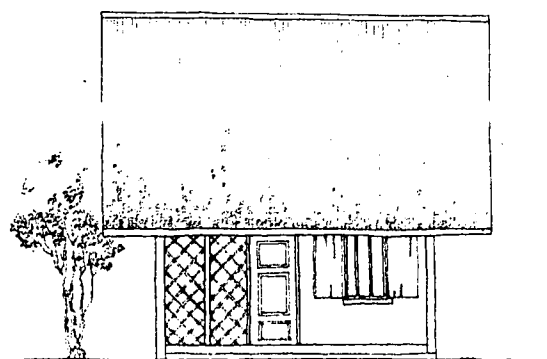
Option 04



Plan



Section



Elevation



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CHAPTER FOUR

CASE STUDY

4.3.4.2 Designs of Individual Housing Units

- Pre-Disaster & Post-Disaster Situations

4.3.4.2.a House of H.S.B. Wijethilake, Udahapola, Ginimallagaha

Introduction

According to H.S.B Wijethilake, a bakery owner explained his setup in his former location. It was a lower land demarcated by the river, the bund & a small lake with the extent of 5 acres. But with the sudden flood all their pride & satisfaction in their life was lost and they were severely affected by the disaster. With the loss of their house, which they lived from their childhood, all their point of references was lost, making them displaced & thus placeless.



Fig. 40 – Heavily damaged house of H.S.B. Wijethilake at Udahapola, Ginimallagaha



Personalization of the dwelling

A study of the transformation of the generic form, with special reference to the re-forming of houses for internally displaced communities affected by flood in Baddegama, Galle District

CASE STUDY

Pre-Disaster Situation

House Plan

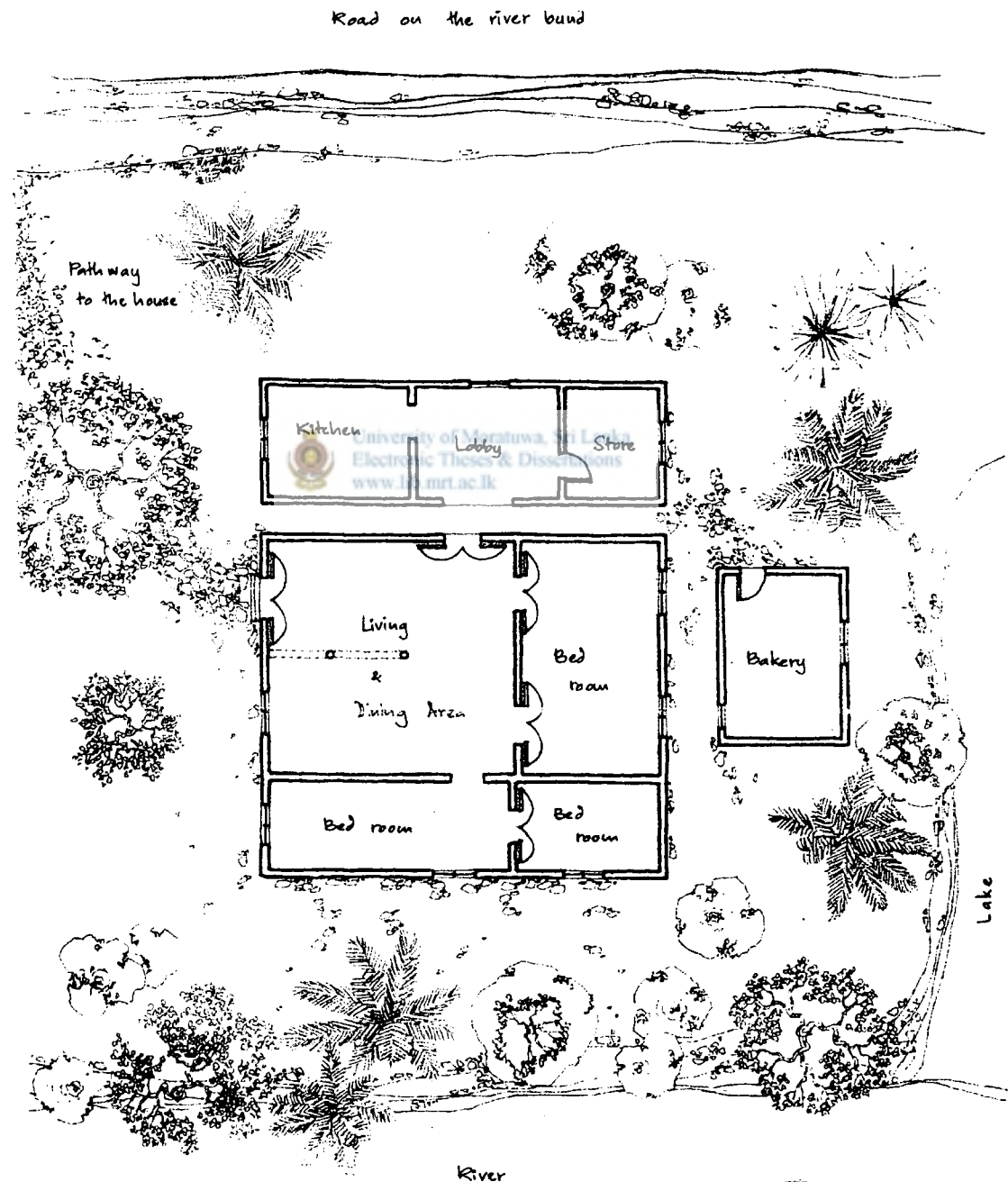




Fig. 41 – Plan & elevation of the pre-disaster house of H.S.B. Wijethilake

Personalization of the dwelling

A study of the transformation of the generic form, with special reference to the re-forming of houses for internally displaced communities affected by flood in Baddegama, Galle District

CASE STUDY

House of H.S.B Wijethilake is fairly a large one, compared to the other houses in Udahapola gramasewaka division in Baddegama area. As we consider the form of the house it reflects the typical rectangular house form with hip and gable roof forms, which are common to the Baddegama area. In most of the houses this typical character could be seen. When considering the single housing units, though the size was changed, the basic rectangular form and the roof pattern remained the same. As it comes to the internal arrangement, the housing unit had been already influenced by their income source. As it comes to the spatial arrangement, the whole unit has been divided in to 3 parts based on the level of personalization of each space.

The main segment consists of large living area and three bedrooms, which are different in size. The second segment consists of storeroom, common room & kitchen. These areas with a secondary importance had been placed away from the lake with less prominence. The third segment is the bakery, which located at the back of the house. It is positioned adjacent to the owner's bedroom in order to keep it in a safe location.

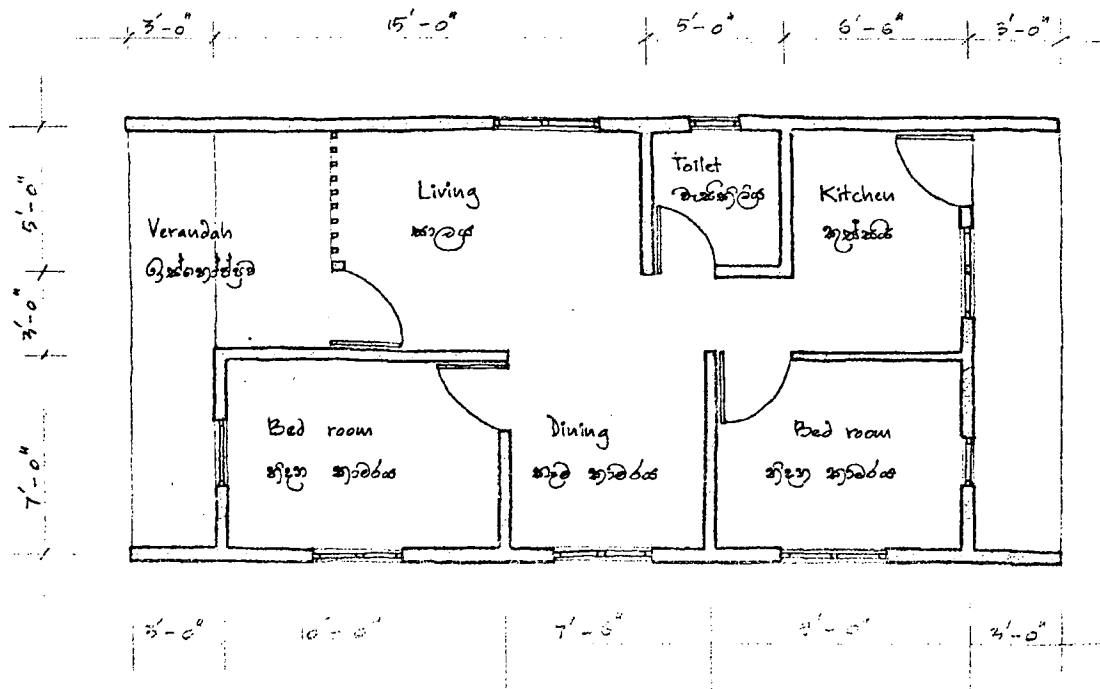
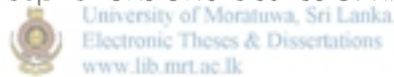
Personalization of the pre-disaster dwelling has taken place in two stages under two generations. H.S.B Wijethilake's parental home was not so large. It had only the main unit with a living room, 2 bedrooms, a kitchen & an open verandah facing the lake. Penetration between open verandah and living area was increased to facilitate & to promote the communal living between the family members & outsiders. Entrance to the house was through the front verandah bordering to the lake.

Later by the next generation in their personalization process, many changes were taken place as discussed earlier. The open verandah was converted to a bedroom and has obstructed the full view of the lake from the living area.

The wall in between bedroom and kitchen was removed & made into a larger bedroom, & kitchen was housed in a separate outside building. In between these two blocks access to the bakery was provided.

Post-Disaster Situation

Post disaster house plan was the one people got through architects' involvement during the workshops held in different areas affected by flood. Accordingly people of Baddegama area were given the opportunity to select the generic form depending on their personal desires. In repent to the above procedure H.S.B Wijethilake has selected the following option, which carried much closer aspirations and desires of himself & his family.



Personalization of the dwelling

A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District

CASE STUDY

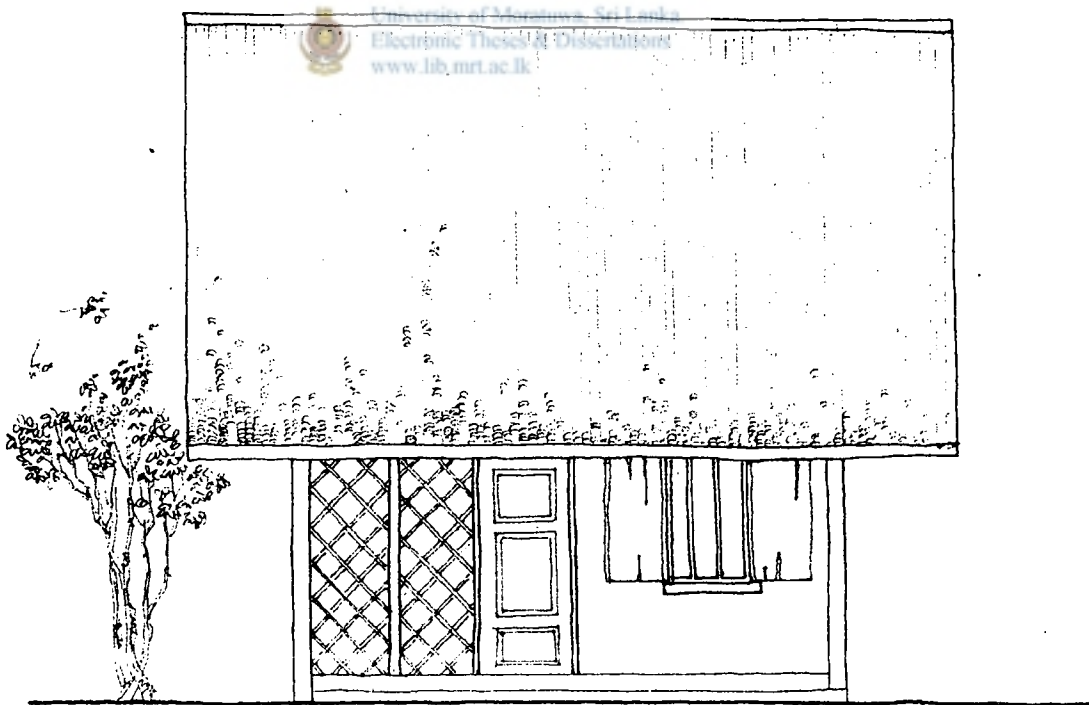
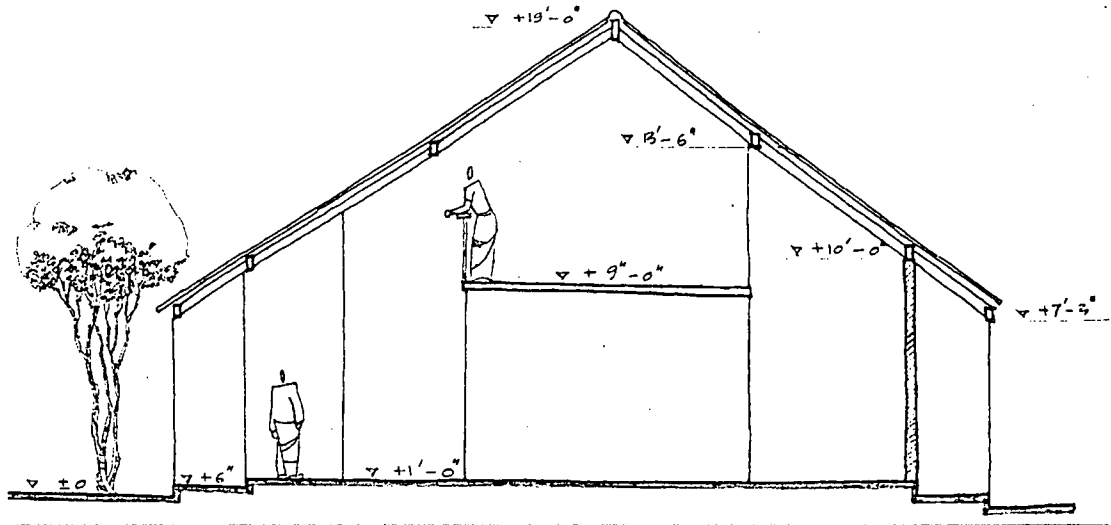


Fig. 42 – Plan, section & elevation of the generic form option selected by
H.S.B. Wijethilake

Appreciation of an aesthetic appearance is a changing measure, which depends on the perceivable level of a person. So depending on the appreciation level of H.S.B Wijethilake, he selected the most attractive option that he thought was the most elegant. For him, to select the particular option, the aesthetic factor became the highly influencing parameter. It can be understood by his words "දැනීමේ හැටියට හිතට ගියා". According to that, the outer appearance has led him to select the particular option.

Also the option had the most similar kind of spatial arrangement and spatial organization, which he looked for. Though this arrangement was not the perfect one he desired, it had the potential to develop according to his mental picture. The spaces of his choice were the verandah, with decorative columns, living, dining, 2 bedrooms, kitchen & a toilet. Because of his much stable economic standard compared to the others, he could choose an option, which is larger in size and had much potential for future expansions.

In the final analysis it is very clear how the level of personalization take place and varies accordingly when generic form transformed into the particular option.

Though the option is more personalized than the generic form, it does not fulfil the total satisfaction of the people. Taking in to consideration this particular matter, the opportunity was given to the people to discuss with architects & to personalize what they have already with them. Through this two-way discussions architects could really understand what the displaced people need. In H.S.B Wijethilake's situation he could finalize lots of changes in a more appropriate way to suit his desires & family requirements.

Personalization of the dwelling

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CASE STUDY

Verandah was further extended & new family dining area was added. The external toilet became an attached, adjoining the family area. Two bedrooms were expanded to shut up the family needs in the future.

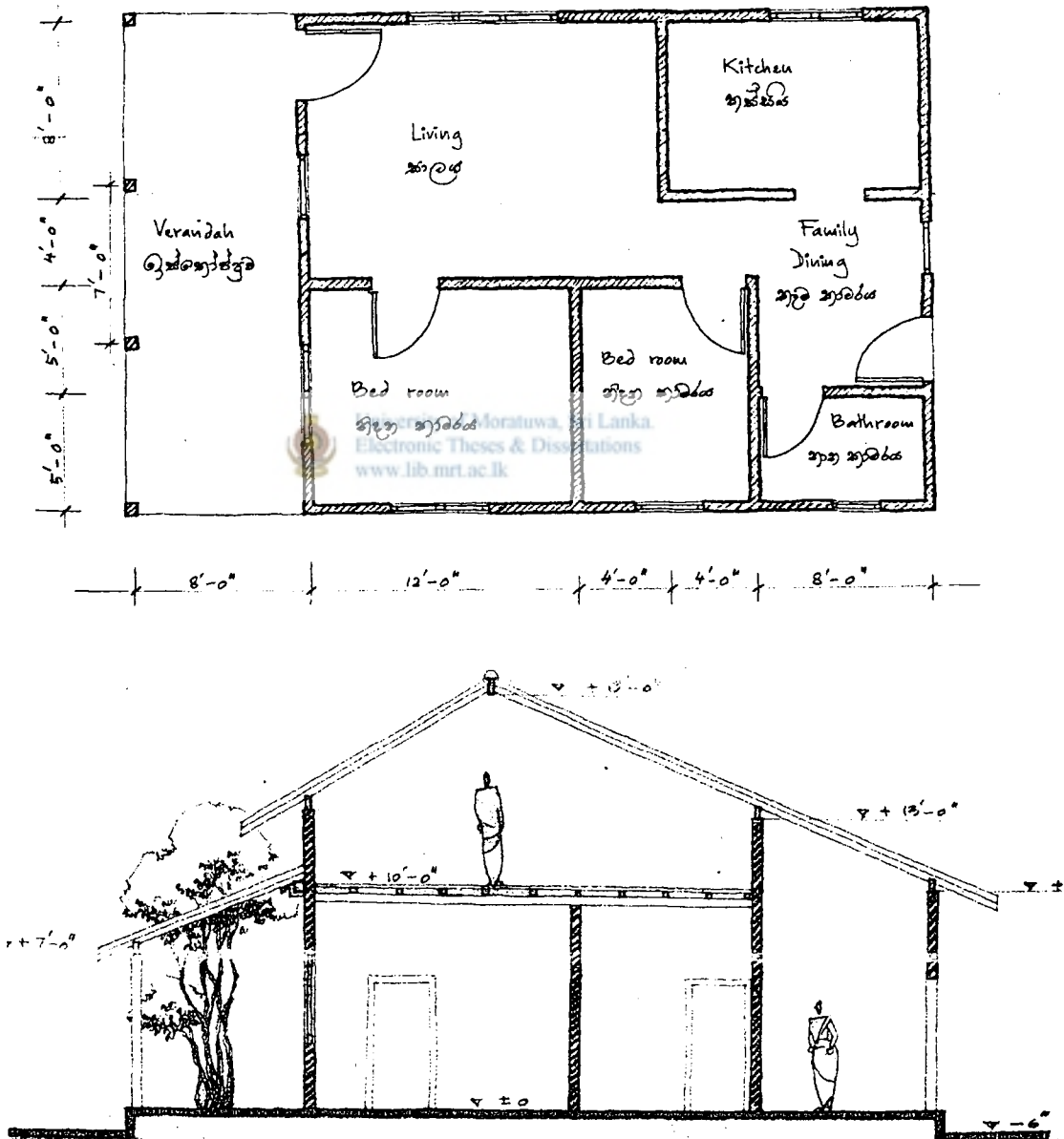
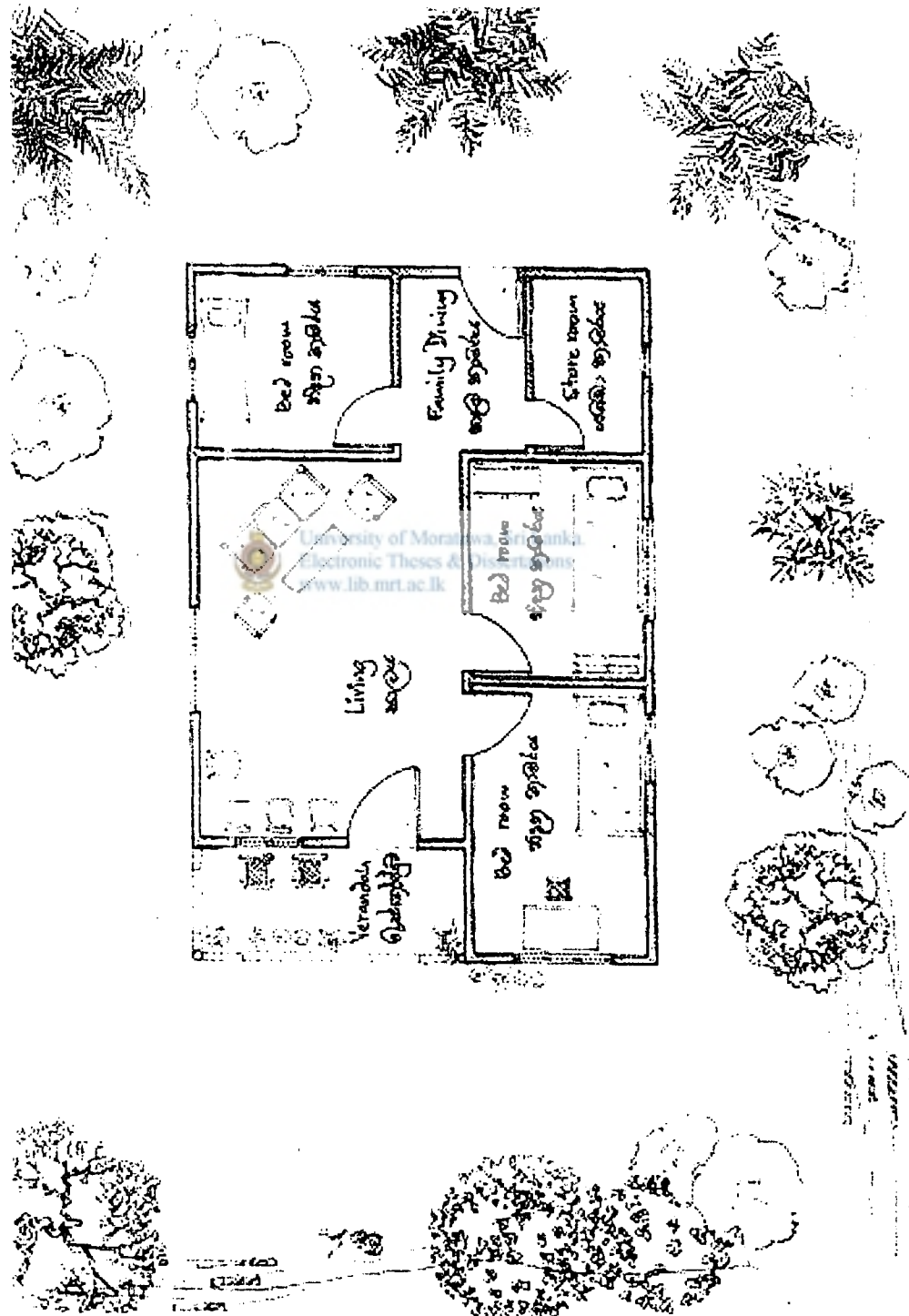


Fig. 43 – Plan & section of the house personalized through the architect's intervention

Final House Plan



Personalization of the dwelling

*A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District*

CASE STUDY

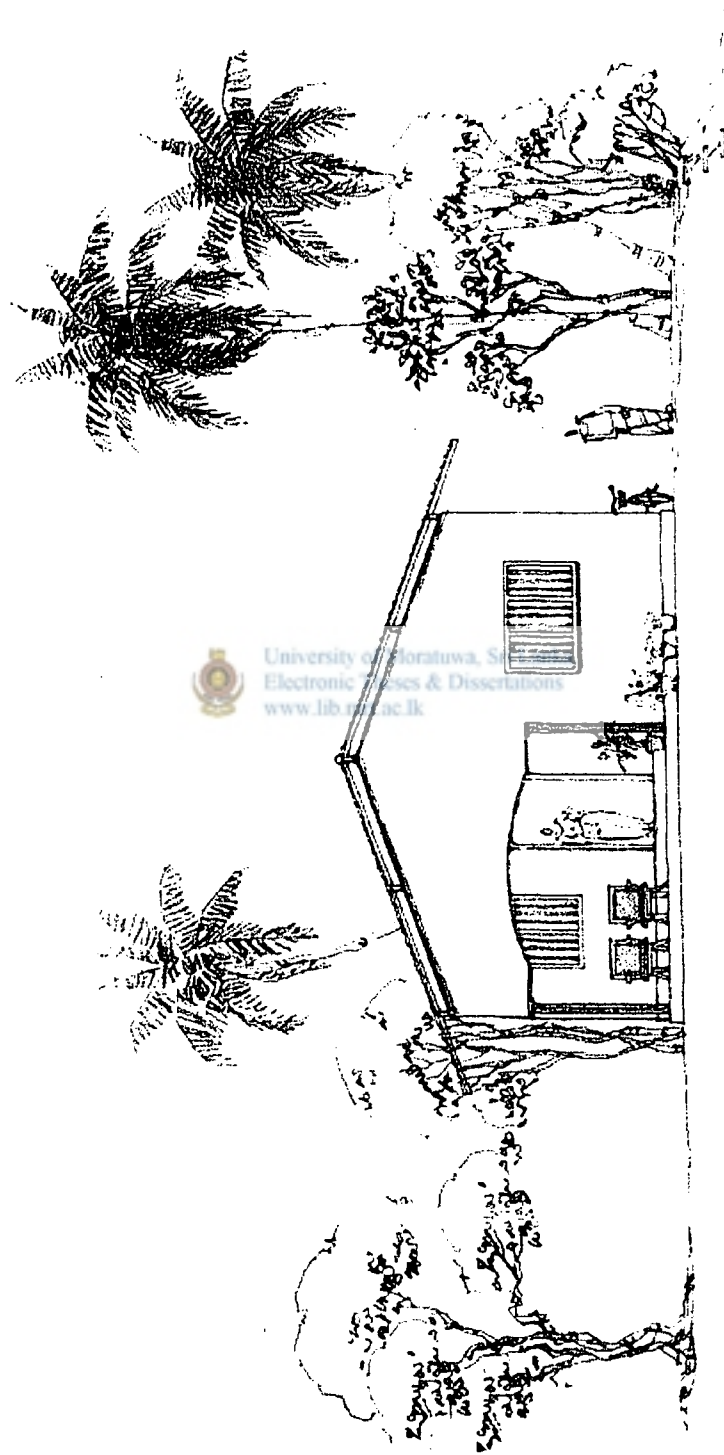


Fig. 44 – Plan & elevation of the post-disaster house of H.S.B. Wijethilake

Fig. 45 – Personalized house
of H.S.B. Wijethilake
after occupying



Further changes have been done during the construction. The economic level & religious beliefs had been affected on decision-making process. As they build their new house on a high land, where there is less vulnerability, they have considered the attic space as less important. For the maximum utilization of space, verandah has been cut down and bedroom has expanded. More decorative elements were added such as columns, arches with plaster moldings etc.

By their personal involvement in choosing & personalizing the new house, they have gained self-satisfaction to a maximum with psychological advancement of their self-esteem.

**4.3.4.2.b House of T.B. Gunadasa
206c, Kihimbi Ela**

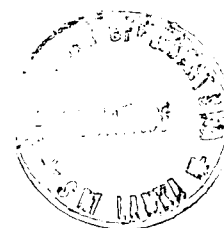
Introduction

Generally, there are two extreme ends, which can occur due to a disaster. Either disaster can destroy the very communal foundation of a society, making recovery and reconstruction almost impossible, or disaster can rejuvenate the communal base of a society, making recovery and reconstruction not only possible, but also a force for improving the society.

But in our situations, in Sri Lanka it is very difficult to expect a situation where the disaster has been a force of improving the society also making recovery and reconstruction possible.

Including the recent floods in Galle district, all has brought a very disastrous situation to the country and to the people making the recovery a hard process. When considering Baddegama area it is a mere reflection of the second situation, which brought the people to the worst, from their better previous living condition.

The scenario can be further established by the following example of T.B Gunadasa at Kihimbi ela. He evoked his feeling of how he faced the incident and the way all their pride and wealth washed away by the sudden storm and the flood. Ultimately they lost their point of reference in this world breaking all their attachments to their own place and the surrounding.



Personalization of the dwelling

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CASE STUDY



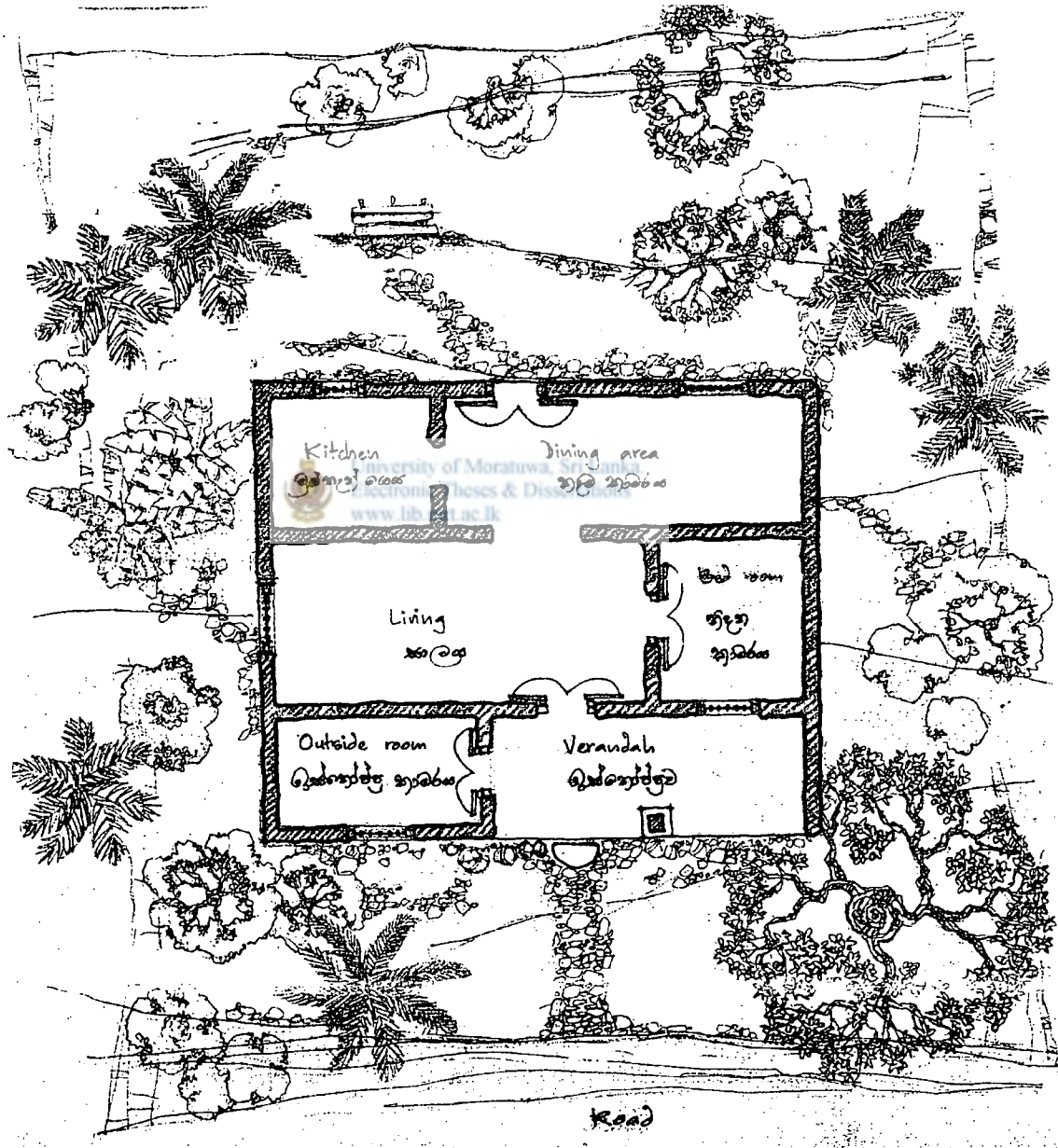
Fig. 46 – Seriously damaged
pre-disaster house of
T.B. Gunadasa
at Kihimbi Ela



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Pre Disaster situation

House Plan



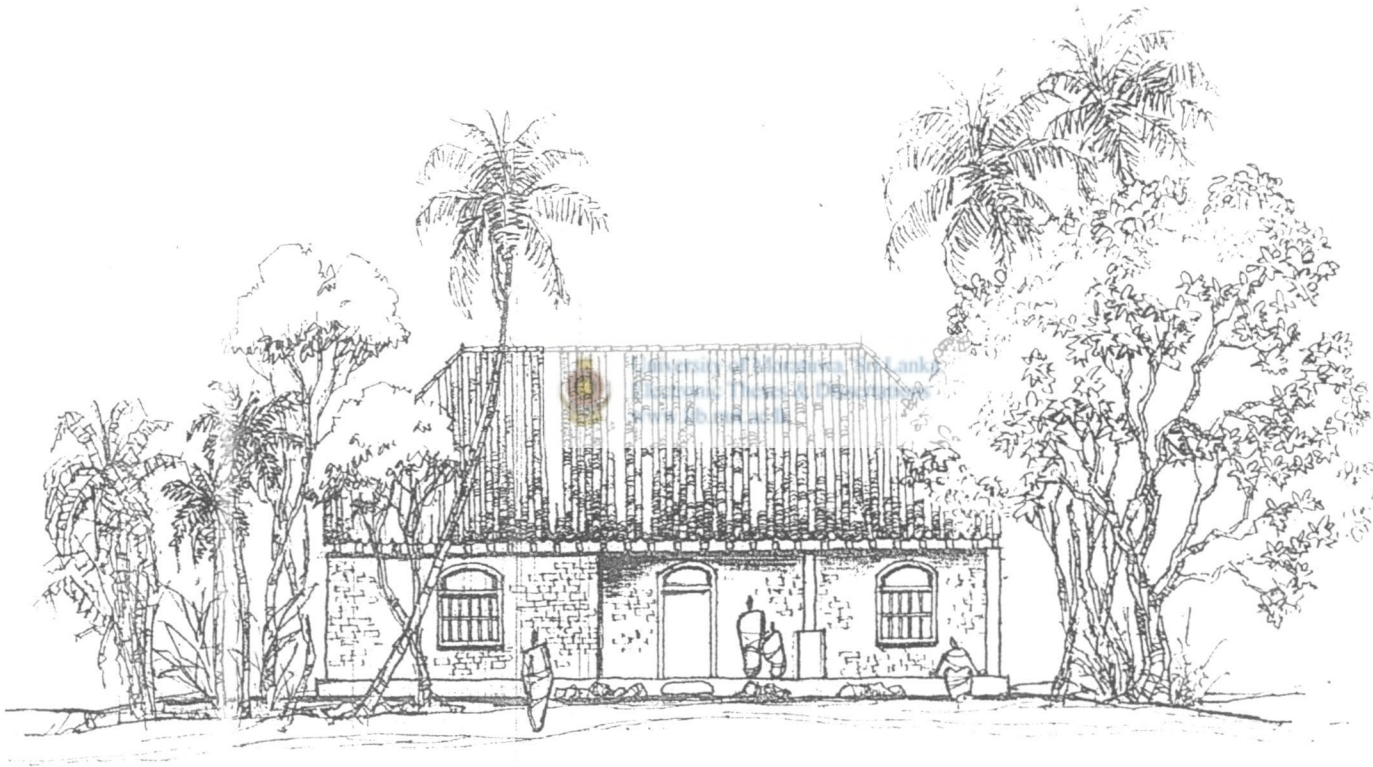


Fig. 47 - Plan & elevation of the pre-disaster house of T.B. Gunadasa

Personalization of the dwelling
A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
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Pre disaster house of T.B.Gunadasa is fairly a large house in pure rectangular shape and with hip roof, which is the typical architectural character of the area. In the basic spatial arrangement this house has major similarities with the previous house (pre disaster) discussed.

As they proffered for communal gathering they have a large colonnaded front verandah with a grand living space with a better penetration in between the other spaces, like the dining. For the whole family, their most memorable and interesting space was the front verandah facing the main entrance road to the house.

As T.B.Gunadasa explained, this was their parental house which they enjoyed their lives satisfactorily with all their status in the village. In the original house additional roof space was not given for an attic space. But in the beginning of 90's when the first flood occurred some changes to the original house was done. Original low-pitched roof was changed to a high pitch roof with half round tile. Within that additional space provided, the new attic was constructed for the use of any flood which may occur aftermath.

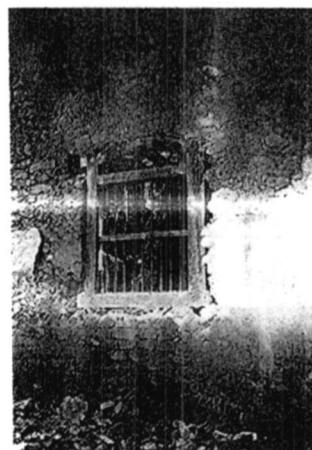
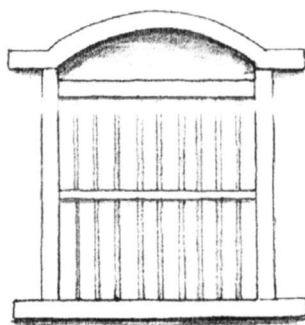
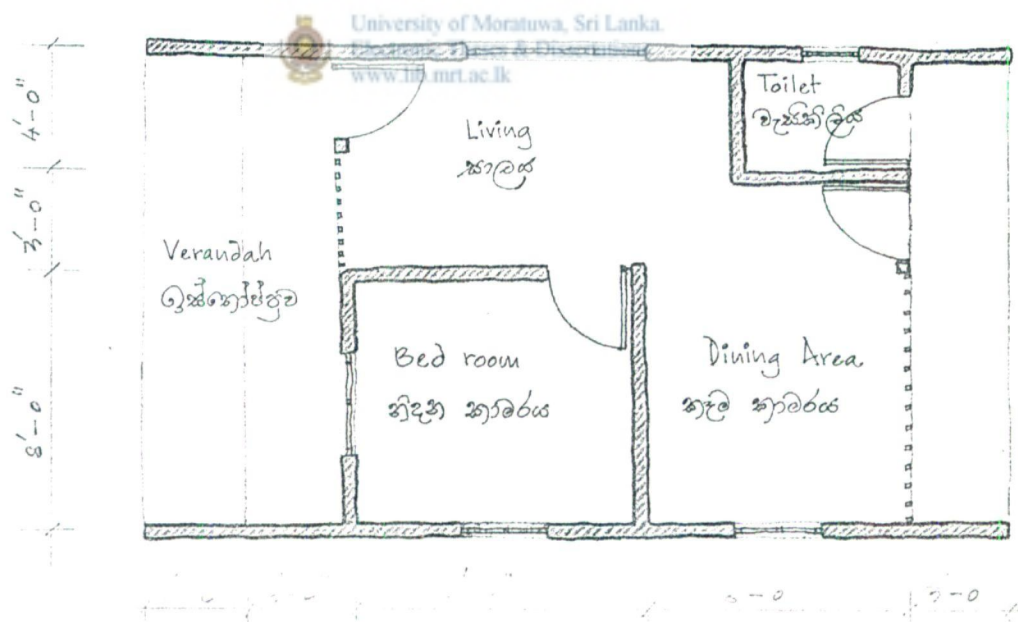


Fig. 48 – Traditional window type that gave a rich character to the house

Post Disaster Situation

After they loose their house they were highly depressed by the sudden calamity. According to T.B.Gunadasa, his major desire was to build some kind of permanent shelter. So, from the given options he selected the following, which he thought that might suit his income and the family desires and aspirations. T.B.Gunadasa is an unmarried person who lived with his sister and brother-in-law, who doesn't have children. Though the current house is comparatively small they were satisfied with the new house, which facilitated their day-to-day need to maximum.



Personalization of the dwelling

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CASE STUDY

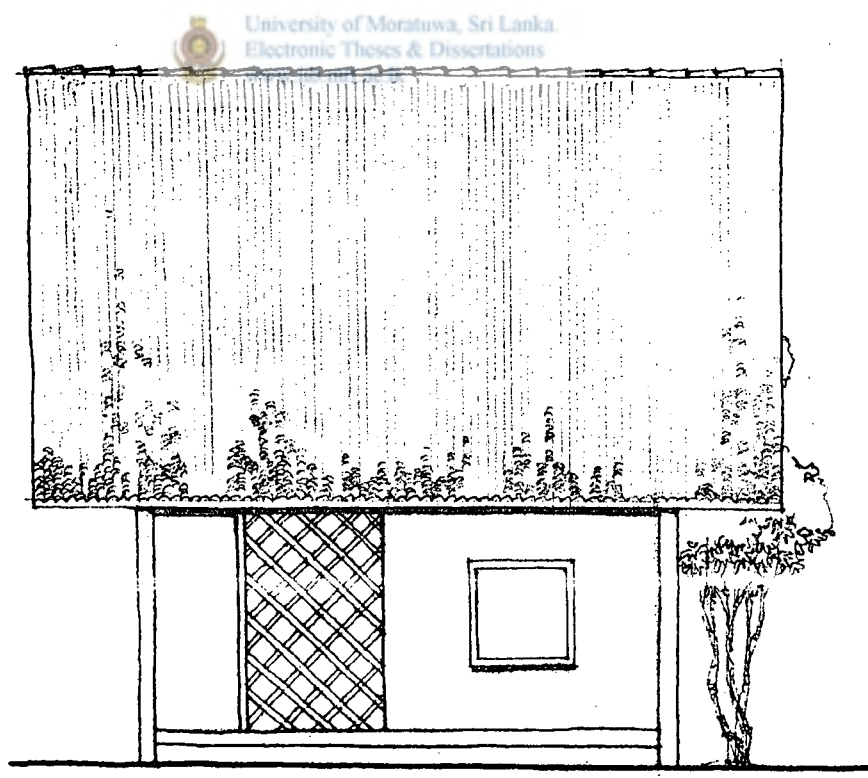
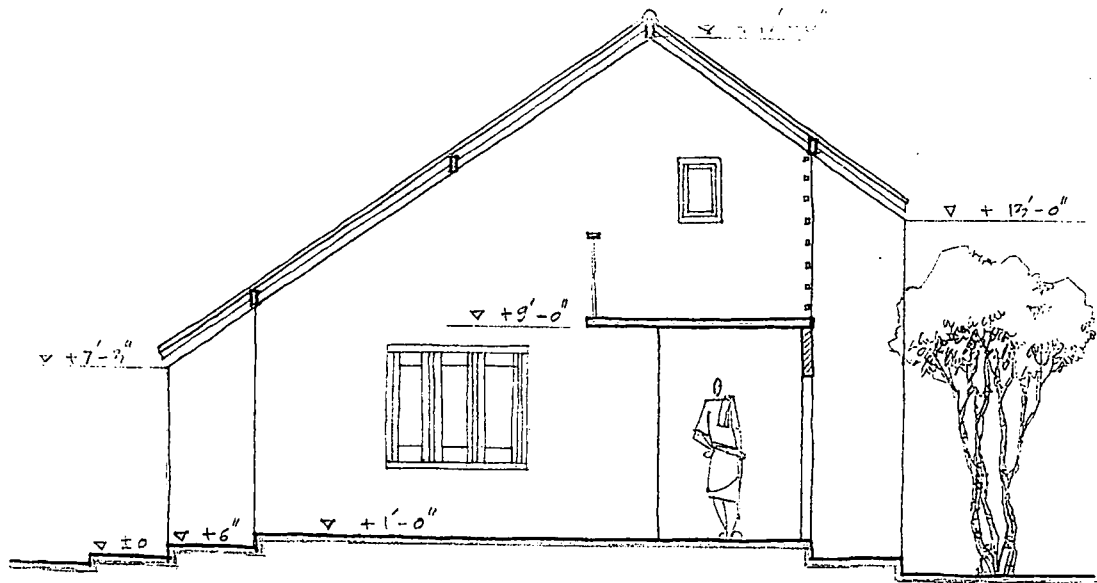


Fig. 49 – Plan, section & elevation of the generic form option selected by T.B. Gunadasa

Personalization of the dwelling

A study of the transformation of the generic form, with special reference to the re-forming of houses for internally displaced communities affected by flood in Baddegama, Galle District

CASE STUDY

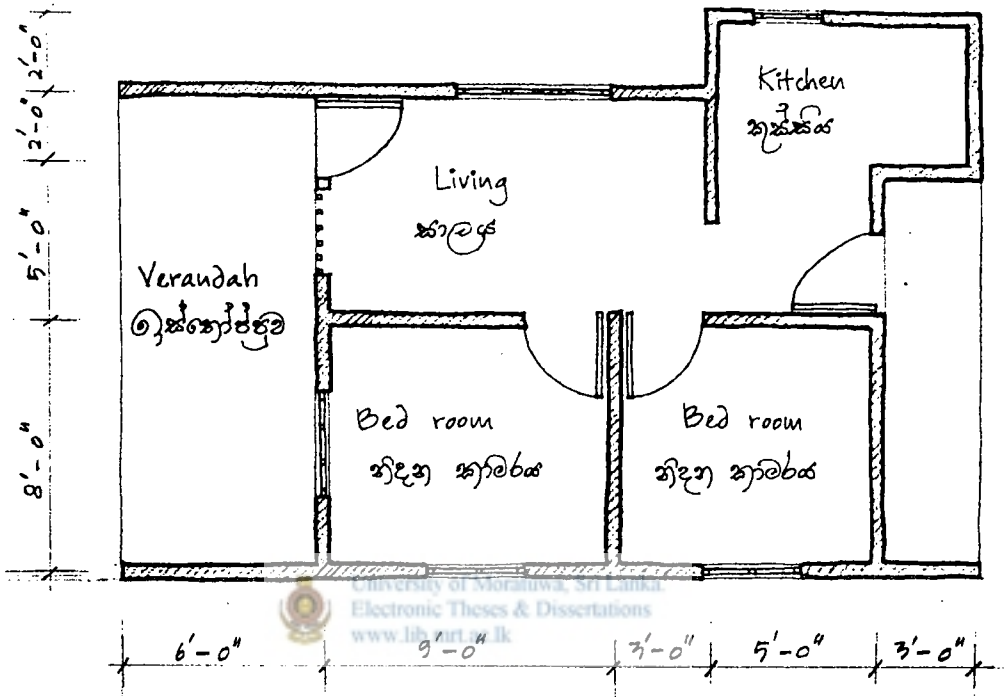


Fig. 50 – Plan of the house personalized through the direct consultation with the architect

Final House Plan

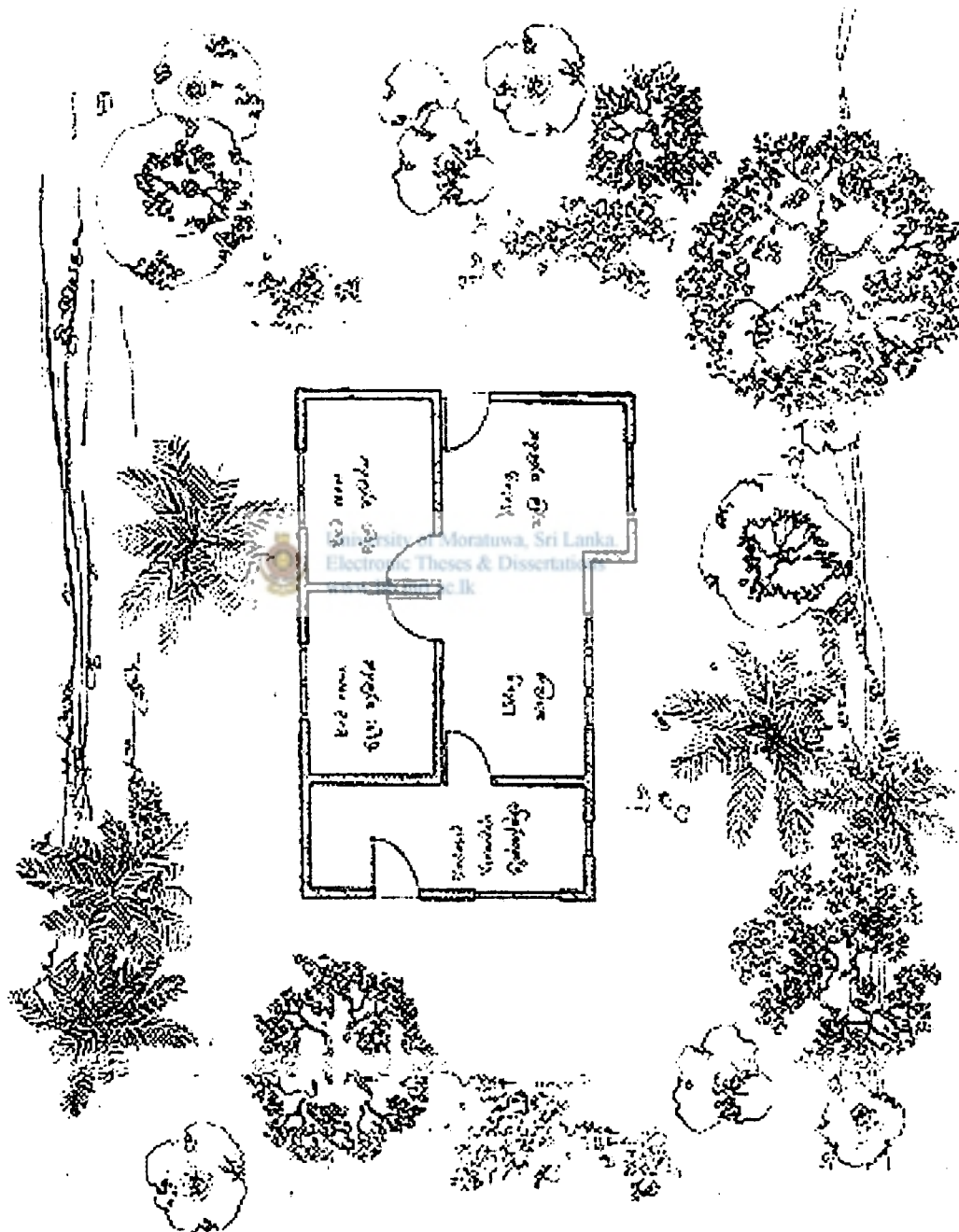


Fig. 51 – Final plan of the post-disaster house of T.B. Gunadasa



Fig. 52 – External view of
constructed completed
house of T.B. Gunadasa

Fig. 53 – Internal view of the
living area towards the
enclosed verandah



Further changes to the architect given plan were done during the construction period to suit their income level and family aspirations. Apart from the above aspects the inhabitants' astrological beliefs have been mainly affected to the internal arrangement of the house. Avoidance of placing a door or a window where there is the interceptor point of four corner lines of

the house is thoroughly believed. In the rural set up this principle is known as "ගිනිකතුරා", (Gini Kathura)

So to avoid the affect of this by the time they converted the front verandah to a covered space within the house. The same principal affected the wall in between living area and kitchen. Without that particular wall living room became more spacious and an additional kitchen and a toilet was constructed outside by the inhabitants. To work within the limited budget of the hundred thousand rupees they had to sacrifice some important elements, which they appreciated so much. Mainly the attic space was removed and the building height was reduced to minimise the construction cost to a considerable level. Through their personalisation process of their house, in order to counteract the above changes T.B.Gunadasa has bees decided to increase the plinth height of the house to face the sudden floods to some extent.

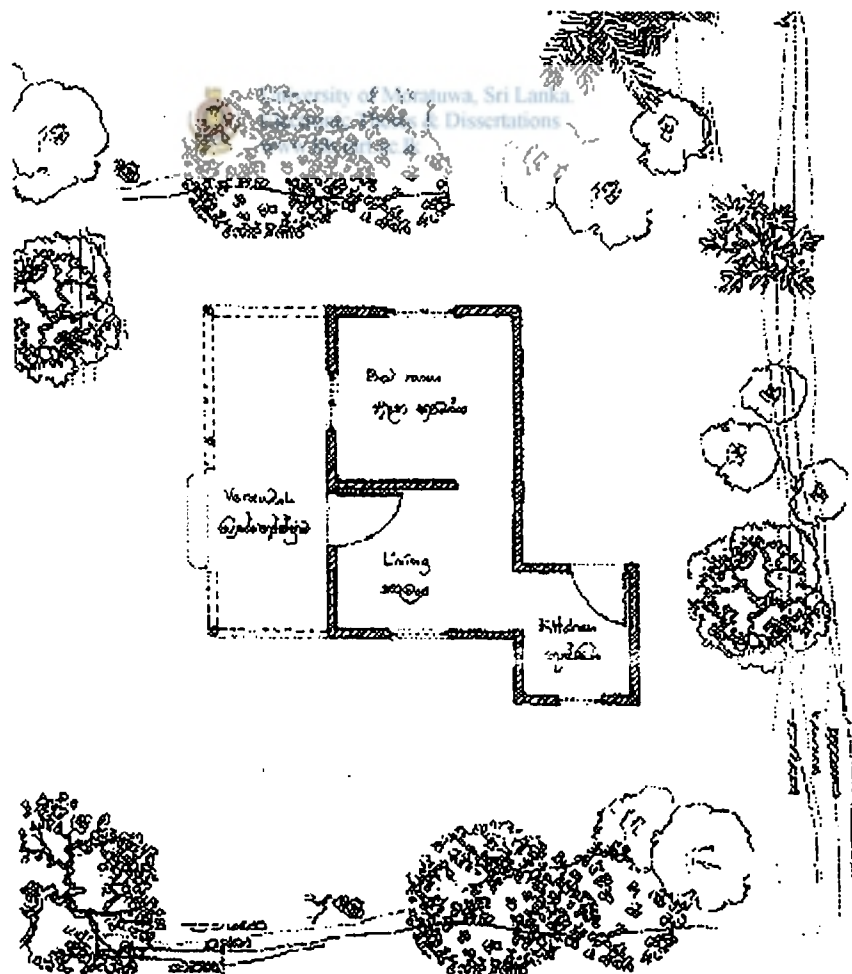
4.3.4.2.c House of I.N. Guruge Hammaliya, Baddegama

Introduction

According to I.N. Guruge, they lost their home with the sudden flood and storm, in an unexpected moment. So they decided to leave the home and all their relations, for means of escape.

Pre-Disaster situation

House plan



Personalization of the dwelling

*A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
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CASE STUDY

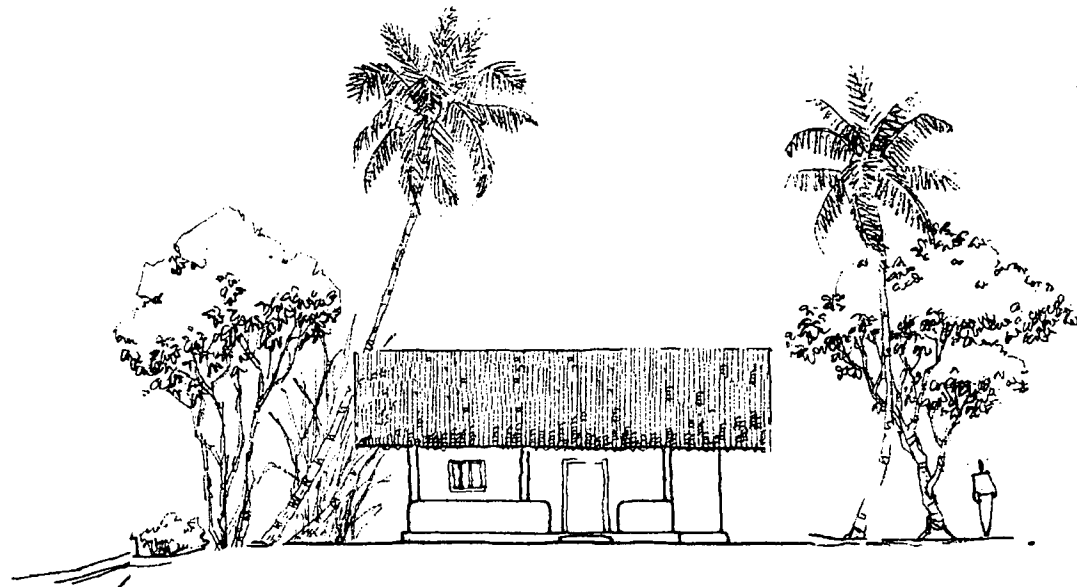


Fig. 54 – Plan & elevation of the pre-disaster house of I.N. Guruge



House of I.N.Guruge was a small one with wattle-&-daub walls and Cadjan roofing, which was constructed by his parents. As we consider the spatial organization of the house the long front verandah has played a vital role in their family activities. As he explained, most of their day-to-day activities had been taken place in this space.

Spatial demarcations between spaces were very less. Mostly verandah, living, and kitchen acted as a single entity by allowing higher degree of penetration between these activities. Bedroom was the only defined space giving much privacy inside the house.

In this house the segregation of spaces could be seen to a certain extent. Verandah, bedroom, and living were arranged within a one block and kitchen area was treated separately to show that it is attached separately.

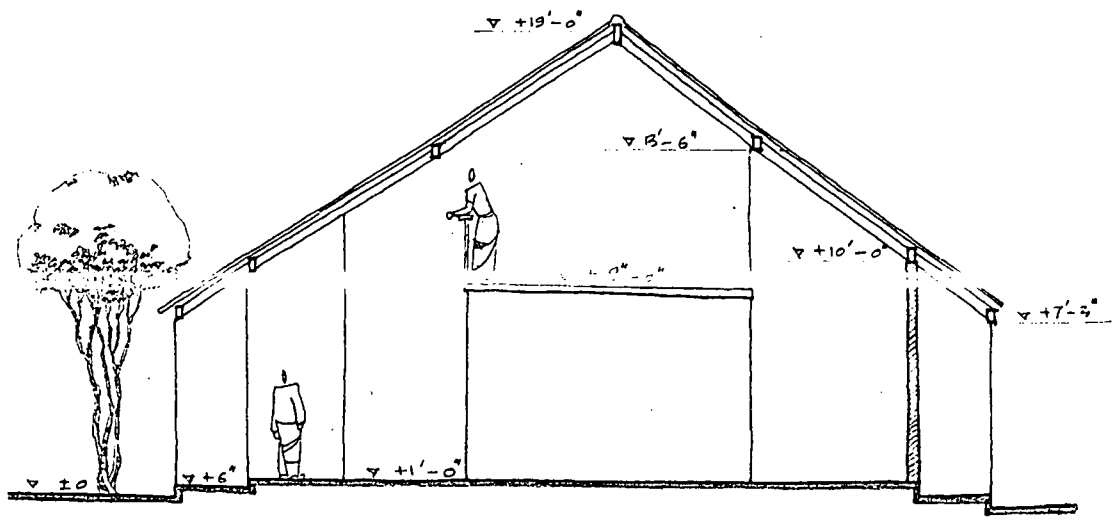
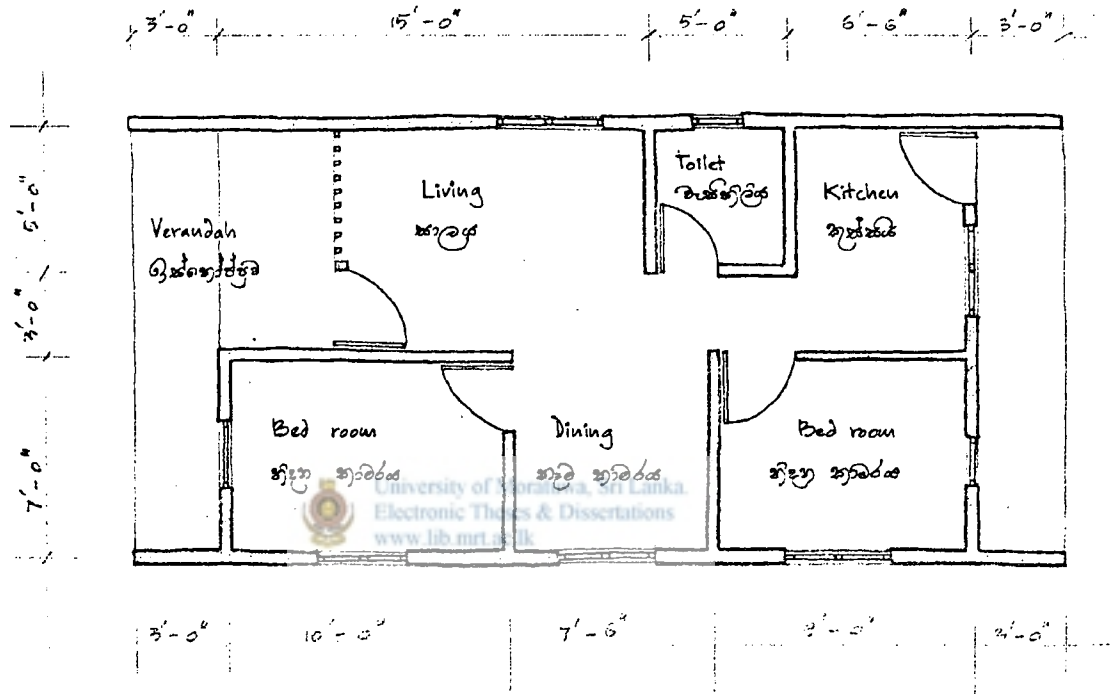
Personalization of the dwelling

A study of the transformation of the generic form, with special reference to the re-forming of houses for internally displaced communities affected by flood in Baddegama, Galle District

CASE STUDY

Post Disaster Situation

House Plan



Personalization of the dwelling

A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District

CASE STUDY



Fig. 55 – Plan, section & elevation of the generic form option selected by
I.N. Guruge

This is the plan, which I.N Guruge got at the workshop held recently, after the sudden flood at Galle district. The selected generic form option is the one he thought that would suit his future requirements.

Personalization of the dwelling

A study of the transformation of the generic form,
with special reference to the re-forming of houses for internally displaced communities affected by flood
in Baddegama, Galle District

CASE STUDY

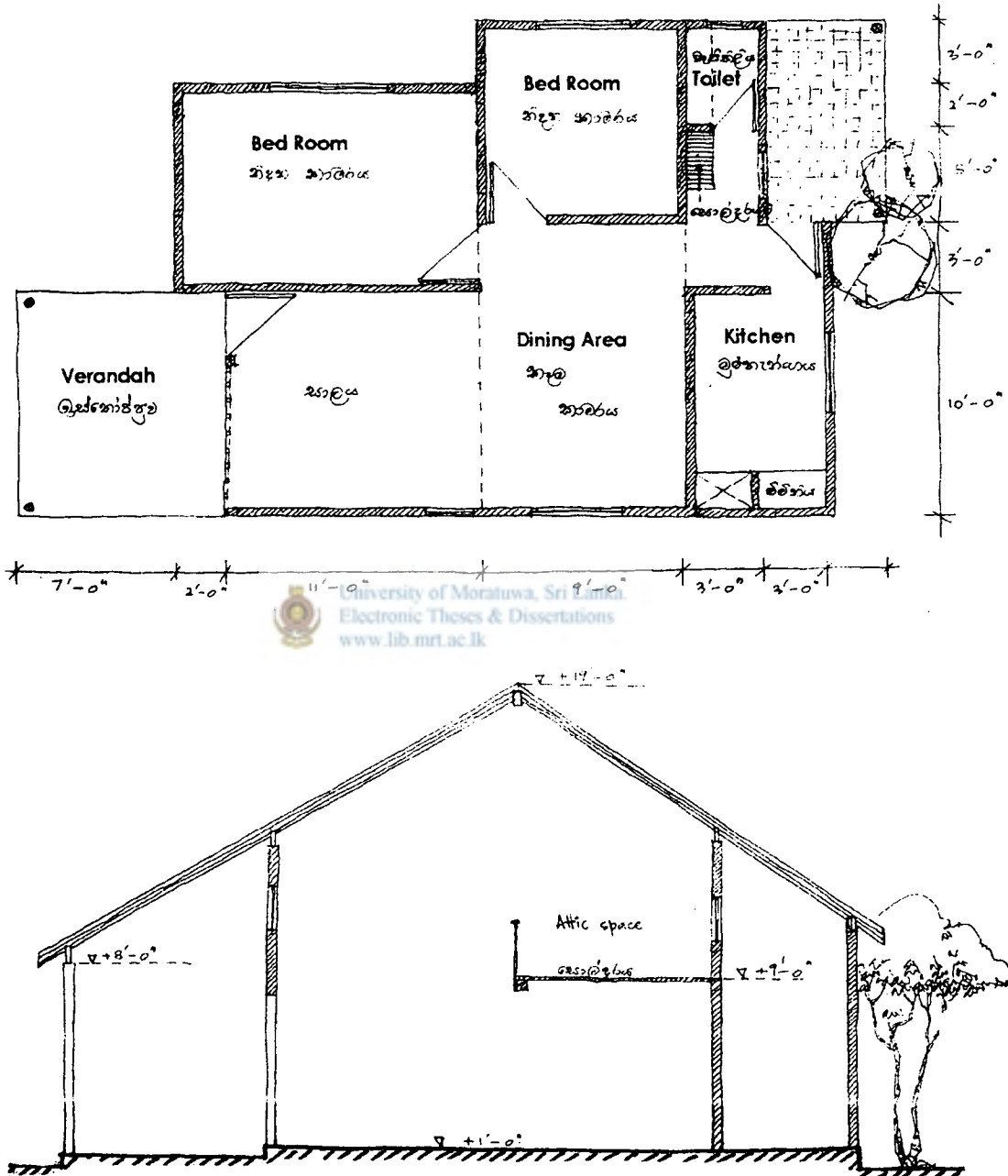


Fig. 56 – Plan & section of the house personalized through the direct consultation with the architect

After the discussion with the architect the number of bedrooms was increased in to two, one is for his mother and one for him who is willing to marry in near future. Other than these changes, they have incorporated the toilet in the main house to treat it as a one spatial entity. Additional rear verandah also provided for family activities. New attic space was added as a precaution for sudden disaster situation, which may occur. Front linear verandah was further enlarged to provide more space for communal activities. Same spatial relationship, which was in the selected option, was preserved while changing the location of particular spaces within the same floor area.

Final House Plan

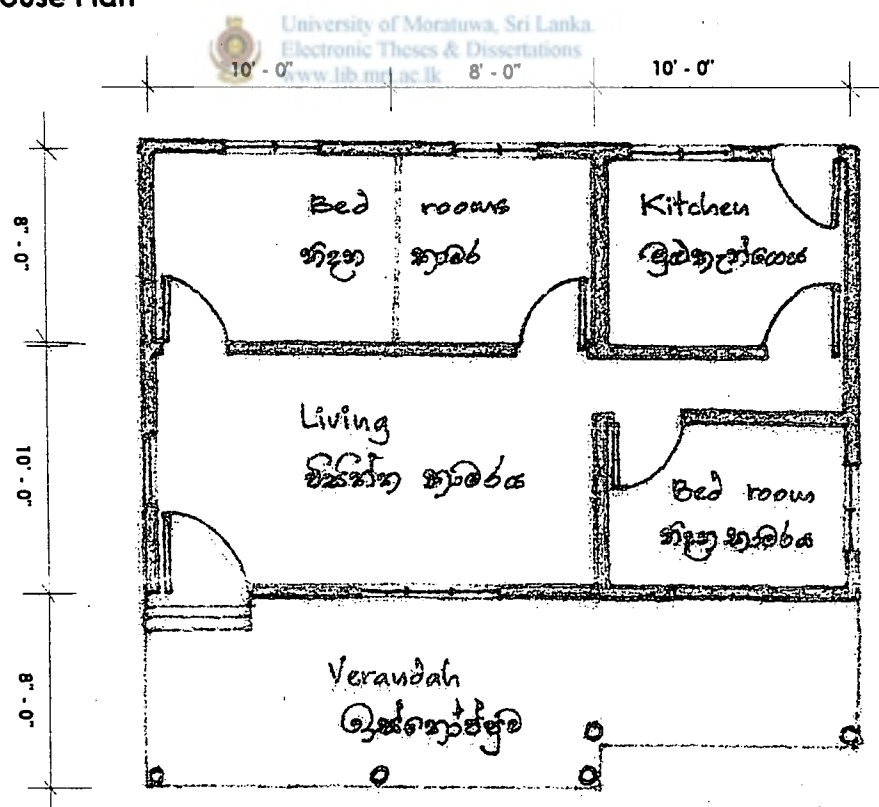


Fig. 57 – Final plan of the post-disaster house of I.N. Guruge

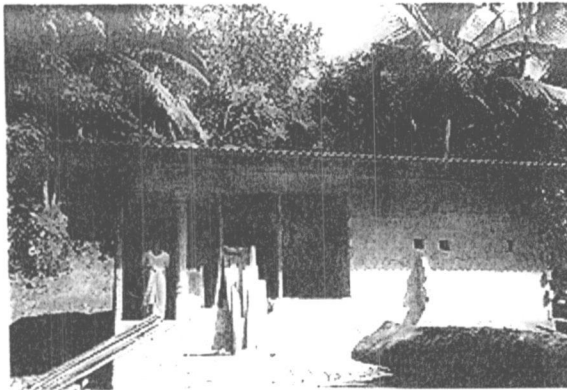


Fig.58 – Incomplete exterior view
of the house of
I.N. Guruge

Elements, which were in the generic form option, were re-arranged in a different way to give more spacious atmosphere in the house. Form was not changed and the orientations of different spaces were changed. As they selected a high land to build the new house, the need of the attic space was not considered. As an alternative solution for the removal of attic, have raised the plinth height from two feet.

The direction of the front verandah was changed. These changes affected the internal arrangement, such as the shifting of kitchen space to the other side and one bedroom was taken to the front. Further enlarged the verandah space, which is not yet construction, is completed. As they further personalize, the rear verandah was removed and internal toilet had shifted outside as usual.



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CONCLUSION

CONCLUSION

Human is a social animal. As it becomes social he has lot of social needs to be fulfilled, to sense he is social. Among these social needs man and his social relationships become more important which helps him to fulfil other physical, social and psychological aspects. Whatever the situation he felt, home has been his prime need to mark his existence in this world. Therefore, the act of dwelling or housing can be thought as a fundamental aspect to all humans, irrespective of the situation they face. But as this study reveals, the criticality of this, varies in special situations such as disasters, which displace people totally from their reference point.

Even in disaster situations as detailed in this study, it was found that people recover and re-build and personalize their socio-physical context. Past memories and experiences have helped them to re-create their places of living. What was identified here is the people's inherent ability to create and re-create their places of living.

But in reality the inherent ability of people to create their own places; is questionable depending on the situation, which it happens. Sometimes it is doubtful whether this goes in the right direction with a thorough understanding of the socio-cultural, economic-political and other aspects of the society, rather than coming into "blind assumptions" which may not cater to the roots of the problem. Perhaps this is the time, which professionals should come out from their "shells" and envisage holistic approaches to architecture.

Architects involvement becomes more vital as they encroach in to this problem in a multi disciplinary approach. So architects should carry the

responsibility to extend their role into a more people centred or people oriented one. In the people re-aligning process, architects should orientate themselves better in designing frameworks for displaced, which the people can easily personalize with a continuous guidance of architects through out the process. In arriving to a fine decision based on the survey, which was done by senior architects & M.Sc. architecture students, for displaced people of Baddegama area was taken as the major basis for the study. Throughout the workshop held in Baddegama; architects tried out the generic form solution approach, which the people got an opportunity for a two-way discussion with the architect, and to select an option, which he can easily personalize, and also suits his income level.

While the visit, it is clearly understood that this method has worked quite well. But there is something radically wrong in the architect's involvement beyond a certain point, and it is evident by what people expressed. Further T.B. Gunadasa suggested the importance of further involvement of architects in their "**Self Place Making Process**". Because of this lacking guidance by the architects, people were misled by various forces, which resulted losing some identified important physical and socio-economic characters such as the attic space, open verandahs & high pitch roofs, etc.

On the other hand, architecture students were interviewed; who involved in this process in order to get an overall view of the merits and de-merits of the generic form solution method.

The questionnaire, which produced for them, is as follows.

- What do you think, are the main reasons for the internally displaced people to choose the particular option of the generic form?

- Income level
 - External appearance
 - Internal space arrangement
 - Size of the house
 - Others
-
- What sort of changes do they ask you to do?
 - Are you satisfied with the way the design process was conducted?
 - If not, what are your suggestions?
 - What is your opinion about the following
 - The level of involvement of the architect in the design process
 - The architects' contribution to the personalization of the dwelling unit
 - Is it better than providing core houses and type plans?
 - What do you think are the merits and de-merits of the "generic form solution" for internally displaced people?
 - What are the issues that have to be addressed when designing houses for internally displaced people?
 - Finally, as an architecture student; are you satisfied with the work you have done?

Most of the suggestions became totally compatible with the ideas taken out from the displaced people, from discussions held in the form of focus group or as individual parley. By analysing these both the suggestions it was easy to arrive in to further conclusions.

- ◆ With the rapid destruction of natural environment, the intensity, which the disaster occurs, has increased. So the number of people who get displaced by these calamities is risen up. So this has been a massive task to re-align them within the shortest time as possible. In this process

paying an attention to each individual will not be an easy task anymore. This scenario has encouraged providing maximum number of solutions in the shortest time. Therefore Mass housing becomes the only way to overcome the problem and to cater to the rising demand of housing for the displaced.

- ◆ Though, the Generic form solution is a kind of mass housing method it has contributed its maximum to the act of personalisation.
- ◆ The identification of a generic form was done by few architects, who were involved in this process from the beginning. After analysing the typical architectural character of the area, a successful generic form was derived as the first step to the existing problem. Through this process it is possible to evolve a location specific architecture, which is able to preserve the identity of the area avoiding creating mere objects.
- ◆ Beyond this level, the process was taken place in direct communication with people. So it is similar to the general way, which the client-architect interaction happens. People can accept or reject anything at the discussion, depending on their personal preferences. It is an imperative merit that can be identified in this process.
- ◆ A larger group of architects were assigned to conduct the direct discussions with the people who have different point of views in relation to the particular situation. Therefore a strong basis is needed to focus them to the set target. But in the practical situation the essence of the task wasn't transferred properly to the above category. In simple terms, the understanding and the connection between the mentioned two

stages were not satisfactory, according to the general view of the architects.

- ◆ To overcome this problem it can be suggested that, a "**Pilot design programme**" is suitable which basically communicate to the architects first and then to the particular focused group of people.
- ◆ Should form several design teams, which can work independently with the people. Each team should give few randomly selected families in disaster areas, to work with, and let them help the people to personalize a particular location specific generic form. The result will be different kind of design approaches or solutions to one particular kind of problem. Then it should be the responsibility of each team to envisage the results, and to discuss the best possible approaches and solutions that can be well fitted to the situation.
- ◆ When they go to the field all are with a similar mindset which may helps to follow the same process with a better confidence, and aim to give the best to the people.
- ◆ On the other hand, this method, gave an idea to those who are displaced, that they are still an important part of the society and professionals and other govt. agencies have not neglected them.
- ◆ Meantime the generic form solution in place making was applied only to a limited social category in the lowest economic level of the country. So without trying this method with other social groups, it isn't fair enough to think of its suitability in long-term process.

- ◆ People choose the options based on their personal choices, so the selection of options and their variations/ modifications done through the architect are the points where the highest level of personalization takes place.

- ◆ At this particular point architect has the responsibility to spend sometime with them and discuss in detail what the need is, and to provide the best out of all.

- ◆ Otherwise people, who are under depression, may go for the wrong selection, which does not match with their psyche perceptions, affordability and socio-cultural behavioural patterns.

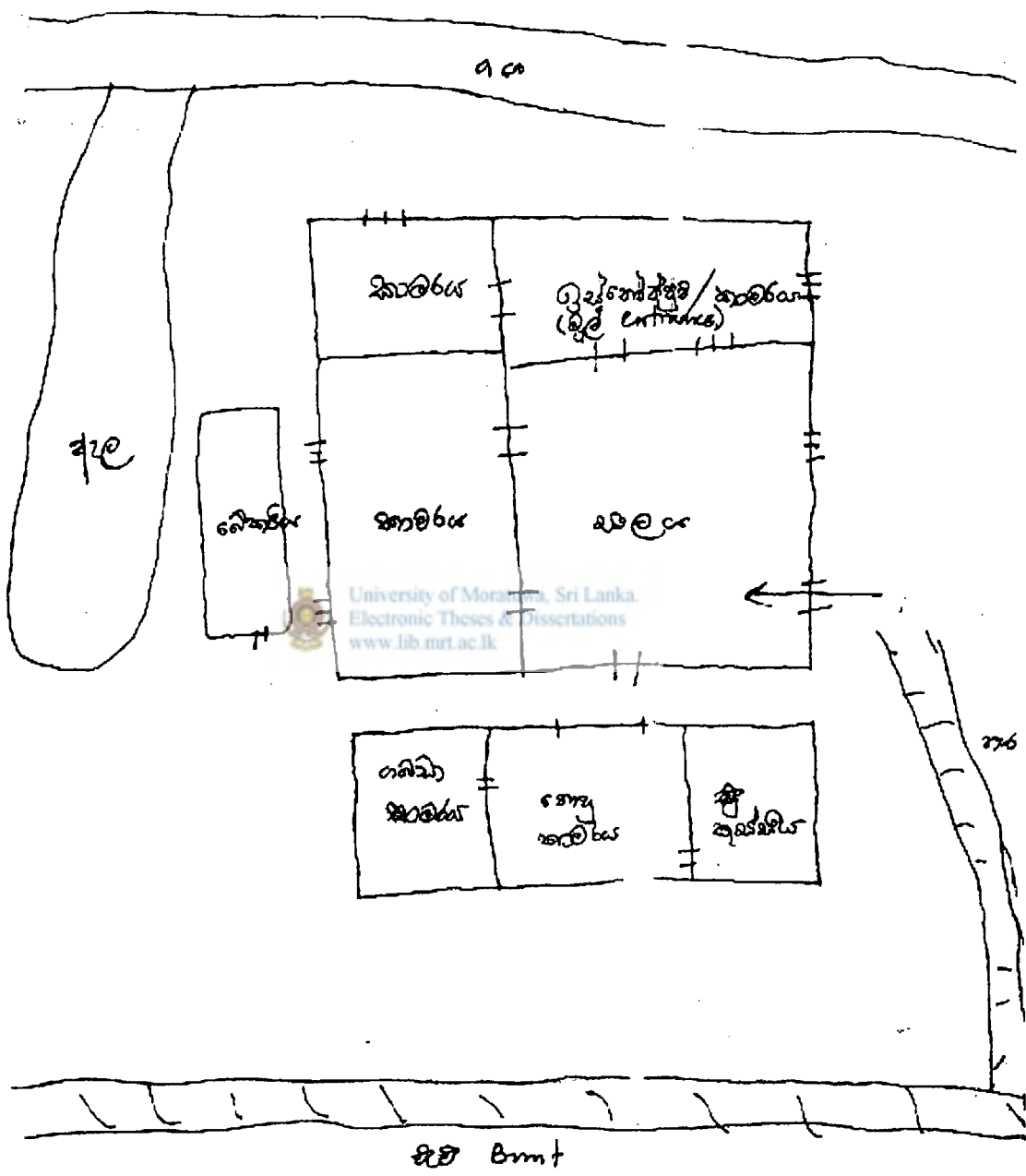
- ◆ Therefore in some situations, the time spent by the architect, for each and every person was not quite enough to understand and provide him with the best sort of solution and for the architect to get the maximum self satisfaction for his service.

- ◆ But when compared to previous design solutions, which were provided for the displaced, the generic form solution is the only method, which caters to the level of personalization at a higher elevation and which gives much possibilities for a more meaningful and successful result oriented method in the future situations.

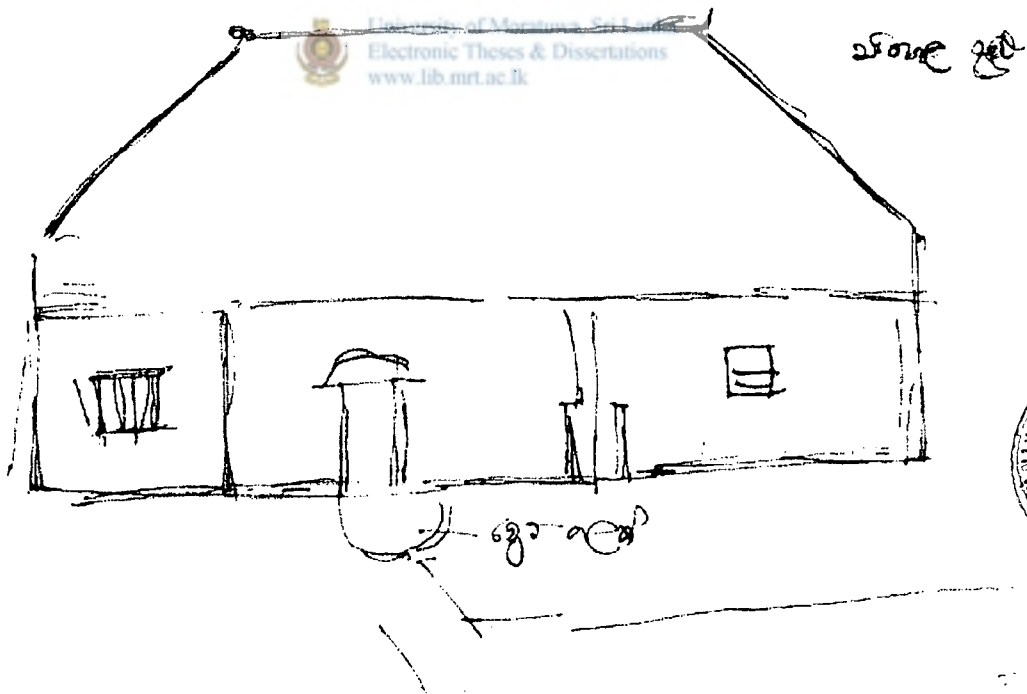
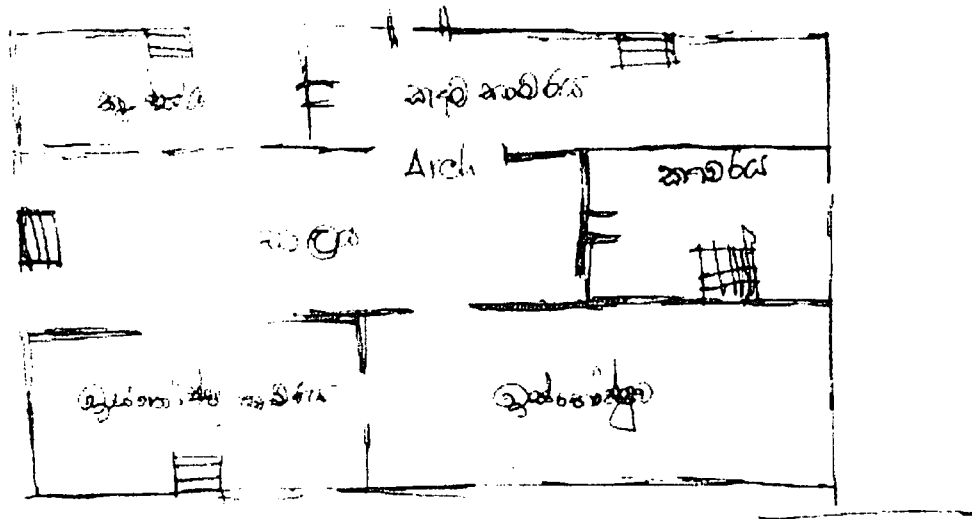


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APPENDICES



House plan & plot layout of pre-disaster situation - Drawn by H.S.B. Wijethilake



House plan & elevation of pre-disaster situation - Drawn by T.B. Gunadasa



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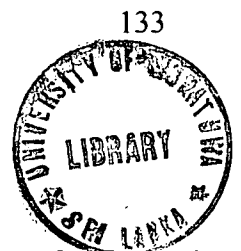
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