RESPONSIVE URBAN BUILDING EDGES

EXPLORATORY STUDY ON THE SUPPORTIVENESS OF THE BUILDING EDGE; TO THE ACTIVITIES AND MODE OF BEHAVIOUR OF THE PEOPLE, IN URBAN PUBLIC SPACES

A Dissertation

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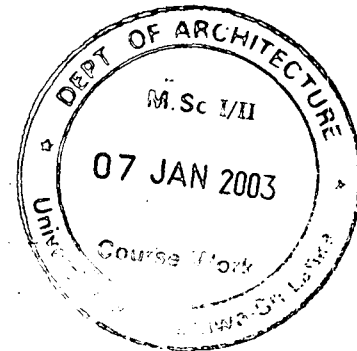
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Most of our present day cities have not provided proper "architectural settings" for the urban spaces. Since, the "urban activities" have an inseparable link with the urban place, or in other words social and spatial attributes are intertwined in our urban space: most of urban places and urban buildings designed recently, in our cities have not understood or neglected to cater to such social and spatial attributes in the urban environmental design.

This has created "socially unresponsive urban spaces" (as well as buildings) in all over the cities, as a result of this phenomenon (centrally); modern city experiences have little to offer as a social, cultural experience of an urban public place. In the other hand local cities are being mass produced by the developers, and due to unplanned rapid development, urban outdoor spaces or city open spaces have become lost as, urban pockets; misused spaces or dead spaces. The aliveness of the urban spaces and their activities are increasingly diminishing due to various negative effects of this unplanned urban development.

The negative effects of this rapid mega development could thus be found at all places in all levels. Towns, open spaces, public buildings and other areas around the world are fastly becoming similar, due to standardization of production methods, improper use of materials and lack of concern in urban environmental design.

As a result of that, especially urban people are in a danger of fastly loosing there sensitivity, attachment and identity to local urban spaces. Therefore especially in local urban context, urban public places have to play a major role in accommodating "urbanized people" and fulfilling their various requirements and needs. Hence the need of "meaningful, socially responsive urban places and buildings", which are capable of accommodating various urban public activities with "positive architectural responses", has become a central issue among the present urban designers.

Thus novel way of approach for "urban environmental design": which essentially deals with and cater to "intertwined social and spatial attributes" in urban places is essential...

Introduction

I N T R O D U C T I O N

RESPONSIVE URBAN BUILDING EDGES;

Exploratory study on the supportiveness of the building edge; to the activities and mode of behaviour of the people in urban public spaces

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TOPIC EXPLANATION

As Paul Zucker characterised (Zucker, as quoted by, Schulz (1971:84) as,

"A psychological parking space within the civic landscape", the urban public open spaces are the most distinct element of the urban structure. Even Lynch (1960), identified the urban open space as *"distinct and unforgettable place"*, where as a clearly delimited place, it was most easily imageable and represents a goal for movement; but in present situation it has become a socially unresponsive place, parking lot or lost as an misused urban pocket in cities.

This is the central issue, which has many facets related with the field of architecture. Therefore, there is a greater need for deeper examine and understanding of this issue.

"The life of a public square forms naturally around its edge. If the edge fails, then the space never becomes lively"

(Alexander, 1997:600)

In more detail, people gravitate naturally towards the edge of the urban public spaces. They do not linger out in the open unless there is an attraction to draw them there. Thus, If the edge does not provide them with "responsive spaces" where it supports and allow (architecturally), to use for different urban activities (from linger to specific functions), the space becomes a place to walk through, not a place which contributes to meaningful urban experience. It is therefore clear that a public urban spaces (may be public squares) should be surrounded by pockets of activities, which should necessarily be lively interconnected in a mutual supportive way.

Especially most of the urban public spaces, the edges are defined by buildings and streets. Therefore particularly the building edge has to play a crucial role in order to positively respond to urban space activities, because the buildings define the edge of the urban space (in a street or in a square) will act as,

- A wall that defines the urban space,
- The solid mass of building provide backdrop for various behaviours and activities taking place in the urban space,

Therefore the building façade (building edge) play a major role in relation with the activities of the people and their mode of behaviour. Predominantly the building edge, and other physical elements related to the edge: forms different zones, around the urban space. According to their form, many urban spaces (or squares) appear to be composed of different "zones". This facilitates the simultaneous presence of several activities and also gives the experience a certain variation.

Therefore, it is important to treat the edge of the building as "**a thing**", "**a place**", and "**a zone**" with volume to it, not a line or interface, which has no thickness. Therefore it is important to design the edge of the building with positive responses, to generate interesting outdoor life in order to improve the quality of man kind.

This clearly determines, set of "qualitative" issues, which enhance the "supportiveness" of the building edge, in order to link it with the immediate surrounding urban spaces. Since the edge doubtlessly determines and affects on the activities: such issues and activities need to be studied in detail in order to provide better solutions for the central issue, by exploring the role of the "building edge" in the urban environment.

But not many studies have done (practically) on this subject, to understand the complexity of the issues, when it is particularly related to defined public urban spaces; in order to understand the "supportiveness" of the defining "building edges" for the activities and behaviours.

NEED FOR THE STUDY

Architecture is a "**reflection**" of society in a give time: thus architecture (especially urban design) should express the positive values of the society and, reflects some of its social and economic achievements.

But most of the present urban buildings done by local architects seem that, they merely focussed their attention, into their visual and aesthetic aspects. This has created individual or single buildings, which are not contributing to the built environment as a whole. Hence they often do not think the building design, as a part of built environment. Such buildings resulted alienation, since this has become a norm today: they do not contribute to create harmonious human environment for the whole society. Therefore this path needs to be changed.

Thus "**responsiveness**" can be identified as s a quality which has a greater potential to change this negative phenomena. Responsiveness will link human values into activities and places, which will then create meaningful social spaces for the built environment.

Architects should act as advocates for a harmonious human environment, especially when it comes to urban context. The need of creating meaningful social spaces which facilitate proper social as well as spatial transformations within the urban environment is crucial. Thus as architects we should exploit the needs of the people who use the inside of the building (what we generally do), as well as we should respond the people who directly or indirectly connected with the building in outside, (what we often neglect).

As Alexander (1997), characterized this idea as

"*A building is most often thought of as something which tems inward – toward its rooms. People or the designers do not often think of a building as something which must also be oriented toward the outside*"

(Alexander, 1997: 753)

Christopher Alexander's this "pattern" sets the stage for the development of a "new zone" between the indoors and the outdoors: which can be identified as a

"transitional space", where most of the public people can sense, feel and attach in creating urban identity.

This creates a fundamental fact, that is Architects should not think, the edge of the building as the only need for the single, fixed, rigid use of designed building face, but in broader manner, it should be connected to the world around it by the simple fact that, it is made into a positive place by exploiting its use as a part of the social fabric, part of the town, part of the lives of all the people who live and move around it. (The urban space).

Since the building edge can be considered as an important element in the urban structure and "responsiveness" is a quality which can be essentially associated with the building edge. This creates responsive "urban places" associated with urban buildings (especially public buildings) where it offers many choices for users and their urban activities and functions. But present day Architects have not exploited some of the greater potentials of "responsiveness", and issues related to this subject area. Therefore there is a greater need for the Architects to understand these various issues related to the "urban space", and the role of the building edge in creating responsive urban spaces.

SIGNIFICANCE OF THE STUDY

At present, as architects we design places, the way we have our own images on it, and we expect other people or the users to adjust them. Since in our urban spaces spatial and social attributes are "intertwined", therefore the designers should appreciate the important components of the built environment such as spatial, personal, temporal, psychological, private and public value components, (Perera, 2001) in order to understand the interaction between the peoples' activity patterns and the built environment. Specially in urban buildings, the façade (building edge) should act as a mirror which reflect not only the purpose and function of the building but also in broader manner, it should express the "supportiveness" for the lives of all the people, who live and move around it or in other words, with the urban space activities.

When making an urban public space in an urban context, the variation in the number of people in different settings and the time of a place become important social

elements in each urban public place. Type of activities varies and degree of activities one may find that, between different meeting places: these activities may overlap or may even differ completely. Therefore it is of greater importance for the Architects to identify the issues between people's activity pattern and the supportiveness of the building edge in order to create a live urban environment.

INTENTIONS OF THE STUDY

The intention of this dissertation is to explore the role that, the building edge could play in creating urban space. Hence explore the potential of the urban building edge, in creating **"responsive urban place"** which could also contribute to create a meaningful social space, or landmark, for the local towns, where such spaces are lacking.

In order to do this understand the significance of the **"urban space"** in an urban environment, and understand the complexity of the issue of building edge with people activities or the behavioural patterns in urban spaces, are needed. Thus finally to obtain a clearer understanding that would enable the Architects to design urban buildings with positive architectural responses which contribute to create meaningful social spaces for the cities.

OBJECTIVES OF THE STUDY

- Understand the **"need"** and the **"role"** of the urban space in the urban environment as "psychological parking space within the civic landscape".
- Identify the building edge as a central element in defining the open urban space.
- Critically examine the qualities responsible for creating "responsive urban environment", and examine the potential of accommodating such qualities with the **"urban building edge"**.
- Study the relationship between the building edge and people activities in order to understand how edge defining elements (settings) govern people activities and affect the behaviour patterns of the people.

RESEARCH HYPOTHESIS

- Identify the urban building edge as a space (a "**Transitional space**") between the indoor and the outdoor spaces. And identifying the need of treating the building edge as a space, in an urban environment.

- Identify the "**urbanity**" as a quality in creating urban character; and identify "**responsiveness**" as a quality which contributes "urbanity" by facilitating rich urban experience through "responsive edge".

- Identify the potential of building edge to act as a "**responsive place**". Which could create "physically exotic", "psychologically meaningful" and "socially vibrant" places.

METHODOLOGY

The subject area selected to explore is more qualitative and experiential. Which has comparatively little weightage on quantitative analyze, however there is a physical aspect which contributes towards this social and psychological experience. Hence the urban space and its edge should be studied and research in order to identify certain patterns spatially and socially within the urban environment.

Therefore in the first phase of the study concentrates to understand the "**responsiveness**" as a quality in the built environment: and to identify the urban place, and its significance in present urban context. Fundamental elements which are defining urban character in the urban space are also needed to be studied in order to get clearer idea about the urban place.

The second phase of the study concentrates the literature review on the public realm of the urban space and its inseparable activities. Therefore various theories definitions and elements need to be studied in deed, along with the emphasising the need of an architect in designing the urban space as central part of his role.

Latter portion of this phase is focused on the qualities and characteristics of the responsive urban environment, therefore in this phase various theories and elements in designing positive urban spaces are to be studied, with local and foreign examples.

The third phase of the research study will be concentrated to identify the building edge as a space (a transitional space) and as the important element in designing responsive urban environments. Further in the same phase, it is identified the activity pattern of the urban people and to be analyzed how the building edge could be "supportive" and change the mode of the people in the urban space.

Next phase (fourth phase) of the study is focused on analyzing selected practical situations in which the relationship with the building edge and the people activity patterns are to be carefully studied. In each situation of the study will identify there close relationships with careful examination of each and every element and factors with the effect of people behavioural pattern. Various kinds of mapping systems people mapping, activity mapping, cognitive mapping and charts will be used, in order to analyze the patterns of activity and its relationship with the building edge.

At the end of this research study concluding remarks will be drawn out in terms of the fact that were observed in each "key situation" of the study. They will be introduced as **general**, **specific**, and **final** conclusions related to discovered issues between responsiveness, building edge and its supportiveness. Final aim is to identify and derive various facets of this issue in order to design positive urban spaces.

LIMITATIONS OF THE STUDY

The study is limited to examine mainly a small number of situations in the local urban context. The situations will be mainly focused to identify the crucial issues and factors between the building edge and the people's activity pattern. But the research study itself will be revealed various issues related to the particular subject. But in this study it is mainly focused on spatial and social aspects of the issue.

Especially when analyzing the urban open spaces its micro climatic issues, form, specific functions, usage, type of users, etc... are also playing crucial roles, but the focus given in this study is very little in such attributes of urban spaces. The other area focused on this study is mainly analyzing its qualitative attributes. Hence the focus given to quantitative attributes is very little. In order to get an insight on applicability of various theoretical studies: in the realistic world, for creating positive urban responses...

Chapter one

RESPONSIVENESS AND URBAN ENVIRONMENT

CHAPTER ONE

1.1 RESPONSIVENESS AND BUILT ENVIRONMENT

1.1.1 INTRODUCTION TO RESPONSIVENESS

The term "**responsiveness**" can be identified as an ambiguous term used differently by different professional groups under different circumstances. This term is often used by Architects and urban designers in the field of Architecture. Thus it is necessary to understand what it means and its relationship with the field of Architecture.

Oxford English Dictionary (1995) meaning for the term "responsive" is "*an answer or an act produces to an influence*"; and "responsiveness" is explained as "*well respond to an influence*". But in the field of architecture it generally represents more qualitative meaning concerning social dimensions.

Bentley et. al. (1985) used an analytical framework of seven visual and physical attributes for achieving responsiveness in built environment. Thus Bentley defines the responsive places, as

"*The built environment should provide its users, with an essentially democratic setting, enriching their opportunities by maximising the degree of choice available to them; we shall call such places responsive*".

(Bentley et. al.1985: 9)

Hence according to Bentley, responsive places or settings can be identified as places where the users are provided maximum choices available in a place. Thus, it can be said that responsiveness has essentially a social component.

On similar grounds Perera (2001) defines the responsiveness as,

"*A responsive built environment is where; human values are linked to activities and places in order to create an image that portrays the true nature of that environment*".

(Perera 2001:19)

This clearly explains that the people and their activities are the essential components in a responsive environment. Therefore the responsive built environment should predominantly be focussed on the social dimensions; other than merely the physical, spatial and visual dimensions. Hence, there is a strong link between the responsiveness and the social context of the built environment.

1.1.2 NEED OF RESPONSIVENESS IN BUILT ENVIRONMENT

Architecture is in a broader sense refers to the wider built environment, not just the building or the landscapes around them. Thus, much broader sense, Perera (2001) used the term "**environmental design**" to denote the process of designing the built environment.

As Perera (2001:14) explains, it has become a trend among the present designers that, they consider private realm of built environment as the responsibility of Architects; public private interface; as the responsibility of landscape Architects and public realm as the responsibility of urban designers. In this context urban planners also attempt to affiliate the responsibility of built environment to their profession while taking urban design to their fold, and assigning only the task of building designing to the Architects.

This has become a serious issue today. As Rapoport (2002:7) elaborates, designers (architects, urban designers, landscape architects) will need to work in interdisciplinary teams involving a variety of professions. But the designers' specialisation to a specific role (without concerning others) has led to create socially unresponsive, ill-fitting buildings almost all over.

The problem becomes worst, because present designers are seemed to be concerned only the spatial and experiential qualities of the space, although it is very essential for three-dimensional quality of the environment. It is not sufficient. As Rapoport (2002) states Settings need to be considered in concern with activities, so does ambiance[1], semi fixed elements and relationships among elements need to be considered.

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[1] It is the result of users their activities systems etc. and also applies to cities more generally in expressing culture and identity

Thus, in order to achieve harmonious human environment, the field of Architecture should essentially be focussed to understand the social context of the built environment; and Architecture should be focussed to realise that environmental design as an activity proposing ideas for spatial as well as social transformations. (Perera 2001:14) Therefore designers must make sure that to link human values to activities and places. In other words, this can be identified as the path to achieve responsive environment.

1.1.3 RESPONSIVENESS AS A QUALITY IN URBAN ENVIRONMENTS

Responsive built environment is defined, where human values are linked to activities and places. (Perera 2001) In other words, "responsiveness" contains social as well as spatial attributes. In general terms, most of the academic literature, this has been identified as "socio-spatial dimensions" in built environment (Madanipour 1996), in a broader sense, it has been identified that, in an urban environment, social and spatial attributes are intervened to create urban space.

Therefore as Perera (2001) states, especially in the urban environment, no space exists or no place making happens without activities, which are conducive and social interaction. Therefore shaping the urban environment invariably deals with transformation of the society that interacts with it.

Present, modern architecture and urban designs are so often criticised as inhuman and repressive. In generally the reason is, designers failed to realise the social component and activities and their relationship with the space. Therefore they produce space, without concerning the social aspects; thus, which absolutely never become attractive social space.

Since the designers focussed their attention only to a single building without considering the built environment as a whole; resulted alienation. Alienation has become a norm today, helping people to loose their attachment and sensitivity to urban places.

Plate: 1. 1 Arpico super centre building Mountlavinia   source: by author

Even Kevin Lynch the America planner; whose celebrated idea of "The image of the city" emphasise the **"imageability"** of urban environment. Likewise there are many qualitative aspects, **memorability, inhabitability,** etc. is creating the attachment and sensitivity to urban space. Even though above qualities are almost visual, the liveliness is created essentially because of the human element in social space.

As identified, responsiveness as human values, are linked to activities and places, in order to create an image that portrays the true nature of that environment. (Perera 2001, 19) It is obvious that the urban quality or the ambiance (Rapoport, 2001) has created because of the activities and their link with the space. (Fixed, semi fixed, non-fixed elements) Therefore **"urban space"** and the **"urbanity"** have an inseparable link with **responsiveness.** Therefore it can be said that in generally one of the reasons in present space is "lack on urbanity" because they are not responsive spaces.

1.1.4 RESPONSIVENESS AND URBAN BUILDING EDGE

Urban design or the urban buildings essentially could be considered, in relation to three realms in general. The private realm of the built environment generally the interior; the public realm, generally the outside the building and the public-private interface (focus of this study) of a building can be identified as three zones. However according to the building type and the function; the relationships between these three zones will vary.

Responsiveness deals with the qualitative aspects of the built environment, since especially for a building located in an urban space; (Public open space or in a street) the public-private interface is important to create a "responsive urban space" between two realms. Generally in a public square as well as in a street, this space provides the ground for most of the urban activities and functions. In other words functions and activities of the urban space could be greatly influenced by this "building edge" space.

Since the edge (one of the Lynch's five elements[2]) contains features and elements which represents physical and visual attributes, viz; permeability, legibility, variety, robustness, appropriateness, richness and personalisation (Bentley et. al. 1985) of a responsive environment; one can identify the building edge as a space which has a direct relationship with the responsive quality. Since the edge has a greater potential to generate activities and to help social as well as spatial transformations.

1.1.5 SOCIALLY RESPONSIVE BUILT ENVIRONMENT

Sri Lankan designers and architecture students are more concerned with visual, physical and spatial qualities of the built environment; rather than its social relevance, (Perera 2001:15) as well as Perera quotes Gosling and Maitland (1984:153),

"*Over emphasis on visual and spatial qualities seem imprecise and apparently concerned with a secondary, superficial level of design*".

Gosling and Maitland 1984, as quoted by (Perera 2001, 15)

This problem is partly because of there is a lack of theories that have attempted to link human values to places and their activities as well as there is no references where designers or students can identify social dimensions of the built environment.

George E. de Silva Park can be identified as a good example socially responsive design.

Plate: 1. 2   George E. De Silva Park, Kandy Front and inner views
Source: The Srilanka Architect 2001 Vol: 103. No. 02 p. 16

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[2] Lynch K. (1960) used an analytical framework consisting of five physical elements viz; paths, nodes, districts, edges, land marks

According to Silva and Giridharan (2001, as quoted by Perera 2001:19) in order to link human values to activities and places, the designer should appreciate the important components of the built environment, viz, spatial, personal, temporal, psychological, private, public and value components. They clearly said that, for the proper understanding of urban space new theories are essential to analyse the strong interaction between space and social process.

Rapoport (1977) seems to be given a comprehensive solution for the above need: by Environmental Behaviour Studies (EBS), which tries to discover the relationships between people and environments; and the mechanisms that link them.

Environmental determinism (Architectural determinism) is also another method to analyse interaction between people and environments. According to Dayarathna (2002:40) defines that as "*a notion that the environments have determinate impacts upon people*". In this method, Architecture and built environments are considered as major and the people are considered as helpless entities subject to the conditions imposed by the environments.

In present situations, actual design practise seems to have benefited very little from these developments. Therefore it is crucial to understand above theories, which creates the pathway to socially responsive designs deal with man environment fit rather than employing aesthetic theories.

1.2   URBAN SPACE AND URBAN DESIGN

1.2.1 THE CITY AND URBAN SPACE

1.2.1.1 The city definition

According to the definition of the 16th century Italian philosopher Giovanni Botero, penned under the heading, "What the city is, and what the greatness of the cit is said to be given its late renaissance time frame – an era remembered for its commitment to city building as a studied art,

"A city is said to be an assembly of people a congregation drawn together to the end they may there by the better live at their ease in wealth and plenty , and the greatness of the city is said to be , not the largeness of the site or the circuit of the walls , but the multitude and number of the inhabitant and their power now men are drawn together upon sundry causes and occasions there unto them moving; some by authority; some by force; some by pleasure; and some by pleasure and some by profit and proceed it." [3]

Botero (1956), as quoted by Kostof (1992:6)

His disregard for the enabling power of the physical form seems a calculated affront, Botero insists that, *"the message of the city lies in its human activity; in processes; political; military recreational; and economic the idea must have shocked contemporaries used to assuming the primacy of the built form, whether that of the solid vernacular or the pedigreed urbanism of radial avenues and grand plazas".*

Botero (1956), as quoted by Kostof (1992:6)

The English word "town "comes from a Teutonic world that means the hedge or the enclosure. But now the things have changed, in the modern period we no longer think of the city as a closed form with hard edges. As Kostof (1992) explains about the political situation in the city: when we cross a cities boundary then as now we accept certain legal restraints and local rules of conduct, and if we make the city as

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[3] Botero G., (1956), *The Greatness of cities, in the reason of state (1588, 1606),* transl, R. Peterson (London 1956), p. 227.
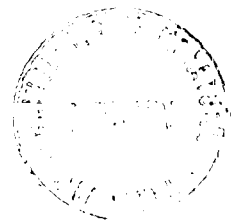
our place of residence, we also agreed to be taxed, to use our property in some ways and not others and to expect a range of services in return belonging is a privilege and has its price. Thus a city or the urban place is generally controlled by certain rules and regulations now as well as in early cities.

Present day urban spaces, especially urban public places are in a threat, to increasingly loosing its liveness and its human and physical interaction. Hence social attachments to such urban spaces are also increasingly loosing. Therefore the necessity of involvement of good urban designers in the process of making responsive urban spaces is needed. Same as that novel approaches are also important to understand the complex relationships among people and the built environment.

Rapoport has addressed this issue by a different view, using environment behavioural studies (EBS). This describes and lays a good foundation for tie central issue in the study.

"City is also an environment, but it is useful to regard the city not as an object, but rather as a system of many heterogeneous smaller units, human and physical and the relationships among them."

(Rapoport, 1981)

According to Rapoport considering the "city" is also an environment – and also too broad and vague a term; thus he has found four dismantling[4],

1. The organization of space; time; meaning communication (I. E. while space in necessary in deed critical , it is not sufficient) Rapoport 1994
2. A system of settings .(Rapoport, 1990b)
3. Cultural landscape (Rapoport 1992 a)
4. Consisting if fixed, semi fixed, and none fixed elements.

(Rapoport 2002: 1)

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[4] Particularly useful ranging from the most complex and abstract to the most concrete, these are complementary not conflicting.

According to above categorisation (dismantling) Rapoport identified the city as a cultural landscape which consists of different settings. Further the "ambiences" in the settings will depend on three types of feature elements, such as fixed[5], semi fixed[6] and non-fixed[7] feature elements; in order to understand and describe the socio physical relationship in the urban space (City). Hence he proposed many ways of analysing various environments and settings, such as *non-verbal communication approach* etc... Thus Rapoport can be identified as a pioneer in environmental behavioural studies which creates the pathways to understand the social - physical interrelationship: (between the building facades and the mode of behaviour of the people) focussing of fixed, semi fixed, and none fixed elements.

To be understood the social - physical interrelationship in local conditions well. Even though in the western theories many ways are given, it is important to understand the local conditions based on research, (example studies of this dissertation). But in order to build good base for understanding various issues involve. This first chapter is used to clarify the terms and concepts which generally two broad and abstract.

1.2.1.2   The city as a cultural landscape

"All landscapes are cultural, the whole earth is designed in the sense of having been changed by human action, settlements however, and especially cities are cultural landscapes par excellence."

(Rapoport, 2002:2)

In order to understand the city in another point of view, as a cultural landscape, like all other cultural landscapes, cities are the result of the independent actions of numerous people over long periods.

According to Rapoport cultural landscapes consists of, **fixed, semi-fixed, and non-fixed elements**. Building which makes up the urban fabric as fixed elements, There

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[5] Elements that are basically fixed or those that change rarely and slowly- walls, floors, ceilings etc.
[6] Elements that can change fairly quickly and easily- furniture, signboards, curtains, message systems etc.
[7] people and their activities in the setting

are the numerous "furnishings" of the city the semi-fixed elements, and its inhabitants and their activities, the non-fixed elements.

*"Semi-fixed and non-fixed elements play the major role in crating the **ambience** of cities which gives them identity; it is not just visual, but occurs in all sensory modalities, is very variable, cross-culturally. "*

(Rapoport 2002:2)

Rapoport (2002) insists that this ambience is never designed in the traditional context. Hence it is the result of users their activity systems etc. this also applies to cities more generally according to Rapoport cities as a whole are never designed.

"More generally cities as a whole are never designed especially contemporary cities, their growth and development can possibly be guided. At most only small parts of the cities can be designed and even that may not be possible. "

(Rapoport 2002:3)

Therefore Rapoport insists that the cities are the result of the independent actions of numerous people, over long periods, (cultural landscapes) therefore how this comes about is the most important question, which if studied correctly can do much to clarify the designs. (Especially urban designs).

1.2.1.3. Creating Urban Ambience.

According to Rapoport (2002) ambience is never designed in traditional sense of the world. But again he insists that only small parts of the cities can be designed and even that may not be possible, even those few parts of the cities that are designed are transformed by people, and their activities. This dynamic quality of cities means that the best one can design "**frameworks**" within which parts of cities develop, change, are personalised by various groups.

The necessity of various researches is indeed on the nature of such frame works. This study is also focussed to study how the physical elements effect or govern, people's behaviours in such **frameworks**, in deed, focussing more to the urban public spaces.

**Plate: 1. 3 New town Hong Kong
Modern city providing, modern and
spacious living environment**.

Source:
The Srilanka architect 2002: 45,
Vol.103, No.4

**Plate: 1. 4
present
developed
condition in
local city**
Source;
Explore Srilanka
1998:21,Vol11,
No.10

As Rapoport (2002) mentioned, within these frameworks, the fixed, semi-fixed, and non-fixed elements can be changed and the latter two, will be quickly change in many cases. Therefore it can be said that, semi-fixed and non fixed elements are the most important in creating urban ambience, hence these two features can be identified as the most responsible features in creating "**urbanity**" In expressing culture and identity, both at the large scale (the city as a whole) and especially in the many sub areas inhabited by various groups. (May be a building edge)

1.2.1.4. Urban Environmental Quality.

For the purpose of analysing the central issue the meaning of "positive urban environmental quality" should be clearly understood. Therefore,

"Environmental quality is the most important and most useful concept, it can be made operational by dismantling into the specific positive and negative components that make it up there ranking and arrangement."

Rapoport 1995a, as quoted by (Rapoport 2002, 15)

Hence the question then is to understand what is a good or a bad urban environment, as rapport proposed: following components can be used, (such as in general terms applicable to urban areas), to understand for the purpose of creating "better" environments.

- *What is better?*
- *Better for whom?*
- *Why is it better?*
- *How do we know it is better?*
- *What means are available to achieve better?*
- *How do we know, we have achieved it?*

(Rapport 2002:5)

Are needed to understand by the designer in order to cerate such responsive positive urban environments. Not only that the designers also need to identify the specific negative attributes their cues and indicator and set explicit objective, what will achieve positive environmental quality, the best way to justify these objectives are the research base studies.

1.2.1.5 Meaning of quality of life and quality of life in cities

Architecture is one of the unique professions that aim to enhance the quality of life through a considered intervention in what we claim "**qualitative realms**". (Dayarathna 2002b: 16) Thus it is obvious that, Architecture is not for providing merely the quantitative demands of a people, but in wider perspective, Architecture should fulfil their perceptual and experiential needs, that deal with their quality of life. Hence, as Architects, it is necessary to understand the meaning of "**quality of life**" indeed.

According to Dayarathna (2002b),"**life**" and "**quality**" are similar illusive entities. That impinge on us and we deal with them almost unconsciously. He argues that, because of above reason, most of people tend to understand that, some perceived characters as qualities. Thus for designers, it is crucial to understand what does quality of life means and difference of the "quality of life" in urban (city) and village conditions.

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Quality of life

If the life means what we live; then quality is about how good that living is and without doubt that involves a certain comparison against a set entity of measurement. These entities can be identified as expectations or aspirations.

Dayarathna (2002b) give a meaning for the quality of life as

"The quality of life as aspired by individuals is related to aspects that are specific to those individuals and may differ from time to time".

(Dayarathna 2002b: 16)

Quality is a perceived entity rather than a reality by itself, in other words, quality does not exist without an individual evaluating it and cannot be commodified by itself. As well as fulfilling or catering to a single issue cannot create quality, but is a collection of varies phenomena. (Dayarathna 2002b)

Thus the quality of life in the cities is believed to be a perceived quality that did not exist in the village. Urbanity; the way of living in close proximity it is argued to have existed in the village except that the "Luxuries" of urbanity did not exist there. According to Dayarathna (2002b), cities have brought are the facilities that we have now recognised as "Luxuries". The ability to have running water, electric light, transport to and from places in convenience and comfort; telecommunication, access to medical facilities and education etc, are the abilities that have improved in the city.

But in the cities, some values of the village have been lost, for example sense of community, natural water, fresh air, etc. thus the quality of life, in the cities has improved one way but has also deteriorated in a different way. Then the idea that,

"Quality of life betters in the cities is thus a perceptual condition, created by the presence of amenities and infrastructure that makes the task of living easier and convenient".

(Dayarathna 2002b: 17)

Hence he describes **"the joy of living "**, which is difficult to achieve in urban situations instead, urban dwellers are engaged in specific activities that will inject **"joys"** in life.

Dayarathna further describes this as;

"The dichotomy between urbanity and ruralness has divided inhabitants of their places aspiring to acquire a greater quality of life that can sustain the cherishable characteristics of the rural societies and the amenities and facilities prevalent in the cities.

(Dayarathna 2002b: 17)

Plate: 1. 5 Rural scenic beauty
Source: The Srilanka Architect 2002: 17, Vol 103. No 4.

Plate: 1. 6 Luxuries of the city
Source:
The Srilanka Architect 2002: 27,
Vol 103. No 4.

But present urban situation the "quality of life" can be identified as former superior communities living in well-planned settlements enjoying higher quality of life. (Dayarathna 2002b) but however present urban spaces are also believed to be unpleasant, noisy, polluted and artificial settings, which are infested with drug abuse, crime, mental illness, vandalism, truancy and social disintegration.

Plate: 1. 7 Present urban spaces (true nature)

Source:

The Srilanka Architect 2002: 17, Vol 103. No 4.

Plate: 1. 8 The city as a fascinating place for rich urban experience,

City should express the positive values of a country and reflects some of its social and economic achievements.

Source: Explore Srilanka 1998:21,Vol11,No.10

Plate 1. 9 local urban spaces

Nugegoda city

Source: by author

1.2.2 URBAN DESIGN

1.2.2.1 The Definition

For the purpose of this study, it is necessary to look and understand the urban design process and the product, in deed. For the necessity of understanding the urban environment and its form; the **urban space** can be defined as the product of the urban development process. Most of the time in the field of architecture It is argued that a **socio-spatial** approach to urban space is needed, one with integrates views from everyday life perspective (functions and activities).

To arrive at a definition for urban design it is needed to take into account these various attempts and identify elements which create confusion and ambiguity. Further the word urban design is too broad; therefore for ease of understanding it is also necessary to dismantle the word, for several attributes. Which could be then on the way to a clearer conception, of what the urban design is about.

Alli Madanipour (1996) has reviewed these areas with confusion and ambiguity. And he proposed seven aspects, what he called "**seven arenas**". In which different definitions fall, for the purpose of analyse.

1. The scale of urban fabric which urban design addresses.
2. The visual or spatial emphases of urban design.
3. The spatial or social emphases of the urban design.
4. The relationship between the process and the product in the city design.
5. The relationship between different professionals and their activities.
6. The public or the private sector , affiliation of, urban design and
7. The design as an objective – rational or expressive subjective process.

(Madanipour 1996: 93)

An examination of these arenas he argued, that will illuminate the dualities and tensions within urban design and its various roles and the area of involvement.

In the area of this study people behavioural patterns and activities are considered in terms of urban design but, again he insists that,

"Urban design is a far from clear area of activity"

(Madanipour 1996: 93)

Signs of the need for a clear definition of urban design can be seen in a variety of sources hence for the deeper purpose, it is necessary to look at the urban design process and product far beyond the activities, with a broader perspective.

1.2.2.2. Urban Design as Social or Spatial Management.

It is important to consider that the urban design deals with spatial rather than merely visual aspects of the urban environment. [8] The result of focusing the visual aspects predominantly, have led the designers to create buildings be associated only with drawings and not with realities.

The wide spread tendency today is to see urban design as dealing with the visual rather than the spatial aspects of the environment. Alli Madanipour addresses the same issue as;

"We first see the objects in front of us, and then began to understand how they relate to each other. If our understanding is limited to a visual understanding we only concentrates on shapes if how ever we go beyond appearances we start a spatial understanding, a three dimensional experience. We can enter this space; rather than just seeing it the same applies to the design of space. We do not create mere appearances but spaces that we can use for different purposes."

(Madanipour 1996: 99)

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[8] Seeing urban design as only attending the aesthetics of the urban environment, and, seeing urban design as an exercise in producing nice images far from reality.
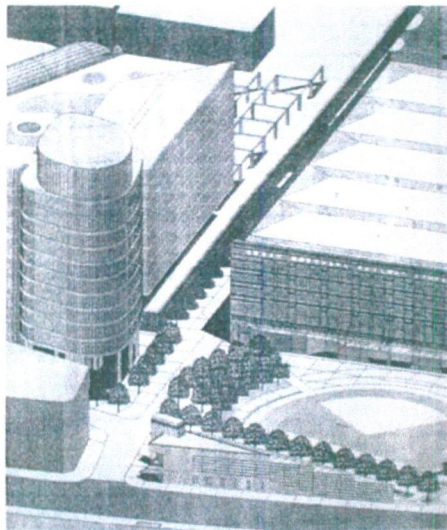
Plate: 1. 10 Urban design as "nice drawings to pin on the wall"

Source: Madanipour, 1996: 99

"The concept of urban design should not be taken in its old-fashioned sense, producing nice images to pin on the walls. But why we may wonder should urban design be associated only with drawings and not with realities?"
(Madanipour 1996:97)

Plate: 1. 11 Is urban design attention to the aesthetics of the urban environment?

Source: by author

Arpico Supercentre building, Mt-lavinia

If our understanding is limited to visual understanding, we only concentrate on shapes: if, however we go beyond appearances we start a spatial understanding, a three dimensional experience we can enter it, feel it, rather than just seeing it...
(Madanipour 1996, 99)
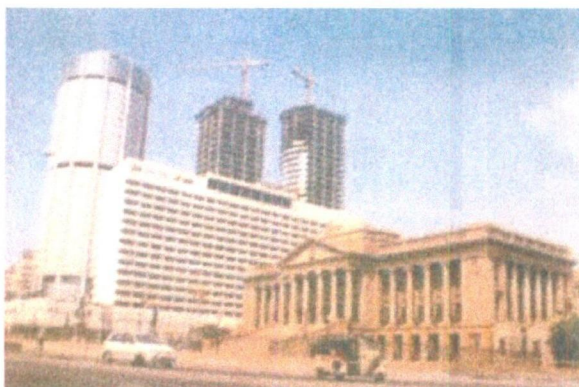
Plate: 1. 12 Is urban design merely "lots of architecture"?

Source: The Srilanka Architect 2002: 17, Vol 103. No 4

Colombo CBD

Therefore it can be said that, concentration on social or spatial management in urban designing, will create, responsive positive three dimensional spaces. Therefore new way of thinking in urban design is needed based on emphasising the spatial aspects (rather than merely visual aspects) of the urban environment but this doesn't mean that, there is no social dimension involved? And it is all about transforming spatial arrangements and not dealing with aspects of use and management of those environments. Spatial dimension has much more deeply seated social and cultural relations between society and space. That urban design should address sensitively.

Plate: 1. 13 Urban design concerned with spatial or social management

Bus terminal Ambalangoda front View
Source; The Srilanka Architect 2001: 17, Vol 103. No 2

Plate: 1. 14 Building edge of the bus terminal Ambalangoda with Galle road

Source: by author

In social terms the building has contributed to cerate a meaningful social space for the people who are on transit.

According to Madanipour (1996)

"Social and spatial aspects are "intertwined" in our understanding of the urban space. The same applies to the transformation of urban space when we are engaged in; shaping the urban space we are inevitably dealing with its social content."

(Madanipour 1996: 102)

Similar argument is provided by Perera (2001),

"Social sand spatial attributes are intertwined in our understanding of Asian urban space, no space exists or no place making happens without conducive activities and social interaction. Therefore shaping the urban environment invariably deals with transformation of the society that interacts with it".

(Perera 2001: 19)

Hence the way that society and space are interrelated should be a main concern of urban design education, which analyse the socio spatial relationship by concentrating on the physical and social contexts of urban design. This is essential in order to produce urban designers who able to manage the increasing complex problems of developing urban space and urban form.

Still one important portion (a central issue) is missing that is the relationships; among the physical environment and people, therefore another point of view is needed but Rapoport seems to be address this issue deeply.

1.2.2.3 Urban Designs as the Organization of Space, Time, Meaning and Communication.

Since the urban environment is an especial case of the environment, it is useful to begin by considering the urban environment as the organism in the environment rather than organism and environment. Because many resent ecological thinking stresses the need to consider the organism in environment rather than organism and environment, Rapoport describes the environment as an ecological system with 7 components based on Ittelsons (1960) theories.

1. **Perceptual** - the ways in which individual experiences the world which is the principle mechanism linking people and environment.
2. **Expressive** - This concerns the effects on people of shapes, colours, textures, smells sounds and symbolic meanings.
3. The domain of, aesthetic values of culture and I would add the whole area of values.

4. **Adoptive** - The extent, to which the environment helps to, hinders activities.

5. **Integrative** - the kinds of social groupings which are facilitated or inhabited by the surroundings.

6. **Instrumental** - Which refers to the , tools and facilities provided by the environment

7. The general ecological interrelationship of all these components.

Ittelsons 1960, as quoted by (Rapoport 1977: 7)

Rapoport suggests that any change done to the physical environment by humans is design. (Rapoport 2000: 4) that is why he said the whole earth is designed. That is the cultural landscape this means that the actions of non professionals compromise most of designs and play a critical role, a resent figure is that less than 1% of buildings are designed by architects and the percentage is clearly less for cities. In local conditions this has become major problem in creating responsive urban environments.

The urban environment can also be described in terms of relationships. Such as the urban environment is a series of relationships among elements and people. And these relationships are orderly they have a pattern.

"The environment has a structure and is not a random assembling of things it both reflects and facilitates relations and, transactions between people and the physical elements of the environment. These relationships in the physical environment are primarily spatial – basically objects and people are related through separation in and, by space."

(Rapoport 1977: 12)

This implies that the link between the changes in the built environment (which the designer manipulates) and which provides a setting for people and changes in other areas. Psychological social and, like. Will generally effects on human behavioural patterns.

Therefore the physical environment or the built fabric in the designers' role should provide positive responses: while ensuring the supportiveness of environments, for

the harmonious human environment by considering above mentioned aspects, in deed.

That lead to achieve the objective of this dissertation issue and to prove the purpose of the design is to achieve (increase) certain such positive attributes of environments and to identify and eliminate (reduce) negative aspects.

1.2.2.4 Who needs to be involved in the urban design process.

The role of various professions, and especially these of architects, need to be considered, in deed in terms of urban design. In dealing with the environmental quality of cities there will in addition to users, be many actors involved politicians; business people, economists. Engineers managers, planners, and designers (architects, urban designers, landscape architects), some of the aspects of environmental quality cannot be changed by any of above actors, (E.g. Climate, topography, views, population and social composition). In this context, national, regional, and local level: Politicians, managers, and economists etc. also play very important roles (E. g. jobs and economy, taxes, social and urban activities etc.) planers will generally influence, on public transport, major infrastructure locations of various uses and activity and overall frameworks and policies.

As Rapoport (2002), explains designers (Architects; urban designers, landscape architects), play specific role overlapping with users and taking their cultural (Group) specificity into account, in order to create , increase , certain positive attributes of the environment. Thus it is useful to distinguish designers from other actors. The important aspects they need to handle in deed (none of the actors who involving urban design handle rarely) is the three dimensional (spatial) and experiential qualities of the urban environment.

According to Rapoport,

"Space organization is clearly essential for the three dimensional quality of the environment, it is not sufficient, for example settings need to be considered in connection with activities so does ambience: semi-fixed elements, and relationships,

among elements, which tend to be neglected, any new element building or urban design., changes the relationships in the existing urban fabric."

<div align="right">(Rapoport 2002: 4)</div>

as Rapoport characterized designers are such important in creating urban ambience, in all sensory modalities, (not just visual) it is important to understand the co relation between the human activities and the positive and negative responses of the built environment on their behaviours, which has become the central issue of this study, further, as Rapoport elaborates the designers role as;

"The designers cannot address urban problems on their own, even within their domain, and at that scale designers will need to work in "Interdisciplinary terms" Involving a variety of professions. We need "hyphenated" designers, theoreticians, researches, programmers, designers' implementers, and evaluators, people specialised in the full sequence of the design process.

<div align="right">(Rapoport 2002: 7)</div>

Chapter two

PUBLIC REALM OF THE URBAN SPACE, AND RESPONSIVE URBAN SPACE

CHAPTER TWO

2.1 PUBLIC REALM OF THE URBAN SPACE

2.1.1 INTRODUCTION TO PUBLIC DOMAIN OF THE URBAN SPACE

From general meaning of the Oxford, English dictionary: opposite of private; there are various definitions and concepts to describe the public space. As Carr et al. (1992) states the common ground where people carried out the functions and ritual, activities that bind a community, whether in the normal routine of the daily life or in periodic festivals" it is,

"The stage upon which the drama of the communal life unfolds".

(Carr, et. al. 1992:3)

As Walzer (1986) elaborates,

"*Public space is space we share with strangers; people who aren't our relations friends or the work associates. It is the space for politics religion, commerce, sports, space, for peaceful co- existence and impersonal encounter*"

(Walzer, 1986: 470)

Most of the concepts and theories that describe public space, and its functions in terms of human activities, what is lacking many of these definitions are the effects of physical environment on human activities and behaviours in such designed urban public spaces, none of above theories explain, (clearly), about the mechanisms, which link, people and, environments in this two way interaction, (built environment and people).

Francis Tibbalds (1992) saw the public realm as,

"*All parts of the urban fabric to which the public have physical and visual access, thus it extends from the, streets parks and squares, of a town or city into the buildings which enclose and line them*"

(Tibbalds, 1992: 1)

The public realm is therefore "the most important part of the towns and cities" It is where the greatest amount of human contact and interactions are taking place.

Tibbalds (1992), trying to define the public space as space enclosure in the city or a town, by emphasising public space as a spatial manifestation of the public sphere: a place for inter-subjective communication.

Rapports **EBS**[1] are the suitable concept of addressing the purpose: that is to study the relationships and the human behaviour, or understand the effects of physical environment, on human behaviour. Hence a new insight is needed to describe and understand the public realm, with positive responses. This can be considered as the path to solve many of the arising problems which decreases the dominance and character of the public realm especially in contemporary cities.

2.1.2 Historical overview of the public space its functions and activities. (For the purpose)

Christopher Alexander in his "A city is not a tree" article presented to the architectural foundation (1965) won Kaufmann international design award for that mere 9 pages; stating this current arguing problem in his following statements, which gives an insight to focus the idea into, responsiveness.

According to Alexander (1956),

"Those cities which have arisen more or less spontaneously over many years are "natural cities" those cities and parts of cities which have been deliberately crated by designers and planners are "artificial cities". Siena, Liverpool, Kyoto, Manhattan, are example of natural cities. Levittown, Chandigah and the British new towns are example of artificial cities; it is more and more widely recognized today. That there is some ingredient missing from artificial cities, when compared with ancient cities that have acquired the patina of life, our modern attempts to create cities artificially are form a human point of view entirely unsuccessfully.

(Alexander, 1956)

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[1] Environmental behavioural studies

And even Francis Tibbalds (1992) in his book "Making People Friendly Towns" Has also tried to address the same issue.

"*We can learn much from the existing context within which we work and from examples else where, traditional towns and buildings are generally put together for better than new ones. Why do they work? Why do people like them, basically I think, it is because they have certain essential qualities, like recognizable patterns and complexity within order. The question needs to be posed, then as to why new development should not have the same richness. Individuality, intricacy and user friendly qualities of existing places...*

(Tibbalds, 1992: 19)

Plate: 2. 1 Lucca in Tuscany,

Provides a particularly vivid example of the persistence of public space"

Source: Kostof 1992: 173
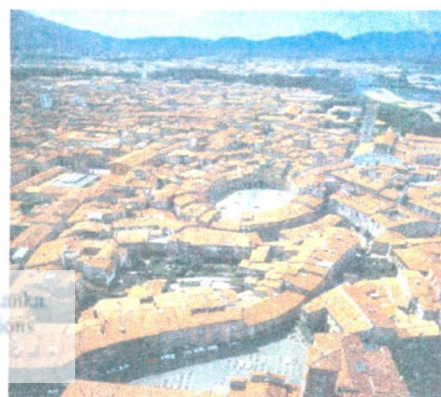
Plate: 2. 2 The campo in Siena - Italy

A public place, acquired its ceremonial functional by accident, as the main open space in the city.

Source: Kostof 1992: 174

Most of the traditional well loved towns (particularly in European countries) we tend to fond them friendly and attractive, friendly and comfortable. Some times it is because, they are smaller and therefore easier to take in and become familiar with.

These user friendly qualities of some old building facades, has evolved from years, may be even centuries, of adaptations. But that doesn't mean that new environments also need to be a pastiche of old elements. But for the present designers it is very crucial to examine and understand how they work and why people like them. And then get new insights to in order to develop new urban forms, buildings which have those positive, traditional qualities but are clearly of today.

Plate: 2. 3 user friendly qualities of some odd building facades, has evolved from years

An urban street with old building facades
Paris, France
Source: Madanipour 1996: 24

Plate: 2. 4 Centre Pompidou, Paris

Much of the pleasure of urban areas derives from the variety to be found their in difference of style and character, coming upon the centre Pompidou in Paris from narrow traditional streets newer fails to delight...
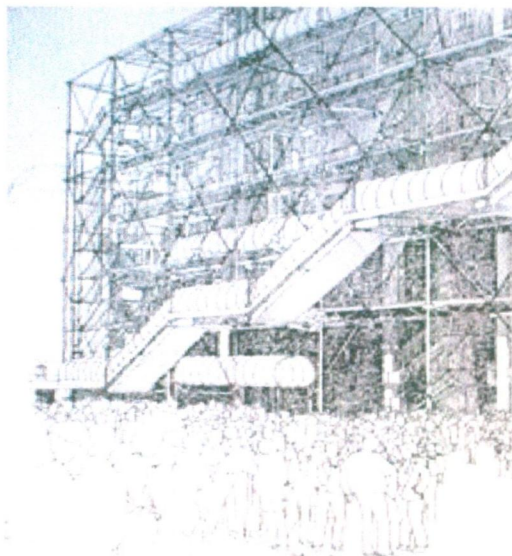
Source: Madanipour 1996: 15

In the Sri Lankan context we have ample examples of such traditionally evolved urban open public spaces, with positive urban responses but the tragedy is new buildings coming to such areas are not provide positive responses and even

decreasing or ruined the traditional responses. Which are existing in the context, That clearly shows present designers lack of concern about the existing physical environment effect peoples activities (especially public spaces and streets), and get insights, as a result of that present urban public setting is increasingly loosing its, liveness and attraction.

Plate: 2. 5 Singer Mega building Mt- Lavinia

If every building screams for individual attention, the result is likely to be discordant chaos.

Source: by author

Therefore it is crucial to understand local traditional responses (vernacular) and as designers we must develop architectural responses that respect; local needs rather than applying universal design solutions,

That again doesn't mean that, present designers should go to vernacular tradition, vermicular tradition but they must understand there responses and apply them positively in the new urban forms.

Plate: 2. 6 Royal bakery building, Wellawathta

"We must develop architectural responses that respect; local needs rather than applying universal design solutions"

Source: by author

As Tibbalds (1992) argued, the best architecture for all ages can usually live together despite contrast of style scale: use and materials above all we must get well away

from brand international style that has made so many capital cities. All over the world, began to look so remarkably similar.

2.1.3 Public Space as Spatial Enclosure

"*A century ago, Camilo Sitte complained about how the plazas (or public squares) of his day could be empty spaces formed by four streets, bordering a piece of land, after studying the spatial organizations, of a number of European cities, he came to some clear ideas about how the public spaces of the city should be organized for him, the main requirement for a public square as for a room was its enclose character, which offers closed vistas from any point within it. The centre of this space was to be kept free and there was a need for a strong a relationship. Between the public space and the buildings around it,*"

Sitte (1986), as quoted by (Knox 2000: 118)

Modernist design which dominated the 20th century and shaped many contemporary cities however was often against this approach to urban space. The functionalism of modernists therefore gave priority to cars and fast movement across urban space. This is the notion which undermined the close relationship between open spaces and the buildings around them.

Due to rapid urbanization happen 19th century most of the cities were overcrowded, polluted, and increase disease and crime. Therefore the need of redefining the relationship between public and private space was needed: which resulted to reshape the urban space by creating large quantities of open spaces for hygienic as well as aesthetic reasons. In the other hand there was a need for a better relationship with other spaces of the city. Public open spaces that could have little or no connection with the other spaces of the city would be left underused, only to be watched from the tops of Highrise buildings or from car window.

To avoid or overcome such situations creation of such spatial enclosure became a main prerequisite in urban design.

2.1.4. Urban Edge of the Public Space.

"The life of the public square forms naturally around its edge, if the edge fails, then the space never become lively"

(Alexander, 1997)

In more detail people gravitate naturally toward the edge of the urban public spaces. They usually do not linger out in the open: unless there is an attraction to draw them there. Urban public space therefore can be identified as "an urban open space surrounded by pockets of activities which are lively interconnected", in various ways.

"As nodes and landmarks, public spaces became a means by which to navigate in the city. Hence streets and squares become the alphabet with which to read, and design urban space. Creating lively and active edges for these spaces was seen as an important condition for their success. Small mixed land uses that generates a strong relationship between the public space and the buildings around it were promoted, it became absolutely essential for urban design to create "positive urban spaces", space enclosed by buildings rather than what is a leftover after the construction of buildings"

(Knocks 2000:119)

As Knocks elaborates, building edge can be identified as an unforgettable element in the urban environment. What this study stresses to identify is, the contributions the edge has been made to social and spatial contexts. Thus it is obvious that the edge has been playing a crucial role in representing social, cultural and economical values of a society. But for the deeper purpose, it is important to understand the mechanisms which link people to such places especially in an urban environment,

In similar grounds knocks et al. also emphasis the issue as,

"Urban designers therefore seek to create lively enclosures in urban space, nodes that bring people together for various activities, through their economic and political significance as well as their economic value. These nodes of human environment act as a framework for social life"

(Knocks 2000:119)

2.1.5 Problems of Present Urban Public Spaces.

Today as compared to most historical period of the past, the prominence and the importance of the public space in the cities has diminished. Thus people are increasingly loosing their attachments and sensitivity to present public spaces, Issues related to this are many: For the purpose of this study it is important to identify the crucial issues which have been critically affected to ruin the liveness of the present public space and its inseparable activities.

2.1.5.1. Development of New Communication Technologies.

"Today as compared to most historical periods of the past, the importance of the public space, in the cities has diminished; this has partly been a result of decentralisation of cities and despatialization of the public sphere, where face to face communication is no longer needed, for many public activities"

(Knocks et al, 2000:120)

According to Knocks present development of communication technologies has been resulted a clear transition from a time when high degree, of socio spatial concentration gave an overarching significance to the central pubic space to a time when places and activities in cities have developed a more dispersed spatial pattern. Public spaces have lost many of the functions it once performed in the social life of cities.

2.1.5.2. New Transport Technologies

The industrial places of work in cities; how ever were separate and even far from where people lived. As new transport technologies have made it possible to live and work outside the city. The central spaces of the city have lost their significance for large number of citizens.

Further more development of modern transport systems increases the ability to pass through the urban space at high speeds has undermined the close physical interaction, between town people and their built environment.

"Speed of movement associated with new transport and communication technologies has contributed to the despatialization of urban activities following the printed word networks of communication and transportation has created a despatialized public sphere. Seriously undermining the political, economic, and cultural significance of the public spaces of the city"

(Knocks et al, 2000:120)

Public sphere therefore now consists of a large number of areas which may never overlap in space or time, political debates the exchange of goods and services and participation in rituals and ceremonies can all take, and place in different locations through a variety of means other than face to face communication.

2.1.5.3 Fear of Crime

The fear of crime has been a major reason for a withdrawal of a public from public spheres. With the decline of welfare state the role of public authorities in the cities has been under mined. The new additions to the urban space are often developed and managed by private investors. They find it unable or unwilling to bare the costs of developing and maintaining public places. This led some spaces within the public space, as unmanaged or leftover spaces.

But without public space that are open to all citizens and which should provide common ground for individuals and groups, thus according to Knocks,

"Therefore the development of truly public spaces which are accessible to all can promote a degree of tolerance and social cohesion and contribute toward a rich urban experience"

(Knocks, et al, 2000:119)

2.1.6 Present functional fragmentation of the public space.

In the modern era the functional integration of the ancient city had almost completely disappeared. The growing size of the city has led to a specialization of space which has dismantled the symbolic and functional coherence of both public and private spheres. Issues related to this separation of socio-spatial relationship of building edge and the activities are many. We as architects should understand various issues related to this tragedy, in deed. Not only overcome those issues but also gather information and derive strategies to create positive urban responses.

Agora the Greek main public space, was the meeting place of the town; it was at the same time a market place, a place of assembly and setting in which ceremonies and spectacles were performed, Hence Agora was therefore a place that Integrated, economic, political, cultural activities. Agora as the main public space also evolved and performed many years, the original open space; was later grew up by various public activities, market place, and city council, meeting place, temples and altars.

Even though with the growth of the city and the need for larger places of assembly, some of the activities were housed elsewhere in the own, but the Agora remained as the heart of the city and its civic activities. And gradually many group activities could take place any where in the city hence the agora remains as the main node in a network of public places and collective activities that made up the city state.

Like wise, starting from middle ages, to Italian renaissance cities, for example there were two or three principle public squares has formed each associated with a distinct set of the activities. This specialization of the space and the functional separation, there was nevertheless an intensive use of public spaces for the public life, the city square were decorated with, fountains, Monuments, ... etc, and other works of art , and where used for the public celebrations and all kinds of the public activities.

In the modern era with the city development the functional integration the ancient city had almost completely disappeared, according to Madanipour (1996) he describe this issue as,

"The growing size of the city has led to a specialisation of the space, which has dismantled the symbolic and functional coherence of both public and private spheres. As places of work and living were separated in the industrialization process, life in the private sphere was completely transformed, before the industrial era, house-holds worked as an integrated economic unit".

(Knox, et al, 2000:119)

Development of the other infra structure facilities have made increasingly helpful for its functional fragmentation, new transport technologies; and communication technologies, has contributed to the destabilization of the urban activities.

The result of this fragmentation processes created a destabilised public sphere, which seriously undermining the political, economic, and cultural significance of the public space of the city.

"Public sphere now consists of a large number of arenas which may never overlap in space or time, political debates, the exchange of goods and services and participation of the rituals and ceremonies can all take place in different locations, through a variety of means, there than face to face communication"

(Knox, et al, 2000: 120)

As a result public space has become less prominent in public activities. The modern city has therefore gone through spatial and temporal dispersion of its functions. Hence as present urban designers, it is important to revitalize the liveness of this space by increasing the positive responses, for the people considering the socio spatial dimensions; hence reintegration of the functionally fragmented city (by-Socio spatial means) is essentially needed.

2.1.7 Reintegration of the Socio – Spatial Fragmentation.

Present urban designers are warring in finding new ways for reintegration of the socio spatial fragmented cities, hence this recent interests (urban regeneration for example) in the promotion of the urban public spaces can be interpreted as a
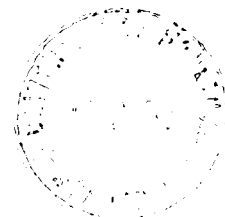
concern for reintegration process which seems the pathway to regenerate, safe and attractive environments for the people.

The aim of the dissertation is also focused to understand the relationship between the people and the built environment, and how that can be extended to rate responsive urban spaces for the future cities, therefore for the above purpose; understanding the issues which have been resulting for socio- spatial Fragmentation is important.

Knox et al. (2000) has been addressed this issue,

According to Knox et al. (2000), shift of the economic base has effected, greatly for the socio spatial fragmentation. As already discussed; during industrialization process with the rise of heavy industries, concentrated blue-collar workers in industrial cities away from the main centre. This dispersion of cities has had severe serial consequences: Which take the people and their activities away from the centre, hence the centre also isolated as a parking lot for vehicles.

Plate: 2. 7 Houston, in Texas City

All most all the open places has been used for car parking,

Source: Kostof 1992: 286
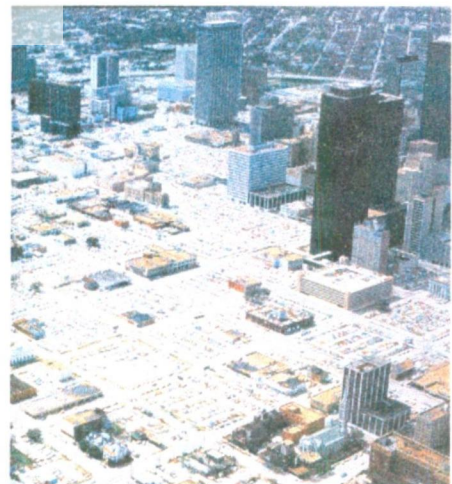
Therefore attachment and the sensitivity, where people had to such responsive spaces, needed to be regenerate within cities. This need, however, has been identified by present authorities and urban designers; hence, the signs of addressing this issue can be seen among present urban development projects in the field of Architecture. The trend of urban regeneration is a good example to such emerging signs.

Plate: 2. 8 Renewal of the Galle face green – Colombo
Local approach to enlivenment of the urban landscape
Source: The Srilanka Architect 2002, Vol.103, No. 04: pp. 26-27

But this is not enough; number of architecturally impressive buildings, which are responding positively, to regenerate human attachment and sensitivity to urban spaces and, proper integration of functions as well as entertaining activities are also needed to reintegrate social-spatial fragmentation.

However the economy of the city transferred to industrial economic base to service sector means, the role of cities are in the process of redefinition of socio spatial fragmentation. But according to Madanipour,

"Cities were suffered from increased threats of social polarization and segregation. Cities that are transformed through industrialisation are being transformed once again, through deindustrialisation and the transition to a service economy, such transformation causes **fear and anxiety** as established socio-spatial patterns are destabilised".

Knox et al. (2000: 123)

The renewal of public spaces has been seen as one of the strategies for confronting this fragmentation and managing this anxiety. Therefore promotion of some form of togetherness can be seen in recent definitions of public space. For example, according to Carr et al. (1992) public space can be seen as the common ground where people carry out the functional and ritual activities that bind a community.

This means, by creating areas in which people can intermingle: it is hoped that a wide range of individuals can be brought together and a degree of tolerance be promoted. Hence the promotion of public spaces as a meeting point of individuals clearly emphasises the importance of togetherness.

Another theme which linked with the promotion of public spaces is the separation of public life clearly from private realm.

According to Knocks, this is seen to be essential for the health of a society as well as increase the economic potential associated with public space.

Even though this idea is promoted, this was highly criticised by various ideologists, such as, Marxists[2], Feminists[3] and postmodernists who regeet universal tendencies and see the withdrawal from the public sphere as a sign of self-preservation and dynamism of a society through, the development of new form of communities.

Therefore the resent interests in various urban developments such as; promotion of public spaces; urban regeneration, water front developments, clearing and open up pathways, can be identified as presently we are in the way to create responsive urban spaces for competitive globalized community. But this study stresses in giving some insights for the same process by focusing the designers more into the interrelationship with people activities and built environment, in order to create responsive urban buildings.

2.1.8 Privatisation of Public Urban Space

As already mentioned in the previous headings, the resent interests in the promotion of open public spaces can be interpreted, as a concern for the reintegration of fragmented cities and it can also be seen as a means of marketing localities. The shifting of economic base from manufacturing industry to service sector, the cities again concentrated with white-collar workers with their very different needs and expectations.

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[2] Marxists, who see the distinction as rooted in the private ownership of property and therefore leading to alienation.

[3] Feminists, who see this distinction as associating the private sphere, with women and undermining their role in social life.

According to Knox et al. (2000) this has led to a widening gap in income distribution and a deepening pattern of socio-spatial segregation and exclusion. Therefore this has further developed in the modern cities and resulted, the widening gap between the social strata, has been associated with the rising fear of crime and concerns about safety in cities.

With the revitalisation of public spaces (E. g. through regeneration etc.), local authorities trying to erase the memories of manufacturing industries; by improving the quality of their environment to attract local and tourist people. The newly created (or regenerated) public spaces of the city were therefore, one of the vehicles for changing the image of cities in a competitive global market place and for the recently of a finite commodity, land back into local markets.

This reimaging the city as an economic asset also resulted clear tensions between the various roles involving, using and designing the public spaces. A major form of such tension is now known as the privatisation of space, Knox et al. (2000).

The impetus for the privatisation of space can be traced back to several changes in the urban development process, throughout the twentieth century, with the growth of the developed companies; financing of development projects and the ownership of properties have undergone substantial change (Madanipour, 1992 as quoted in Knox et al. (2000), the companies began to operated national and international level rather than local level and scale. Therefore, the cultural and symbolic values they had in their past, has change to a values in the market that determines their interest. Hence the spaces are stripped of their emotional and cultural values; they came to be treated as mere commodities.[4]

The new additions to urban spaces are often developed and managed by private investors. This led the role of public authorities in the cities undermined, radically. The public authorities find themselves unable or unwilling to bear the cost of developing and maintaining public spaces.

This according to Knox et al. (2000) a combination of the need for safe investment returns and safe public environments has led to the demand of total management of space, Hence, undermined its public dimension.

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[4] Process of commodification of space in which the space is approached and treated as a commodity.

This phenomena can be seen, has spreaded in almost all urban public spaces today; especially public spaces designed for functional purposes, Bus Stands, Railway Stations and Religious Spaces, etc. The encroachment of spaces of public spaces by various private companies, mark their territories and managed by private agencies. In larger scale this problem resulted from the shopping malls to gated neighbourhoods and protected walkways.

Plate: 2. 9 French corner building Mt- lavinia
Source: by author

The building is dominating and almost over controlling the public pavement, continuation of such building edges (unresponsive) will undermine the pedestrian freedom in the urban space.

Plate: 2. 10 French corner building
        Mt- lavinia building edge and the
        pavement

Source: by author
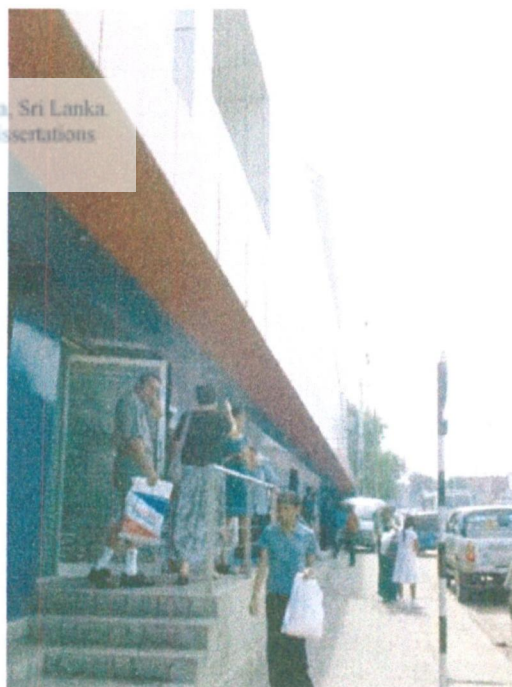
Private security Guards and surveillance cameras are used to exert a tight control over such spaces. Without public spaces that are open to all citizens and are common grounds between individuals and groups.

This increase of physical and symbolic barriers (private) within the public spaces reduces the permeability and robust qualities (discussed under third chapter)

drastically. In local conditions, this privatisation of urban spaces seems to have promoted by local authorities. Therefore, rather than creating and promoting the degree of tolerance and social cohesion, which are essential for rich urban experience. They are now again on the pathway of socio-spatial polarization process.

Plate: 2. 11 premodern urban public space

Pre modern urban settings, public spaces such as urban squares and market places played the role of arenas for public communication.

Source; Madanipour, (1996: 102)

Plate: 2. 12 Urban open space-Nugegoda city

Reality about the present public spaces in local towns, informal sector activities are flourished even undermining the pedestrian freedom.

Source: by author

2.1.9. Public Spaces and Its Economic Potential (Associated With the Edge)

Urban public open spaces according to many definitions (mentioned) are truly public spaces accessible to all and can promote a degree of tolerance and social cohesion and contribute towards a rich urban experience. As the word means, for rich urban experience, a suitable activities should be grouped in the edges of such public spaces for live people interaction. Present cities most of them are commercial activities. Even though this has resulted, privatised public space; other than the

umber of impressive buildings, and the functions and activities attached to such buildings also determined the aliveness of the space.

It is clear that the economic potential associated with the edge of the buildings in the public spaces. Due to present high land costs, the need of exploiting the economic value for such edge is crucial without damaging the aliveness of the public space. This selection of activities can create another social polarisation in the space.

"In a small public square should be surrounded with a combination of community facilities and shops, which are mutually supportive"

(Alexander et al., 1997: 167)

Present tend of establish banks, large food courts, Showrooms has not done in a mutual supportive way. Therefore, in the same space, when one space lively attracts people, some other spaces have become a "lost space". This has resulted to the separation of public spaces into spaces in terms of activities. It is important to create mutual supportiveness among the functions, and once this appropriate supportiveness is established, the whole space can be identified as a collection of spaces which are self-reinforcing the activity by one another and never become lost isolated spaces welcoming crime and fear.

Problem of exploring this economic potential in local situation is clearly segregating the community in the space because of non-supportive activities. Nowadays most of the super markets have opened in public spaces. And most of the time the common people who actually use this space is not get benefit of it, because only higher social class people only can afford it. Hence, mere integration of commercial activities in local situation has ruined the local character in local spaces.

"Through out the history there have been places in the city where people who shared a set of values could go to get in touch with each other. These places have also been like street theatres they invite people to watch others to stroll and browse and to loiter".

(Alexander et al., 1997:169)

2.2   Characteristics of the Responsive Urban Environment

"A responsive built environment is where, human values are linked to activities and places in order to create an image that portrays the true nature of that environment. Therefore to link, human values to activities and places the designer should, appreciate the important components of the built environment, viz; spatial, personal, temporal, psychological, private, public and value components".[5]

(Silva & Giridharan: 2001, as quoted in Perera 2001: 19)

Above quotation clearly expresses the qualities of responsive urban environment and identified the urban space as a place where the social and spatial attributes are intertwined. Hence, it can be said that, no space exists or no place making happens without conductive activities and social interaction. (Perera 2001: 19) Therefore shaping the urban environment invariably deals with transformation of the society that interacts with it.

Different traditions of Architecture have given different meanings for the process of socio-spatial interactions. For example Modernists tried to change the society and social behaviour by transforming space. But this view, which is discarded, now was known as environmental determinism. (Rapoport 1977) What is increasingly finding acceptance by social sciences as well as social arts is the people own process of space making (Perera 2001: 19) Therefore this view express that there is a strong interaction between space and the social process.

This study focused on socially responsive urban space where created closer to building edge, therefore it is obvious that, in order to create socially responsive places, the characteristics of the edge, is clearly effecting for the human activities. Therefore in order to understand this intertwined process; it is crucial to understand the attributes of responsive environment combining with the activity.

Bentley et at (1985) has given a practical attempt to show how responsiveness of the environment can be achieved in a socially conscious way. He argues that,

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[5] "Responsive architecture, making an image of the city", paper presented at the SLIA annual sessions, 2001, Colombo, Sri Lanka Institute of Architects.

"The built environment should provide its users with an essentially democratic setting; enriching their opportunities by maximising the degree of choice available to them" (Bentley et at. 1985) and he call such places as responsive places. Hence, he provides seven key issues in making places responsive. By studying the key issues, intention is to show how these qualities can be achieved, in the design of urban buildings an outdoor spaces (edges).

Bentley's key issues are,
1. Permeability,
2. Variety,
3. Legibility,
4. Robustness,
5. Visual appropriateness,
6. Richness,
7. Personalization,

2.5.1 Permeability

"The extent to which an environment allows people a choice of access through it from place to place is therefore a key measure of its responsiveness". This clarity can be identified as "Permeability".

(Bentley et.al, 1985: 12)

This can be identified as, only places which are accessible to people can offer them choices. This does not mean that, the everywhere was accessible to everybody; physically or visually which effects greatly for the privacy of both public and private environments.

But one of our basic sources of choice stems from our ability to live both public and private roles. For this capacity to flourish both public places and private ones are necessary.

As Bentley, et al. (1985) mentioned, private and public places cannot work independently. They are complementary and people need access across the interface between them. Indeed, this interplay between public and private gives people another major source of richness and choice.

Thus permeability has different implications in public and private spaces as well as the interfaces (this study stresses) between them.

Permeability can be broadly identified as physical and visual permeability. Physical permeability of a space physically provides different choices of accesses, but this is not enough. Visual access is also equally prominent.

Plate: 2. 13 permeability and public place

Source: Bentley et al. 1985:12

Both physical and visual permeability depend on how the network on public space divides the environment into blocks.
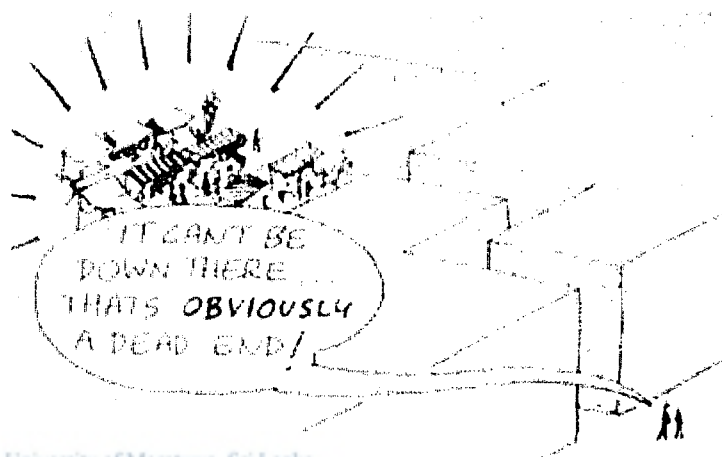
Thus permeability can be identified as an essential quality of an urban public environment for the purpose of this study. It is necessary to identify the permeable qualities associated with building edge.

As Bentley (1985) argues since physical access to private space is necessary limited permeability across the public / private interface is largely a "visual" concern. This has different implications for private and public space.

Plate: 2. 14 Visual permeability

Source: Bentley et al. 1985:12

Plate: 2. 15 Both physical and visual permeability is blocked for the sake of privacy.

Source: Bentley et al. 1985:12
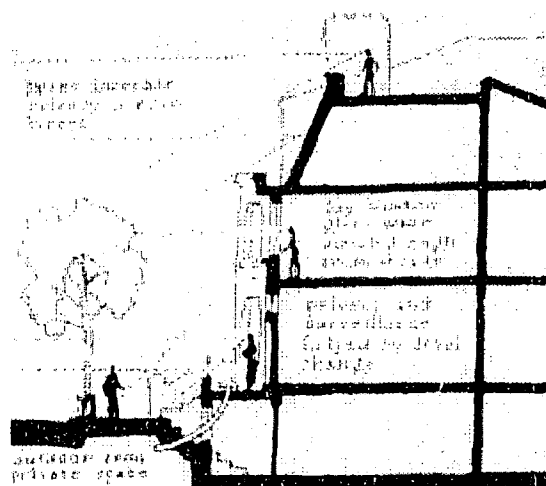
2.2.2 Variety

Variety can be identified as a quality which expresses "the range of users" available to people. "*Accessible (permeable) places are only valuable if they offer experiential choice*" (Bentley: 1985: 27) thus the variety is therefore identified as a key quality in urban space.

Variety of experience implies places with varied building types of varied forms. It attracts varied people ay varied times for varied reasons. Because the different activities forms an people provide a rich perceptual mix, different users interpret the places in different ways. It takes on varied meanings, (Bentley 1985). Thus variety of use is therefore the key to variety as a whole.

Plate: 2. 16 variety diagram
Source: Bentley et al. 1985:12
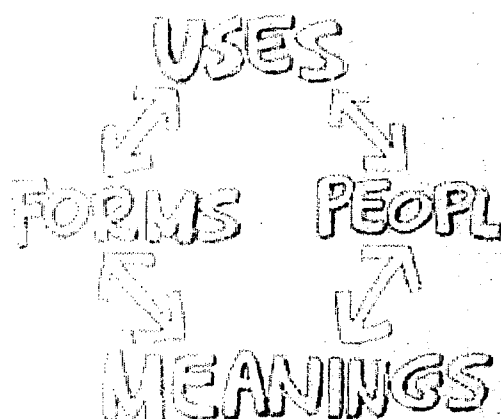
According to above argument the promoting the variety can be identified as increasing the choice. But the choice also depends on mobility, because of the people who are highly mobile can take the advantage of mobility, but children, poor people, disables, women generally cannot be afford high mobility. Thus people like

above, (probably the majority) taken together real choice depends on a close grain of variety.

Plate: 2. 17 Variety in the Street

Source: Bentley et al. 1985:12

According to Bentley et al. 1985, the variety of uses a project can support depends on three main factors.

- The range of activities which want to locate there which we shall call demand
- The possibility of supplying affordable space in the scheme to house these activities
- The extent to which the design encourages positive interactions between them

Plate: 2. 18 Variety. Mutual support of activities

Source:
Bentley et al. 1985:30
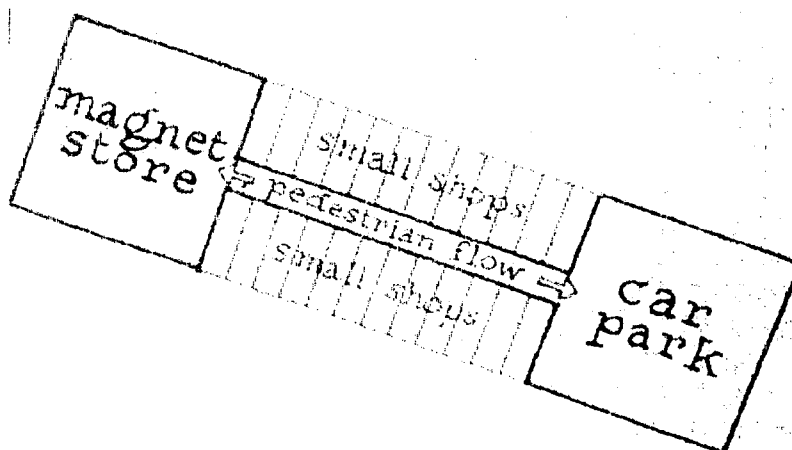
Variety is not achieved merely by dumping a mixed bag of activities on a site. To work well the uses should give each other "mutual support".[6]

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[6] Some activities – primary uses – act like magnets, attracting people to a site, concentrations of dwellings or work place are primary uses, nearly everyone has to go home and to work, at

But this live off the people drawn to the place by its primary uses. (Primary uses therefore support secondary uses)

2.2.3 Legibility

Legibility can also be identified as a quality; which determines how easily people can understand what opportunities it offers or in other words; legibility is the quality, which makes a place graspable.

Plate: 2. 19 Legibility

Source: Bentley et al. 1985:42
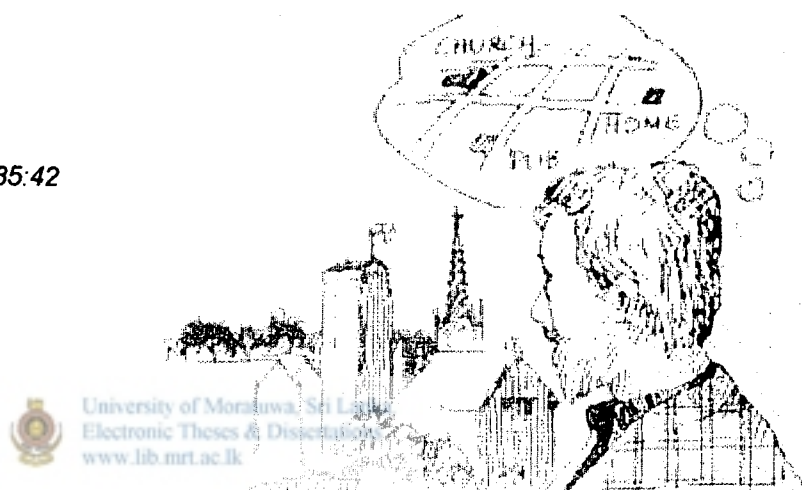
Bentley et al. (1985) argues that the legibility is important at two levels; that is "physical form" and "activity pattern". The legibility of both form and use is reduced in, modern environments. This is easily seen by comparing the traditional city with its modern counterpart.

According to Bentley places may be read at either level separately, (physical form and activity pattern). For example it is possible to develop a clear sense of the physical form of the place, perhaps enjoying it, only at an aesthetic level. Equally patterns of use may be grasped without much concern with form, but to use a place potential to the full awareness of physical form and patterns of use must complement one another. This is particularly important to the outsider who needs to grasp the place quickly. (Bentley et al. 1985)

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frequent intervals. Large stalls or markets have a similar effect; many people go to them, quite often. In contrast secondary uses are enterprises which they lack the pulling – power to attract people.

As mentioned before; reduce or neglecting the quality; legibility has increase alienation buildings in present urban spaces.

Plate: 2. 20 Buildings cannot lie

This confusion is made worse because important public buildings and publicly irrelevalant private ones often look alike.

Source: Bentley et al. 1985:42

Premathilake (1993) has seen the problem on similar grounds as visual chaos reigns in contemporary Sri Lanka.

"Our streets, cities and country side are a cacophony of ill-fitting buildings in uneasy relationship with their neighbours. We are unable to agree on the larger parameters of design. As a consequence our temples look like villas, villa look like police stations, and police stations look like temples. As a society we appear in phenomenal disharmony".

(Premathilake: 1993: 53)

In order to create such ill – fitting unidentified buildings, the lack or negligence of legibility has been greatly effected and in many urban situations local Architects has a trend to create every single building as if none such ever existed before without considering or inspiring from the precedents of type and place.

Plate: 2. 21 Singer Mega Building Mt-Lavinia

Source: by author

Plate: 2. 22 Arpico supercentre building

Source: by author

Confusion of urban spaces; this confusion made worse important public buildings and publicly irrelevant private ones often look alike.

2.2.4 Robustness

Places, which can be used for many different purposes, offer their users more choice than places whose design limits them to a single fixed use. The environmental quality, which offers this choice, can be identified as robustness.

Quality of robustness can be increased in both inside and outside of the buildings. For the purpose of the study most of the problems associated in present public outdoor spaces seems possible to be solved by increasing outdoor robustness in buildings.

In public outdoor space designers tend to create specialised spaces for different activities separated off from one another. But activities in public activities they rarely need to be separated from one another for reasons of privacy, security, etc.

Indeed in the public space it is the activities themselves that acts as the most important supports for other activities. Hence create robust spaces will greatly help for the supportiveness of such activities. Therefore as designers robustness should always be pushed as far as possible especially in public spaces.

Plate 2. 23 Royal Bakery -
Wellawaththa

Source: By author

Robust space created by the building edge is used in wide range of ways

Plate: 2. 24 Jorge E. De Silva Park, Kandy

Source: *The Srilanka architect*
2001:16 vol.103, No.02

Particularly in urban situations the activities in outdoor places are strongly influenced by what goes on in the buildings around their edges. Hence the building edges and adjacent outdoor places will be greatly affected by the robustness qualities in order to make them more liveable for different users; different scales at different times.

To an important extent the potential for robust outdoor spaces depends on what goes on in the parts of the building immediately next to them. This must be taken into account in order to create robust outdoor spaces. Thus some of the activities within the building may benefit from being able to extend outwards into adjacent public outdoor spaces. When this occurs they will contribute to the activity in the public space itself or even other indoor activities may contribute to the level of outdoor activities, visual contact with them can make the place more interesting for spectators.

Plate: 2. 25 indoor outdoor relationship
Indoor activities can be drawn to out side

Source: by author

Plate: 2. 26 Indoor and Outdoor Visual connection

Visual connection of outdoor makes the outdoor space more interesting

Royal bakery Wellawaththa

Source: by author

Thus the public edge of the building should house activities, which benefit from interaction with the public realm and contribute to the life of the public space itself. Hence, especially ground floor spaces in the local public outdoor spaces have a great potential to increase the robustness.

Since the value of urban land is increasingly going high same as space on the public front is particularly valuable: especially in front of Super Markets, Theatres, Car Parks, by increasing robustness allow using the edge actively in designed way, which obvious uses the maximum benefit of the space. This avoided the dead or lost spaces in city centre.

Plate: 2. 27 Nugegoda Super Market dead areas
Building edge facing old Kottawa road
Source: by author

Plate 2. 28 Bus terminal Mathara Dead Areas

Building edge facing one main road even the
pedestrian freedom is undermined.

Source: by author
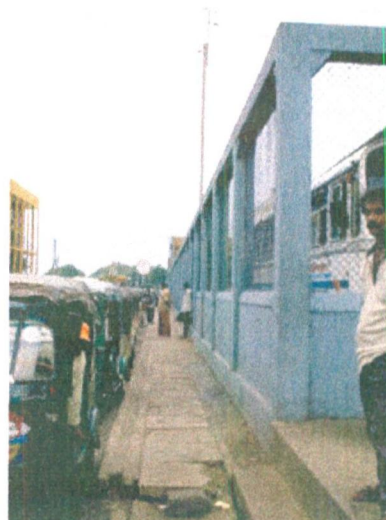
To increase robustness the edge between buildings and public space must be
designed to enable a range of indoor private activities to co-exist in close physical
proximity with a range of outdoor public activities. This has a variety of design
implications depending both of the building activities concerned and on the nature of
the activities in the public space.

**Plate: 2. 29 Potential of
accommodating various
activities in the edge of the
space**

Source: Bentley, et al. 1985: 70

2.2.5 Visual Appropriateness

This quality affects whether the detailed appearance of the place makes people
aware of the choices available. The quality can be identified as visual
appropriateness.

This quality is important because it strongly affects the interpretations people put on the place; whether designers want them to or not, people will interpret places as having meanings. Therefore when there meanings support responsiveness the place has a quality we call visual appropriateness. (Bentley, et al. 1985)

Even though visual appropriateness is important both indoors and out; but this quality is mostly important in the more public spaces; so far as public outdoor space is concerned it is particularly relevant to the outside of the buildings which defines the public realm.

As discussed interpretations people give to a place can reinforce it is responsiveness by different levels, supporting its legibility, variety and robustness play a crucial role in reinforcing the responsiveness of a particular place as well as the detail appearance of a building has an important role to play in supporting responsiveness. Hence in order to encourage this responsiveness, it is important to understand how people interpret places.

According to Bentley, et al. (1985) people interpret visual cues as having particular meanings because they have learned to do so. But people do not learn in a social vacuum.

"A great deal of learning, both formal and informal, is shared by groups of people; whose members will therefore tend to make similar interpretations of a given place". (Bentley et al. 1985: 77)

As well as, members of different social groups may well make different interpretations of the same place. This happens for two main reasons.

- Difference of environmental experience
- Difference of objectives from other groups

Further this tells the designer that, to design visually appropriate places using cues, which different groups of users are likely to interpret as supporting legibility, variety and robustness, so that the designers have to inquire into the likely experiences and objectives of the place's users, looking for visual cues, relevant to each user group.

Plate: 2. 30 Use of cues in design

Source: Bentley, et al. 1985: 78
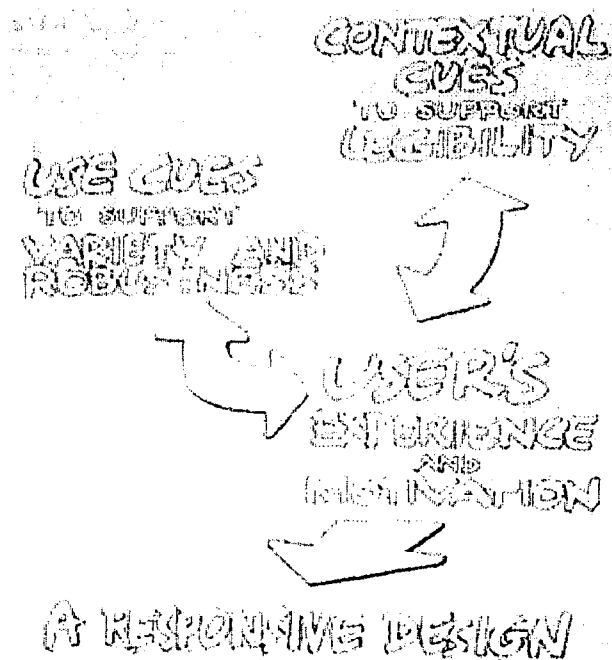
2.2.6 Richness

Richness is the quality, which effects people's choice of sensory experiences. Richness increases the variety of sense experience; which users can enjoy.

For most people, sight is the dominant sense. Most of the information we handled is channelled through our eyes. Thus it can be identified as visual richness, Bentley, et al. (1985). Hence for the purpose of this study, it is concerned with visual richness. According to Bentley, richness is not a purely visual matter; other senses also have design implications,

- Sense of motion
- Sense of smell
- Sense of hearing

Is also essential,
(Bentley, et al. 1985: 89)

"According to Bentley, designers are mostly concerned with the fixed bits of places. For richness we must design these to offer sensory choice".
(Bentley, et al. 1985: 89)

This implies designing so that, people can choose different sense experiences on different occasions. Therefore it is necessary to understand, how users can choose different sense experiences from a fixed environment.

Bentley argues that there are only two ways that the people can choose from different sense experiences if the environment itself is fixed,

- By focusing their attention on different sources of sense experience on different occasions.
- By moving away from one source towards another

Plate: 2. 31 how do users choose

Source: Bentley, et al. 1985: 89
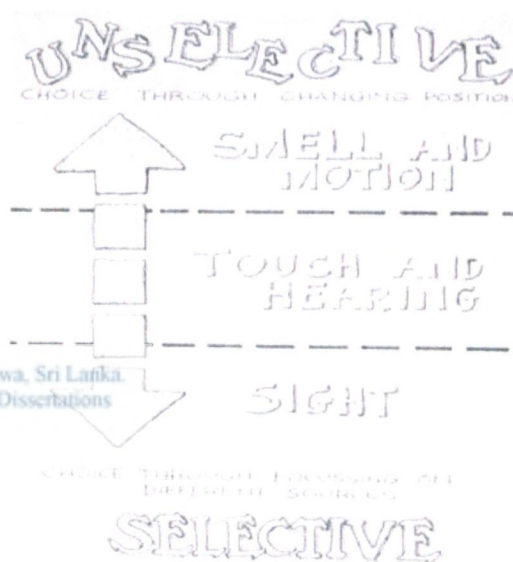
Plate: 2. 32 Visual Richness

Old Parliament Srilanka
Colombo
Source: Robson, 2002: 146

2.2.7 Personalisation

Personalisation is studied under Chapter Three in detail, considering the urban edge space. Personalisation can be identified as a process where users can achieve an environment, which bears the stamp of their own tastes and values.

Personalisation seems to be increasing nowadays, partly because of an increasing range of cheap ways of changing building external appearance and sometime this personalisation process will strongly effect for maintaining the architectural character of a place (personalisation) sometimes develop in an uncontrollable way. Personalisation in another words can be identified as more psychological reaction, because people only develop truly participatory relationships with places they like (affirmative personalisation)[7]

People mainly personalise places they regularly use for long periods; in practise, homes and work places. Nearly all buildings sometimes designers may allow, at least in part for the users to obtain their stamp. But according to Bentley, personalisation may overwhelm too fragile a pattern altogether. If this happens it becomes a political issue, because private actions erode the quality of the public realm. It does not mean, we should repress personalisation; rather it calls for buildings, which can accept it without regenerating into chaos.

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[7] As an affirmation of their own tastes and values; affirmative personalisation (Bentley, et al. 1985: 89)

2.3   MAN ENVIRONMENTAL INTERACTION IN URBAN SETTINGS

2.3.1. Man – environmental interaction in urban settings as a key issue

City as a setting for life, as experienced, known and evaluated by people; very rarely have the social and behavioural disciplines been concerned with the actual three dimensional space at the smaller scale; at which people actually experience and use cities. This has been the concern of the design professionals today; Rapoport (1977) as well as this is the concern of this study.

Thus finding about the ways in which people perceive the city; structure it mentally; what effects have on people; the role of images; how important cities are, for human behaviour or satisfaction or in other words how people actually experience the city, is essentially need to be considered in social responsive environmental designs.

Rapoport has given a comprehensive tool to analyse this man – environmental interaction in different settings. That is EBS – Environmental behavioural Studies, which again is very sophisticated and difficult to summarise theoretically, for this kind of study. But the application of EBS is quite easy for a setting.

2.3.2 Human Characteristics and Physical Characteristics of the Built Environment

According to Rapoport *"there are human characteristics, which should be congruent with certain physical characteristics of the design environment. These characteristics of individuals and groups are both universal common to people as organisms and members of species and also culturally variable".*

(Rapoport; 1977)

Thus, this further explains that, there is much more invariant procession principles of the ways in which interact with their urban environment. Hence the necessity of analyse human behaviours in urban spaces should be done essentially considering psychological, cultural and social needs of the people.

Therefore in order to understand relationships of physical form and social interactions, it is necessary to study how people experience cities; give meaning to what they perceive; how they understand the city and organised it conceptually; how they give identity to environmental elements[8]; how they classify elements and how they behave as a result of this, how designed environments reflected ideal images and how they effect behaviour, how choices are made and on what basis: are need to be studied.

2.3.3 Psychology of Perception and Behaviour
(Concepts of Behavioural Settings)

This approach should be essentially considered with the individuals' and the groups' experience of the physical and socio – cultural environment. The starting point being the experienced world of the individuals and his interpretations and groups seen as collection of individuals with common socio – cultural and psychological characteristics based on above argument, the individual and group behaviour in urban spaces is need to be understood.

One of the pioneers in developing the study of person-environment relations was Roger Backer, who derived the concept of behavioural settings in late 1940's by following people through their daily activities. He was able to record all of their reactions to the objects spaces and places around them, as a product of the analysis, Backer has discovered that the objects in spaces mould and shape the behaviour of the people.

As Goldsteen, (1994) the intimate objects were directly utilized leaned against, written on, move about, in addition to other people caused the subjects of the studies to adopt their paths to meet or avoid them. This observational study refers to us as contextual research. For peoples actions were measured against the physical social and temporal dimensions of their surroundings, rather than with the mechanisms of a laboratory experiment.

This approach engendered many studies of people's actions within their behavioural settings, defined as small scale social systems comprised of objects and people that

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[8] Rapoport(1982) semi fixed , non-fixed and fixed elements.

are configured to produce a routine, programmed set of actions within specified boundaries of time and place, when it especially considered to outdoor spaces.

2.3.3.1. Perception

"The term perception signifies the reception and identification of sensory stimuli, when a person sees an object the mind perceives it may be as colour, shape, probably the material, and other items, of information that identify it. In order to understand that as a specified object"

(Goldstein, 1994: 128)

Hence at the same time non visual in formation is also perceived, may be the environmental quality (ex, crowded, sound of children playing, sunshine) etc. therefore the combination of messages is matched to ones intensions, purpose and mood, hence interpretations of the perceptions is more a guess. It is an identification that, or an imitations of an object.

2.3.3.2. Behaviour,

"Behaviour is actions taken because of the perceptions and the interpretations that are made form elements and objects"

(Goldstein, 1994: 143)

Therefore it is obvious that, objects and people outside a person's immediate vicinity can influence his or her behaviour.

2.3.3.3 Interpretation

Perception and interpretation are inseparable yet interpretations vary, in order to survive and cope with their surroundings. People seek information about and from the environment

When we think about or encounter an environment perhaps the most important judgement is whether it is interesting; gloomy; freighting; relaxing; or such a composite of above.

2.3.4. Experiencing a Space

- Non- verbal communication
- The meaning of space
- Understanding the space

2.3.4.1. Non-Verbal Communication Approach

As mentioned none fixed, semi fixed, and fixed feature elements would tell us much about the behaviour, culture, tradition, etc. For example, one can clearly identify a setting (urban setting) by kind of clothing people wear, buildings, shop signs and so on. Further religiosity, ethnicity, elements of history and nature of order (order/ disorder) etc. Hence, Rapoport (1982) developed non–verbal communication approach to understand environmental meanings, considering fixed feature, semi fixed feature and non-fixed feature (Informal elements).

2.3.4.2. Fixed-Feature Elements

Fixed feature elements are those that are basically fixed or those that change rarely and slowly. Most of standard architectural elements – walls, ceilings and floors belong to that domain (Rapoport; 1982, pp. 90-119) as do streets and buildings in cities. Thus clearly the ways in which these elements are organised (their spatial organisation) their size, location, sequence, arrangement and so on do communicate meaning.

2.3.4.3. Semi-Fixed Feature Elements.

Semi fixed feature elements range all the way from the arrangement and type of furniture, curtains and other furnishings, clothing to street furniture, advertising signs, window displays in shops, garden layouts and lawn decorations and other urban elements. (Including the verbal and iconic message systems) these can and do change fairly quickly and easily.

2.3.4.1.3 Non-Fixed Feature Elements

Non-fixed elements are related to the human occupants or inhabitants of settings, their shifting, spatial relations (proxemics), their body positions and postures (Kinesics) hand and arm gestures, facial expressions, hand and neck relaxations, eye contact, speech rate, volumes and pauses and many other behaviours, (Rapoport, 1982; pp 90 – 119)

According to Rapoport (1982) the non-verbal behaviour has been developed in and almost entirely restricted to non-fixed feature elements or non-fixed feature formed the subject of non-verbal communication studies.

2.3.4.1.4. Environmental Meaning

Fixed feature elements according to non-verbal communication method comparatively less important in creating environmental meanings. (Rapoport,1982: 95) Therefore in that context, semi fixed and non-fixed elements are much more important and used to communicate meanings. The problem now is most of the designers over emphasise the fixed feature elements (as physical context) and often they seems to neglect semi and non-fixed feature elements which much and much important in communicate meanings.

Thus what important is applying the non verbal model to environmental meaning, is this to move from the non-fixed feature realm to the semi fixed and fixed feature elements, observing what cues they play in behaviour, social interaction and so on.

According to Rapoport semi fixed elements, that the most productive first step is to try to bridge the gap between the work on non-fixed and fixed elements. Hence

assuming the environment act as a form of non verbal communication and proceeding from there by direct observation; by the analysis of existing studies, etc. will provide the path to analyse the relationship between people and physical environment. (I. e. urban space)

The study stresses on the supportiveness of the building edge (supposing consists of fixed, semi fixed and non-fixed elements) for the people activities and behaviours. Hence after analysing the relationship (by non verbal communication models) it is crucial to understand how the settings can be supportive, either culturally or perceptually or otherwise.

In this context, following questions can be used to understand the supportiveness. Rapoport (1982) also gives hypothetical answers for the supportiveness.

For example understand the supportiveness of a setting,

1. What is being supported?
2. How it is being supported?
3. By what it is supported?

If one concentrated to particular activity of either a group or an individual (walking for example) answer for above questions can be found as follows.

1. Walking is being supported.
2. This is done, other things being equal by maintaining high levels of perceptual interest
3. This is achieved through, high levels of perceptual complexity
   (Increasing the pleasure of walking through environments, stimulating exploratory activity, ex: pleasure, delight, interest, exploration)

Further, in analysing a particular cultural context, certain perceptual characteristics are needed to provide that environmental quality appropriate for the setting provided for an activity (for example walking),

Cultural variables	Activity / Behaviour	Physical perceptual variables
Values	Walking	Characteristics such as, Width
Lifestyles	Standing	Enclosure
Meaning of activities	Sitting	Texture
Unwritten rules	Eating	Turns
Etc.	Socialising	Etc.
	Etc.	

(Rapoport, 1990 pp. 245 – 248)

2.3.4.2 Understanding of Space

Various theories and concepts have been used to define the human understanding of the space. But for the purpose of this study it is necessary to define the space understanding in behavioural point of view. Therefore focusing on Rapoport (1982) seems to be worthwhile.

According to Rapoport (1977) people act according to their reading of the environmental cues and thus the "language" must be understood. If the design of the environment is seen as the process of encoding information, then the users can be seen as decoding it. If the code is not shared, not understood or inappropriate, the environment does not communicate.

Therefore using this approach it is possible to distinguish between direct and indirect effects of the environment on behaviour, mood, satisfaction, performance or interaction. Hence, the environment can be used to draw conclusions about the social standing or status of its occupants and their behaviour.

Chapter three

**SUPPORTIVENESS OF THE BUILDING EDGE FOR
ACTIVITIES IN THE URBAN PLACE**

CHAPTER THREE

SUPPORTIVENESS OF THE BUILDING EDGE FOR ACTIVITIES IN THE URBAN SPACE

3.1 BUILDING EDGE

3.1.1 Introduction to Chapter Three

Chapter one and two introduced many of the concepts which provide a framework for analysing the relationship between the built environment and people, after discussing the city as an environmental point of view, and understanding humans' behaviour as a key factor in such urban environments conceptually; This Third Chapter is used to elaborate the role of building edge for the creation of responsive urban space. Therefore this Third Chapter can be considered as the key chapter, which really trying to understand the principles, which links people with the urban space. In broader manner; this will then elaborate in the Fourth Chapter (Case Studies) in practical means considering their applicability in local conditions with merits and demerits.

The Third chapter further focused to understand the human environmental relationship in means of communication aspects, which really needs to understand the degree of communicating the responsiveness of an urban space for the users, in order to facilitate their level of understandings and mode of behaviour.

Therefore as already discussed Rapports' (1982) fixed, semi-fixed and non-fixed elements in the urban environments need to be understand as a whole in the urban environment; focusing how they communicate and support for the responsiveness in an urban space. Therefore the communication principles are also need to be studied for the purpose of understanding the "**responsiveness**" as an essential quality in an urban environment.

3.1.2. Building edge as the central defining element of the urban public space

The term "**urban space**" and what meaning it holds within the urban structure is mentioned in Chapter One. The further extension of that urban space within the city provides two elements. That is the street and the square.

Rob Krier argues street and square as central urban spaces which are having similar characteristics

"In the category of 'Interior Space' we would be talking about the corridor (street) and the room (square). The geometrical characteristics of both spatial forms are the same. They are differentiated only by the dimensions of the walls which bound them and by the patterns of functions and circulation which characterise them".

(Krier; 1984:16)

According to his argument the street and the square can be differentiated by its functions and activities. The functions and activities associated with both spaces have inseparable link with the built environment (the walls which bound them) Rapport (1977). Therefore functions and activities should carefully considered with defining walls (bounding buildings) or in other words with the building edge.

This study is focused to public urban spaces predominantly in order to understand the above inseparable relationship. Hence, the square can be identified as *"the first way man discovered of using urban space"* (Krier, 1984:17)

The urban square, it first emerged as grouping of houses around an open space (Krier, 1984) and this concept has developed from Agora, Forum, Cloister and mosque courtyards, where the arrangement offered a high degree of control of the inner space. These kinds of arrangements frequently come to bear symbolic and other socio-cultural values.

The street can be identified as a distribution of space and functions, and it has a more pronouncedly functional character than the square. (Krier, 1984); streets in local conditions were earlier planed to the scale of the human scale (most of Srilankan streets with shop houses) or may be horse and the carriage. But later the

street character is radically changed by the continuous flow of motor traffic. Which largely undermines the local aliveness of the functions and activities of the urban space and the relationships were destroyed by the flow of motor traffic.

Therefore the square is developed with a new dimension of socio-spatial urban places (Madanipour, 1996). Where this process tried to re-establish the qualities of the urban space as one unified entity, operates at human scale and speed. (Other than motor traffic speed)

Kind of social ritual and cultural values of groups and individuals and their behavioural patterns crated a live relationship with urban public space. As mentioned earlier this relationship has an inseparable link with the bounding building edge. Therefore along the edge (of a public space) forms a live mix of activities in local conditions.

3.1.3. Role of the building edge as a Space

Christopher Alexander argues that as *"Outdoors, people always try to find a spot, where they can have their backs protected looking out some larger opening beyond the space immediately in front of them"*. (Alexander; 1997: 558)

As well as *"The life of a public square forms naturally around its edge. If the edge fails then the space never becomes lively"* (Alexander; 1997: 600)

In more details this shows that the people have natural tendency (instinct) to gravitate towards edge of the public space. Therefore, if the edge does not provide them with the spaces where they can accommodate their functions and activities, the square (in our case immediate urban space) will fail.

Therefore it is clear that, for the aliveness of the immediate urban space the edge (actually the space) effects in large. Therefore where ever there is action in a place *"the spots which are the most inviting are those high enough to give people a vantage point and low enough to put them in action"*. (Alexander: 1997:604) this further clarifies that the edge has a direct response with the adjoining space or the defining edge of the urban space.

Therefore the purpose of this study is to identify the building edge as a central defining element of the public space, thus is need to be established, and in present urban context the building edge play a major role as central defining element. Hence, considering the edge of the building as a space: "**A Transitional Space**" not a line, in the process of designing is a crucial thing.

3.1.4 Characteristics of the building edge as a "transitional space"

3.1.4.1. Physical context of the transitional space (the built fabric)

Physical context of the built fabric can be basically identified as two elements. That is **Mass** and **Space**. Therefore the identification of the building edge as central defining element of the public space, it is necessary to identify the role of building edge, edge in relation to the urban space. Hence as a hypothesis identification of the building edge as the "**transitional space**" is important in this study.

According to above argument the edge of the building which forms the transition space need to be studied, as a space where people understand the building as a "face" (facade). Therefore the building (or the buildings in urban spaces) should provide positive responses for the "**transitional space**" predominantly and which could be then match and extended towards the (broader theme) outdoor space.

Christopher Alexander has identified this issue in his pattern language, therefore as he mentioned,

"A building is most often thought of as something which turns inward towards its rooms. People or the designers do not often think of a building as something which must also be oriented towards the outside"

(Alexander, 1997:753)

Christopher Alexander's above pattern sets the stage for the development of a "**new zone**" between the outdoors and the indoors can be identified as "**transitional space**", where most of the urban situations public people can seen, feel and attach in creating urban identity.

Therefore it is important to treat the edge of a building as 'a thing', 'a place' and 'a zone' with volume to it, not a line or interface which has no thickness. Hence, it is important to design the edge, considering it as an important space of the building with positive responses.

According to Rapoport (1982), the edge or the transitional space is an environment, where the primarily semi-fixed and non-fixed elements are dealing together to create different ambience over time. Hence it is not defined for fixed, rigid single use; people may use this space for different activities, which changes with time. Therefore the flexibility of the space is crucial: according to different activities associated with edge, or in other words the space should be essentially associated with "Robust[1]" qualities, in order to create "robust transitional" space.

Plate: 3. 1 Royal Bakery, Wellawaththa
Source: by author

Building edge treat as a space. Royal Bakery, Wellawaththa, "lots of activities associated with edges"

Plate: 3. 2 lots of activities associated with edges-Royal Bakery, Wellawaththa

Source: by author

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[1] Places which can be used for many different purposes,(Bentley, 1985)

Plate: 3. 3 Apricot building Dehiwala

Source: by author

Building edge treat as a line. "Edge is dead"

Although zone is defined but it is isolated from either side,

3.1.4.2 Non-physical context of transitional space

"When you have all the answers about a building before you start building it, your answers are not true. The building gives you answers as it grows and becomes itself".

Khan, L. As quoted Lawlor (1994:152)

When physical context is created, it is necessary to understand how the non-physical context of the building (or buildings) operates in different settings. This can be begin with the simple question; if we ask somebody where he lives, he always talking about his house or the neighbourhood his house is in, even though in our context, it sounds harmless enough. But if we think what it really means, the people of our culture believe that they are less alive when they are out of the homes (working / shopping like) than when they are at home.

Or in other words our aliveness is only attached with our homes; not in other places. This is a common problem in local context. The answer is straight forward, other than our homes any of other places are not live or not provide proper settings for, lively attached to such places other than our homes.

This wide spread phenomena led the human to loose the attachment to our outdoor life, because it does not provide proper setting for them to behave (Rapoport 1977).

The aliveness has a direct link with the non-physical or the spiritual qualities of the spaces; which are essential for create proper setting.

Once Winston Churchill said, *"We shape our buildings therefore they shape us"*.

Plate: 3. 4 Physical Context

Physical Context
Without people

Source: Rapoport, (1977:375)

Plate: 3. 5 Non-physical context

Source: Rapoport, (1977:375)

Non-physical context "add a life" to physical space
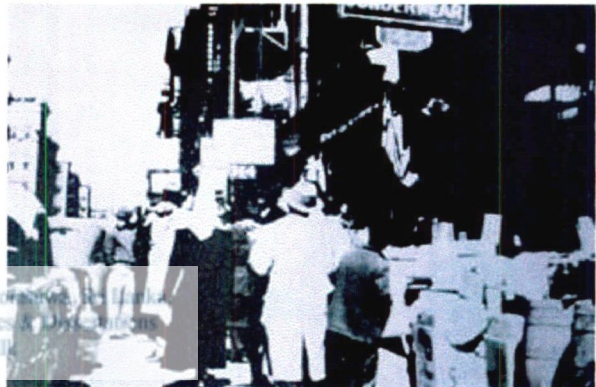
3.1.4.2.1. Social Context

"You and I are moulded by the land, the trees, the sky, and all that surrounds us. The streets, the houses ...Our hearts are shaped by the plaster walls that cover us and we reflect plaster wall ideals... When I make a vase, a cup or a saucer, they will be my expression and they will tell you who I am and what I am ".

Maybeck, B. as quoted Lawlor (1994:41)

People can be considered as the fundamental element of a place, where we can identified as a social place. The variations in people in different aspects within different settings, is a predominant factor in a socially vibrant place. Although the

degree of sociability[2] of a place (or a setting: Rapoport: 1982) can be analysed or understood by observing following characteristics. (Rapoport 1982:107)

- language spoken
- behaviour
- Dress
- Physical type
- Occupation
- Age and sex like...

"People", are the most important elements in socially vibrant places.

Their behaviour, dress, physical types: add colour and life to places

Plate: 3. 6. "People", fundamental element in social place

Source: by author

Plate: 3. 7 People in front of a building
Source: Tibbalds (1992: 15)

The building within the square, (Centre Pompidou of France) has enabled a lively social place within the vicinity.

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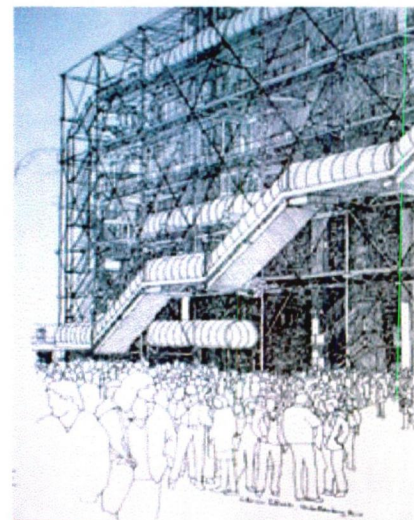
[2] A description of social network (including via a survey, including perhaps the use of social mapping) would indicate, the level of degree of friendliness.

The type of activities, degree of activeness or the variation of activities has a direct link with the "setting" of the transitional space. Therefore the social composition and its nature need to be studied, indeed for the purpose of achieving social responsive places; hence further understandings in the tendencies of social conflicts are also needed. Because in present social context, the gap of income is increasing. Sociologists indicate a social polarisation and a spatial segregation has largely undermining the social interactions in the urban space. In order to address this issue, the social and spatial renewal projects have been proposing by various urban designers with the view to create impressive symbols of identification as well as comfortable places to meet and to organise community life.

3.3.2.2 Economic context

Most of the issues related to economic context has already discussed in Chapter One under the topics,

    2.1.8   Privatisation of public space

    2.1.9   Public space and economic potential associated with building edge

Further under this topic it is necessary to understand the response of transitional space for the economic context of the urban space.

Especially in the local context, almost all over the public spaces are used for unplanned (except that are designed) economic activities. This seems to have developed as a serious negative effect. Because most of the transitional spaces has already blocked and separated by these economic activities, due to the spatial fragmentation and isolation of activities in selected segment has generally undermined the flexibility or the robust qualities of the transitional space. (Almost completely) Even though urban designers are stressing on creating socially vibrant urban spaces, this overflowing unplanned economic activities developed in public spaces has resulted to convert the transitional space into a market place and the activity variation expected in the transitional space has converted to fixed, rigid economic activities.

This doe not mean that the economic context should keep away from the "transitional" space. But the economic context should be integrated with the urban

space (in public places), in way balanced with other activities, considering relationship between people and space. Or in other words activities should be integrated in "mutual supportive"way. Bentley (1985:30).

Plate: 3. 8 Shoemaker
Source: by author

The presence of people on the street makes for lively interesting public environments.

Francis Tibbalds argues the approach of mixing uses and activities in the urban spaces.

"The building in towns and cities are more than just collections of buildings. They are essentially for and about people. They accommodate their activities, the better used and varied they are; the more they are likely to have the quality of people friendliness.

Tibbalds, (1992 .28)

And further he argues that uses and activities are more important than buildings to life or a town or city, greater diversity will help to create more liveable city.

Therefore the transitional space also can be identified in the economic point of view to accommodate (provide settings) activities which are of a mixed use nature and re of a deliberately rich and varied character.

Plate: 3. 9 mixing of uses in an urban space.
Sources: Tibbalds, (1992: 29)
The mixing of uses should apply to whole streets

The mixing of uses should apply to urban spaces especially for streets.

Source: by author

3.1.4.2.3 Cultural context

"Urban centres are more than just collection of shops, they provide for culture entertainment, leisure, recreation, civic life and the exchange of community views ideas and opinions, Tibbalds (1992:27)

Francis Tibbalds clearly describes the multiplicity if the settings required in the urban space. Hence the transitional space as a form of urban space doubtlessly has a link with culture especially when it comes to local conditions the cultural rituals are taking place with the direct relationships with transitional space settings.

From the ancient Greek agora; Roman Forum the urban space has been playing major role in the cultural context. Local condition the role was similarly important and has been contributing to the growth of Srilankan culture and tradition. The streets and the squares, were the main public places at one time where all kinds of social traditional and religious activities happen some are exists and continuing today also with equal prominence.

Kandy perahera is a good example where the urban space is contributing towards the activities of the perahara from "Mahamaluwa" and all the traditional streets are contributing for this cultural activity even though this happens once a year the urban space had provided a proper architectural setting for the activity most of the shop houses and buildings and the buildings are remaining today, clearly express the responses provided by the built environment

Same, one who walks along the Galle road, during Hindu festival season. It is a common seen of "Banana tree decorations" along the most of the shops front in Galle road -Wellawaththa.

Rapports definitions of all environments are cultural landscape, is also defines that activities and the built fabric (created by fixed, semi fixed and none-fixed elements" creates the urban ambience.

Plate: 3. 10 **Kandy perahara**

Source: by author

Traditional streets are contributing for this cultural activity by providing proper architectural responses.

3.1.5 Deferent ways of defining the building edge

The physical definition of the building edge is very crucial in defining the social space in a public building. Usually the boundaries or the edges are the physical separations of two areas; they can be identified as the indicators of the extent of a physical form. As Lynch mentioned "*more or less penetrable, which closes one region from another, they could be seems, lines along which two regions are related and joined together*".

(Lynch, 1960: 47)

This gives idea that the manner in which a built or natural form is demarcated or bounded. Gives it strength as an identifiable formation creating a powerful visual impression, for example, depending on whether the boundary makes a sharp gradient of definition or whether the demarcation is made subtle and loose.

Sometimes architects have done sharp binderies which clearly separate the physical form of the building from adjoining space.

Plate: 3. 11 French corner Parade-Dehiwala

Sharp binderies which clearly separate the physical form of the building from adjoining space

Source: by Author

Plate: 3. 12 Royal Bakery Wellawaththa

Source: by Author

Building edge demarcated is perceptual not a rigid demarcation and boundary could also be a perceived edge between places; it may be fuzzy as in the edge of a sprawling city and suburban neighbourhood or distinct as in a room or a courtyard.

Both above ways of creating boundaries are common in the field of architecture for the purpose of , identifying the building edge as an activity space (transitional space) it is necessary: to understand how both methods have been used to create responsive building edge, the space..

3.1.5.1. Treat the Building Edge as a Sharp Edge.

For the purpose of this study, the concern is given to the urban building facades predominantly. The way the different designers has defined the edge; has to be analyzed via the design process of the particular building , but here it is focussed to identify how the transitional space has been demarcated using sharp or rigid edges of the buildings.

When it comes to historical analysis rigid edge defining can be found from Fortresses, and city boundaries. This can be found from almost the entire ancient cites and civilizations, main function were the security and demarcating their territories.

But, in most of the present buildings also defined the edge as sharp clear-cut way. Most of the times the form has shaped, considering the security; backdrop; or the visual issues this clear-cut edge does not provide (most of the times) proper setting for accommodate people and activities.

By emphasising this edge, it does not mean that all the time, the edge should support, or accommodate people in the urban space. But this study stress on the urban buildings which provided responses or to create e architectural setting for the human and their activities, this can be considered as an essential feature in urban public buildings those have been purposely designed to accommodate people's activities and functions. A good example is the "Mathara – New Bustard"

Plate: 3. 13
Bus terminal
Mathara

Source: by
author

The building in its function designed to accommodate people who are on the transit. , but it has too much respected to the Dutch fort hence the form, has created almost, sharp clear-cut edges, in many spaces around the building. This has resulted the socially unresponsive design for the bus stand, hence there is not much of a social transformation resulted in terms of creating a social space for the town.

3.1.5.2. Defining the building edge as a perceived space.

As mentioned earlier this topic also predominantly focussed to identify the spatial demarcation of the urban (public) buildings. Perceived building edge demarcation can be identified as, psychologically or, perceptually defined edge, where not rigid physical elements are used for the purpose,

As Alexander(1997), mentioned pattern for building edge,

"A building is most often thought of as something which turns inwards – towards its rooms. People do not often think of a building as something which must also be oriented toward the outside".

(Alexander, 1997:753)

This pattern has sets the stage for the development of the zone between the indoors and the outdoors. Often this "Zone" is thought of as an edge, a line on paper without thickness a wall. But this is altogether wrong, especially in a public space (street or square) unless the building is oriented toward the outside which surrounds it as carefully and positively as toward its inside. The space around the building will be useless and blank with the direct effect in the long run that the building will be socially isolated, because the uses have to cross a no-man's land to get to it.

Most of the machine edge slab of steel and glass buildings, people cannot approach it anywhere except at is entrance, because the space around it is not made for people.

Plate: 3. 14 Machine edge buildings
"The edge cannot support for any life"
Source: Rapoport. (1977:375)

But compare this building with some traditional older building, which has a continuous surrounding of benches, galleries, balconies, flowers, corners to sit, places to stop. This has made the live building edge space, which is connected to the world around it, by the simple fact that it is made into a positive place where people can enjoy themselves. (Alexander)

This small difference can make huge effect on socio-spatial integration, In the field of Architecture, those who concern about socially responsive buildings should essentially need to understand the different effects of this zone; which has been identified (in this study) as "**Transitional Space**".

The building with a lively building edge is connected, part of the social fabric, part of the town, part of the lives of all the people whom live and move around it.

Therefore defining the edge perceptually will help to create more humanistic places along the edge. (Especially in urban public buildings) this can greatly change the people's behaviour by the elements used to define the space.

Edge is not rigid or fixed hence provide maximum social integration

Plate: 3. 15 Ambalangoda Bus terminal

Source: by author

Therefore this perceptually defined proper edge will help to create a realm between realms (private and public). It increases the connection between inside and outside, encourages the formation of groups which crosses the boundary, encourages movement which starts on one side and ends on the other and allows activity to be either on, or in the boundary itself. This is a very fundamental notion.

3.1.6. Significance of the building edge as a physically exotic place

"The work of architecture is employed to convert to physical form assumptions about relations in the society, which may not be justified, but which ones fixed in built environmental form, are very difficult to conceive as being false assumptions".

(Bruce Bentz; 1985:180)

Bruce Bentz above argument clearly defines that the architect should see their role as instrumental in effecting social change. They should also be oriented towards people, concern should be expect for the needs of men and women which should led then to create a humanistic commitment towards creating responsive environment.

Hence architecture should play a role in supporting socially accepted modes of human behaviour where the intention is to offer a critique of social awareness.

To see urban design as dealing with the visual and spatial rather than social aspects of the urban built environment is a wide spread tendency, among the present urban designers. The result will led to develop physically exotic places but not socially responsive environments. The other tragedy is present urban designers seems to think that their environmental design as a creative process of built forms and physical elements, rather than creating "social spaces" which transform people in social and spatial means. This over emphasising of buildings in terms of physical and visual dimensions has produced buildings which are merely stand as exotic forms but when it considered with built environment (as a whole) such buildings may absolutely no contribution to the social spatial transformations.

"Architecture, how ever in a broader sense refers to the wider built environment, not just the buildings of the landscape around them. Then the term "Environmental Design" can be used in a much broader sense to denote the process of designing the built environment".

(Perera 2001)

Physically exotic buildings are also necessary for the proper imagiability of a town or a city, but merely considering only visual aspects, led us to compose shapes and do visually attractive buildings. In most of times as single isolated buildings not as a whole: widely considering built environment.

Plate: 3. 16 Present trend in composing shapes, Arpico building and singer-mega building Mountlavinia

Source: by Author

Arpico buildings

The arpico buildings done recently by local architects seems to be a lost opportunity in social point of view although that buildings provide setbacks from streets and creating fairly large open spaces in front the space also can be identified as a lost space or it clearly isolated the people in one space in the street.(Galle Road)

This building gives evident that architecture should not only be physically exotic but to be inhabited by people, to be taken over; to be identified and made part and parcel of the people, and allow human to dwell, that such places should socially vibrant and healthy.

Rajapaksha, (1997) p.49 has come to a conclusion that a place to be completed as a ideal, it should be fulfilled and should be:

1. Physically exotic,
2. Socially vibrant,
3. Psychologically meaning full,

But local conditions when considering local buildings most of the present examples are seems to be lack in playing in attention to one or all above aspects. Therefore transitional space or in other wards building edge space is not properly treated with

positive architectural responses or they seems to have completely neglected the important of the treating the building edge as a space.

Plate: 3. 17 French-corner building
Physically exotic building facades

Source: by author

3.1.7 Significance of the building edge as a socially vibrant place

As mentioned before people are the fundamental elements of the place. (Social place) the variations in people in different settings are a predominant factor in bringing about socially vibrant places. As well as it is mentioned that the behaviour, dress, physical type, etc. need to be analysed in relation to study the degree of sociability of a given space.

Hence under this topic, the study is focused to understand the supportiveness of the building edge, as a whole (not a building but as built environment) for creating social vibrant places. The study focused on urban public buildings the contribution of the building edge (especially in the urban public spaces) for the activities have created interesting outdoor life in many urban spaces. (Towns and cities)

In the local situation the building edges has been used as socially vibrant places from the past. Building edges in the most of streets and public places were played a significance role in the social spatial interaction. Some of the older buildings remaining today (shop houses) clearly express the supportiveness those buildings had in local context.

Plate: 3. 18 road to Mountlavinia

Source: explore Srilanka,(1998:16)
Vol.11, No.11

Plate: 3. 19 Chatham Street

Source: explore Srilanka (1998:16)
Vol.11, No.11

When it considered the traditional shop houses done considering Sri Lankan carts and human scale, had proper edge responses for the people and carts; involvement; considering their activity pattern. But after shifting the cars by motor vehicles, the scale and activity pattern drastically changed; streets were changed to motor vehicle scales but not human scales. This results the social unresponsive building within these streetscapes. This breaks the continuous flow of activities and pedestrians along the street and created socially isolated spaces. This phenomenon was studied in the first chapter. Therefore need of revitalising the social responsiveness, which bring social vibrant spaces back into the urban places, is crucial. Some of the present local designers have created innovative solutions for the same problem.

Royal bakery – Wellawaththa   Bus terminal – Ambalangoda

Plate: 3. 20 Some Contributions to responsiveness
Source: by author

Both above buildings have contributed to integrate the important spatial elements such as the Galle road, the pavement and the built fabric (building edge). In social terms it has contributed to create a meaningful social spaces people who use the spaces for different activities. The spatial arrangement at both ground and upper levels (especially bus stand) are more responsive to social needs than the commercial needs. The expression of Architecture is people friendly.

These places should essentially provide social glue for the community. Therefore the architectural setting should be human friendly. (Social responsive) the setting should give them the right to be there; and people should feel safe enough to stay and relax; nod at each other, perhaps even meet. A good social vibrant space meets above conditions.

Especially in western context, the activities also greatly helped to form social vibrant places, especially street cafes; beer halls, coffee shops, etc. will try to meet above settings. Hence once it considered as a whole, this mixing number of small activities together will naturally create a good social integration and the space become live.

But in the local situation, even though we do not have such culture, but our buildings should meet those settings; which are essentially need to integrate people who are in different activities and levels.

Responsive urban building facades, which are meeting above needs, provide good response for urban activities. Hence the fixed, non-fixed and semi fixed elements

which are participating to create the setting is need to be analysed in deep for the purpose of this study.

3.1.8 Significance of the building edge as a psychologically meaningful place

Meaning is an intangible quality, which differs according to each individuals, circumstances, and time and as designers we should understand the place is clearly more than a geometric location in space and more than a mere physical setting. And another way to conceive of place is that it is the interaction between people and the physical setting together with a set of meanings, which both emerge from, and inform this experience and interaction (Ralph; 1976). Thus the place is a direct implication on experience and depth of meaning.

Rapoport (1990), will give another definition for the meaning.

"The inherent high variability of "meaning" suggests that it will tend to change not only passed on the circumstances and time, but also based on different types of settings and also cross culturally".

Rapport's above argument expresses that the meaning could be culture specific and, types and levels of meaning, the cues used to communicate them, their redundancy and the settings in which they occur are like to vary due to cross cultural variations too, and he suggests that the meaning as a quality that cannot be directly manipulated by an Architect or a creator of a place.

On similar grounds, (Downtown; 1985; 112) mentioned that,

"Architects cannot somehow insert or inject meaning into their buildings or place; they can, through the understanding, through their shared aspects of culture influence the likely meanings their buildings will have for people. In a sense they can incorporate "meaning triggers" into their work. This way they could affect potential place hood, the degree to which their buildings are likely to be seen by one or more people as somewhere appropriate to conduct a portion of their lives".

Thus above quotation creates a base, that, meanings could be generated through the correct decisions in creating physical settings and enabling appropriate activities / behaviour. This can be directly applied to the building edge or the associated transitional space.

Thus it could be said that the considering edge also as a space (transitional space) with an appropriate meaning associated. That will help to fulfil the understanding the place and its purpose. This in other words can be identified as a meaningful enabled place or a setting.

Rajapaksha(1997), has identified following sub divisions of the meanings associated with a place. Rajapaksha identified the meaning, as they could be sub divided based on different ways in which they are generated.

1. **Perceptual Meaning**

   An effective attitude to the environment gained by sensual cusses gives meaning to the place. These can be applied to particular sections or a whole setting. They contribute to effective relationship between the user and the environment,

   - Visual cues – physical characteristics
   - Oral cues – Natural and man made sounds
   - Olfactory cues – man made as well as natural

2. **Symbolic meaning**

   Symbolic meaning is related and varied according to cultural and religious schemata; cosmologies, worldviews, philosophical systems, etc. (Rapoport 1990: 520) has termed this kind of meaning as "high level" meaning. Ex: Culture, religion.

3. Functional meaning

These are termed as "low level" meanings, where they are cues indicating and for identifying uses which settings are intended for, and hence, the social situation and expected behaviour.

Ex: Meanings indicate movement; way finding' accessibility, penetration' etc. Information, which enable users to act and behave appropriate and predictably making co-acting possible.

E.g... A bus stop

A bus stop should indicate to the user that it is one by having the necessary signs and physical demarcations to indicate its' meaning to the person.

4. Associational meaning

These are the meanings derived through the association and experience that a person has with a given place. Thus they are primarily individualistic to the person involved in the experience.

The term indicates the degree of involvement a person has with place, and how the meaning of place differs accordingly. Ralph (1976 P: 46) interprets this in terms of the degree of "inside ness' and "outside ness"

5. Meanings related to personal intentions

These are meanings generated through intentions, personal attitudes, values and purposes. It could also be those, which communicate identity, status, wealth, power and so on. These are individual meanings which are latent rather than instrumental aspects of the physical and social setting.

Above categorisation shows that the meanings are complex and have different sub divisions according to their settings. But in order to understand the relationship between the physical characteristics, social behaviour and the general meaning, all levels of meanings should be considered, studied and understood.

3.1.9. Personalisation of the urban building edge

Personalisation seems to be increasing nowadays; almost all over the urban spaces this is widely spread in an unplanned way. This is partly because of an ever-increasing range of cheap ways of changing building external appearances.

Personalisation can be identified as public or users participation in design. This is highly desirable, but when this happen in an unplanned way, the qualities of the original design space will be ruined as a whole. Therefore personalisation can be as good as well as bad thing on terms of design.

Sometimes the designers make it possible for users to personalise their existing environments, this is the only way most people can achieve an environment, which bears the stamp of their own tastes and values. (Bentley; 1985; 99)

Urban places should be capable of accommodating a wide variety of users changing over time. This quality in other words can be identified as the robust quality of the environment. In robust environment this personalisation process can be identified very easily. In such environment by encouraging each user to dress the building differently, personalisation can make each use explicit.

Useful literature on personalisation is thin on the ground, but Bentley el. Al. (1985) has provided a good tone to understand personalisation process. There Bentley has identified two clear ways of personalised space.

1. To improve practical facilities
2. To change image of a place

Local condition the latter portion of the personalisation can be identified very often. In the urban public spaces, where people / users has personalised the urban space, they control (or they use). Therefore different random personalisation patterns can be identified.

E.g. Personalising the urban space
Mount Lavinia Super Market facades during Pola

People when it considered the space; they have two kinds of personalisation of places. That is inside a user's space and across the boundaries. This boundary separates the user's private domain from the public realm. It enables us to make the important distinction between private and public personalisation. For the purpose of this study public personalisation is more important, because it communicates across the private / public boundary, affecting the public realm. This mostly happens at physical gaps in the boundary. Therefore various patterns of collars, signboards, semi-fixed and non-fixed elements can be found all over the urban spaces as a result of personalisation process.

Plate: 3. 21 personalising the building edge- in local street situation
Source: by author

Chapter four

EXAMPLE STUDIES

CHAPTER FOUR

EXAMPLE STUDIES

4. 3. 1. EXAMPLE STUDY ONE - MOUNTLAVINIA SUPER MARKET
Study of the Building Edge With Reference to Main Streets,

4. 3. 1. 1. The design and the building edge

Considering Mountlavinia as a linear developed town located at the Galle Road; the super market has created an identity for the town. The building is trying to create a significant social space for the town, but some neglected issues in the design have diminished its "responsive" qualities.

Plate: 3. 1 Mountlavinia super Market building

View from the Galle road

Source: by author

Considering the location, the building is in the Galle Road with a setback; three sides of the building are demarcated by the main roads, and north from the CTB bus stand. This building, (as the Nugegoda Super Market), is facing four different contexts, which are different from physical fabric as well as activity pattern.

Plate: 3. 2 Layout plan

(For the purpose of identifying the building edges and immediate context)
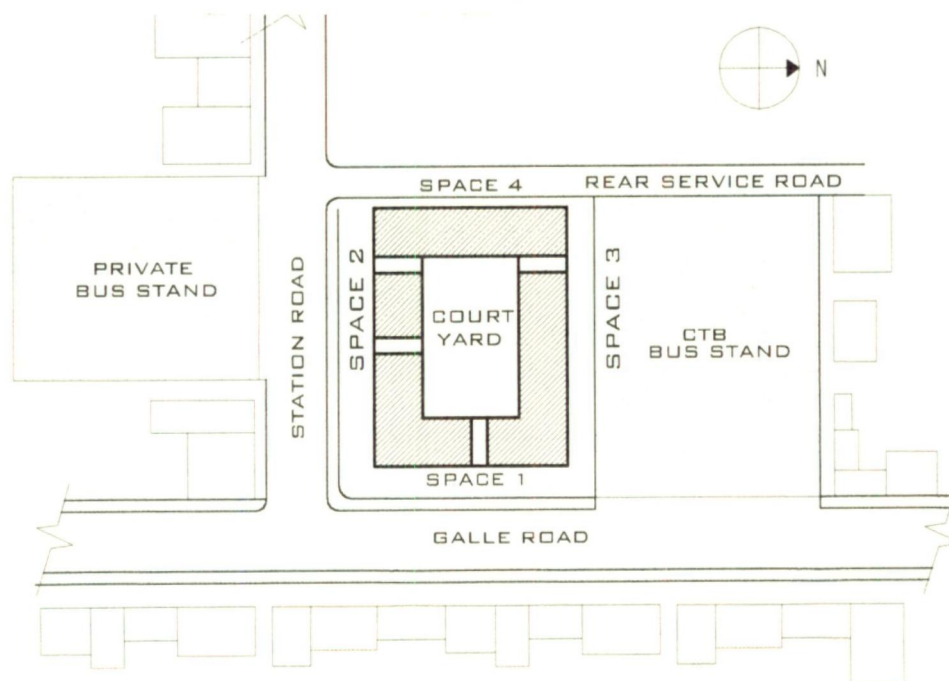
Considering above key plan, four clear building edges can be identified.

Space One –   Edge facing Galle Road

Space Two –   Edge facing Mountlavinia Station Road

Space Three– Edge facing CTB Bus Stand

Space Four – Rear side of the building facing to Service Road

SPACE ONE

The building setback and created a space between the building and the Galle Road which is landscaped and has a great potential to create prime social space for the town center.

Plate: 3. 3 Building front edge facing the Galle road

Source: by author
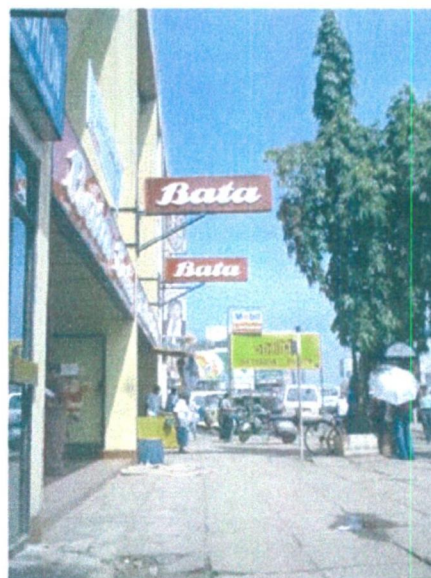
SPACE TWO

Building edge facing to Station Road also facing the Private Bus Stand along the building edge; the landscaped stretch of land has created another place for social interactions.

Plate: 3. 4 Building front edge facing Station road

Source: by author

SPACE THREE

Building edge facing to the CTB Bus Stand open area, the edge is defined almost without having any response for the bus stand function; the edge is almost a dead edge only use for service functions.

Plate: 3. 5 Building front edge facing CTB bus stand
Source: by author

SPACE FOUR

This is the building rear side, even though the edge is facing to a road leading to main hotels, that edge is treated as dead edge and used for the service functions for the Super Market.

Plate: 3. 6 Building rear edge facing to the rear road

Source: by author

Plate: 3. 7 center court yard with fountains and seating

Source: by author

The design can be identified as an introverted kind of design similar to Nugegoda Super Market building. Which creates a center court yard with fountains and seating and all shops are arranged around the court yard in three floors overlooking the central court yard.

4. 3. 1. 2. Users and Functions Associated With the Building Edge

As mentioned, the building has created four clear edges with slightly different building elevations. Building elevation facing Galle Road and the elevation facing Station Road are almost same and provide entrances from each side. Considering these two building edges, building setback creates a transitional space between the main road and the building. As identified, this transitional space has a great potential to develop as an active social space for the town. But in existing situation, the landscaping done otherwise is created a setting for people to walk, stay closer to the edge. Thus, even in the existing situation, different individual and group behaviors can be identified closer to the building edge.

Plate: 3. 8 shady tree provides a setting for youngsters to meet

Source: by author

Plate: 3. 9 Ticket sellers has identified the prime public movement along the edge of the building
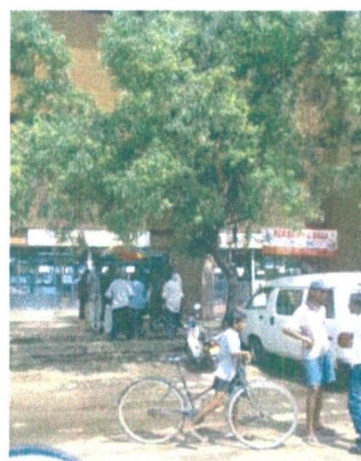
Source: by author

Plate: 3. 10 Front transitional space

Provides good shade for the people who are waiting for busses, but part of it has encroached for vehicle parking

Source: by author

Even though front and Station Road building edges has created a place for various activities to happen, rear and the CTB Bus Stand side building edges has been designed with absolutely no response to create such social space.

By linking CTB Bus Stand and the Mountlavinia Super Market, There is a greater potential to develop a stretch between the Bus Stand and the building, (an interface) which results live public space(a meaningful social space for the town); the potential has been neglected and the edge is defined using wire mesh boundary wall. Existing condition, CTB Bus Stand and the Super Market has totally separated almost from physical and visual means. Hence, that edge is only used for service access to Liquor Shop and for garbage collection.

Plate: 3. 11 Edge Facing CTB Bus Stand

Source: by author

Wire mesh boundary, which separated Super Market from the bus stand and created socially isolated land stripe in the center of the town, even though both functions are public functions no spatial or social transformation is happening,

The rear edge of the building which is facing the Service Road is almost used for service functions with no response to make a live transitional space closer to the edge. The edge has defined almost in very blank way.

Plate: 3. 12 rear edge of the building

Source: by author

It seems that no attention has taken to make it another responsive facade for the prime public building in the Mountlavinia town.
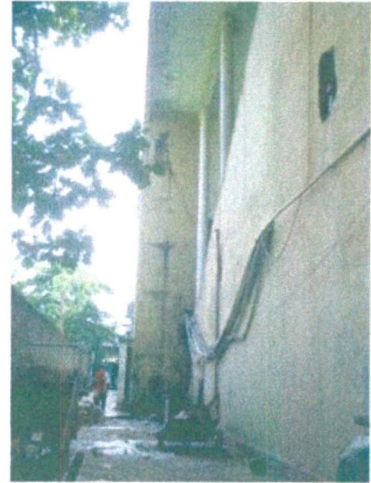
4.3.1.3 Supportiveness of the building edge for functions and activities

As mentioned, only two sides of the building are lively participate for outside activities. Those are the edge facing Galle Road and the edge facing Private Bus Stand. Physical characteristics of both facades are almost same, even though the shops are arranged in introverted manner. The visual contact provided to both edges has created the transitional space more interesting to spectators.

The landscape and shade has created a ground for people who are waiting for buses and people walking. Ticket sellers and like people also identified this potential and come closer to the building edge. Although there are active and passive areas of the edge, which can be clearly identified by following people distribution diagram.

PEPOLE DENSITY (EACH DOT REPRESENT 5 PEOPLE)
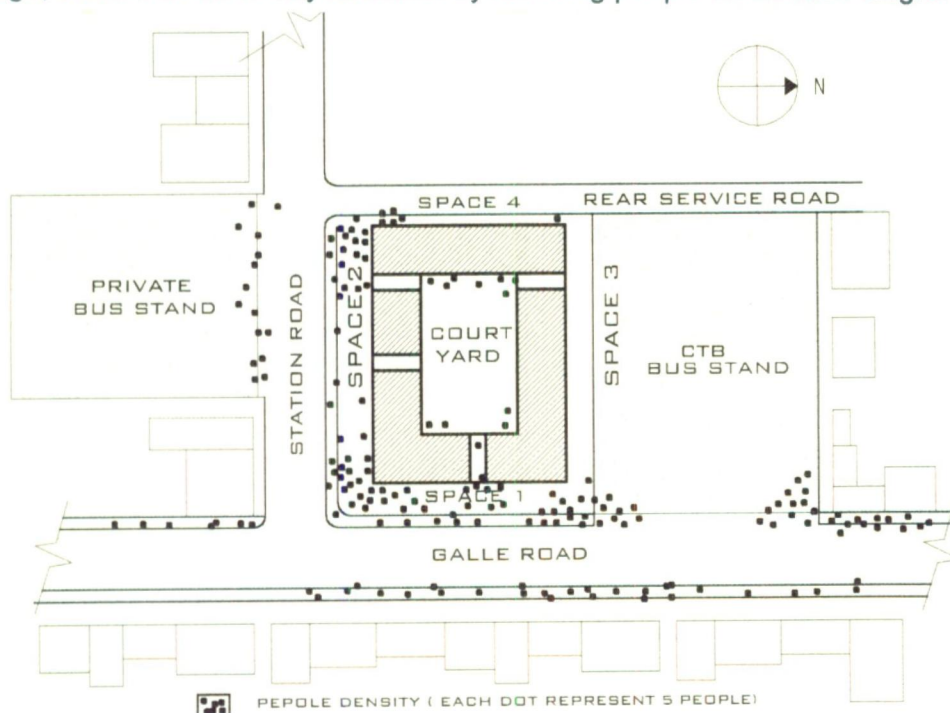
The indoor areas, which can be contributed to outdoor activities in either means of physical or visual contact, such areas can be identified as active areas. Hence, the passive areas are the areas without such contribution to outdoor public space.

Plate: 3. 13 Active areas of the building

Source: by author
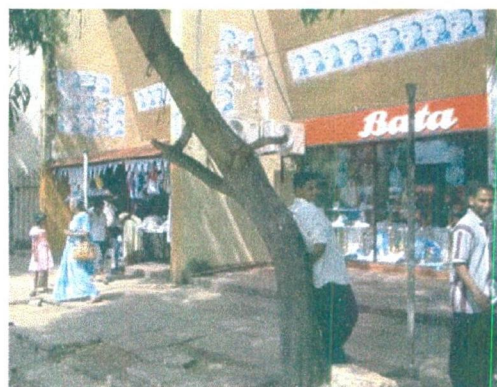
Main entrance to the Super Market has created from Galle Road elevation. As well as another entrance has created from Private Bus Stand side elevation. Both entrances take the people in, focusing the fountain and landscape area and the middle of the court yard. Even though the designer has paid so much attention to make the interior visually attractive, the building interior is not become socially attractive place.

Even though interior shops are accommodated in three levels, very few are functioning; people are very rarely visit upper floor. Hence, the interior has become an isolated place, compared to front and side building edges.

Plate: 3. 14 interior court yard and the interior edge of the building *Source: by author*
Even though designers make so much attention to make it visually attractive, the space seems to be socially unresponsive. These corridors are playing a major role in creating interior edge of the building.

Fish and meat stores are located in the west side of the interior. These shops seem functioning well, but, do not create any live contribution for the interior; hence, some of unplanned structures have been done within the court yard.

Plate: 3. 15 some of unplanned structures done in the interior

Source: by Author

Informal sector entrepreneurs have understood the way; the pedestrian floor is been constructed by shop owners.

Some areas of the exterior edge (interior as well) of the building has become socially isolated for ever and converted to garbage collection points by the side of the main corridors.

Plate: 3. 16 socially isolated areas

Source: by author
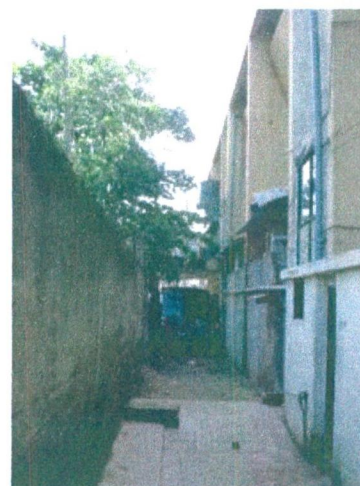
4. 3. 1.4. Implication of Responsiveness

The purpose of studying of this Super Market area is to study the responsiveness in relation to the main street. Thus, Mountlavinia Super Market is facing its two sides, and making two prominent edges with main roads, it is one of the prime examples to study the responsive relationship with the urban street.

As studied, urban street also can be identified as a part of public sphere in an urban space; with rather different pedestrian movement, activity pattern and urban

experience exist is compared to urban square. (As Nugegoda) hence, the experience is generally perceived in passing. Thus, the architectural backdrop (The building edge space) should be designed in a way, with positive responses towards streets. At present, most of the street buildings neglected the pedestrian floor and hence, they design as individual facades, which one can classed as icing on a cake. Since, the street plays such an important role in the urban context, urban street (rather than residential street) the series of activities, which provide rich urban experience is essential.

At present, most of the streets can be identified as a mix of active and passive areas. Active areas are, where the indoor areas which can contribute to outdoor space, in order to make the space interesting. Hence, passive areas are the areas free from any activity or free from both visual and physical contact with the indoor activity.

Activities within the building may benefit from being able to extend outwards into adjacent public outdoor space. When this occurs, they will contribute to the activity in the public space (in this case, the street) itself.

Plate: 3. 17 Indoor activities can be extended outwards into adjacent public outdoor space

Source: by author

The design of public outdoor space is a complex matter, (Various critical issues studied in previous chapters) when the edge is considered, (for the purpose) where that most activity takes place.

Considering above aspects (and many more) the Mountlavinia Super Market creates two edges; one with busy Galle road and the other with Station road. Both edges have been designed in a similar way; but both spaces are functioning in different

ways. During the week days, the space is used for different activities ranging from loitering to small scale informal business activities.

But during weekends (especially on Sundays) these two edges acting entirely different way; week days character completely changed by the Sunday fair, busy informal commercial activities are happening each and every space within this space. The traders have identified the pedestrian floor and select a place for their activities. Hence, the space provides various choices; thus the robustness in this urban stretch is in a higher level.

But having considered the activities at the edges, it is necessary to turn our attention to design the main body of the space. The principle for supporting robustness is to design: design settings which, as far as possible enable a variety of activities to co-exist in the public realm without inhibiting each other; this particularly effects, the way we handle vehicular and pedestrian activities. (Especially reference to the street)

The designer seems to identify the pedestrian floor along the Galle road and the Station road, hence, he provides transitional space, but he does not seem to pay attention to take the pedestrian floor through the building, which creates a good link between the interior and outside, therefore the designer paid less attention to increase qualities such as, permeability, legibility and variety.

This pedestrian floor has identified and successfully handled by some good local projects. For example, Kandy, George E. De Silva Public Plaza (In open context), and Majestic City (Building outside). Especially in Majestic City, the two streets re connected by pedestrian corridor within the building and created public center inside of the building, which creates live interior with full of people.

Plate: 3. 18 majestic city interior – "full of activities, full of people"

Source: by author
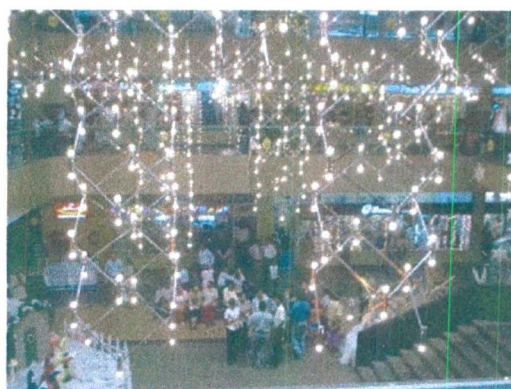
Both buildings have been designed in creating entrances to the Galle Road and side road, but Majestic City interior corridor function well between two streets with full of people. But in Mountlavinia Super Market, nobody uses that path. The problem is the choices both people offer for people or in other words the degree of responsiveness.

Plate: 3. 19 Majestic city public corridor

Full of people any time

Source: by author

Plate: 3. 20   Mountlavinia supermarket main entrance corridor

Source: by author

Become dead blank isolated space

This gives good example that, merely focusing visual, special and contextual cues, neglecting social relationships will result buildings, which creates socially unresponsive places within the urban space. The danger is the continuation of this is a good opportunity to increase crime and other bad results in urban context.

4. 3. 2. EXAMPLE STUDY TWO - SUPER MARKET– NUGEGODA
Building Edge with Reference to an Urban Public Space

4. 3. 2. 1. The design and the building edge

Super market, Nugegoda can be identified as a city center commercial building which also created fairly large public areas either side of the building. The four storied building located at the city center, plays a significant role by above two public areas (even though used for parking vehicles) and the building, which is the largest public building in the city. As mentioned the purpose of studying this particular building is, to understand the relationship of the building edge with reference to the designed city open urban space. Considering the building layout, building front is facing Main Road (Stanley Thilakarathna Mawatha) and two side roads make the side boundaries; rear side of the building is facing to the bus terminal. Thus, the building facades are facing to four different fabrics. The building has almost equal elevations for above four fabrics. Although in the front elevation prominent two entrances has been done with a small shade. There is no significant response done for four different fabrics by the building.

Plate: 3. 21 super market building
– Nugegoda

View to Stanley Thilakarathna
mawatha

Plate: 3. 22   Super Market, Nugegoda
Front entrance to the public urban space.

Source: by author

Plate: 3. 23 The key layout of the building reference to the main roads
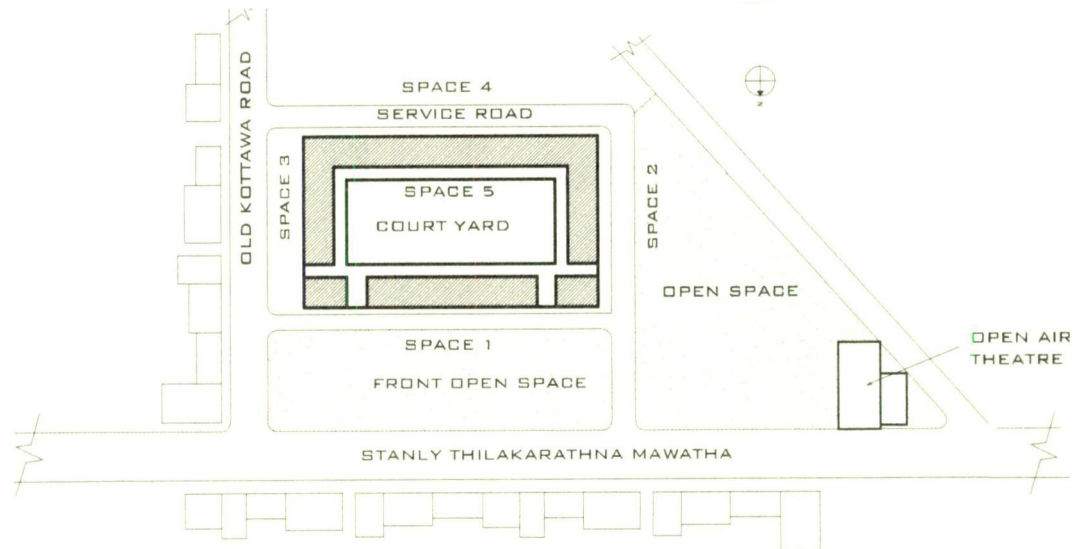
The design can be identified as an introverted kind of building where all the shops are facing to the inner court yard and the interior corridors. Shops are arranged either side of the corridors and around the central court yard. The central court yard plays a significant role in building interior by visual and spatial means creating another open public plaza for the users. Even though the design has done in a way to locate interior corridors facing and overlooking the interior public place, the plaza does not seem to be acted as a live public space.

Plate: 3. 24 inner court yards and the corridors facing and overlooking the open public plaza

Source: by author

Plate: 3. 25 the shops are arranged either side of the interior corridors

Source: by author

Therefore for the ease of the studying of the role of building edge, five different spaces can be identified as follows.

SPACE ONE

This is the front facade of the building facing the Stanley Thilakarathna Mawatha, overlooking the main public area. (Parking area now) Two prominent entrances were done in this building facade, taking the people from public open space.

Plate: 3. 26 Building facade facing Stanley Thilakarathna mawatha

Source: by author

SPACE TWO

This is the building facade facing to Ananda Samarakoon Open Air Theatre. Further this building facade facing to one of the successfully designed urban space around the Open Air Theatre.

Plate: 3. 27 Facade facing to the open air theatre

Source: by author

Plate: 3. 28 view from the open air theatre

Source: by author

Plate: 3. 29 stairway and the balconies overlooking the open air theatre

Source: by author

SPACE THREE

This is the facade facing the Old Kottawa Road. The building has successfully setback from the main road and created a public space between the building and the main road. The landscaping seems to add quality to the space, but the mere structures done (may be after completing the building) within that space, has ruined the liveness and fragmented the prime social space. Hence, now that space is occupied by beggars and converted to a place for collection of garbage.

Plate: 3. 30 view from old Kottawa road

Source: by author

The structures done within that prime space has fragmented the space where no one will tend to use it lively. And no activities can take place,

Plate: 3. 31 structures done within that prime space

Source: by author

SPACE FOUR

This is the facade which is facing the bus stand or where the service access to the super market is located. Later done meat and fish stalls has created an unplanned situation where people can hardly use it comfortably. Loading and unloading bays has arranged in a way to overlap with the pedestrian floor to the fish and meat stalls.

Plate: 3. 32 rear side facade of the super market
Source: by author

Plate: 3. 33 unplanned structures arisen from the new facade

Source: by author

Unplanned
structures done
by
Various people

SPACE FIVE

This is the building interior facade and the edge. The edge is defined by colonnaded corridor, bounding the central court yard. (Open space) The setting has done in a way that, to link the space visually through the court yard, but the space is seemed be encroached by various informal sector business people.

Corridors seems to have later encroached by various informal sector business activities

Plate: 3. 34 interior corridors

Source: by author

4. 3. 2. 2. Users and functions associated with the building edge

For the ease of identifying the edge, same categorization can be used, such as Space One, Two, Three, Four and Five in relation to building facades. It is understood that in order to facilitate socially attractive urban places, the associated buildings, which define the urban space should create live, responsive edges towards the urban space. In such context, even though Nugegoda Super Market is facing three different physical fabrics, the edge is defined in same way.

The edge has finished in a way which does not seem to be supported for the outside activities. Even though in the front edge near entrances, small lobby area is created, there is no prominence to lively take the people in or the edge does not act as a live interface, which clearly communicate with the people by telling the choices available within the building. The edge in other words has defined in a sharp way that does not allow people to stay or to use the space as common place. The entrance directly takes the people into the building and let them connected directly with the

commercial activities. As discussed the edge should act as a space especially in such urban public building; to communicate with people.

It is obvious that, both public urban spaces defined in front and side of the super market is full of vehicles. It never factions as a live urban space with full of social activities. One of the purposes of defining the open urban space in the city center is to create a social place for the town, which was lacking in the Nugegoda town (even though there is a great potential to create meaningful social space for the town). This is a prime example to understand that, urban space should provide with suitable functions and such functions should be supported by the setting. Hence, the building edges will play a major role in creating such responsive settings.

As discussed, the urban ambiance can only be created by understanding the people, and their behavioral patterns in the urban space. The reason for emerging such socially isolated urban spaces (Even though full of vehicles) is because: the designer's less attention to understand the socio spatial issues of the Nugegoda Super Market. Hence, he has created a building facade, which does not offer any choices for the people in adjacent public space. This reason takes the people away from the building edge. (That resulted the parking space at the edge)

FRONT EDGE

Edge is away from people. The edge is became a parking space by blocking even the pedestrian floor around the building.

Edge and the public space not connected, thus the interior is separated from outside which created passive areas around thee building.

Plate: 3. 35 building front edge, *source: by author*

Plate: 3. 36 two side edges are away from people

Source: by author

INTERIOR EDGES

No response to the central court yard and corridors become merely to walk.

Plate: 3. 37 interior edges

Source: by author

Dead or socially isolated central court yard

4.3.2.3. Supportiveness of the Edge for the Functions and Activities

The different users of urban space by different groups in different settings will depend on the choices offer from such settings, or in other words, it can be said that, in a defined urban setting; as designers we should provide appropriate choices to cater to different groups.

Since, Nugegoda Super Market is located in a city center, defining two clear urban public areas, consideration of user groups and their choices play a major role. As

mentioned in the previous chapters, merely the defined public space only cannot accommodate them or cannot be offered them different choices. The edge buildings should act as activity packets, in such context, creating live mix of different activities. Here the study stressed on choices. According to Bentley et al. (1985) the design of a place effects the choices, which people can make at any levels, such as permeability, variety, legibility, robustness, visual appropriateness, richness and personalization. What all about are the characteristics of responsive environment.

The purpose of selecting Nugegoda Super Market as an example study is to understand, how the building edge act in relation to urban public space. In order to do that, following diagram can be used to analyze people and activity distribution within the building and its periphery.

Plate: 3. 38 people and activity distribution diagram
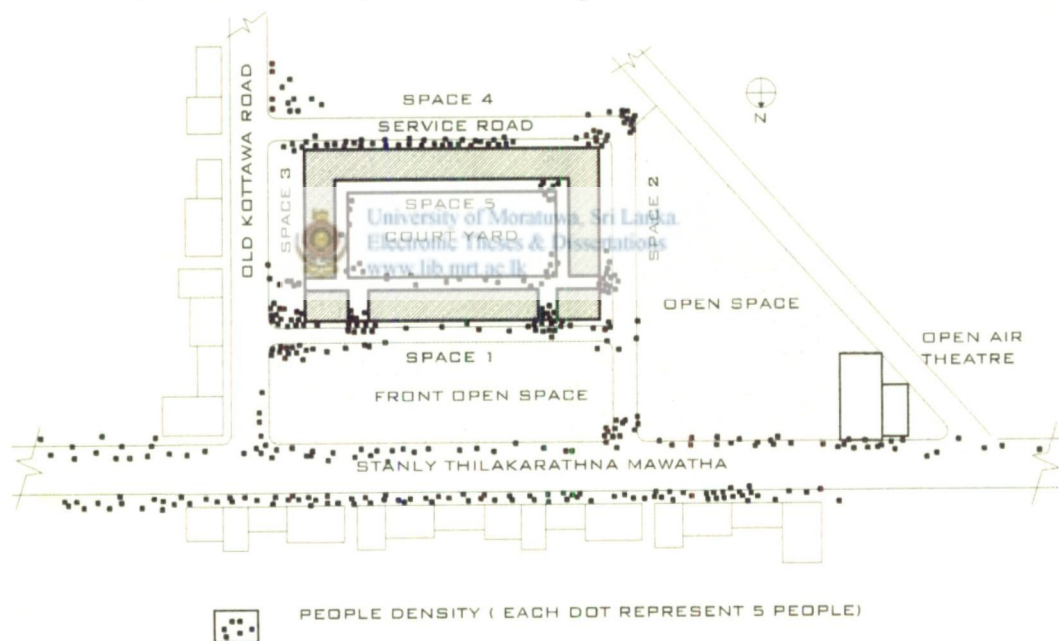
Stanley Thilakarathna Mawatha from Super Market to "Bo- Tree Junction" (Diagram 4. 1), the street is always full of pedestrian movements; either side of the street is almost all the time is full of people and live activities. (Most of them are informal commercial activities)

Plate: 3. 39 Stanley thilakarathna mawatha

Full of people with live mix of activities

Source: by author

But the Super Market area and adjacent urban space is occupied by comparatively very small number of people and almost no activities happen, unless parking vehicles. The purpose of creating such urban space to accommodate above people and activities. It is important to find out what is missing in the urban space.

We here stressed about the building edge, but it does not mean that the building edge only can fulfill all what has missed. However, it is obvious that supportive building edge can provide positive impact for socially attractive urban place.

The people and activity distribution diagram (Diagram 4. 0) gives following insights.

- One corner has acquired by a row of shops by creating their own structures.

Where pedestrian floor is high, even though building does not cater to that, there is a greater potential to encroach such spaces by informal sector commercial activities.
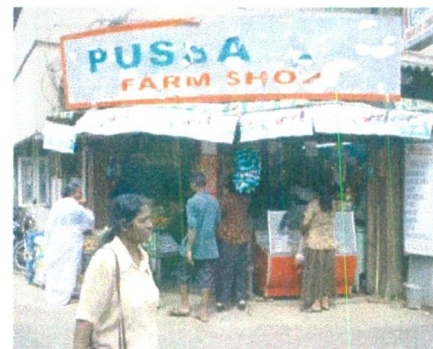
Plate: 3. 40 Informal sector commercial activities   *source: by author*

79046

- Edge facing to Old Kottawa Road (Space Three)

  Even though there is a greater potential to create attractive social space, by landscaping, the mere horrible structures ruined the liveness of the space, hence, beggars tend to achieve that space.

Unplanned structures have fragmented the potential for prime social space.

Plate: 3. 41
unplanned structures

Source: by author

Front edge has become a parking place for vehicles. This has resulted because of the interior activities are not connected with front space. If they connect at least visually, the space will become live pedestrian space for window shopping.

Plate: 3. 42 the passive areas
in the building edge

Source: by author

Upper floor balconies and stairways leading to upper floors, no one seem to use that because they are not placed in a way considering the pedestrian movement, hence, almost all the balconies facing out side overlooking streets and public spaces has become garbage store for individual shops. And Balconies have become prime areas for advertising.

4. 3. 2. 4. Implications of responsiveness

In order to study the building responsiveness predominantly with reference to adjoining public spaces, and reference to the main streets, a set of measurements is needed. In previous example studies, it is used the people and activity pattern. In order to analyze the degree of responsiveness, the responsive environmental characteristics can also be used, such as permeability, legibility, variety, robustness, visual appropriateness, and richness and personalization qualities. Above qualities will depend on different choices that the building (For the purpose the edge) will offer. For the purpose, rather than analyzing how above qualities work within the building, it is important to study their possibility of integrating and applications with Nugegoda Super Market area.

The quality, permeability effects on the choices to know where people can go and where they cannot. This quality should be emphasized from the design from the beginning. In Nugegoda Super Market, two entrances have been highlighted, and all movement paths are arranged interior, around the court yard. Even though the stair ways leading to upper levels are exposed, and done externally, the locations are not appropriate; hence, people refuse to use them. That resulted less number of people use the exterior of the building.

Robustness affects the degree to which the people can use a given place for different purposes, especially the edge facing a public urban space. Therefore the building edge also needs to accommodate or offer choices for different groups who are using the urban space. But Nugegoda Super Market, the edge does not offer any choices to make it use as a social space.

Especially for a building which facing an urban public space, legibility plays a significant role, by communicating people, about the opportunities it offers. For this purpose, as mentioned two legibility levels are important, the physical form and the activity pattern. For Nugegoda Super Market area, even though the form can be accepted, but the activity pattern the form provides, is not match with the activity pattern of the public area or the street. This creates a spatial fragmentation or in practical means, people are trying to come closer to natural activity areas. Therefore it can be said that the design has failed to understand the social dimensions of the built environment, which ruined the potential to create a meaningful social space for Nugegoda town.

4. 3. 3   EXAMPLE STUDY THREE

BUS TERMINAL - AMBALANGODA

Building edge with reference to the function of the building

4. 3. 3. 1 The Design and the Building Edge

Bus stand at Ambalangoda can be identified as one of the successful simple design in terms of social and spatial point of view. The design provides meaningful social spaces for the people who are on transit. The spatial organization in ground and first floor has done in way with careful consideration of user activity pattern and their behaviors. Therefore, the edge of the building (especially the front, facing Galle Road is treated as spaces; where people can comfortably use in any time)

As a contemporary design, the Architect has clearly understood the social and spatial dimensions of a bus stand and seems to have appropriately applied for the small town, Ambalangoda. As a gradually developed town along the Galle Road; the Ambalangoda town was needed a building to integrate important spatial elements of the town such as (old and new Galle road, Railway station); and in visual and spatial means the town was needed a place or a land mark, which was lacking in this town. The designer seems to have answered above questions successfully by this simple clever design.

Plate: 3. 43 Bus terminal
Ambalangoda view to Galle Road

Source: The Srilanka Architect, 2001:17
Vol. 103 No. 02

Plate: 3. 44 Building layout

(For the purpose of understanding edges and immediate context)
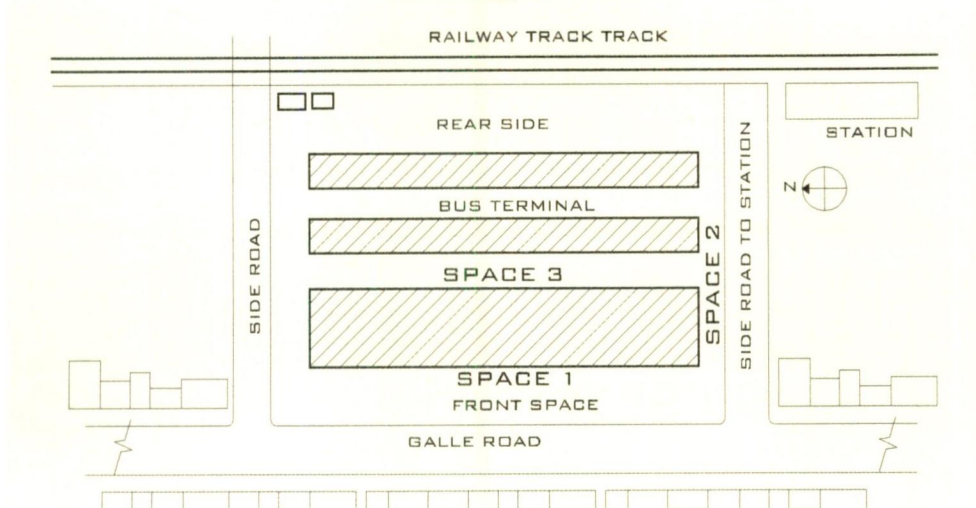
The bus terminal front is facing busy Galle Road; with a set back and three blocks of buildings are located parallel to Galle Road. Main block facing Galle Road and has two floors accommodating rows of shops. The spatial arrangements at both ground and first floor are more responsive to social needs and the expression of architecture and language is more people friendly. Therefore the space is more responsive to social needs of the people who are on transit than commercial needs.

The scale of the building and the architecture seem to harmonize with the existing shops located and packed either side of the Galle Road. For the ease of examine building and the edge can be identified as four spaces.

SPACE ONE

Space between the Galle Road and the main block. The colonnaded double height, space in the front and the shaded canopy provide comfortable space for the people.

Plate: 3. 45 Space between the Galle Road and the main block

Source: by author

SPACE TWO

Side spaces of the building

Plate: 3. 46 Side spaces of the building

Source: by author

SPACE THREE

Space between two building blocks and the edge

Plate: 3. 47 Space between two building blocks

Source: by author
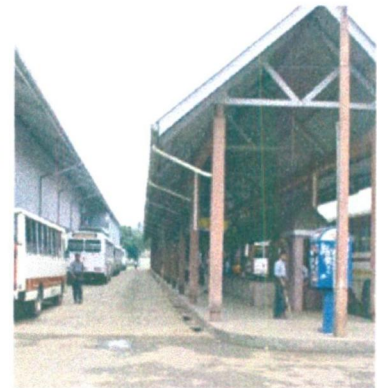
SPACE FOUR

Interior lobby space for the people and accommodation of commercial activities

Plate: 3. 48 Interior lobby space
Source: by author

The building form and the way the edges have defined, is appropriate for the function of the building as a terminal. Even though present designers tend to give priority for the functional bias in such transits, Merely too much respecting the function will take the designers away from the shaping the design in terms of social and spatial means. In such context, the edge and the spatial arrangement of Ambalangoda bus stand can be identified as transparent; where there is no sharp clear cut edges; hence the users are given the opportunity for their choices to select the way of behaviors.

Plate: 3. 49 Transparent edges with shade

Source: by author

Users have maximum opportunity for their choices; hence wide range of behavioral patterns can be identified within such spaces.

4. 3. 3. 2. Users and functions associated with the building edge

As mentioned, the edge has been defined, and treated as a space; and careful integration of function in selected locations has become the edge as "socially vibrant place". The designer has treated the four edges (according to previous four places) differently. Hence, the socio-spatial arrangement has created four types of settings; which are slightly different from one another as identified in the previous topics.

1. The Front Edge

Plate: 3. 50 Front edge of the building as a space

Source: by author

Front edge of the building is treated as colonnaded double-height verandah in between the shops and the main-road. Making the area pedestrians, and act as the main entrance of the bus stand, further the two prominent stairways leading to upper floor is accommodated in the front edge. This has made almost live verandah adjacent to main road. There fore continuation of the street is also achieved by introducing shops for the front space.
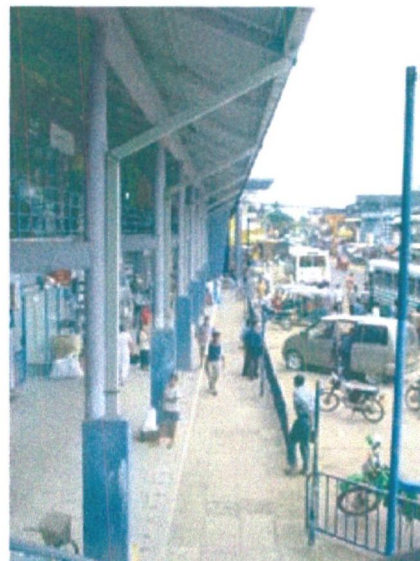
The setting which accommodates shops and the people, who are on transit, is done in a way where the activities are integrating but not blocked or disturbed. Therefore the shop windows are placed considering pedestrian movement without disturbing and blocking it.

By visually and physically integration of commercial activities enhances the legibility of the space. Hence the front space can be identified as robust space; where the spaces can be comfortably used for different purposes. (Commercial, People transit, waiting, etc.) Therefore the space can be identified as a "socially responsive place".

This quality has been successfully achieved, and thus the front facade or in other words, the interface between the Galle Road and the bus stand has identified as a "transitional space" and treat the space with positive responses; which are appropriate with function; created ever-live social space for people who are on transit.

Plate: 3. 51 front edge as a space

Source: by author

Front edge as a space, provide the continuation of street facade as well as become a good interface between the road and the bus stand

Upper floor balconies

Over looking the public space below and visual contract with street makes the space more people friendly.
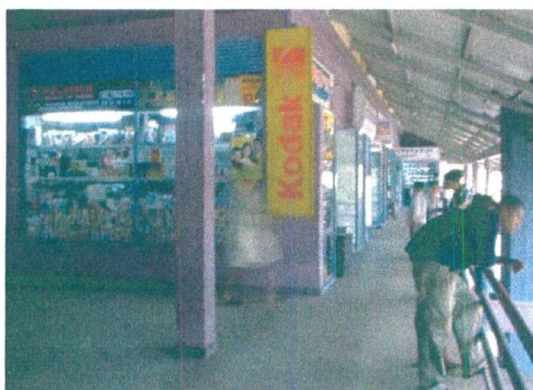
Plate: 3. 52 Upper floor balconies
Source: by author

Stairway leading upper floor

Stairways are located either side of the front transitional space, thus people can easily find their way; hence the space is more "legible".

Plate: 3. 53 Stairway leading upper floor

Source: by author
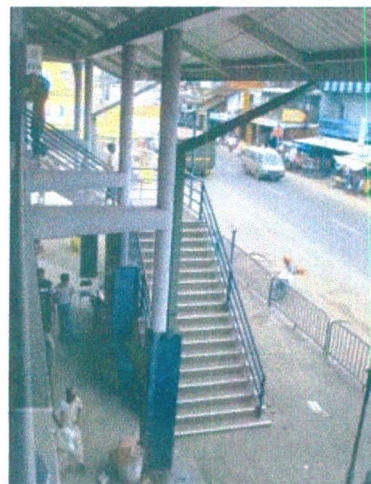
Architecture is people friendly…

Detailing and use of colors are simpler and people friendly; proportions are match with human scale. This makes the space more people friendly.

Plate: 3. 54 Detailing and use of colors

Source: by author

In visual and spatial terms the building has created a social space and a land mark for the Ambalangoda town.

2. The building side edge

Plate: 3. 55 Building side edge view from railway station exit

Source: The Srilanka Architect:
2001:17 Vol.103, No.02

Side edge seems to be merely treated as open building edge only with jutted out balcony in the upper floor. This has not done in a way with considering social transformation, even though the Architecture is treated and continuing the same language. Compared to front facades, the side facades are not treated as a space.

Plate: 3. 56 Building side edge
Source: by author

Therefore the designer seems to pay a less attention to create a socially attractive edge in the side, even in the right facade, where which links Railway station and Galle Road. The edge has not provided with positive response. Therefore compared to front facade, the aliveness of side edges is less.

Therefore the building façade towards the station haven't responded properly to that particular pedestrian floor, hence it is not acting as an interface between two transport modes in order to facilitate proper spatial transformation.

3. Edge Between Two Blocks

Plate: 3. 57 Edges between Two Blocks

Source: by author

The edge between two blocks is used for loading and unloading passengers from busses. Thus, the arrangements of bus stops are linear along either side of the two small blocks. Therefore each block created an edge, which facilitate users to get on to a bus comfortably. Hence the edge has defined predominantly for the function.

4.3.3.3. Supportiveness of the Edge for Functions and Activities

Below layout plan can be used to represent the people density within the building periphery in a given time. For the purpose of study, below map is representing the people density in a weekday evening. The pedestrian movement (social transformation) through the building gives following insights.

- Most of the users at Ambalangoda have perception, which the building front edge of the bus stands as a common social place in the town. (Which was lacking in this town)

Plate: 3. 58 people density in a weekday evening

PEOPLE DENSITY (EACH DOT REPRESENT 5 PEOPLE)
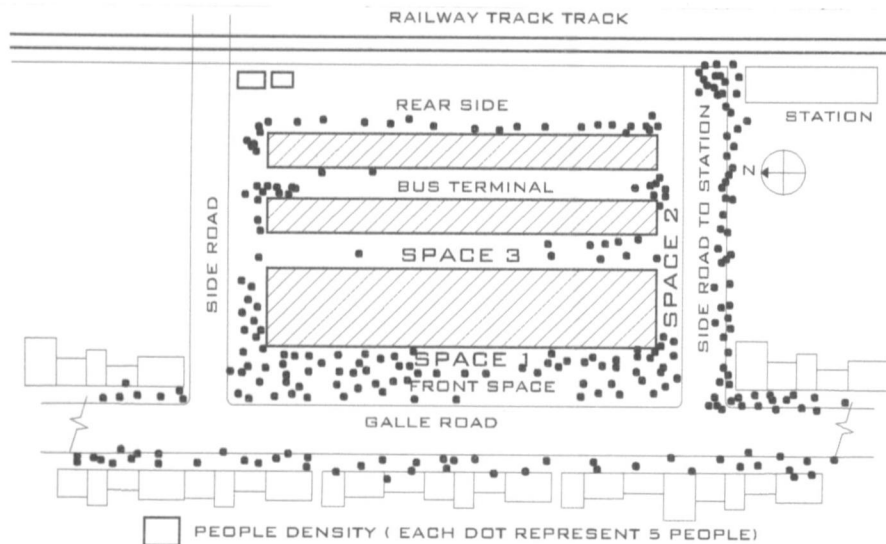
- Building has created a landmark for the Ambalangoda town where outsiders can easily imagiable the city center by the new bus terminal.

- Most of the people have a perception, that, they have an attachment and sensitivity to the urban space created by the building front.

- Building front act as a city center to Ambalangoda, the design of public front and the responsive facade has created a meaningful social space.

- Most of the people use the front space as well as path created linking the Railway Station. Therefore major pedestrian movements can be identified front space and left side open space in the building. Therefore, it can be said that, the front facade has provided a good response for social space, but right space has not clearly defined in terms of pedestrian movements in between the station and Galle Road. Thus, that building edge can be further improved with positive response considering the user activity pattern.

The supportiveness of the edge and people interaction involve basically on three areas.

1. Knowing something
2. Feeling something
3. Doing something about it

Therefore, individual and group behaviors are supported by simple design elements of the building. (Rapoport 1977) hence, specific areas can be identified according to the way, that the people are using the setting. These different activities will create a rich mix of behaviors, which makes the space a live "social space".

Setting for shopping

The edge defined for commercial activities

Plate: 3. 59 Setting for shopping

Source: by author

Space for waiting and relaxing

The upper floor corridor overlooking the Galle Road

Plate: 3. 60 Upper floor corridor
Source: by author

A clear separation of pedestrian and vehicular movement provides safe pedestrian area.

Plate: 3. 61 separation of pedestrian and vehicular movement

Source: by author

4.3.3.4. Implications of the responsiveness

Thus bus terminal Ambalangoda can be identified as a successful design, which focuses social and spatial aspects of the environment rather than emphasizing visual qualities.

The implications of the responsiveness in the building can be clearly identified in terms of the functions of the building. A bus terminal, which should create a social space for the people who are on transit, is clearly achieved. By creating meaningful front responsive social space, which even accommodate other functions like commercial activities.

The merits of responsive design can be identified clearly within the vicinity of the building. Socially unresponsive buildings, especially their edges create numerous problems (as discussed in previous chapters) has clearly solved in this simple design. Functional fragmentation or misused areas cannot be found in this building periphery. Each edge or the corners has treated with proper responses in order to create appropriate settings. Hence, the human behavior and activities are happening in a controllable and harmonized way.

Socially responsive edges do not create spatial fragmentations. Instead, such spaces generate sensitivity and attachments of people. Considering Ambalangoda bus stand, it is understood that, there are no misused or dead spaces. Almost all the places are used by the people; predominantly for transport function. Therefore land encroachments by informal sector enterprises, which denies public areas cannot be seen in this building and its periphery.

The building edges create good relationships with adjacent functions and activities, or in other words, the edges provide good responses. The responsive Architecture link human values to activities and places (Perera, 2001, 19). Hence, by studying the edge of bus terminal Ambalangoda, the study focuses the attention to socially responsive edge with building function, which provides proper settings for social (as well as spatial) transformation.

4.3.4. EXAMPLE STUDY FOUR

<u>BUS TERMINAL – MATHARA</u>

Study of the building edge reference to the design bias of the building

3. 4. 1. The design and the building edge

"Our *understanding of Asian urban space, no space exists or no place making happens, without conducive activities and social interaction*". (Perera 2001: 19)

In such grounds, the Ambalangoda bus stand's building edges were studied as socially responsive spaces (in example study three). But in similar grounds, bus terminal, Mathara can be seen as "socially unresponsive" design. Because the design is not strong enough to provide: social transformation required for a bus terminal, or in other words, the design has failed to provide proper architectural setting required to create meaningful socially responsive space.

Plate: 3. 62 Bus terminal Mathara view to Galle road

Source: The Srilanka Architect:
2001:17 Vol.103, No.02

It is understood that Ambalangoda bus terminal in the design itself identified the patterns of social spatial transformation cleverly. But when it comes to bus terminal, Mathara, the designer seems to focus his attention more too physical context and neglected the important social interaction required for such urban public building. Respecting too much for the adjacent Dutch fort and Dutch Architecture has resulted socially unresponsive design for the new bus stand.

It is examined that the Ambalangoda bus stand has contributed to create a social space for the town. When it comes to Mathara (compared to Ambalangoda), the city has much social places (Beach promenade, the fort, etc.). But what lacking was a

social place in the center of the town, which can integrate the other places of the town. The new bus terminal has come to the site; in such context, but over respect paid for the Dutch fort has lost opportunity to create such socially responsive place for the town.

Even though, the location provides good public open space between the Dutch fort and the bus stand as well as provide good visual link to the sea and the beach promenade.

Plate: 3. 63 building layout
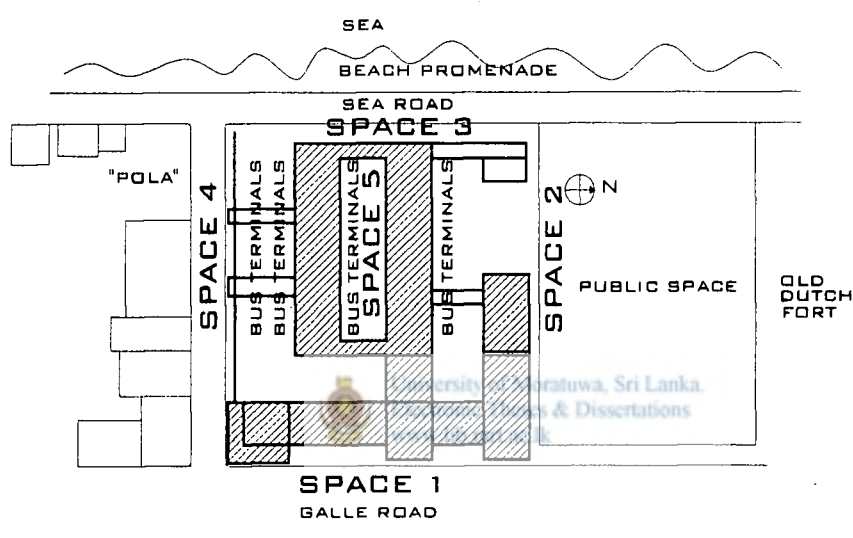
The building faces its three sides to main roads and one side to the public space. For the ease of the study, the building edge and its adjoining spaces can be identified as five spaces (for the ease of study).

SPACE ONE

Front edge and its adjoining space between the Galle Road can be identified as Space one. Main entrance of the building located at this front space and the building is clearly, created a landmark in the town. But the building edge does not seem to provide proper responses for the activities nor created for the responsive interface between the main road and the bus stand.

Front space

Plate: 3. 64 The interface between the Galle road and the bus stand

Source:
By author

SPACE TWO

The facade facing to public space between the bus stand and the Dutch fort, this edge is almost defined as a sharp edge, where it does not provide any space for the people. Even though in the upper floor corridors provide visual link to public space; it is not done in a way to link the people with the open public space.

Plate: 3. 65 Facade facing to the public space

SPACE THREE

This is the building edge facing to the Beach promenade and sea. This facade is also act as an interface for the people who enter to the building from the main road in seaside. There is no clear definition of edge, hence any clear demarcation of space

for any activity, unless turning circles for buses. Hence no special responsive setting has created.

Plate: 3. 66 Building edge facing to sea side

Source: by author

SPACE FOUR

This is the building edge facing to side road. The edge of the building is defined from a wire mesh boundary wall with two gates for the people to enter, even though the entrance is covered with a steel gate, this edge is also defined as a sharp boundary. Hence, this does not provide any space for people and activities, but since two gates are there, three wheelers encroached the edge of the building.

Plate: 3. 67 The edge is designed as a wire mesh boundary

Source: by author

SPACE FIVE

Space five is the building interior facades, which provide settings for the people get on and get off from buses. The response for the function is done well, but in terms of social dimensions it is a socially unresponsive space.

Plate: 3. 68 building interior spaces

Source: by author

4.3.4.2. Users and functions associated with the building edge

As already discussed urban public building edges have a great potential to act as a transitional space or in other words interface between the public and private domains. Further it is understood that, the edge as a space has a clear potential to become a responsive social space for the urban environment. A setting appropriate for such responsive environment will form by careful integration of activities and suitable physical elements considering people behavioral patterns. (EBS)

Thus, at the Mathara bus stand, the edge seems to have defined as a sharp edge, without treating it as a space for socio-cultural behaviors. The designer's intention was to physically respect to Dutch fort, hence the edges has designed almost as a rampart. Therefore too much respect paid for visual qualities has created social unresponsive spaces almost around the bus terminal.

Edge wall designed as "Rampart" does not seem to create any responses for users and their activities.

Plate: 3. 69 Edge wall designed as "Rampart"

Source: by author

Edge facing to the public space (between old Dutch fort and bus stand) has defined sharply, where the social response is neglected, hence become a socially dead space, the opportunity has created unplanned parking space close to the edge.

Plate: 3. 70 socially isolated building edge facing the main public space of the town

Source: by author

South facade has treated almost like clear cut, fence using half boundary wall and the wire mesh boundary. The fence feeling will further emphasized by fixing two huge steel gates in the same boundary wall. This makes the socially unresponsive edge and, hence it is encroached by three wheelers, which blocked the pedestrian movement in the pavement.

Plate: 3. 71 wire mesh boundary

In the south building elevation

Source: by author

Plate: 3. 72 South facade has treated almost like clear cut, fence using half boundary wall and the wire mesh boundary

Can this create socially attractive building edge for the town, for function or the activities?

Source: by author
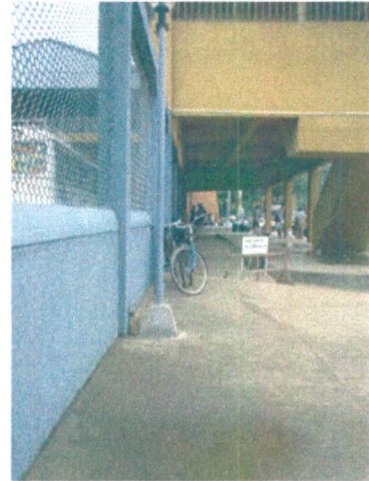
Plate: 3. 73 Upper floor "empty corridors"

Source: by author

Upper roof terrace, even though it provides nice public plaza, why people neglected to use it, it is not only because they accommodate it in upper level; but clearly that has not defined in social responsive way.

Plate: 3. 74 Upper roof terrace

Source: by author

The pola and the beach promenade seem to functioning well in one opposite corner closer to the edge and the social transformation has seemed to neglect completely. Thus, "the promenade" as an important spatial element in the town there is no proper response paid for the "promenade" function.

Plate: 3. 75 pola and the beach promenade

Source: by author

4.3.4.3. Supportiveness of the building edge for functions and activities

Following key plan can be used to analyze the people density and activity distribution within the vicinity of the building.

Plate: 3. 76 people density and activity distribution diagram
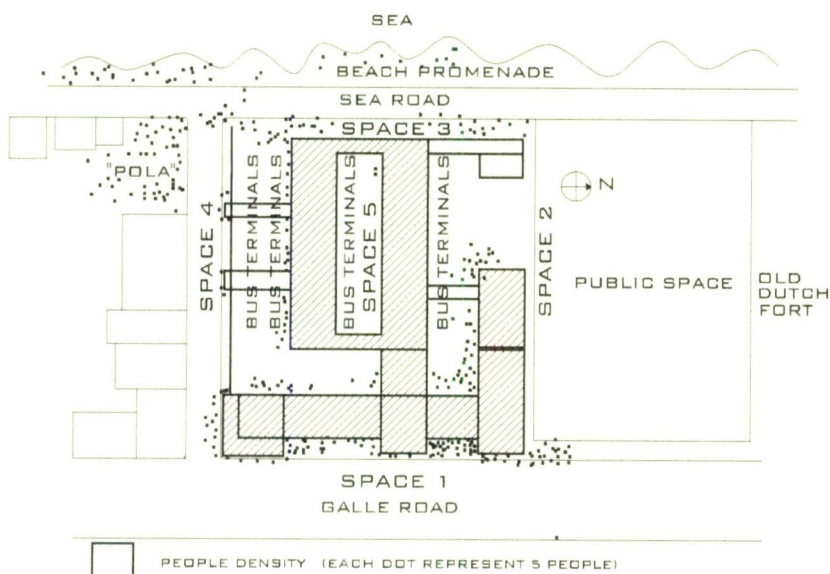
By carefully studying the people distribution, it is clear that the people are concentrated in few places of the building, especially in the front, main entrance obviously and the building edge facing to the beach and promenade.

Above people distributions give following insights, which will help to understand the nature of activities, their distribution and the relationship of the edge with activities in deed.

- People are concentrated at the front edge of the building; this is where the designer has created the main entrance from the Galle Road. People who are on transit will use this space and few commercial activities introduced either side of the pedestrian path, has seemed to get blocked by commercial activities.

- Building edge, facing the sea and the Beach promenade is also concentrated with people, even though there is no proper response. The visual link to the sea has created a setting for them to wait a while.

- Building edge facing the public area (between the Old Dutch fort and the building) is almost free from people or almost created a dead space. No response has made from the building (except upper floor balcony visual link) to the important spatial element in the Mathara town. Hence that space has become a parking lot.

- South edge of the building has defined by half boundary wall and the wired mesh fence; hence obviously it will not provide any response for the activity. Instead clearly separates the building from the south main road. The edge has given a setting for three wheelers to parking closer to the edge and almost vanishing the prominence of a live pavement.

- Space in between wings has defined to park buses for loading and unloading passengers. The setting created by that edge seems to play a role appropriate with function but not created a social space.

- Thus people often tend to cross this space, because the definition of the space is not strong enough to direct people along the center corridor. This has resulted the overlapping of people and vehicle movement at most of the places in the new bus stand. Therefore the design has lost the opportunity to create social responsive space for the town. The reason is the less prominence given to understand the relationship between social processes and spatial transformations and the too much respect paid for the old Dutch fort has take the designer away from the awareness of the interaction between the spatial and social change.

4. 3. 4. 4. Implications of the responsiveness

"*Responsive is understood as where human values are linked to activities and places in order to create an image that portrays the true nature of that environment*". (Perera, 2001: 19) In such base the Mathara bus stand can be identified as negative responsive building. For the purpose of this study, it is necessary to find out the responsiveness within the building and how it has been ruined by the design bias.

It is understood that the respect paid the Old Dutch fort has become the primary issue in the shaping the building. Hence, the edge has been treated as; sharp edges almost like rampart walls, which never ever contribute for a live social setting. The argument does not mean that the edges cannot be shaped as rampart walls, instead the study stress about the lack attention paid for create the wall friendlier to the users.

In means of legibility and the robust qualities of the space, the activities seem to have rigidly defined and the choices given for the users to change the setting and make it their own is absolutely zero. This argument also should mention that there should be a mutual balance; otherwise all other problems will arise. (Spatial fragmentation and privatization)

Even though the building creates spatial links (transformations) for beach, promenades, main road, pola, etc. social link is not happened as well as even though the upper floor; is completely dead and become a socially isolated place. The study stresses that the less prominence paid to link such spaces not only visual but also in the means of social transformation; has created unresponsive places.

Especially when in Ambalangoda bus terminal, the spaces are more legible and robust; people friendly architecture has provided good support for the setting. Where as, in the Mathara bus stand, the expression of architecture is not people friendly. This is merely not the reason, then why the human scale upper floor has become a socially isolated space? Why the corridors are dead even though properly match with the human scale and friendly detailing. The answer is the stress of the study, that is the social responsiveness, or in other words human values are not linked with the space, a question of lack of response for social transformation.

Hence to find the reason for the spaces are being unresponsive is, obviously the Rapport's behavioral cues. Further, Rapoport defines generating of appropriate behaviors depend on two aspects, the emotions (psychological motions) and actions (obvious physical motions) within transition spaces provided appropriate behavior cues and their meanings provided causes, arousing, regulating, and sustaining emotions and actions, (Rapoport; 1977) in relation to the spatial experiences. These transitional spaces may be recognized as built (enclosed) or semi enclosed spaces and outdoor spaces. (Rapoport (1977) as quoted Jayasinghe, 1999, 38)

Hence, mere introducing functions and places making for activities will not create responsive spaces; it needs certain amount of analysis; how the setting generated appropriate behavior and perception about the space is crucial or linking human values into the space (Dayarathna; 2001) should need to be essentially considered.

Chapter five

CONCLUSIONS

CHAPTER FIVE

5. 0. CONCLUDING REMARKS OF THE STUDY

5. 1   General Conclusions

5. 2   Specific conclusions

5. 3.   Final concluding remarks

The main study concentrated on the "Responsive urban building edges" has clearly identified the various issues, facets and aspects related and central to the objective. Since the study is rooted into such wider aspects (as discovered); it is necessary to link and arrange them with insightfully in order to derive the lessons learned through analysis. Thus, the conclusion chapter is divided into three parts namely as;

- General concluding remarks
- Specific conclusions and
- Final conclusions

Remarks which are common and general to the study area in all situations studied will be discussed under general conclusions. There are specific issues and facts that were discovered in each example study: with reference to its operational level in the urban setting. Thus, identified specific issues will be discussed under specific conclusions. The final conclusions will be used to present the implications of responsiveness (as an essential quality) in urban space referring to "Architecture", "Architect's role", "Design circumstances", "An urbanity" with an insight towards long-term objective.

5. 1. GENERAL CONCLUSIONS

- In the field of Architecture, "**Responsiveness**" is generally understood as a term, which is used to define certain set of qualitative aspects in the built environment. But in a wider perspective, the study identify the "Responsiveness" as a quality, which helps to create an appropriate environmental image in ones mind (may be a group) by linking human values into activities and places.

- In the field of Architecture, the space or the place making is described with reference to activities. Therefore the intrinsic nature of a space or a place is, however they are connected with human activities, in the stage of built environment. (Madanipour 1996) (Perera 2001),

- It is understood that, the "**Responsiveness**", as a quality, which maximizes the degree of choices for the users, in order to enrich their opportunities in a setting. Therefore such places are identified as "**Responsive Places**".

- The study stressed on "**Urban Space**". Because, as identified, it is the place, where activities and social interactions are happening at highest level in a given time. Thus, it is understood that, in an urban space, social and spatial attributes are "**intertwined**" in a complex manner. That can never be separately considered as two things, thus, the need of understanding the relationship between social and spatial attributes is needed.

- The above relationship sensitively studied, analyzed, and understood by using appropriate Literature Survey. This provided a proper base for analyzing the role of "**Building edge**" and its supportiveness for activities and behaviors.

- "Responsiveness" is identified as broad and has many levels in the built environment. Therefore, different ways of identifying the quality, "**responsive**", was needed. Therefore, understanding the social aspects of the built environment and the mechanisms that, link people with the built environment was essentially needed. Rapport's (1982) Environmental Behavioral Studies (EBS) and fixed, semi-fixed, non-fixed elements which create "ambiance" provided a sophisticated analytical tool (Theoretical Base) for the study.

- The prime study area for the dissertation is the "**Urban Building Edge**". Therefore, above theoretical base helped to identify the urban building edge as an important urban element, which has a great potential to act as a successful urban space where, social and spatial means for the rich urban experience.

- Therefore the "Urban building edge" is identified as a "**Transitional Space**", by considering the edge of the building as a thing, a place, a zone with volume to it, rather than treating the edge as a line or an interface which has no thickness.

- It seems that, in our country, generally the designers (Architects, Urban designers) pay very little attention to exploit the role of "Urban Building Edge" in present urban designs. It is clearly understood that, even most of the public buildings (done absolutely for people) in this country, are not make the good use of this potential.

- Therefore, this study elaborated various roles of the urban building edge, which contribute essentially to enhance the social, cultural and economical aspects of the cities.

- The study identified that, the "Responsive Building Edge" can act as an **"Urban Place"**, which supports different activities and behaviors of the people in adjacent open space. This sets the stage for development of another zone between indoors and outdoors.

- The study identified the intermediate zone as a "Transitional Space", which most of the people can comfortably attach, sense, feel and use in creating urban identity. Therefore, the building edge's role is further elaborated as a **"Physically Exotic Place"**, **"Psychologically Meaningful Place"** and **"Socially Vibrant Place"**.

- In order to explore the potential for developing urban buildings with "Responsive Building Edges", proper understanding about the characteristics of a responsive place is essential. Thus, characteristics of a responsive place, and different levels it operates in various urban settings, were identified.

- Permeability, Variety, Legibility, Robustness, Visual Appropriateness, Richness and Personalization were identified as characteristics of the responsive environments. Thus, it is understood that, each character operate differently with various urban settings. Therefore, four different public urban settings were selected as example studies in local urban context.

  - **Example Study One** studied an urban building edge with reference to Main Street. (Mountlavinia Super Market is studied)

  - **Example Study Two** studied an urban building edge with reference to public open space. (Nugegoda Super Market is studied)

  - **Example Study Three** studies an urban building edge with reference to function. (Bus terminal Ambalangoda is studied)

  - **Example Study Four**, building edge is studied with reference to design bias of the building. (Bus terminal Mathara is studied)

- Public open space and the street are identified as two major elements of the urban space, where "Responsiveness" is essential to create an appropriate environmental image in both situations. Therefore, in order to understand the degree of responsiveness in the public space: public space is studied by emphasizing its present increasing problems such as, social spatial fragmentation, functional fragmentation and privatization of public space, etc. has been resulted socially unresponsive urban spaces.

- Therefore, urban design is identified as the process of creating urban places: and widened its limits by understanding urban design as "social and spatial management" and as the process, which is organizing space, time, meaning and communication".

- The study identified the necessity of new way of approach to environmental design, concerning the "relationship between social processes and spatial transformations" where, some scholars have already laid foundations. (Dayarathna, 2001 and Madanipour, 1996)

5. 2. SPECIFIC CONCLUSIONS

Specific conclusions are drawn with careful examinations of the key situations selected as example studies. The example studies clearly identified the facts that, different urban settings where, the "**Responsiveness**" is operating at different levels. As mentioned, following key situations were studied as examples.

1. Building edge responsiveness with reference to the urban streets, where Mountlavinia Super Market is studied. – Example Study One

2. Building edge responsiveness with reference to the urban public open space, where Nugegoda Super Market is studied. _ Example Study Two

3. Building edge responsiveness with reference to the building function, where Bus Terminal Ambalangoda is studied – Example Study Three

4. Building edge responsiveness with reference to the Design Bias (In order to understand the path to responsive building edge in the design approach), where Bus Terminal Mathara is studied – Example Study Four

- It was evident that, each situation is created an "**Urban Place**", where numbers of activities are happening in a given time, (More than one activity) with a direct or indirect relationship with the building edge. Thus, the supportiveness of the building edge is studied by considering the type of activity or the activity variations with the immediate setting.

- Thus, it is understood that, an immediate setting (which is created by the building edge, acting as a space) provides more choices (more than one option) is acting

a "socially attractive" place. Hence, the perception of the groups as well as individuals: were the setting, is "supportive" for their activities.

- Even though, the activities were identified in vast range from loitering to cultural activities, the edge space (Physical elements) provided almost same but flexible settings in some situations. Hence, the study argued that, the settings which provide more choices for different activities have the robust qualities. Hence, the urban building edge space is identified as a "Robust" space.

- Further it is identified that, the "Robustness" can only be created in a socially responsive place, which facilitates social transformation (predominantly); Ambalangoda Bus Stand proved above argument.

- Building edge "Responsiveness" is essential for a live public space; activities and functions of the public space will obviously modify by the responsive building edge. It is understood that, "If the edge fails, the space never become live"; by studying the Nugegoda Super Market above argument could be proved. (Although it was identified as a negative responsive edge)

- Study identified that, the "aliveness" of the urban streets will depend on "active" and "passive" areas, further the increasing active areas, which are the indoor activities, visually or physically contribute to outdoor (street) activities; help rich urban experiences for the people who are passed by. Above argument is examined in Mountlavinia Super Market building with reference to the Main Street.

- In the same situation, it is identified that, when a building is facing different social, physical fabrics or functional areas, the degree of responsiveness for different functions is essential. Thus, it is understood that, the possibility of forming dead areas in such situations, which are welcoming the fear and crime to cities.

- In order to identify that, the stage to begin design responsive building is "preliminary design stage" and consideration of existing socio spatial transformations. Thus, the urban design is further identified as" **environmental design**", which proposing ideas for spatial as well as social transformations. The social transformation with a purpose and consideration need to identify the spatial elements, is essential to design responsive built environment. Thus, Mathara Bus Terminal is studied with a similar base and identified that, the over respect paid for the physical form (to the old Dutch fort) has created many socially unresponsive places, which has not contributed to Mathara town as social place, because it does not offer any choices. (resulted the upper floor isolate form people)

- The study discovered that, the need of developing new zone between indoors and outdoors, which can essentially contributed to the life of outdoor space and essentially indoor will benefit from interaction with outdoor public realm. The study identified this space as a "**Transitional Space**", which has a clear potential to act as a meaningful social space.

- Especially in local cities, by enhancing above spaces, by creating responsive urban building facades; doubtlessly, we can create meaningful social spaces for our cities. (Which is lacking in most of our cities at present) This will essentially then facilitates social and spatial transformation.

- It is obvious that, local context, clients are very concerned about the project costs. But it can be argued that (Based on the study) the "Responsiveness" can be greatly increased within normal cost limits, by paying attention to understand the social dimensions in Architecture.

- Therefore, the designers (Architects, Urban Designers, Landscape Architects) have a crucial role to understand this potential (Central issue of the study) and incorporate them with designing "Urban Place". Thus, rather than giving prominence to visual aspects of the design, a new way of approaching to design is needed. The study suggests that, (and many scholars laid the foundation) Architecture and Urban Design should not be considered as creative process (Make nice individual buildings) but as a multidisciplinary approach / activity of shaping and managing urban environment (Built environment) in order to improve the quality of living man kind.

5. 3. FINAL CONCLUSIONS - "the final remark of study"

- "Responsiveness" is understood as a quality, which enables to create an appropriate nature of the environment by linking human values with activities and places. Thus, "Responsiveness" is identified as an essential quality, which should be associated with the urban space, in order to create meaningful social urban places.

- It is studied that, the urban building edge as a space, which has a potential to express positive values of a society and reflects its social, cultural and economic achievements. "Responsiveness" is identified as an essential "quality" to be accommodated in the building edge space in order to create meaningful social

places, which create, identity or act as a social place or a landmark in the urban space.

- It is proved that, lack of responsiveness in the urban space produced socially unresponsive urban places where, there is a greater possibility of fear and crime.

- Present "trend" of Architecture and Urban Design has identified that, they over emphasize the visual and aesthetic qualities, but pay very little attention to understand the social aspects of the wider built environment. This resulted socially unresponsive single buildings (alienation) which, results that the urban people are fastly loosing their sensitivity and attachment to our urban spaces.

- The study identified that, in local situation some of the urban buildings done by local Architects has created responsive urban buildings, which facilitate social and spatial transformation by acting as live social spaces an the town. (helps to regenerate sensitivity and attachment to urban places)

- The study stressed about building edges and identified edge as an intermediate space with responsive characteristics. (the responsive building edge) The main intention of the study was to understand the supportiveness of the building edge for activities and mode of behavior for the people in urban space. Hence, the main hypothesis is that, identification of intermediate zone between indoors and outdoors. The study proved that, by identifying the building edge as a transitional space.

- Further it is discovered that, the responsive edge determines the social attachments, level of activities and mode of behavior of people. Example studies discovered the relationship between the physical building edges with social elements (People). Therefore active and passive areas were identified in relation to the activities determined by the building edge.

- Main objective of the study; that is to explore the supportiveness of the building edge for the activities and people behaviors in the urban space; it is identified that, **"Responsiveness"** as an essential quality to enable the **"Supportiveness"** of the building edge.

- Since the study identified "Responsiveness" as a quality enabling "Supportiveness" of the building edge as a social space; the study revealed that (although concentrated to responsiveness) different levels of responsiveness is operating at various urban settings.

- The purpose of enabling building edge as a **"Responsive"** place; there may be lots of other issues and aspects, which are directly or indirectly involved other than the aspects and issues; this study focused; such as, microclimatic urban

conditions, building location, orientation, specific building functions, etc. Those are welcome areas for one who interested to research and explore the path way to responsive built environment.

- This study stressed on urban building edges in wider manner; the building edge is not the "only element", where we should enable responsiveness. It should be very clear that the study has selected a micro situation (the building edge) in the whole urban space, and emphasized the need of creating: "Responsive" spaces.

- It is crucial to apply the study "exploration" in wider areas such as, into a whole public space, a segment of a street or even to whole urban district, likewise different revels. Then only the responsiveness will operate as a whole in future cities.

- The study clearly understood that, by designing single or few buildings in an urban space do not create the rich urban experience. Therefore the "Responsiveness" as a quality should be applied to whole possible areas of the urban built environment.

- The study revealed the necessity, importance and requirement of the **"Responsiveness"** in micro situation. (Using urban building edges) thus, one should essentially expand this to whole urban situation. (Which essentially needs scholars assistance in various fields Ecology, Sociology, Psychology, Economics, Technology, etc.) When the concept expanded to whole possible urban settings which will essentially improve the quality of future man kind.

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