

LB/202/24/00

PRINCIPLES OF TOWN CENTRE DESIGN:
*AN EXAMINATION OF THEIR APPLICABILITY TOWARDS THE
CREATION OF HABITABLE URBAN ENVIRONMENTS*

සර්වභාෂා
කොටුවේ පිටපත් විකුණාලය. ශ්‍රී ලංකාව
මොරටුව.



University of Moratuwa, Sri Lanka
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

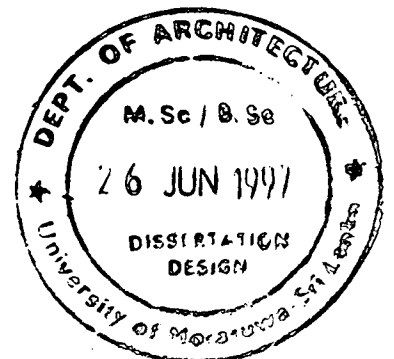
**A DISSERTATION PRESENTED TO THE
DEPARTMENT OF ARCHITECTURE,
UNIVERSITY OF MORATUWA,
FOR THE FINAL EXAMINATION IN
M. Sc. (ARCHITECTURE)**

71583

72 "97"

711-4

W. A. M. S. W. M. A. SENANAYAKA.
DEPARTMENT OF ARCHITECTURE,
UNIVERSITY OF MORATUWA,
1997



71583

TH

ACKNOWLEDGEMENTS

I am grateful to Dr. L.S.R. Perera, Senior Lecturer, Department of Architecture, University of Moratuwa, for all the valuable comments, guidance and inspirations. My deep gratitude to Mr. Kapila Dharmasena, Lecturer, Department of Architecture, University of Moratuwa, for his valuable information, initial guidance and encouragement. Without their constant support and encouragement, this endeavour would never have been fruitful.

I am deeply grateful to Thulani who prepared the typescript and helped me in numerous ways to complete this task.

My warmest thanks to my friends and colleges Sudarshana(Vije), Prasanna, Nandana, Dilshan, Pathidharan, Rogithan, Milinda, Chaminda, Nalin and Rajith.

Finally, I am very grateful to my parents and sister who gave me encouragement and heartiest support.

CONTENTS

Acknowledgements	ii
List of Illustrations	vi
Introduction	1
1. Topic Explanation	1
2. Architectural Problem and Justification of the Study	2
3. Aims and Objectives	3
4. Methodology	4
5. Scope and Limitations	4
Chapter One .	
Habitability And Space	6
1.0 Preface	6
1.0 Habitability : An Introduction	7
1.1 Man and the Environment : The Interaction	7
1.1.1 Environment And Experience	9
1.2 Parameters of Habitability	10
1.2.1 Locational Factor	10
1.2.2 Socio Cultural Factor	11
1.2.3 Time Factor	13
1.3 Determinents of Habitability	14
1.3.1 Quantitative Attributes	14
1.3.2 Qualitative Attributes	15
1.4 Habitability And Space	15
1.4.1 Imageability of Space	17
1.4.2 Meanings of Space	18
1.4.2.1 Assigned meanings	18
1.4.2.2 Personal meanings	19
1.5 Personalization	20
1.6 Habitable Space : A definition	21

Chapter Two		
Town Center and its General Characteristics		22
2.0	Preface	22
2.1	Town Centre - An Introduction	23
2.2	Town Centre: Definition	23
2.3	Town Centre: Its Importance	23
2.3.1	Centre as a Place of Generating Life	24
2.3.2	Centre as a Place of High Imageability	26
2.3.3	Centre as a Place that binds the other Parts	29
2.4	Constituents of the Town Centre	29
2.4.1	Central Place	30
2.4.1.1	Unbuilt Central Place	30
2.4.1.2	Built Central Place	31
2.4.2	Elements of Contrast	32
2.4.2.1	Built Elements	32
2.4.2.2	Natural Elements	33
2.4.3	Edge of the Space	34
2.4.3.1	Buildings	34
2.4.3.2	Natural Phenomena	35
2.4.4	Entrances	36
2.5	Town Centre -Types	37
2.5.1	Administrative Centre	38
2.5.2	Commercial Centre	41
2.5.3	Cultural Centre	44
2.5.4	Supportive Nodes	45
2.6	Hierarchy of Town Centres	47
2.6.1	Climax Centre	47
Chapter Three		
Habitable Town Centers; Identification of Design Principles		49
3.0	Preface	49
3.1	Imageability of a Town Structure	50
3.1.1	Organisation of Centres	50
3.1.1.1	Permeability of a Town	51
3.1.1.2	Legibility of a Town	54

3.2	Imageability of a Town Centre	60
3.2.1	Centre	60
3.2.1.1	Central Space	61
3.2.1.2	Elements in the Space	63
3.2.2	Enclosure	63
3.2.2.1	Hieght width Ratio	64
3.2.2.2	Road Network	66
3.2.3	Continuity	70
3.2.3.1	Rhythems/ Repitition	70
3.2.3.2	Symmetry	72
3.2.3.3	Datum	73
3.2.3.4	Inflection	73
3.2.3.5	Activities	75
3.3	Meanings of the Town Centre	75
3.3.1	Assigned Meanings	76
3.3.1.1	Meanings and Characters	76
3.3.2	Personal Meanings	79
3.3.2.1	Territoriality	79
3.3.2.2	Variety	90
Conclusion		97
Bibliography		



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

LIST OF ILLUSTRATIONS

Fig No.**Page No.**

01	Eskimo habitat	11
02	Living conditions of Tropics and Northern hemisphere	11
03	Aboroginis society	12
04	Modern City	12
05	Changing Needs and demands of people	13
06	-do-	13
07	Working place of a knitwear designer	20
08	Nugegoda path	25
09	C.B.D Colombo	26
10	Bus depot area Matara	28
11	Map of Matara	28
12	The bridge of Matara	28
13	Bo-tree area Matara	28
14	Mahamaluwa, Kandy	29
15	City Center of Amstradam	30
16	Majestic City	31
17	Clock tower of Matara	32
18	Towers of San Gimignano	33
19	Bo tree of Walasgala	33
20	Clock tower of Dehiattakandiya	33
21	Piazza san Marco, Italy	35
22	Piazza Della Signoria, Florance	35
23	GallFace Green	36
24	Sence of enclosure of the Mahamaluwa, Kandy	36
25	Piazza Del Popolo, Rome	36
26	Map of Town hall area	39
27	Town hall building	39
28	Dawatagaha mosque	40
29	Viharamahadevi park	40
30	Dharmapala mawatha	41
31	Map of Nugegoda	42
32	Bo tree intersection	42
33	The path, Nugegoda	43
34	Supermarket intersection, Nugegoda	43
35	Map of kandy town	45
36	Temple of the tooth	45
37	Dalada Veediya	46
38	Good Shed segment	46

39	Dalada veediya, Kandy	51
40	Map of Ratnapura town	52
41	Map of Derham	53
42	The first route, Derham	54
43	The second route, Derham	54
44	The third route, Derham	54
45	The fourth route, Derham	54
46	Mahamaluwa, Kandy	55
47	Cathedral close, Derham	56
48	Map of C.B.D, Colombo	57
49	Ports authority building, C.B.D	58
50	Continuous level of sky-line,C.B.D	58
51	Bo tree, Thihagoda	58
52	Temple of the Tooth, Kandy	59
53	Cargills and Millers building, Colombo	59
54	Palace Green, Derham	62
55	Map of Dehiattakandiya	62
56	Central space,Dehiattakandiya	62
57	Piazza Del popolo, Rome	63
58	Map of Deniyaya	65
59	View of the town, Deniyaya	65
60	Mahamaluwa, Kandy	66
61	Bo tree segment, Matara	66
62	Luca in Tuscany	67
63	Forecourt of the Fort Railway station-Map	67
64	Enclosure of the forecourt, Fort railway station	67
65	Piazza Annunziata, Florence	68
66	Piazza Del Campo, Siena	69
67	-do-	69
68	Kodithuwakku Arachchi Building, Kandy	71
69	Arcades, Dalada Veediya	71
70	Kotugodalla Veediya, Kandy	72
71	St. Peters Square, Rome	72
72	Rajpath, India	73
73	C.B.D, Colombo	74
74	Olcott mawatha, Colombo	77
75	Chatham street, Colombo	77
76	Dalada Veediya, Kandy	78
77	Nugegoda-Path	78



78	Walakulubamma, Kandy	81
79	Piazza san Marco, Venice	81
80	Kandy lakeround	82
81	St. James park, London	82
82	Spanish steps, Rome	83
83	Akurassa Town Centre	84
84	Nugegoda Town Center	84
85	-do-	84
86	Feeling of refuge	85
87	Nugegoda, The Path	85
88	Arcade of Cargills and Millers	86
89	Arcade of Greenlays Bank	87
90	Arcade of Queen's Building	87
91	Kandy Town Center	88
92	Piazza San Marco, Italy	89
93	Kandy Lakeround	89
94	Perugia's Corso Vanuncci	90
95	City of Chandigar	92
96	Piazza san Marco, Venice	92
97	Amstradam	93
98	Nugegoda-The Path	94
99	Campidoglio, Rome	94
100	Textural Varity of Kandy Town Center	95



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk


INTRODUCTION

0.1 TOPIC EXPLANATION

Cities and Towns are complex human settlements, in which the natural surroundings are dominated by man made features. Since the evolution of earliest urban civilisation, cities have undergone drastic changes resulting in present urban forms.

As the most developed animal on earth, the man needs to organise his physical environment in a functional and meaningful way. Therefore city forms are of the utmost importance as the manifestation of human development. Town centres play a vital role in these human functions. They are special places of physical character, meaning and a unique form in the urban fabric.

Cities and towns are created by people and changed by people. Although built forms and open spaces are important constituents in a city form its inhabitants are the most important when considering the vitality of a city. In other words, people bring life to a city and one without human habitation is a dead city.

 University of Moratuwa, Sri Lanka
www.lamri.ac.lk
"Man's personal worlds has its centre within these entrances of world and home, centre is a continuum of hierarchy of overlapping centres serving different communities of groups. It is the design, physical definition or reinforcement of these centres which at the core of the disciplines of architecture, urban design and planning."

(Cliff, 1992:19)

City or town centres are the strategic points around which the human habitation revolves. They are activitywise, meaningwise and spatialwise special from other parts in the structure of a city or town. These qualities further differ from centre to centre resulting in the existence of different types of centres in the urban context.

These differences in character, function, meaning and hierarchy can be spatially expressed in two interrelated ways.

- (i) Through the overall spatial organisation of the centre, including the geometrical composition of converging paths and other constituents of the centre.
- (ii) Through the buildings around it, including how they have responded to the centre for its function, meaning and hierarchy and how the buildings contribute to create the desired character.

The shaping of town centres and moreover the creation of habitable urban spaces would be facilitated by the knowledge of these two interrelated aspects of an urban context.

In any composition, there is a need to emphasise some parts and subordinate others the best way to achieve this in designing towns is by having definite centres. It is only in this way, that a relationship and proportion can be established between the different parts of the town design.

"The centre dominates the town in size and grandeur, it gives meaning to its existence as a place distinctive from other places "

(Cliff, 1992:90)

0.2 ARCHITECTURAL PROBLEM AND JUSTIFICATION OF THE STUDY

City and Town forms are in a continuous growth and change to meet increasing needs of human beings. While the changes in the physical environment are required and acceptable, incompatibilities of such changes have produced mixed results from haphazardness to total abundance.

On the other hand, centre being one of the important constituents of a townscape, perhaps the most important one, must be thoughtfully designed in order to create habitable environments in newly planned towns and cities.

It is understood that the life of the city/town mostly depends on its centre. All the activities, which are happening around it, are closely connected to it. The image of the city/town always reflects by its centre.

But the lack of integration of activities in and around the town centre and the lack of knowledge and understanding the importance of a centre to the people of the town have resulted in haphazard developments on the one hand and have paved way to the existence of "ghost towns" and lifeless urban environments on the other.

It is therefore the responsibility of the architects, to understand this problem of absence of social acceptability and the lack of order and integration in social and physical aspects as well as the spatial attributes, characteristics, meanings and differences of centres, relationship between the centre and periphery and its role as a part of the city/town form.

A good and meaningful habitable urban environment can thus be created. The importance of this study lies in this connection.

0.3 AIMS AND OBJECTIVES

The main aim of this dissertation is to examine design strategies, which may help to design habitable town centres, and its applicability towards the creation of a habitable urban environment.

Within this broader perspective, this study focuses its attention on how activity nodes are organised around different types of town centres and how the physical elements of it should be designed in order to give the inhabitants a potential of getting themselves attached with the space.

Further the study intends to broaden the knowledge of architects and planners on the principles of town centre design and encourages them to apply these principles to create habitable urban environments.

0.4 METHODOLOGY

(i) First, the study will theoretically establish what is meant by a habitable space using the concepts of "place", described by various scholars and identify what are the qualitative attributes of a habitable space.

(ii) Secondly, it will discuss what a town centre is, and the importance of the town centre to its periphery to create a habitable town. Further it will describe different types of town centres based on activity pattern, and their hierarchy in order to understand their distinctive qualities which should be considered when designing a centre.

(iii) Thirdly it will discuss the qualitative attributes of a town centre which was identified in the first chapter, and how they should be designed and composed physically, in order to become a habitable place.

Sri Lankan and foreign examples will be used to illustrate different situations of town centres and cited to discuss design strategies and their applicability towards understanding the problems and causes for their habitable or inhabitable situations.

Different architectural aspects of a particular example could be used to discuss different situations of habitability in a town centre.

0.5 SCOPE AND LIMITATIONS

This study as mentioned earlier, is an attempt to identify fundamental principles and strategies for designing habitable town centres.

Attention is focussed on to the centre, since it acts as the main space or the heart of the town and it is the place where all the important public activities of the town is carried out. Centre affects the habitability of the town to a greater extent.

When habitability of an environment is concerned, it depends on its qualitative attributes (inherent ability of the environment to evoke the feeling of connectedness with it in the peoples mind who interacts with it) and quantitative attributes. (quality

of an environment to provide necessary facilities to make the inhabitants physically comfortable)

But its fair to say habitability mainly depends on its psychological component. It is a quality, which emerges in the mind through the relationship between the man and the physical environment. Many town centres have failed due to lack of concentration paid to this aspect. Hence, this study focuses its attention on qualitative attributes of habitability.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk