

Architecture and Building:

An examination of the user's ability to sense the difference between the two situations, with special reference to commercial spaces

**The Dissertation Presented to the Department of Architecture,
University of Moratuwa,
Sri Lanka
for the Final Examination in M.Sc.(Architecture)
and RIBA Part II Examination**



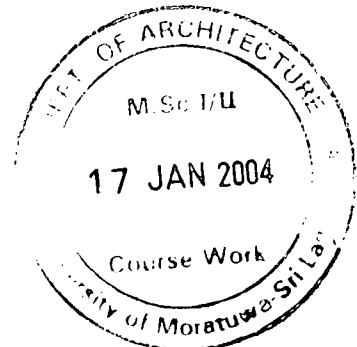
72"04"
72(043)

85447



University of Moratuwa

**Thilakarathna H.G.P.R.
Department Of Architecture
University of Moratuwa
Sri Lanka
January 2004**



85447

85447

DECLARATION

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

UOM Verified Signature


Thilakarathana H.G.P.R.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to each and every one for their help and guidance extended to me, during this study.

I extend my sincere gratitude to Archt. Vidura Sri Nammuni Head of the Department of Architecture, University of Moratuwa, for his insight, invaluable ideas and comments to me throughout this endeavor.

My heartfelt gratitude and appreciation to D.P.Chandrasekara Lecture Department of Architecture who give me right guidance.

Also sincere thanks go to Archt. Prasanna Kulathilake Lecture Department of Architecture, for his cooperation and helpfulness towards this venture.

Dr. Ranjith Alahakon, Archt. Madura Premathilake to whom I express my honour and gratitude for their incisive advice and invaluable comments and for supporting me gave the relevant particulars.

I am grateful to Aishani, Bashwara, Thilan, Asanga and all other friends who helped in obtaining survey and helped to me in numerous ways.

Also grateful to thank Suresha and my sister, who helped me to type setting and finally my particular thanks to my parents and family members for their support and encouragement provided in order to make this study success.

LIST OF FIGURES

Figure	Page
1 Light House Hotel, Galle	05
2 Building in the Kaluthara town	07
3 Centre of the space	09
4 Enclosure of the space	11
5 Continuity of the space	12
6 The Bo-tree on the Galle road near the Rawathawaththa	14
7 Interior of well design building shows the architecture	15
8 Kandalama hotel is the best example for context generated architecture	16
9 St. Briget convent pre school for user as a generating factor	17
10 The Colombo town hall for higher purpose as a generator	18
11 Olimpik railway station – Australia for function as a generator	19
12 Image of the independent square shows form as an exterior	20
13 Interior space give an idea about the spatial orchestration of the buildings	20
14 Interior space give an idea about the spatial orchestration of the buildings	20
15 This give an idea about the volume in architecture	22
16 This give an idea about the size in architecture	23
17 This give an idea about the scale in architecture	24
18 This give an idea about the proportion in architecture	25
19 This give an idea about the enclosure plane in architecture	26
20 This give an idea about the colours use in architecture	26
21 This give an idea about the colours use in architecture	26
22 This give an idea about the texture	28
23 This give an idea about the texture	28
24 The lighting use in the architecture	29
25 The lighting use in the architecture	29
26 Most of the users of the Majestic city are younger generation	40
27 People hang-around and join the window shopping	40
28 Users of the building moving freely inside the building	41
29 This shows many young people hang around in the Majestic city lobby	42

30	People moving on the corridors because its arrangement	42
31	The volume of the corridors are appropriate to the activity happens	43
32	The interior and exterior colour use is well matched	43
33	Illumination level of the interior is well matched	44
34	Small lobby and narrow escalators are not create an environment for people to gather	46
35	This shows how bad the interior composition of the building	46
36	The interior and exterior colours are not matched	47
37	High illumination level change the environment of the function	48
38	The double height volume of the main entrance of the building	50
39	Entrance from the station road	50
40	The main entrance from the Galle road	50
41	The corridor from the main entrance to atrium lobby	50
42	Right side of the corridor expose to the stairways and escalators	50
43	Entrance of the building directly links to the narrow atrium lobby	51
44	The atrium lobby make people move freely	51
45	Use small less intensity light make people sensitive	51
46	Use day light and make the environment more natural	51
47	View of the corridor from the atrium	51
48	Tiny escalator and highly enclosed corridors are increases the sense of privacy	53
49	The shops arrange around the major space of the building	53
50	Highly light up shops which are make insensitive atmosphere	54
51	Many people use this building	56
52	Many people use this building	57
53	People beehive freely in the entrance area	57
54	Many people satisfied about the interior composition of the building	59
55	Interior and exterior colours are matched well	60
56	The main entrance of the Sumanadisi Bakery at Wallawatte	62
57	The view after enter to the building	63
58	Lighting arrangement of the building	65
59	Exterior view of the Royal Bakery from the Galle road	66
60	Most of the people visit the building to buy or eat some food	66
61	Exterior view from the Galle road	67

62	Steel structure and red colour fabric canopy in the double height space	68
63	The grand entrance from the Gall road to the building and name board fixed old brick wall.	68
64	Front façade of the Royal bakery	68
65	Entrance and the façade of the building view from the Gall road	69
66	Main entrance of the building face to Galle road	69
67	Food display cabinets in the transition area	69
68	Sensitive colours used in the space, related to the activity happens	70
69	The spotlights use to light up the area	70
70	Steel structure which connects two spaces	70
71	The double height space create a link between ground floor and upper floor	70
72	No any kind of volume changes in the building, entire interior in the same laver	71
73	There is no physical connection between eating area and transaction area and visual no strong visual connection also	71
74	There is no physical connection between eating area and transaction area and visual no strong visual connection also	71
75	No specific colour scheme use for interior and exterior of the building	73
76	No specific colour scheme use for interior and exterior of the building	73
77	Sun light penetrate through the glass façade of the building	73
78	Florescent lamps with the mirror glass fixture use to artificial lighting	73
79	There is an eating area in the upper floor of the building and massive glaze openings	73
80	Steel structure use to create the link upper floor with the ground floor	73
81	Colours use properly in the space	73

LIST OF GRAPHS

Graph	Page
<i>Majestic City shopping complex – Bambalapitiya, Colombo 04</i>	
1. Question number 01	40
2. Question number 02	40
3. Question number 03	40
4. Question number 04	41
5. Question number 05	41
6. Question number 06	41
7. Question number 09	42
8. Question number 14	42
9. Question number 15	42
10. Question number 08	43
11. Question number 10	43
12. Question number 11	43
13. Question number 12	44
<i>Unity Plaza shopping complex – Bambalapitiya, Colombo 04</i>	
14. Question number 01	44
15. Question number 02	44
16. Question number 03	45
17. Question number 04	45
18. Question number 05	45
19. Question number 09	46
20. Question number 14	46
21. Question number 15	46
22. Question number 08	47
23. Question number 10	47
24. Question number 11	47
25. Question number 12	48



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

Royal Bakery – Wallawatta, Colombo 06

26. Question number 01	56
27. Question number 02	56
28. Question number 03	57
29. Question number 04	57
30. Question number 05	57
31. Question number 06	58
32. Question number 09	58
33. Question number 14	58
34. Question number 15	59
35. Question number 08	59
36. Question number 10	60
37. Question number 11	60
38. Question number 12	61

Sumanadisi Bakery – Wallawatta, Colombo 06
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

39. Question number 01	61
40. Question number 03	62
41. Question number 04	62
42. Question number 05	62
43. Question number 06	63
44. Question number 09	63
45. Question number 14	63
46. Question number 15	64
47. Question number 08	64
48. Question number 10	64
49. Question number 11	65
50. Question number 12	65

LIST OF TABLE

Table	page
<i>Majestic City shopping complex – Bambalapitiya, Colombo 04</i>	
1. Reference to the question numbers with number of people	79
2. Reference to the question numbers with answer options	80
3. Reference to the question numbers with answer options as percentages (%)	80
<i>Unity plaza shopping complex – Bambalapitiya, Colombo 04</i>	
4. Reference to the question numbers with number of people	81
5. Reference to the question numbers with answer options	82
6. Reference to the question numbers with answer options as percentages (%)	82
<i>Royal bakery – Wallawatte, Colombo 06</i>	
7. Reference to the question numbers with number of people	83
8. Reference to the question numbers with answer options	84
9. Reference to the question numbers with answer options as percentages (%)	84
<i>Sumandisi Bakery - Wallawatte, Colombo 06</i>	
10. Reference to the question numbers with number of people	85
11. Reference to the question numbers with answer options	86
12. Reference to the question numbers with answer options as percentages (%)	86

ABSTRACT

The separation of architecture and buildings is not clearly visible. It is a qualitative attribute rather than a quantitative one. Habraken states architecture to be "process and product of human habitation." Hence, it is a spatial phenomena deeply bonded to the spatial existence of humans. But the prevalent social phenomena | the contemporary world is indicating a totalitarian destruction of the human civilisation. Humans are claimed to be increasingly insensitive to their built environment.

But, every human at an unconscious subliminal level is sensitive to their spatial existence. This sensitivity is not outwardly expressed and for that reason is not even understood by that person himself. If prompted, these sensitivities are expressed. But the general understanding however that is there is insensitivity to the built space.

This dissertation attempts to explain how a user senses and responds to physical and psychological attributes of the architecture of a building. It contains surveys done on several commercial buildings to asses how users feel physical attributes such as volume, size, scale, proportion, enclosure plane, colour, texture and lighting of the environment. Results of surveys are studied to identify how users sensed the psychological attributes such as belongingness, privacy, territoriality and identity.

CONTENTS

	Page
Declaration	i
Acknowledgment	ii
List of figures	iii
List of graphs	vi
Abstract	viii
Table of contents	ix
Introduction	01
Chapter one:	
Architecture and building	05
1.1 Architecture Vs Building	
1.1.1 Architecture as an Art	05
1.1.2 Building as a craft	07
1.2 Space in Architecture	08
1.2.1 Spatial attributes of space	09
1.2.1.1 Centre	09
1.2.1.2 Enclose	11
1.2.1.3 Continuity	12
1.2.2 Human – Spatial relationship	13
1.2.2.1 Existential space	13
1.2.2.2 Architectural space	15
1.2.3 Generating factors of the Architectural space	16
1.2.3.1 Context as a generating factor	16
1.2.3.2 User as a generating factor	17
1.2.3.3 Objectives as a generating factor	18
1.2.3.4 Function/Activity Patton as a generating factor	19
1.3 The constituents of Architectural space	20
1.3.1 Form: as an Exterior	20
1.3.2 Spatial orchestration: as an interior	20

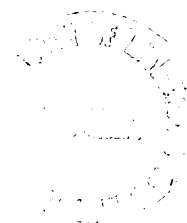


Chapter two:		
	Sensing Architectural space	22
2.1	Sensing Architectural space	22
2.2	Physical attributes of the Architectural space	22
2.2.1	Volume	22
2.2.1.1	Size	23
2.2.1.2	Scale	24
2.2.2	Proportion	25
2.2.3	Enclosure plane	26
2.2.3.1	Colour	26
2.2.3.2	Texture	28
2.2.4	Lighting	29
2.3	The Psychological attributes of the Architectural space	30
2.3.1	Sense of Belongingness	30
2.3.2	Sense of Privacy / Territoriality	30
2.3.3	Sense of Identity	31

Chapter Three:		
	User response to the commercial space	
	Part one	
3.1	Survey Design	32
3.1.1	Introduction of Survey	32
3.1.2	The formwork of the User response survey	33
3.1.2.1	Observation method	33
3.1.2.2	Research: User Survey method	34
3.2	Methodology of the Survey	35
3.2.1	Questionnaire	36
3.2.2	Key factors of the Questionnaire format	38
3.2.3	Collection of data	38
3.2.4	Scope and limitation of the Questioners	38
3.2.5	Analysis of data	39

Part two: **Case studies of the building**

3.3	Case Studies: Case studies for Architecture and Building	40
3.3.1	Case Study one: Majestic City and Unity Plaza shopping complexes	40
3.3.2.1.	Collected data of the survey	40
	Majestic City shopping complex – Bambalapitiya, <i>Colombo 04</i>	40
	1. User Identification	40
	2. Senses evoked by the building to people	41
	3. Direct response from the user	43
	Unity plaza shopping complex – Bambalapitiya, <i>Colombo 04</i>	44
	1 User Identification	44
	2 Senses evoked by the building to people	45
	3 Direct response from the user	47
3.3.1.2	The Users	48
	Majestic city shopping complexes.	48
	Unity Plaza shopping complexes.	49
3.3.2.3.	Response to the Building	49
	1 Entering to the building	49
	Majestic city shopping complex – Bambalapitiya	49
	Unity Plaza shopping complex - Bambalapitiya	51
	2 Atrium lobby and corridors around it	51
	Majestic city shopping complex – Bambalapitiya	51
	Unity Plaza shopping complex – Bambalapitiya	52
	3 Shops	53
	Majestic city shopping complex – Bambalapitiya	53
	Unity Plaza shopping complex – Bambalapitiya	54
	Conclusion: For Majestic City and Unity Plaza shopping complexes	55



3.3.2	Case study two: Royal Bakery and Sumanadisi Bakery	56
3.3.2.1.	Collected data of the survey	56
	Royal Bakery – Wellawatte, Colombo 06	
	1. User Identification	56
	2. Senses evoked by the building to people	57
	3. Direct response from the user	59
	Sumanadisi Bakery – Wallawatte, Colombo 06	61
	1. User Identification	61
	2. Senses evoked by the building to people	62
	3. Direct response from the user	63
3.3.2.2	The Users	66
	Royal Bakery – Wallawatte, Colombo 06	66
	Sumanadisi Bakery – Wallawatte, Colombo 06	67
3.3.2.3.	Response to the Building	67
1	Entering to the building	67
	Royal Bakery – Wellawatte	67
	Sumanadisi Bakery – Wallawatte	69
2	Main space or Transaction area of the building	69
	Royal Bakery – Wellawatte	69
	Sumanadisi Bakery – Wallawatte	70
3	Dining area of the upper floor	73
	Royal Bakery – Wellawatte	73
	Conclusion: For Royal Bakery and Sumanadisi Bakery	74
	Conclusion	75
	List of References	78



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

INTRODUCTION

INTRODUCTION

Observation

The differentiation of architecture and buildings is not readily visible. It is a qualitative attribute rather than a quantitative one, and this does not allow for easy recognition of works of architecture among mere buildings by the general public. Almost always there seems to be a clear confusion as to what a work of architecture is and what how that is different from the buildings.

However, every human at an unconscious subliminal level is sensitive to their spatial existence. This sensitivity is not outwardly expressed and for that reason is not even understood by that person himself. If prompted, these sensitivities are expressed. But the general understanding however that is there is insensitivity to the built space.

Criticality



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

Art nurtures and nourishes the sensitivity of humans and in turn increases the sensitivity of the entire society. Architecture is an implemented art. It is called the "unavoidable art" and "mother of all arts".

General observations show that there is increasing insensitivity to the built environment. Instead of being emotionally uplifting built environments, human creations are increasingly becoming alien to their creators. There is increased urban crime in almost all cities, there is expressed hatred to the built environment, and there is a distinctive lack of emotion. These are dangerous symptoms of an even more dangerous disease: The lack of human emotions and sensitivity. This phenomenon needs exploration and it is necessary to see whether it is actually insensitivity of the humans that is the cause or is it something else.



Possible Causes

Several possible cause for this perceived insensitivity to architecture can be seen. Firstly it could be because the average human is actually insensitive to the built space diminishing the possibility of distinction between architecture and building.

Secondly, it could be that the average human is actually sensitive, but is unable to express it in spatial terms, to be understood by a fellow human.

Thirdly, it could be that they are sensitive to the built space, and are able to express it, but there is no real difference between architecture and building, or architects have been unable to create "architecture".

Hypothesis

This study takes the position that it is the second cause that could be the possible reason behind this phenomenon. Two facts point in the direction of this selection. Firstly, research into human environmental behavior and environmental psychology has proven that the human being is indeed sensitive to their built space. Secondly, there are groups of people that are able to recognize, study, and express in very distinctive terms what architecture is and, how it is different from buildings. This study will attempt to put this hypothesis on firmer grounds.

Intention of the study

The intention is to formulate a methodology and implement it to show that though unable to express, a layman is sensitive to the difference between architecture and building and that they have their own ways in which that sensitivity if prompted, could be recognized.

It will further attempt to establish the fact that if prompted, the expression of sensitivity to the built space is recognized and even understood. It will also establish the fact that the difference between architecture and building is of significant proportions and has wide spread implications.

Methodology

A user response survey will be adopted as the method of the study. In the first segment, it will adopt established principles to formalize that architecture and building could actually be separately identified. It will then show what the differences between architecture and building are.

In the second segment, it will proceed to show how humans sense their spatial existence. This will be established through studies into physical attributes of architecture, and architectural space, the psychological and physiological implications of the built space on the user.

The third segment will be in two phases. First phase will attempt to identify possible scientific research methods that could be adopted to do a research of this nature. It will further attempt to review those methods and then will select the most appropriate. It will also establish a methodology for the research, data collection and a format for data analysis and presentation.

In the second phase, two case study scenarios will be selected. Two generally accepted "works of architecture" will be compared against two "mere buildings". In each case, a standard questionnaire will be given to a selected sample of the general public, and a standard set of questions regarding the quality of the specific built space will be asked.

Based on the findings of these research, a series of analysis will be conducted to establish the hypothesis.

Scope and Limitations

In the first segment, only accepted, published studies into architecture and space will be analyzed to establish what architecture is. Similarly, defining building and architecture will use only accepted academic principles. In this regard too, the study will limit itself to available theories and research.

In the second segment, similar to that of first, the study into sensing architectural space will limit itself to accepted theories and research. Highlighting the significance of selected each.

In the third segment, the research method will be formulated only by reviewing the existing, established scientific research methods. There will be no attempt to formulate new methods. In selecting probable case studies, only public architecture will be considered. No residential architecture is studied due to the facts that users of those spaces have special bonds to the dwelling allowing their comments to be influenced. Out of public buildings, only commercial establishments are selected due to its convenience in selecting examples that are similar in size, scale, function, location and other parameters which should not be different to the researched projects.

Only two case studies; two shopping malls against each other in Bambalapitiya, and two bakeries in Wellawatte will be used for the research considering practical limitations. Finally, it needs to be brought to light that an interview research of all users to a particular building is impossibility. Hence, it will not be attempted. A random sample of user will be selected to represent the larger, and only they will be interviewed.



In representation of the research findings, standard graphical presentation methods will be adopted to express the final outcome of the research.