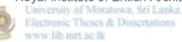
## AN ANALYTICAL STUDY OF THE SPATIAL ORCHESTRATION PATTERNS IN SRI LANKAN VERNACULAR CAVE TEMPLES

## With special reference to Kandyan period



The Dissertation Submitted to the Faculty of Architecture,
University of Moratuwa, Sri Lanka,
for the Final Examination of M. Sc. [Architecture], January 2003
And Part Two of the

Royal Institute of British Architects



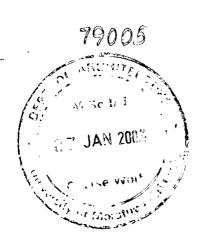
72 "03" 786. (CSCE-1)

University of Moratuwa

K. M. S. B. ATHAPATTU

FACULTY OF ARCHITECTURE UNIVERSITY OF MORATUWA SRI LANKA JANUARY 2003

79005





**CONTENTS** 

## Acknowledgement

## List of Illustrations

## Contents

## Introduction

Topic explanation Need of study Introduction of study Methodology

CHAPTER - 01		01	
Spatial orchestration	on in Architecture.		
1-1 Introduction of Ar	1-1 Introduction of Architecture		
1-2 Architectural Spa	1-2 Architectural Space 1-2-1 Explanation to "Space"		
1-2-1 Explana			
1-2-1-1	1 Qualities of spatial enclosure	03	
\display = 1	2 Quantities of spatial enclosure	04	
1-2-2 Attribute		05	
	Center	05	
	Processing	06	
	Depth	06	
	Density	07	
1-2-2-5	i Continuity	80	
1-3 Spatial relationsh	nips in Architecture	09	
1-3-1 Space w	1-3-1 Space with space		
1-3-2 interlock	ed space	10	
1-3-3 Adjacent	space	11	
1-3-4 Spaces I	inked by common space	11	
1-4 Spatial organiza	tion and spatial orchestration in		
Architecture	•	12	
1-4-1 Spatial	organization principles	13	
1-4-1-1		13	
1-4-1-2	Linear organization	14	
	Radial organization	15	
1-4-1-4	<del>-</del>	16	
1-4-1-5	Grid organization	17	

	1-4-2 Spatial orchestration	18 19
	1-4-2-1 Continuity of spaces 1-4-2-2 Use of spatial relationship	20
		20 25
	1-4-2-3 Continuity of spatial expressions 1-4-2-4 Development of spatial meanings	25 25
	1-4-2-5 Psychological progression	26 26
	related to spatial meanings	20
	related to spatial meanings	
СНА	NPTER - 02	28
	Ori Landon Varragular Aughitagtura Dhulananhiad	
	Sri Lankan Vernacular Architecture, Phylosophical and Sociological Background.	
	2.1 Brief Introduction to Sri Lankan Vernacular Architecture	28
	2.2 Aspects of Sri Lankan Vernacular Architecture.	34
	2.2.1 Special Characteristic.	34
	2.2.1.1 Harmony with Contrasting.	34
	2.2.1.2 Composition of Geometrical Shapes.	35
	2.2.1.3 Uniqueness of spatial construction pattern.	36
	2.2.1.4 Quality of Minimalism.	37
	2.2.1.5 Harmony with Nature.	38
	2.2.1.6 Articulation of Traditional Space.	39
	2.2.2. Influences and Inspirations.	40
	2.2.2.1 Sri Lankan Buddhist Tradition.	41
	2.2.2.2 Nature.	42
	2.2.2.3 Material and Construction technology.	43
	2.2.2.4 Sense of human Scale	45
CHA	<u> PTER – 03</u>	49
	Kandyan Cave Temple in Sri Lanken Vernacular Tradition	
3-1	Brief introduction to Kandyan vernacular cave temple tradition	49
3-1	Historical background	50
3-3	The physical context	51
	3-3-1 Geography and location	52
	3-3-2 Climate	53

3-4	The social b	ackground		54
			onomic Background	54
		gious Backg		56
	3-4-2-1 Th	e philosoph	y of Buddhism 56	
			ited values and human behavioral pattern	57
	3-4-2		ture generated by Buddhist	60
			ral pattern	
		3-4-2-3-1	Spatial qualities of Kandyan	65
			vernacular cave temple	
			architectural tradition	0.5
		3-4-2-3-2	Spatial relationships	65
		3-4-2-3-3	Related spatial organization and	70
			orchestration pattern	
CHA	PTER - 04			74
	Case studie	<u>:S</u>		
4-1	Case study			
-, .	oude diday	One -	Maraluwawa	74
		<b></b>		
4-2	Case study	to Unive	ersity of Moratuwa, Sri Lanka.	
			Niyadawanaya	83
		88 www	:Lib.mrt.ac.lk	
4-3	Case study			
		Three -	Kaballelena	93
	O			
4-4	Case study	Ca	Didisono	100
		Four -	Ridigama	100
Cond	clusion			108
Diki	ography			113
	ography			113



**ACKNOWLEDGEMENT** 

I wish to acknowledge with deep sense of appreciation to those who had helped me in the presentation of this dissertation. Nimal de Silva, Dean of the Department of Architecture, University of Moratuwa, Dr. Smitha Manawadu, Head of the Department, Department of Architecture, University of Moratuwa, for the valuable guidance with constructive comments, Dr. Rohinton Emmanuel, Senior lecturer, Department of Architecture, University of Moratuwa, for the valuable guidance and advice given me through the project.

And also special thanks to, Archt; Channa Dasswatta, lecturer Department of Architecture, University of Moratuwa, Archt: Prasanna Kulathilaka, lecture, Department of Architecture, University of Moratuwa,

Sincere gratitude for Mr.: Sithumini Rathnamalala for his encouragement, criticism and valuable advice given.

I wish to thank my dear mother, father and brother for all their supports and encouragement to collect information, and help me to make this dissertation a success.

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

I would also like express my sincere thank to my friend Susantha, Kasun, Pulasthi, Prabahth, Nalin, Rasika, Ravihansa, Janaka, Chaminda for their help and valuable assistance.

الرابية



LIST OF ILLUSTRATIONS

## LIST OF ILLUSTRATIONS

Figure – 01	"Kaba" is the center of the world of Muslims
Figure - 02	" Kaludiya Pokuna"; nature into man made – a strong link
Figure - 03	"Vierzehnheilign", pilgrimage church
Figure – 04	Dense space interior of the mosque at Cordoba
Figure - 05	The opening of space is obtained by the reduction of its degree of definition and by the presence of elements belonging to depth the interior and the exterior
Figure - 06	Space within space
Figure – 07	Space within space: suggestions
Figure – 08	Inter lucking space: spatial relationship
Figure - 09	Adjacent space: spatial relationship
Figure – 10	Spaces linked by common spaces
Figure – 11	Spaces linked by common space: direct special relationship
Figure – 12	Centralized organizations
Figure – 13	Linear organization pattern
Figure – 14	Radial organization pattern
Figure – 15	Clustered organization pattern
Figure – 16	Grid organization pattern
Figure – 17	The building approach: frontal
Figure – 18	The building approach: oblique
Figure – 19	The building approach: spiral
Figure – 20	Building entrances: formulation
Figure – 21	Configuration of the path
Figure – 22	Configuration of the path
Figure – 23	Space relationship : passed by spaces
Figure – 24	Space relationship : passed through spaces

Figure – 25	Path- space relationship: terminate in a space
Figure – 26	Tank- fed settlement- section
Figure – 27	Tank- fed settlement
Figure – 28	"Kaludiya Pokuna": nature into man made- a strong link
Figure – 29	Orchestration pattern
Figure – 30	Life depict- minimalism
Figure – 31	Pathway- An extension in organic form
Figure – 32	Verandah, inside- from out side
Figure – 33	Vegetation in aesthetic functionality
Figure – 34	Impermanent nature
Figure – 35	Sense of belongings
Figure - 36	Nature with human
Figure – 37	in between
Figure – 38	endless
Figure – 39	Step with the natural rhythm
Figure – 40	Towards the end
Figure – 41	Steps beyond steps
Figure – 42	The last elevation
Figure – 43	The spiritual isolation
Figure – 44	Plan
Figure – 45	After the great elevation
Figure – 46	Preparation for worship
Figure – 47	The effect of filtering
Figure – 48	The first subway
Figure – 49	The last step of the pilgrim
Figure – 50	Filtering the mind
Figure – 51	Coming back

Figure – 52	Plan
Figure - 53	The start
Figure – 54	The final stairway
Figure – 55	A raised terrace
Figure – 56	The complete isolation
Figure – 57	Plan
Figure – 58	Turning point
Figure – 59	The first terrace
Figure – 60	Equal foot steps
Figure – 61	Framed path
Figure – 62	Starting worship
Figure – 63	Celebration started
Figure – 64	Continuation an progression of celebration
Figure – 65	Next?
Figure – 66	The final achievement
Figure – 67	www.lib.mrt.ac.lk Map



## INTRODUCTION

"In my approach to architecture I think my first concern is the arrangement of spaces, how this related to the site and the needs of the movement constrains there are." Geoffry Bawa (1995 interview by arch. Channa Dahaswattha,p,11)

Basically architecture considers as the art of creating and arranging spaces. It consist both intangible things as well as tangible things. Both these contributes well to generate the spatial quality of each space. Ultimately that spatial quality helps to make and enhance the spirituality of the space.

When these spaces are arranged carefully in their hierarchal order it explains and clearly shown the spatial distribution pattern. And finally it explain the total meaning and massages which ultimately creates an emotion in the human mind. A spatial distribution pattern which gives the message a meaning to create an emotions, and there rhythmic ways can be identified as the spatial orchestration pattern in architecture. This has been included in the Sri Lankan tradition as well. This can be identified through understanding clearly and examining and analysing carefully the cultural identity (Traditional identity) as because spatial orchestration pattern develops on the basis of a socio cultural background.

Tradition in its definition is additive process which is continuing to form generation to generation and it also implicates the wisdom of the past. When considering our tradition, there are two main divisions. One is the grand tradition which is highlighted on the royal buildings grand religious premises. While other one purely evolved in elite houses and called as vernacular tradition.

Vernacular tradition has generated and develops among perhaps of everyday life of the common man. It has very simple space with minimum number of spaces connecting each other. Traditional beliefs that formed through

the culture enriched the architectural tradition. Grand tradition on the other had has been related to the Indian architectural traditions, their concepts and philosophical influences due to the historical reasons. Therefore those orchestration patterns aren't emerging from the true socio cultural background of Sri Lanka. But temple architecture which comes under the vernacular tradition is basically influenced on Buddhist philosophy. The simplistic and minimalism qualities of life pattern in common man get closer to that philosophy.

The true story and proof which justify there link situations can be found in the Kandyan period. There are several types of architectural religious buildings, in Kandyan period. Therefore to identify a pattern one must find several examples for it. One of the fine ways to identify that pattern is to study the cave temples and their spatial orchestration patterns.

#### Need of the study

Nowadays, instead of carrying the traditional identity, in the spatial orchestration in Sri Lankan architecture, it tends to carry the more western identity and it also lacks the Sri Lankans quality in it. Although we have a rich spatial orchestration patterns in our tradition, they are not further discussed or clearly understand.

Few of the contemporary architects have identified traditional orchestration pattern and use it in the modern usage. But these patterns are not moved in to the most of the architects who practise today. As university students, it is our duty to research about it and find our own orchestration patterns and revealing it for the purpose of using contemporary architecture in Sri Lanka

"Each project is very particular response to a culture it's on particularly in respect to the materials. Understanding bail is very different from south India. Straw is the material of south India and timber of Bali. Most delusions are

obvious in that way least obvious to me. Design encompasses a cultural sensitivity. I respond to it through the site and the materials of the site any other response in bogus to me. Geoffrey Bawa

#### Architecture is mastery of spaces

Many consider that the architecture is an art of spaces and orchestrates the spaces in certain order ultimately generate an orchestration pattern. These orchestration patterns have the socio cultural identity of considering country. As the students of architecture the study reveals effort to identify traditional spatial orchestration pattern which is develop with out socio cultural background. This will be a good resource for study the spatial orchestration patterns of architecture and also to widen the depth of the knowledge of how the tradition and cultural aspects affect to it.

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

Traditional Sri Lankan spatial orchestration pattern is a very broader topic to discus. It can be decided mainly to religious / vernacular forest monasteries/ Royal palaces and common houses in order to do a successful study. The topic has limited to study and identify the orchestration patterns in cave type of religious architecture.

According to the Buddhist philosophy there orchestration patterns are same, what similar cause like social, culture, contest, climate orientations and materials help to vary from one another, but the emotions meaning and the "Spirituality" which generate from the pattern is tried to maintain in similar form in every example.

Spatial orchestration pattern is related with the spatial quality in our building and it should be experience not to be explained. The words used and

the way they used will not show most probably the experience one would get moving in and around such spaces.

#### Methodology

The spatial orchestrations and its affects to the architecture will be discussed in stage one in the study. To identify clearly one should understand the architectural spaces and orchestration from a theoretical base. It will depict how the messages, meanings and emotions should be emerging and transferred through architecture. In stage two it will describe the Sri Lankan vernacular architecture basically and it will be also depicts the philosophical influence of Buddhist to it. The culture, beliefs and values in the society due to the influence of Buddhist philosophy is also reveals. There for this will clearly show how the messages, meanings and emotions in the society transferred through architecturally when considering both stage one and two.

Stage three manly focused on to the Kandyan period. The social and cultural changes occurred in that period and context, both physical and historical environments considered in order to make the study a success. The religious implications and how it depicted in spatially also discussed. Chapter four will use to case studies which has taken to prove the above and to find out a spatial orchestration pattern in Kandyan period cave temples. Both literature and photographic survey has done in order to this.



**CHAPTER ONE** 

Spatial Orchestration in Architecture

#### **01.1 Introduction to Architecture**

"Architecture is a spatial experience" Schulz (1971, p,25)

Quoting Heidegger, Kulathilaka K.K.R.P states that "man's existence is spatial. One cannot divorce man and space his whole existence ever since the feature is grown inside the mother's womb is spatial. As he lives in space he captures the essence of these spatial experiences and interprets it in the way he likes." Kulathilaka K.K.R.P (1994, p,12)

"Architecture how ever is like grate hollowed out sculpture which man enters and comprehends by moving about within it." Cured in Brett (1970, p,40)

Architecture is vast subjective phenomena that can be seen from different pint of view. When simply consider the architecture is creating spaces and in these architecture spaces using light shade, color volume, proportion scale, degree of enclosure different views in to required quality generate the spatial quality. There spatial qualities tend to originate spatial meanings manage finally to generate emotions. And these spaces which are help to generate emotions arrange in to their hierarchical order basically knows as spatial orchestrate to give a total meaning total message and then a total emotion to the use finally generating a spiritual meaning to the space.

"Not so much room in rooms, but rooms in their context and seeing things beyond a particular room or space even as we setting here you can imagine how the place will change. Ones feelings in a room constantly alter as one move around it. Particularly in the perception of out side and adjacent spaces what it means is when you are anything say that end wall there you have to considers seeing through it past it, around it form all different point of views. The landscape is a moving picture that one is inside of it is continue in which all sides appear simultaneously movement is very important, as you

move through a building you are conscious of everything around you although you may naturally see it in detail the rooms are merely about orchestrating one's movement determining how people move through space, because that really is what one does, Arrival being drawn in discovering being release to the view the inter linked space are backdrops to life. It is not singular devotion to a beautiful vies. There is more intrinsic energy that goes within the spaces whether shelter or not.

What is this need to be taken in to consideration? Whether it arranges you or pleases you it doesn't matter you have to take it in to consideration." Geoffry Bawa (Robert Puffer 1996 Dec.)

#### 01.2 Architectural Spaces

"The space we experience of sky or sea or landscape or of a city spread out beneath us viewed from a tall building the built space of the street of the building from out side or experienced from the inside the respond space of maps, plans cosmographies and geometries in taller space the space proceeds by objects or claimed by countries or devoted to the gods thus range or experiences and understanding of spaces." E. Relph (1976, p,26)

Architecture is using and creating new spaces. It plays with space and elevates ones experience of space. It creates spaces between ground, walls and ceiling enclosing the hollowness but space enclosed within it means more than the hollowness to the beholder. The creator of space second to the nature or the god the architecture must be very conscious of this space

"Man lives in the space and it is closer to man kind. But there are more areas to be understood to be justified. What is space; How can it be defined it? what are there length and breaths can it be seen; is it only tangible or is it only viewed? Is it lane the both tangible as well as intangible things or is it has both viewing objects as well as unseen objects. So many other questions causes to our mind, use have to define space, so what is space is

amorphous and intangible and not an entity that can be directly described and analyzed." E. Relph (1976, p,35)

#### 01.2.1 Explanation to Space

According to Aristotle space is a container of things which contained mainly the quality is absorbed or captured from surrounding. It contained tangible and intangible as well as visible and invisible things within the hollowness. Therefore architecture too contains all those things in it. Spatial quality creates by the intangible context and mans conceptions regard as the sprit of place which is intangible invisible and is enshrined in architecture.

"Architectural spaces exist in three dimensions" Linton Harold (1985,p,90) Relationship between objects or boundaries and from planes which do not have the character of object but define the limits is help to evolved architectural space. The limits may be more or less explicit constitute continuous surfaces forming an uninterrupted boundary, or on the contrary constitute only a few cases (ex. Four columns) between which the observer stimulating the origin of space defined by cues. Which at first started on implicit and then moves on to more and more explicit This—show the potential of more a less apparent planes and edges which the observer reestablished between the concrete cues. For architect—the space between the walls ceiling and ground is not nothingness quite contrary the very reason—for his activity is to create the hollow in order to contain. Ultimately it will satisfy through hospitality and relative freedom of movement which people require.

#### 01.2.1.1 Qualities of Spatial Enclosure

The main quality of the volume is its quality of implied containment. A limited space may be fully enclosed; it may contain direct and concentrate interest in the interior. The entire spatial enclosure may be constructed in such a

manner as to appear in much narrower and squeezed into smaller spaces. It may also appear to open out and direct attention to its structural elements and beyond. It may induce directional movement with flowing undulating and rhythm element. This may appear as either complete incomplete space with in it self and or a setting. It may also erect or produce pre determined sequences of human responses or stimulate a prescribed emotional reaction.

A space will be neither dominated by an object nor will it dominate the space. It has lot of orientations down ward, upward in or out ward, radial or tangential orientation this may relate to force object or another spaces and gain their meaning from the relation ship between two. More complex space can assumes the qualities of it components volumes and relate them into unified entity in designing a space for any given function. The designer should predetermined the essential quality desired by the users and organize the approach in order to provide a good out come.

# 01.2.1.2 Quantities of Spatial Enclosure

Architectural spaces are most widely planned in terms of their relationship to humans. The size of an interior space showed the feelings and behavior of those who use it. There for size relates to quality or quality can be determine by size.

A compressed space as an example with low overhead plane is much ideal for sitting but not for standing. It wants produce or promotes a comfortable and relaxed environment. And want be able to perform the human activities like sitting eating dancing and conversing. Plan of the exterior spaces is also same a timid person in an open expanse feels lonesome and unprotected from nature an from the elements. While on the other hand a bolder person feels challenged with plenty of room for movement and action.

An upright object in the bare ground is an element of inherent as well as a point of orientation, a vertical plane or wall has meaning both for human defense as shelter, too. Intersecting upright planes increases our sense of protection. Continued attachment of vertical planes increases the definition of the space.

## 01.2.2 Attributes of Space

Each space contain and originate with fundamental attributes they help to form the space and for it's existence thus help to conceptive the quality exist in space on to built form. They are centre, enclosure depth density and continuity. Through that space is created and varied degrees of each of this, its strong ness drive the spatial quality to some extent.

#### 01.2.2.1 Center

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

During the early period of the history man thought that the whole world is being centralized. On the other way each means has his own physical world and it contains a center. Reaching to this centre is considered as the most difficult task of the life. There for it may concerned as more sacred. Ancient

Greeks located the navel of the world in Delphi. "ka'aba is the centre of the world of Muslims.

Center represent to man is known in contrast to unknown it s a point where he linger and lives in space. It is the point where he refers himself to other spaces.

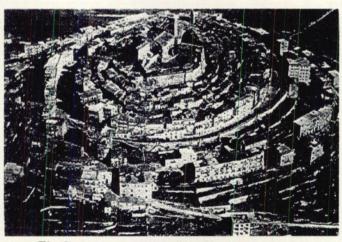


Fig. 2: Kaludiya Pokuna; Nature into manmade -a strong link

#### **01.2.2.2 ENCLOSURE**

"The centre exists in the relative field of the volume and enclosure is the container of this volume; enclosure can I either be a tangible physical entity or intangible sense of enclosure. In pragmatic perceptual and existential spatial experience enclosure be comes primarily spontaneous happening and intangible phenomenon." Kulathilak K.K.R.P (1994,p,13)



Architectural space enclose purposefully created to enhance the desired spatial meaning and most often visible physical entity. Walls ceilings are the major element of any physical enclosure which help to variety of built structures as meaning spatial entities andscape water level

changes are used also to creating enclosure.

#### 01.2.2.3 Depth

Effective indicator of the depth will be the effect of perspective, gradient of texture and the phenomenon which tells us that on object hides or another in front of it. In painting one or the other of this phenomenon are used to produce deep space or shallow space.

"Painter from the Renaissance to the nineteenth century do not conceal their preference for perspective and deep space painters of middle age and in another manner painters like Juan Gris, Braque Le cobusier and more recently Robert Slutaky are masters of this shallow space in which supere imposed



planes appear compressed very close to each other and often ambiguous.

Meiss Pierre von (1990 ,p,150)

So modern architect also attempt to compose space and objects by using these method s. Rather than working with fontal planes whose respective distance is small, modern movement exploit not only this hallow space but also the pheromone of transparency which results form the disappearance and fragmentary reappears of one plane behind the offer.



Fig. 3: Vierzehnheiligen, Pilgrimage church

## 01.2.4 Density

"For the architect a space does not only have depth it is also more or lessens. When a greater density appears appropriate he seeks to modulate distance by intermediary and closer "stages of depth " this is generally the case when we work with shallow space but also create density with a deep space."

Louise Kanh

Same space is derived in to smaller spaces by visually using columns, beams, steps there for number of smaller spaces occurred in the large volume, to all these smaller spaces volume is same. Therefore this phenomenon called as spatial density.

Spatial density is not only occurring due to spatial staging it can

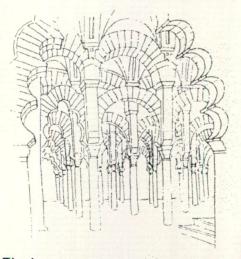


Fig.4: Dense space interior of the mosque at Cordoba

be implicit by the modulation of floors walls or ceiling so that the same unitary space appear as full or relatively empty.

#### 01.2.5 Continuity

Distinguish character of architectural space is that they can either be closed, introverted concentrates up on themselves or open extroverted centrifugal where mass concentrate space is more or less closed. Degree of enclosure does not depend on the quantity and the size of the opening. When some one try to create a space tends to open to exterior more on less try to make it less explicit. Therefore this is a close relationship between motion of explicit and implied space and the degree of opening or close. But continuity suggests a path. There is a beginning a direction an inclination facing for many up levels and at the end destination along the path. This will be common to all forms of mans physical and emotional stimulate as well as behaviors, spatial experiences well so exists as a space it has to continue to exist man in the space he too has to make relationship with space. Either it is man made or natures the spatial quality exists continue with it in same way or even strengthen form.

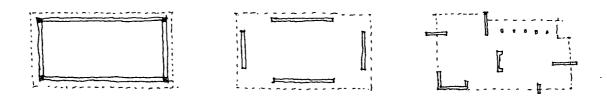


Fig. 05 The opening of a space is obtained by the reduction of its degree of definition (for example elimination of a corner) and by the presence of elements belonging to depth the interior and the exterior (for example, extension of a wall towards the exterior)

## 01.3 Spatial Relationships

"The goal already contains the path as its point of reference, directional indicator and ultimate end, and movement may be directed towards the goal, may emanate form it or may encircle if, all architecture a structuring of space by means of a goal or path. Every house is architecturally structured "path" the specific possibilities of movement and the drives towards movement an one proceeds from the entrance through the sequence of spatial entities have been pre – determined by the architectural structuring of that space and one experiences spaces accordingly." Norberg Shulz (1971, p,121)

Mans impatient search for the orientation of his existence in the field of imagination made him to learn what orientation he needs. In primitive utilizations they found terms which communicates the spatial relations which are not abstract but have direct reference to himself as well as environment. Such as above and below, before and behind, right and left will be examples for that, which guided him to express his position in this world.

This attitude encourages the building of spaces and by building he fixed spatial relationship between earth sky and time conjecturing his position in the world throughout the civilization.

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

#### 01.3.1 Space with in space

A large space can envelop and contain with in its volume a smaller space visual and spatial continuity of two spaces and between can accommodated but the smaller are one defined on the larger one for its outdoor space.

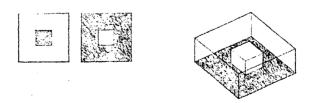


Fig. 6: Space within space.

To endow it self with higher attention to contained space may share the form of enveloping space. But it oriented in different manner. This creates a secondary grid and dynamic residual space within the larger space.

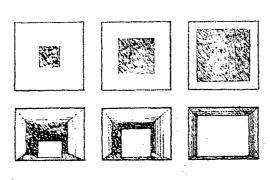


Fig. 7: Space within space: suggestions

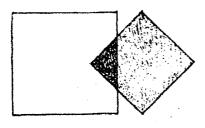
Contain space as the other land differs from the enveloping space and strengthen its image as a freestanding

Object. It may indicate the functional difference between the two or the symbolic importance of contained pace.

## 1.3.2 Inter Locking Space

This consists of to spaces whose fields overlap to from a shared space.

Their volumes in this retain its identity and definitions. But the resultant may subject to a various interpretations.



One ways is interlocking portion of two volumes can share the equally the each space. Interlocking portion can merge with one of the space and can become a part of its volume.

Fig. 8: interlocking space: Spatial Relationship

The interlocking portion can develop its own and integrity as a space. That serves for two originals.

#### 01.3.3 Adjacent Space

This will be the most common. It allows each space to clearly define it self and respond to its functional or symbolic requirements—its way, the degree of visual and spatial continuity that occurs between the two will depend in the nature—of the plane—that both separates and binds together

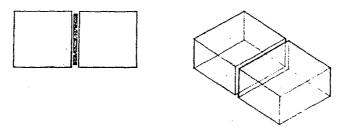


Fig. 9: Adjacent Space: spatial relationship

Limit visual and physical access between two adjacent spaces reinforce the individuality of each space and accommodate their difference.

Some times this space act as a transcending plane in a single volume strongly defined with raw of columns that allow a high degree of visual and spatial continuity. Be merely implied with a change in level of surface articulation between the two spaces. University of Morahuwa, Sri Lanka.

Electronic Theses & Dissertations

www.lib.mrt.ac.lk

### 01.3.4 Spaces Linked By Common Space.

Two spaces that are separated by distant can be linked or related to each other by a third intermediate space relationship between the two will depend on the nature of the third space which they share common relationship.

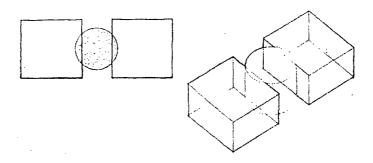


Fig. 10: Spaces Linked By Common Space

Two spaces as well as the intermediate can be equivalent in shape and size to form a linear sequence of space

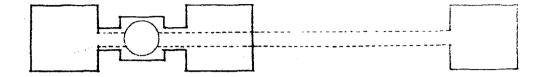


Fig. 11: Spaces Linked By Common Space: direct spatial Relationship

Intermediate space can become linear to link the two spaces or it may link the two spaces with out having no direct relationship to one another. Intermediate space my become the dominant space the relationship and have the potential to capture number of spaces it self. Sometimes the forms of two spaces linked will determine the form of the intermediate space

The intermediate space provides the mean of separation or connection differentiation and transition interruption and continuity, boundary and crossing order is created when these elements and systems start to make visible the relationships among themselves as constituent parts. When there relationships are perceive as contributing to the singular nature of the whole a conceptual order that is perhaps more enduring them transient perceptual vision comes in to and qualities that make possible the progression of spatial experience which is the spatial progression that we talk in architecture.

#### 01.4 Spatial Organization And Spatial Orchestration Patterns

In natures existence space has no dimension. It takes on the dimension and form given by meaning. Combined interrelationship between man and space many always provides the areas to understand the spatial orchestration. Elements which are shown as bound together in the masses, simply describe as a quality of the space which clearly depicts the unity in the spatial orchestration. Grouping of spaces should have visual centers of gravity to have

unity. There centers are so called as the dominants in spatial unity and it helps when in organizing and grouping of spaces.

"Architecture is the articulation of spaces so as to produce in the participated a definite space experience in relation to previous and anticipated space experiences." Edmond N. Bacom; All architecture is series of connected spaces. Meaning with articulated space moulds man to capture three dimensional body. Through correct positioning of the object architect manages to orchestrate the succession in spatial composition. This constitutes in organizing simple forms of masses in to single entity of space. Therefore it is the organization of the objects to create an essential spatial quality of space to have a particular order and discipline is considered as the spatial orchestration in architecture.

#### 01.4.1 Spatial Organization Principles

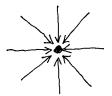
Architecture means series of connected spaces. These massing of spaces moulds a three dimensional body which help to capture it visually. Therefore this composition of spaces done in organizing simple form of masses in to a single entity of spaces there are several ways of organizing in order to capture the required essence. It has been illustrated under sub topics.

#### 01.4.1.1 Centralized Organization

Centralized organization is a stable arrangement which consist number of secondary spaces grouped around a large dominant central space. This central space must be large enough to gather and hold the number of secondary spaces.

Secondary spaces may be equivalent to one another in function, form and size and cerate an overall configuration that is geometrically regular and

symmetrical about two or more axes. Secondary space may differ from one another in their form in size as a response to their individual requirement of function, relative importance of context. This differentiation arranges the secondary spaces allow the form of the centralized organization to respond to the site.





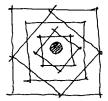


Fig. 12: Centralized organization

From of centralized organization inheritantly non directional, approach and entry must be specified by its site and articulation of one of the secondary space an entrance form. Circulation pattern will terminate the central space relatively compact and geometrically regular centralized organizations can be used to

University of Moraduwa, Sri Lanka.

Electronic Theses & Dissertations

www.lib.mrt.ac.lk

- Established points or places in spaces
- Terminate axial compositions.
- Serve as an object in defined space

#### 01.4.1.2 Linear Organization

Linear organization consist series of spaces which will neither be directly related to one another or be link through a separate linear space. This will consists usually that are like size form and function and may also consist linear spaces that organize along its length a series of spaces that differ in size , form of functions. But in both each space has an exterior exposure. Spaces that functionally of symbolically important to the organization can occur anywhere along the linear sequence and have their importance articulated by

their size and form. This significance emphasis by their location at the end of the linear sequence of the linear sequence offsets form the linear organization or at the pivotal points

This organization because of its character expresses a direction and signifies movement extension and growth. To limit it can be terminated by a dominant space or form, by an elaborated entrance or merging with another form or the site.

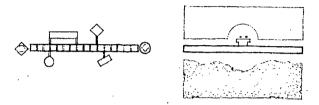


Fig. 13: Linear organization pattern

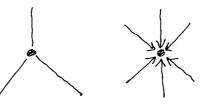
Form of linear organization is flexible can respond readily to various conditions of its site it ca run horizontal sacross or diagonally up a slope or stand vertically as a tower. This can related to other forms in its context by

- \* linking and organizing along its length
- Serving as wall or separate
- \* Surrounding and enclosing them within

### 01.4.1.3 Radial Organization

This combines both centralized and linear organizations. It consists of a dominant central space form which a number of linear organizations extended in a radial manner. With its linear arms it can extended and attached it self to specific elements of features of its site. This central space in radial organization is generally regular in form. Radiating arms can also differ from one another to respond to their individual functions and context.

Specific variation of a radial organization is the wheel pattern where the linear arms of the organization extended from side of a square or rectangular central space ultimately this arrangement results in a dynamic pattern that visually suggest a rotational movement about the central space.



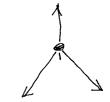


Fig. 14: Radial organization pattern

## 01.4.1.4 Clustered Organization

Clustered organization uses to relate to its space to one another. This shares a common visual trait form shape or orientation. It often consists of repetitive celluar spaces that have similar functions clustered organization can accept within its composition spaces that are in various sizes forms and functions but related to each other because the pattern does not originated form grid and geometric concept the form can accept growth and change readily without affecting its character.

This can be organized in a point of entry to a buildings or along the path of movement through it. The space can clustered about a large defined field or volume of space. Although this similar to the centralized organization it lacks the compaction and geometrical regularity. This can also contained within a defined field or volume.

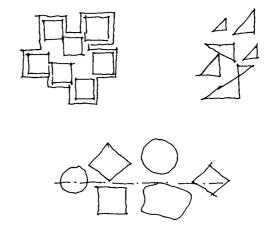
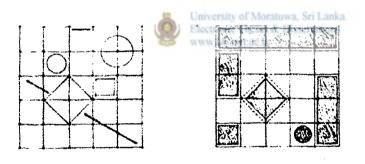


Fig. 15 Clustered Organization pattern

Significance of the space must be articulated by its size form or orientation with in the pattern.

### 01.4.1.5 Grid Organization

This consists of forms and spaces whose position in space relationship with one another are regulated by a three dimensional slid pattern on field, grid is created by establishing a regular pattern of points that define the intersections of two sets of parallel lines projected into the third dimensional organizing power of grid results form the regularity and continuity of it pattern pattern established a constant set of field of reference point and linear in space with which the spaces of a grid organization although dissimilar in size form function can share a common relationships.



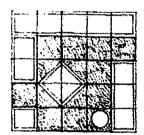


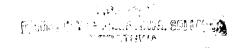
Fig. 16 Grid Organization pattern

A grid a established most often by a system of columns and beams with in the grid. Spaces can occur as isolated events or a repetition of the grid module regardless of their deposition within the field these spaces if seen as positive forms will create a second set of negative spaces.

To accommodate the specific dimensional requirements of its spaces grid can be made irregular in one or two directions. This would create a hierarchical set of modules. Grid pattern can interrupt to define a major space or accommodate natural feature of its site.

#### 01.4.2 Spatial Orchestration

As architectural product is an assemble or serious of spaces and the purpose of this product is not just for visual satisfaction but for total emotional experience that a person encounters when moving through these spaces. If this total experience is to be a satisfactory it should convey a meaningful massage. To achieve this, spaces should organize in a particular manner. With directional sense, this would clearly indicate the starting point a terminating point with the progression of movement manipulated in such a way as to achieve the above purpose. In giving sense of progression towards the climax, or the major space, or main space, of the architectural creation of the deliberate manipulation of space, with deferent qualities at different levels. These would make different sensations at different stage of progression, a qualities gradually reaching climax experiencing it as show. This need were is not only the correct order of space but also the correct orchestration of space in rhythmic way in other word orchestration of spaces or create certain progression so that one is oriented towards the required directions with the correct emotional impact which convey the correct massage. Here the created built environment become meaningful spaces for people to behave, accommodate and feel comfortable with the physiological impact and stamp the image this the sensitive orchestration of mean spatial progression of buildings eventually express there differences individuality and their purpose. Obviously this leads to create better and meaningful built environment "One can assume that the nature of this sequence of spaces toward the inner sanctuary and the individual form of there spaces were not the product of



chance, but that spatial form significant and use were related to each other over and above this one can recognize the principles of using system of spatial layout and spatial relationships, as architectural achieve certain effect on the experience." Steen Eler Rasmussen (1959, P. 9)

The idea of orchestration had different episodes likewise musician creating or producing his music composition. Here listening is it's experience one is impressed with how lively and bormey it's melody sound. Again it is liveliness are bouncy. There are certain aspects of auditory melody itself is lively. it is the expressive quality. This experience. The melody comes as sounding lively. Because on experience as a while, which is articulated in a certain way. The particular pattern of crescendos and descrendos the specific array of accented beat the pattern of pitch changes. All these evolving simultaneously give rise to the melody as an organized experience and constitute. Its articulation similarity the architect like a musician, orchestrates the spaces in sensitive way. So that it demonstrates the expressive qualities. With the effect of experience, manipulating the characteristic of the spaces, become the architect's method of determining various aspects on the experience of an observer. It is his interest in patterning some aspects of observer's experience. It takes to into consideration the nature of experience which is most useful in furthering to architects goal.

#### 01.4.2.1 Continuity Of Space.

Form spatial relationship spaces connected each other, Physical by to grasp the spatial hierarchy spaces should flows therefore although height and volumes enhance or very of spatial quality there should be continuity of spaces. "Architecture primary objective is to set forth a spatial model of the world to give order to the naked space. The ordering of space signifies employing form to derive form space the invisible relationship that will constitute a transparent order." Piere van mies (1986, p,35)

Most pierced and perceived art of form and space which brings each individual to particles on their contribution as character inside or spectator out side. It always has a meaning because it has a valve on space rather than with form.

"Architecture is spatial art, form is len the ultimate and to that purpose but rather a means of conferring upon places and pathways a distinctive identity of arranging places and pathways to be utilized and to create on impression on the mind." Piere van mies (1986, p, 51)

"One would come to a conclusion that architecture comes to being only when experienced. It is mistaken to say that man is always the centre of architectural space and to decide that the direction of architectural space changes with the movement of the human body. Architectural space, certainly exist independent of the casual perceiver and has centers and directions of its own space manipulate the man and his functions while orientation and configuration makes him move and to progress." Piere von Mies, (1986, p,17)

Space can be perceive physically as well as emotionally because it has tied to mans perceptions. Physical perception of space can be grasped by through the experience in the extensions of material bodies of field and codifies to the spatial progression. Emotional perception of space can be objects and spatial composition in context bringing these two in to life through architecture creates a successive perception of places. Its links and relationships towards and beyond encourage the emotional and physical movement of man to move from one place to another. Having successfully applied on physical design considered as continuity of space.

#### 1.4.2.2 Use Of Spatial Relationship

The relationship shows several aspects, it provides separation and connection or in other worlds differentiation and transition, interruption and continuity,

boundary and crossing etc. Order emerge when these systems or elements shows these relationship among themselves as constitute and part when the relationship perceived as singular nature of the whole perceptual vision emerge. It is the main source that make possible the progression of spatial experience which considered as the spatial progression in architecture.

The Circulation path can be perceived as the perceptual thread that links the spaces. Since we move in time through a sequence of spaces we experience spaces in relation to where we have been and where we anticipate for going there are several phases in this special experience.

#### The Building Approach

When consider the entering to a building's interior, first phase of the spatial experiences will be the approach towards its entrance along a path. Nature of the approach may contrast with what is confronted at its termination,

or it may continue on is to the buildings interior sequence for spaces, obscuring the distinction between inside and out side. Approach may directly leads towards the buildings entrance aonlg a straight axial path and the visual sosal that terminate the approach will be clear.

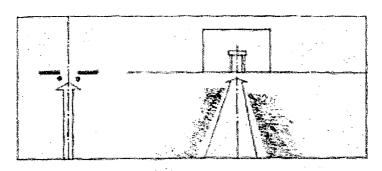
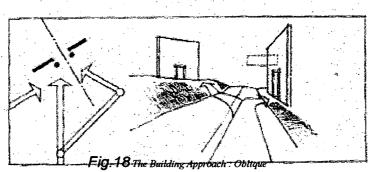


Fig. 17 The Building Approach: Frontal



Some times approach my entrance the effect of perspectie on building form. The path can be re directed one or more times to delay the sequence of approach.

Path will arrange for one to experience the three dimensional form of a building as the moves towards. He more towards while moving around the building perimter that emphasizes a spiral approach to the building.

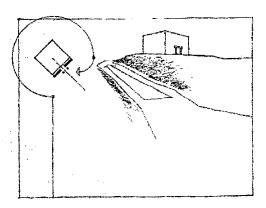


Fig. 19 The Building Approach: Spiral

# **BUILDING ENTRANCE**

Entering to a building, a room with in a building or defined field of exterior space, involves the act of penetrating, a vertical plan that distinguishes one space from another and separates "here' and 'there'. It can be a passage through an implied plan rather than a real plane. In more suitable, situations where visual and spatial continuity between too spaces is desired, a change on level make the passage from one place to another.

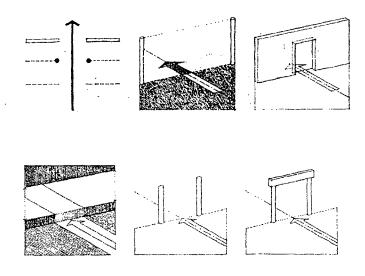


Fig. 20 Building Entrances: Formulation

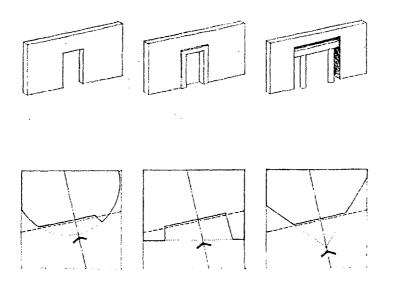


Fig. 20 Building Entrances: Formulation

Regardless of the form of the space being entered or the form of its enclosure establishing a real or implied plane perpendicular to the path of the approach best signifies the entrance in to the space.

## **CONFIGURATION OF PATHS**

All path has starting points which will taken one through a sequence spaces to the required destination. The intersection or crossing of paths is always a point of decision making for the person approaching it. The continuity scale of each path at the intersection can help us distinguishing between major rout leading to major space and secondary paths leading to lesser spaces. When the paths at crossing are equivalent to one another, sufficient spaces should be provided to allows people to pause and orient themselves. The nature of a path's configuration influences or is influenced by the organizational pattern of the spaces it links. The configuration of a path may reinforce a spatial organization by paralleling its pattern. Once individual use mapping out individuals mind the overall configuration of the paths in a building,

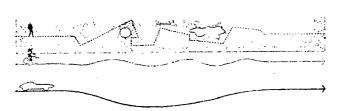


Fig. 21 Configuration of the path

individuals orientation with the building and individuals understanding of its spatial layout will be clear. All paths are linear , straight path can be the primary organizing elements for a series of spaces. A configuration could be radial and therefore paths could be radiated from or terminated at a central point. Sometimes the configuration if path may be a spiral that organizes form a central pint that evolves around it and increases the distance form its.

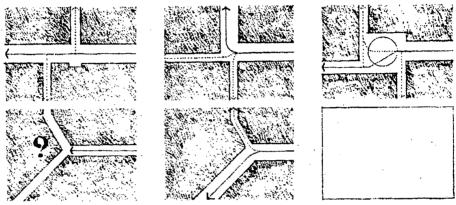


Fig. 22 Configuration of the paths

Configuration may be a grid consists of two sets of parallel, paths that intersect at regular intervals and create square or rectangular fields of spaces. Configuration that consist of random paths that connect establishes in space is principally known as the network. In reality a building normally employ a combination of the preceding paths to avoid the creation of a disorientating maze. A hierarchical order among the paths can be achieved by differentiating their scale form and length.

#### PATH SPACE RELATIONSHIP

Paths may be related to the spaces an sometimes it passes by spaces or passes through spaces a path could be terminated in a space.

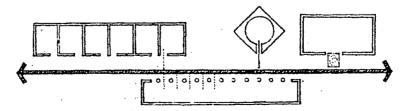


Fig. 23 space Relationship: Pass by spaces

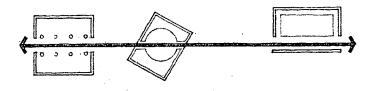


Fig. 24 space Relationship: Pass through spaces



Fig. 25 Path - space Relationship: Terminate in a spaces

#### 1.4.2.3 Continuity of spatial expressions:

Expression is the architectural arrangement gives out the specific message (meaning) the architect intent to communicate. The expressions are generated by the way that the architect handles his architectural tools, scale, proportion enclosure, spatial density and depth etc depending on the purpose of the spaces expressions vary. The architectural creation is a unity of different spaces. Continuity of expressions is in superbly woven within the unity of the spaces. Each expression is perfectly related with the other surrounding expressions. This continuity should also be maintained in an arranging manner with the purpose of the whole creation.

#### 1.4.2.4 Development of Spatial Meaning:

Spatial meanings are the messages generated by the spatial expression. What all the individual meanings have got to do for the whole creation is the identified to be the development of spatial meaning. (Where the meanings are concerned they are space dependent; chiefly on a particular space and perfectly on the rest of the spaces as well)

Following major points are discussed under the development of the spatial meaning

# a) Locality of the space:

Specifies the location of the particular spatial arrangements

# b) Totality of spatial expressions

The ultimate purpose of the total creation has some impact on each individual spatial meaning in return

# c) Influence of the expressions of related spaces

Expression generated by related spaces contribute to determine the relevant to a specific meaning to be developed expression in harmony

# d) Spatial kingship

The position that the space deserves hierchical order of the spatial arrangements important of the space interest holds in the hierarchy of the spatial arrangement.

#### 01 – 4.2.5 Physiological progression related spatial meanings

Though the generating meanings are different at different stages of deferent spatial expressions they all are under the control of the objective of the creation., supporting to the ultimate purpose so that uniqueness of the under laying rhythm can carefully be maintained through out, from the beginning to the destination of the creation.

The meaning here are meant to generate emotions, in the mined of the person who experiences to move through the creation. Generating of emotions in such a way that the above movement in meanings are reflected in them is what an a Architect's ultimate goal and is termed "Physiological progression"

related to the spatial meaning inside the architectural creation. plying of this role is the subject of spatial orchestration.





# **CHAPTER TWO**

Sri Lankan Vernacular Architecture



#### 2.1 Brief Introduction To Sri Lankan Vernacular Architecture

When considering the work "Vernacular " it gives the impression such as 'anony mous' spontaneous popular primitive or flock based. How ever one can suggest these terms illuminate in preliminary way. In broader sense these terms look each has a distinct true meaning of its own.

Oxford Dictionary defines as the word anonymous as of unknowns other ship and word flock means the masses of the people in the lower culture and originated or widely used among common people. At the sometime indigenous describe as native of the land untouched by exterior or alien influences. World spontaneous gives a meaning of self originated or acting. Without external causes. 'Popular' means the pertain to place infact world primitive defined as isolated and self contained.



Either of these terms are not satisfactory to use for identify the meaning vernacular form of architecture. Many architectural critics also describe that divide a satisfied definition of vernacular is more difficult.

It seems Sri Lankan vernacular Architecture can be termed as activities which are native and indigenous forms in the nation like music art—architecture or language. Community of Sri Lanka—there language song too can be identifies as vernacular—most significant thing is that it is not limited or bound to an one particular period. The vernacular in all arts has always been a source of inspiration for every one and it helps to tie one to its roots. Built—environment of any human settlement vernacular architecture depict—it as an important role.

Man was completed to learn the know-how to built which was more expressive of his sprit and aspirations which he was comfortable in then the care to which he felt less belonged. When considering the way built forms evolve Amos Rapport explains how in early societies is capable of building built objects for them selves. "Certain forms are taken for granted and strongly reist change science Scientist like these very tradition oriented thus explains the close relationship between the forms and culture in which they are embedded and also the fact that some of these forms persist for very long period of time." Amos rapport (1969, P,4)

But Prof. Nimal de Silva explain development of the vemacular tradition in the Sri Lankan tradition for shelter.

"The tradition is the opinion or belief or custom handed down form ancestors to posterity. The tradition is not static it is the product of the functional demand adopted with the nature and environment flavored with culture and belief. It was developed with certain value system any thing that was not acceptable to the society was gradually rejected any what was proved useful for people were retained and adopted. The outcome of confidence and the human satisfaction experienced by the ancestors, formulated participated the tradition. Prof. Nimal de Silva (1987, p,17)As mentioned above Sri Lankan vernacular architecture develop on the way of forming a Sri Lankan identity.

These indigenous buildings which are built by local craftsmen are widely respond to Sri Lankan context. That mean it enhances the regional identity of the architecture style.

"Regionalism by the very definition is committed to find truthful responses for geographical locality and also it is simple returning to architecture which is true to people and namely the continuity in a given lace between past and present". Chirus A (1986 Nov. p. 22.)

That is committed to fined unique response to a particular place culture climate and history. That means the Sri Lankan vernacular buildings which were built local craftsman who used the local material and technology. They are well suited for the particular environment settings and the climate such buildings are construct with cosmological and religious. Values social and political structures and attitudes towards time and space.

There for they reflect the collective images values and attitudes of their societies architectural language is embedded as an aspect of tradition. In vernacular religious building such as village set tradition assure continuity of vernacular setting through craftsmanship materials and technology.

Form and symbolisms of vernacular are in grip of tradition there fore form of vernacular remains same for centuries while changes occurs in any in credential manner. Sri Lanka has rich vernacular tradition. It has enriched by the strong philosophy of Buddhist which is granted from India, move them 2500 years ago. Buddhist philosophy and attitude to life play an innumerable role in shaping the social and cultural tradition in the island.

Simplicity and impermanence nature of life generates a basic foundation of life. This will be the main attitude that from the culture and the Sri Lankan quality. Hence Sri Lankan traditions are mainly based on the principals of the care, gratitude and thrift and sharing reasons.

Originating the vernacular Architecture express the way in witch the local traditions link with every day of life an appreciations of local community or society. From and symbolism of vernacular are in grip of tradition. There fore form of vernacular remains same for centuries while changes occurs in any inclinational manner.

Fore examples, when consider the early Sri Lankan vernacular settlements that are reflect the essence of the particular culture respond of local

government context. Social context and buildings. That settlement mainly classified in to two distinct characters.

They are the,

- 1). Rain fed village.
- 2). Tank fed village.

But there are similar elements would be identified in both these settlements as unique components of Sri Lankan vernacular

# Dr. Ranjith Dayarathne describes, that

"In absences of organized professional intervention in creation settlements these consist of extensions, additions, modifications and consolidated of every day place that corns to being and existed on the basis of spontaneous activities of the ordinary people." Dr. Ranjith Dayarathne (1999, p,178)

## The Poornagamas And Jungle Villages

There are the earliest jungle villages prevalent in the north central provience. These are commonly known as "pooranagmmas" (meaning old villages). Such settlements are essential tank-fed. Hence they came into being placed where a tank to collect water, which exists in a higher elevation of the settlement space. The low and was preserved for agricultural purposes.

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

Each and every family in the village shared responsibilities to sustain the agriculture livelihood by ensuring the sustenance of tank. Thus the surrounded area (catchment area) was left as jungle space.



Fig. 26 Tank - fed settlement.section.

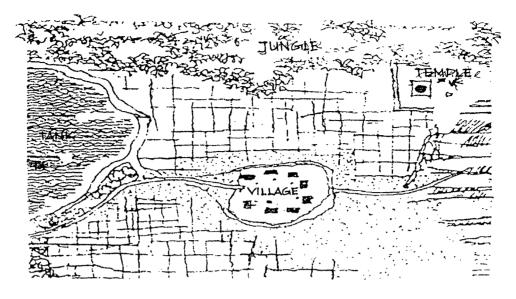


Fig. 27 Tank - fed settlement,

The in-between unproductive land was used to form a collective homestead. The individual dwellings were faced. To the central area that formed a communal space, which enclosed and depended against the wilderness. The dwellings were small and consisted of a minimum inner-enclosed space for privacy and a large outer verandah for all other purposes. There were grannies of commonly known as "bihi" of each family, constructed as a separate unit which symbolized their collective wealth. A fence surrounding the homestead protected it from the wild animals and other intruders.

#### The rain-fed rural settlement

(central hills and western wet zone)

in these rain-fed rural settlements, the agricultural activities were relied upon the seasonal rains. Hence tank is not a visible feature in such settlements. According to the seasonal rains, a cycle cultivation method is carried out and it maintains the richness of soil. The arrangement of dwelling space took a different shape in rain-fed rural settlements, but similar pattern could be identified in the collective settlement spaces.

The dwellings of these settlements were constructed in the high ground, in a dispersed manner. The routes or paths proceeding from a central village square, commonly known as "gamgoda". The low and surround the built areas, left as agricultural land.

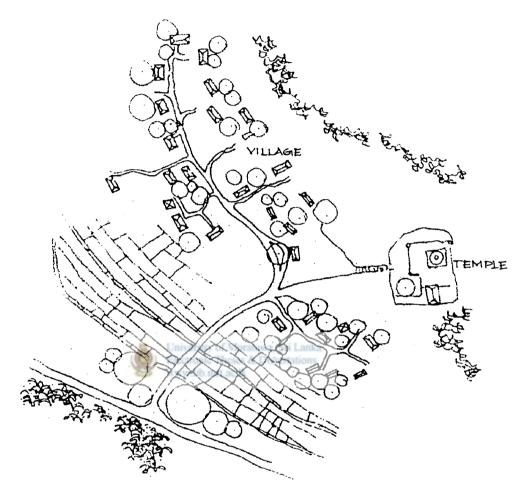


Fig. 27 Tank - fed settlement,

In these settlements, each dwelling surrounded by a cultivated land, known as "watta" or "home garden". It provides fruits, vegetables, herbal plants, and timber for building purposes. The land beyond the agricultural fields was reserved for the forest. It was considered as the source of life of the settlement system, which also provided the fauna and flora and firewood for the dwellers.

## 2.2 Aspects of Sri Lankan Vernacular Architecture

When considering the vernacular architecture in Sri Lanka, it has been emerge strongly because of the Socio cultural back ground that derived from agro based economy. This has grown lager with the help of the religion and time. There are various attributions under this. They are,

- a). Domestic vernacular or the vernaculars settlements.
- b). Vemacular public buildings like 'Ambalama'.
- c). Religious vernacular like Temple, 'Vihara', Cave temples, Image houses etc.

Sri Lankan vernacular architecture has had unique features and inherent characteristics of Sri Lankan vernacular tradition which are the factors generated from Sri Lankan Eco – Socio cultural context. Unique feature and inherent quality of the Sri Lankan vernacular architecture can be identified from bellow.

# 2.2.1 Special Characteristics of Moralium Sri Lanka. When the second control of Moralium Sri Lanka. When the second control of Moralium Sri Lanka. When the second control of Moralium Sri Lanka.

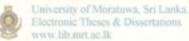
While looking at the vernacular built forms in general terms these mere artifacts tells us very little. There for it will be an interesting phenomenon to view them in new profound way. Indeed the nature or the essences of such vernacular traditions represents the shared wision of relationship with the Buddhism and society. This will be more specific to Sri Lankan culture. In fact it is able to capture the hopes and dreams which are containing indigenous ways of doing things. The following sub topics reveal some of the important features which are unique to the nature of that architecture.

#### 2.2.1.1 Harmony with Contrasting the Nature

This reveals the significance of Sri Lankan vernacular architectural products showing clearly that they are part of the context at the same time depicting the clear difference between natural and man made. Image houses

and all the cave temples are fine examples for this. Although the product shows clearly the deviation from natural to man made, they way in which it fits in to the context positioning, scale and the proportions are used in the most suitable manner. This helps to bind the products on to its natural context. As a result the vernacular architectural product and the natural context do not contradict but harmonies together to bring out the beauty of each without polluting one another.

When taking a vernacular cave temple as an example this has been fulfilled by using the natural caves in isolated mountains. Although when using these caves in to mans needs the element like walls/roofs which he use clear cut the margin of naturalism and man made it depicts that the elements are bound to the natural rock. The proportions scales are manipulated efficiently in order to bring out that significance in effective way. There for though this effective manipulating man succeeds transforming the beauty of natural thing in to the manmade as well as transforming the beauty of man made in to natural with out destroying it.



# 2.2.1.2 Composition of Geometrical Forms

One of the most significant ways of the Sri Lankan vernacular architecture

tradition is the use of pure geometric shapes in meaningful way. Therefore that would enhance the organic quality of the natural environment without destroying the purity of shape. Most commonly used shapes will be squares and rectangles. This has been used in cave temples to create vemacular architecture.



Fig. 28: Kaludiya Pokuna; Nature into manmade –a strong link



In tank fed villages our ancestors widely used rectangle shapes in meaningful ways to generate vernacular architecture. Important feature of the arrangement patterns of above vernacular built forms are, when arranging the houses it depicts the lifestyle of the inhabitants their social hierarchy and their aspects to the nature.

Like wise when considering the cave temple the detailing of the joint of the large natural rock and the pure geometric shapes which hit on to it, how sensitively it has done without destroying its former shape clearly shows the mastering qualify of composition in vernacular architecture. The treatment given to the geographical condition and the human behavioral pattern also clearly shows this.

# 2.2.1.3 Uniqueness of Spatial Orchestration Pattern

The Sri Lankan vernacular architecture tradition has its own spatial orchestration pattern. This is also can be seen in other art forms like, literature and drama. Cave temples like Dambulla clearly show this identical spatial orchestration pattern. Infect it is also can be evidence when analyzing deeply the social life pattern of the traditional Sinhalese village. It clearly shows that this pattern exist similar way in the lifestyle of that people.

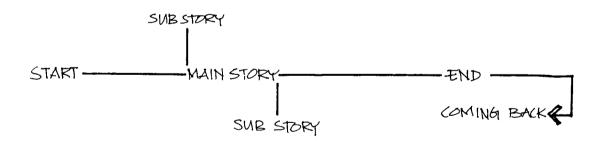


Fig. 29: orchestration pattern

The best example to identify this pattern will be the Jathake stories that come in Buddhist philosophy, which the Sri Lankans associated and familiarized for centuries. Largest story on the "Jathaka Stories" Ummagga Jathakaya captures this pattern.

Likewise in Sri Lankan vernacular built forms such as cave temples also develops a similar spatial orchestration pattern.

# 2.2.1.4 Quality of Minimalism

This has been clearly identified as an unique feature of the Sri Lankan vernacular architecture. This significant feature has based on considering the core of the Buddhist philosophy which describes or ultimately reveals the impermanence nature of life. When taking it as a social aspect the life style become simpler and humble as it has considered that this life is just another rest pint in the process of born again and again or the "Sansara"

There fore the vernacular architecture has developed inorder to adjust to depict the key realms of this simple lifestyle. "The great simplicity of ordinary life must be kept mind the house was one storied timber and mud wall buildings with thatched roof"

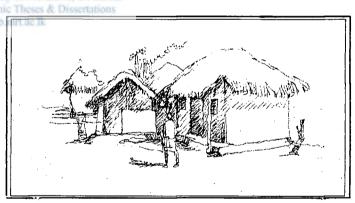


Fig 30: life depict - minimalism

Coommaraswamy (1979 p 31).

Therefore the Sri Lankan vernacular architecture which has been enriched from the social aspects depicts this social life pattern more elegantly. Sri Lankan vernacular architecture emerges through the requirements that come from the simple, minimal life style and minimal quality has become it key feature.

As taking an example, the built form in cave temples has this minimalist quality or the simplicity on each space as well as in totality of whole. Volume in order to the human scale, quality of each space and details done to then the materials used to derive the each spatial quality, construction technology will depict the simple minimal quality.

# 2.2.1.5 Harmony with nature

When creating vernacular traditional forms, attitudes towards the nature and the site can be mentioned as key aspects. Predominantly the life style which has been nurtured from Buddhist philosophy help peasants to cultivate the attitude of harmony with nature; rather than conflict or conquest.

The attitude towards nature could be identified as symbolic here. "Man and nature are is state of balance and man regard himself as a responsible to good for nature and earth and as steward custodian of nature" Rappoport. (1965: p 77).

Infect the vernacular tradition; treated with great care and sensitivity contributed to their locality. Thus it is inevitable to achieve a proper balance or harmony between vernacular built forms and their biological environment. Indeed the way of such forms fit in well with the

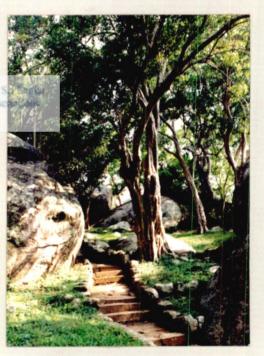


Fig 31: pathway - an extention in organic form

nature express the attitudes through choice of material and spatial configurations.



Vernacular built form such as cave temples, pavilions were formed in such a way that, they consist of minimal enclosed spaces for individuals and privacy by the way majority of public or communal spaces open out the landscape or nature.

Open out transitional spaces and verandahs with a raised plinth define the building edge by rising it form the rest of the surrounded ground. It shows that such outward spaces provide panoramas of surrounding landscapes that generates the openness. The use of locality available material, their colour and texture that all related to landscape infect dwelling were part and partial of the nature.

## 2.2.1.6 Articulation of Transitional Space

"Transitional space" conveys the massage of the process of spatial experience from one state of mind to another. Thus it can be identified as dynamic spatial field which will provide a path to flow freely in between a certain inner and outer realms.

Infect an intermediate space is formed by stretching inside space towards the outside and at the same time out side space penetrates to the border by creating an area of transition.



In traditional vernacular buildings

Fig 32: verandah, inside - from outside.

contain open, semi open and enclosed spaces. There fore here the open flat

podium is the entrance of the entry point and the semi open area which are connect the inner chambers or the inner climax areas or else the ultimate spaces called as transitional areas. It also recognize as the public gathering area. It is seen as in between zone neither fully open out of the landscape nor totally enclosed from the landscape.

In fact, transitional space in the vernacular building acts as the filtering space of its users. At the sometime it serves symbolically as a buffer zone that limits the admittance to the inner compartment.

Such intermediate zones on the Sri Lankan vernacular buildings clearly manifested the fluidity between outer openness and inner enclosure thus creating a strong spatial experiences of the arrival by transforming the mind set from one realm to another.

#### 2.2.2 Influences and inspirations

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

In traditional way of creating Sri Lankan vernacular architecture has toughly effected by the socio cultural beliefs and the available technology and material. But that tradition develops grapping their essence. Forms and spaces which are created traditional vernacular architecture arrange in to a spatial hierarchical order which grasp from the Buddhist philosophy.

Sri Lankan Buddhist philosophy materials and construction technology sense of human scale and nature are some of the factors which influenced and help to inspired and form the nature of the vernacular architecture.

Prof. Nimal de Sivla (1987: p 15) describe it as; The traditional houses that existed in Sri Lanka for more than two thousand year was an out come of strong philosophy of Buddhist life, ie. the simplicity and in permanent nature of life the house was pat and parcel of nature the material borrowed form the nature and returned to the nature.

#### 2.2.2.1 Sri Lankan Buddhism

Development of vernacular architectural tradition strongly linked with Sri Lankan Buddhist philosophy and its attitude to life. Hence in ordinary Sri Lankan villages predominantly consist of 'Wewwa', 'Degaba' and 'ketha' (paddy field). Dagaba rises above all built elements of the settlements which symbolize the strong religious implication of the society and influence in vernacular tradition to develop.

Dr. Ranjith Dayarathna (1999: p 40) explains that the Buddhism is both as religion and philosophy. "It central doctrine is to enable the laymen to realize the nature of life as being constitute of suffering or 'dukka' and cultivate a way of life and practices that will made if possible to quire the status devoid of such suffering 'Nivana'".

In addition Ananda Coomaraswamy (1979: p 40) says that; "Nirvana is to be obtained by freeing the mind from all attachment and desire"

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

In such a way, Buddhism present a number of concept that useful to the laymen achieve and practice a balance living. In the words of Lord Buddha the laymen are expected to avoid both extremes of asterism and self fortune. He is expected to flow a middle path by perfuming. "Good actions without regard to reward and without thought of an I or My" Coommraswamy (1979: p 40)

Sinhalese culture which is derived form Buddhism provided the phessents the wisdom of life. It will enrich their values and believes and act as the dynamic source to them. Infact it will shape create and guide their actions.

As a result of the settlements dwellings cave temples are conserved in the vernacular process and express the Buddhist concept of life.

Because of the vernacular tradition and the significant life pattern, certain way of respecting flora and fauna animal life and vegetation evolved. Thought

the culture and the life pattern it is considered as sacred inhabitants act or life on it with utmost care and respect. Even the little waste he produces is reused as a fertility to nourish ground.

Indeed land and any other resources were shared with each other and also preserved for the future generation.

#### 2:2:2:2 Nature

In Sri Lankan vernacular Architectural tradition when creating their vernacular built forms, nature paves the way to influence and inspired in order to make the design an appropriate one. When someone finds a suitable place for the location of the vernacular built forms the first step is to find and identify the natural rhythm in the surrounding. Architectural creation is done after making the required design according to suite the natural rhythm of the site. According to the natural rhythm social functions which occurred in the site interpret the built form and it will be a unique feature for the site. Nature is dramatized according to the particular functions and it has been grasped to the creation.



Fig 33: Vegetation in aesthetic functionality

When during the architectural creation, first thing to do is to capture the aesthetic beauty of the site. And after that by using the appropriate architectural language, nature and man made objects were bond together. For that, when taking the inspirations from the nature, it is taken according to the perception of the creators mined. And it is used in a way to highlight and enhance the massage given by the creation to the society.

Considering vernacular cave temple as an example, the location it is situated the pathway which leads to the location and the other spaces, objects in the temple character of the location is very important to do the creation.

Each and every space arrange according to the location character. Levels has mainly used for this and spaces arrange to suit that. There for pathways and spatial arrangements has done to capture the aesthetic beauty of the site. These spatial arrangements wear done according to generate a concentration in mind at the movement. The relationship of manmade things and nature highlighted using the built objects that highlight the qualities like simple and minimal qualities which were depict in the Buddhist philosophy.

Elements like boundaries are formed in connection with natural sources such as water barriers, rock and boulders which can be seen in the natural environment also more widely used to boundary demarcating and to aesthetic expressive qualities carefully arranged level changes that can be seen in the natural environment also used to landscaping, techniques as well as functional purposes.

#### 2.2.2.3 Material and Construction Technology

In Sri Lankan vernacular tradition construction of built forms were linked up with a serious of rituals that brought confidence and hope in the mind of the occupants on prosperity. Basically when someone tries to build a house, at laying the foundations rituals play a vital role. Auspicious time for that has been made by the village astrologer with the blessings of the god and religious blessings the given horoscope of the person who wants to build. Then he with the help of the astrologer finds a suitable land for that.

When construction under needed the vernacular architecture the society basically use the village carpenter as the main technical advisor carpenter also help to select a suitable site and advise the owner for what type of construction to be used.

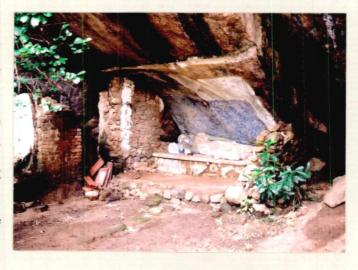


Fig 34: Imperment nature.

Like wise when choosing the construction materials that demonstrate the Buddhist philosophy that underlay the level of materials and the technologies level of refinement of built forms could be identified as important factors. That demonstrates to the Buddhist view of simplicity and impermanent nature in life.

The materials used for the construction is found out from the nature where they are Earth, grass thatch timber are found on the jungle simple technologies utilized to put it go ether the material which are borrowed form the nature. In fact most of the time raw materials did not undergo complex process of transformation. Thus they conserved the original nature of the materials conserving the modesty in construction.

The use of natural textures and colours of finished and less sophisticated retirement of elements demonstrate the charm and humble or the noble quality of the built forms. In such a way the materials were well accepted and demonstrate the reality or the harshness of climate. The process of decaying was accepted and symbolizes the fundamental fact which depict the ultimate truth of human life flora fauna and all physical attributes has to face.



#### 2.2.2.4 The sense of human scale

Scale is a relative term that deals with particular dimensions of an object on relations to another. Hassan Fathy (1973: p 222) describes that; "Man the center of the architecture and also the measure because he is the part of the

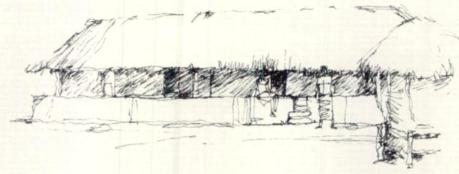


Fig 35: Sense of belonging

nature, which seen and feels the forces of nature when built forms are introduced with the human scale always there is a spirituality".

University of Moratuwa, Sri Lanka.

The traditional cave temples can be identified as the products of Buddhist community. The society which beholds the Buddhist philosophy involved in constructing and maintaining it properly. Thus forms are built in such a way that,

it can be manage by the users with reachable and tangible characteristics. Therefore vernacular buildings become more closely related to human scale, because of this most of such vernacular built forms provides harmonious proportions in terms of



Fig36: Nature with human.

length, width and height in relation with human scale. Therefore these built forms become friendly and familiar in its nature.

# 2.2.4 Tradition and Continuity

Tradition is difficult to define on a satisfactory way for the total. The term 'tradition' derives from the Latin verb 'traddotransdo" which means to pass on to another Edward shills (1998: p 12) described if as; "Any thing which is transmitted or handed down from the past to the present. It makes no statement about what is handed down or in what particular combination; it says nothing about how long it has been handed down or in what manner, whether orally or in written form".

Roalnd De Silva (1991: p 11) says that; "Tradition on the present context means artistic or literary principles based on accumulated experiences and continue usage.

However all these definitions imply that tradition which describe means something that continuing or handed down transmitted form one generation to the other generation. Thus it is process of evolution through trial and error. Which means the most appropriate to its contest will survive and remain accepted while others will gradually letdown by the society. There for tradition does not emerge form a short period of time. It has been constantly renewed and shaped enriched by the generations.

Vernacular tradition in Sri Lanka is not an effort by a one man it is a result of double process of preserving and transmitting for generations. Therefore the result product is wisely experienced and suits its functions better as because it has sharpened from early generations.

It is well adapted and also flavored with culture and belief Prof. Nimal De Silva (1987: p 15) explains that in their Sri Lankan tradition for shelter. "The tradition is the opinion on belief or custom handed down from ancestors to posterity. The tradition is not static; it is product of the functional demand adopted with the nature and environment flavored with culture and belief"

When taking the Sri Lankan vernacular tradition our ancestors build up their values and belief that tally the concepts and the symbols which evolved in their social frame works. These have build up according to understand the society as well as each individual. They transferred these built values and belief to the immediate generation and onwards. Within that the development and shaped out occurred. By handing over from one generation to another generation they have done the continuity of the tradition.

Prof. Nimal De Silva (1987: p 16) describe it as; "It was developed with certain value systems anything that was not acceptable to the society was gradually rejected, only what was provide useful for people were retain and adopted the outcome of confidence and the human satisfaction experienced by the ancestors formulated and participated the tradition".

These continuation of tradition has spread on to the every aspect of the society from birth to the end of the life of each individual tradition goes hand in had with day to day life. This conceptual symbolization can be highlighted form the examples explain below: \*\*These & Dissertations\*\*

www.lib.mrt.ac.lk

When constructing a building one thing which will done by the common men is called as "pada bedima" or divide the land in to areas called 'pada' and then the house or the building construct on the relevant pada or the defined area. Although this has done as a ritual in tradition the real truth behind this is that the center of a place is a position where one cant personalized the place. The force which act on the center makes uneasyren to the one who likes to retain their, because of that through the traditional rituals it has provide in position where it will balance the whole context. But there are some which will be positions in the center. Eg: Houses are come side of the premises while religious buildings locate in the center of the premises.

This depicts the social attitude to the religious emeses power it has and the belief of that every force is underlay when the concentration of mind occurs.

Another thing which will be done eventually is that avoid keeping main door to the west direction this has performed because all creations done to retain the energy sun is the main source of energy which will give to the earth. Therefore main doors and openings faces to the eastern direction in order to absorb more energy from sun. because sun rises from the east there want be any opening on western direction as main aim of the creation is to effective consumption of absorb energy rather than wasting to cut down the loss of energy there wont be any openings in to west direction.

When going through all these it reveals that all these concepts of tradition evolved through a scientific analytical background. But unfortunately it was not highlighted when it form one generation to the other rather than reanalyzed and practiced it was practiced as ritual.

Another thing which is used by the tradition is that avoding timber like Na, Nuga trees for constructs the common houses. This timber has used to construct religious buildings only. This clearly shows the courtesy and respect that give to religion. The revolution that has done by the religion not only penetrates to the life style of the common man but also to their aspects. This shows the aspect they depict to the surrounding environment. They categorize some flora and fauna along with the religious thoughts.

Another example will be the depicting the human scale in the vernacular architecture without using it as a rule they accept some methods to perform that one way is constructing the main entrance door according to the sizes of the man occupant in the house.

All these aspects and symbols depict that the tradition has a some sort of a social frame and this social from has continues though beliefs and values to the next generation.



**CHAPTER THREE** 

Kandyan Cave Temple in Sri Lankan Vernacular Tradition

# 3.1 Brief Introduction to Kandyan Vernacular Cave Temple Tradition

Sri Lanka has a rich vernacular architectural tradition of cave temples. When considering this vernacular tradition in cave temples and the socio cultural background, Kandyan period clearly shows the peak of the development. Because during that period Kandy has became the stable ruling kingdom. The development of art forms in that period also helps to develop the tradition of vernacular cave temples to enrich both these fields Buddhist philosophy influenced a lot. More than 2000 years, Buddhist philosophy and its attitude to life played an innumerable role in shaping the social and cultural traditions in the island. Simplicity and impermanent nature of life generate the base for the foundation of the community life.

There fore cave temples in Kandyan period mainly based on the concept of simplicity. It should be compatible with the Buddhist philosophy which will be the main source that help make it and the human social value and behavioral patterns which derive form the Buddhist philosophy.

Because of that the cave temple environment should not carryout any constrains or negative signs to the seeking of the truth or the wisdom. It should facilitate and lead them in the spiritual path by engaging in material activities. (Leading some one to offer the flowers to lord Buddha). It should facilitate and encourage such feelings and emotions. Because it will lead or take the individual in to a state of spiritual enlighten. Ultimately this would help to make the proper thinking of the mind set of monks as well as the common man.

When considering the Kandyan vernacular cave temple and its main aim it also similar to what explain above. But it has achieved on the basis or the frame work of social aspects in Kandyan period. Also it can be seen that each unique environment which has created help the vernacular cave temples to from an identical patterns to achieve this idea.

So to derive the idea which explains in above spaces, organization pattern spatial orchestration and expensive quality of the built object in Kandyan vernacular cave temple should link with the behavioral pattern and social aspirations of monks and ordinary people.

Providing spirituality or enlighten of human mind "Samadhi" will be the main aim of the Kandyan vernacular cave temple tradition. To give that there will be a unique architectural pattern in the product. That is the spatial orchestration pattern, there fore to identify or to study there spatial orchestration patters in Kandyan cave temples one should study the causes which help to evolve the product. The are the socio cultural background and the contextual implications of the cave temples.

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

In between the death of king Vimaladdharmasuriya I in1604AD and the British capture of the last king of Kandy in 1815 AD, There were the seven successive kings who ruled the Kandyan kingdom.

R. Knox (1966: p 189) explains that, "... the victorious of two century long distance of the Kandy makes highly credible existence were of a strong political power and social organization"

The most important value in the social context of Sri Lankan at this time period will be the social organization. Cast system and the duty or the "Rajakariya" will be the main components that help to formed it.

In this organization and social context temple gets the highest attention and respect, because, Buddhism is interrelated and interwoven with the life pattern of the people in this context. Impression of the Buddhism had spread on to the areas like. Behavior pattern of the society, to the ethics of the society, economical standard of the society and in the politics also. There for temple premises identifies not only as a religious place but also a place which would enriched and developed the culture. It has also identifies as a place which would create the social relations.

"The Buddhist ethos influenced all social relations and practices. In a short, Buddhism constituted in 17<sup>th</sup> century Singhalese kingdom the spiral cord of the social ensemble. A complex reality without any monopolizing organization but nevertheless in continuity with its founder and which integrated the culture of group at the same time structuring a certain group of individual and collective behavior" Houtart (1978: p 93).

As because of the culture based on the Buddhist philosophy, when creating the religious places the relation ship of it with the society, and the way should be designed according to the Buddhist philosophy considered. This has been done with using its own techniques of building designed and highlight the relationship of religion, society and when developing the Buddhist religious places the main feature in this time periods is emerging the buildings of Sri Lankan cave temple architectural tradition.

#### 3.3. Physical Context

When considering the development of Kandyan vernacular cave temple architectural tradition, it has extracted the Sri Lankan climatic, geographical and particular locational rhythm to develop as a unique vernacular tradition for Sri Lankan.

# 3.3.1 Location and Geography

When considering the location of the country it is situated in the North longitudes 5°-10° and latitude 79°-82°. It has been considered as the tropical climate south Asian island.

As being a island according to the geography 3 main areas can be identified they are the "Udarata" or the up country, "Pahatharata" or the low country and the "Meda rata" or the middle country.

Up country will be the area where there is large number of mountains and situated in the mid of the country how country compromise with the coastal area in the country while other areas will come under "Meda rata". Before the country becomes colony, to British Empire last capital in the Sri Lanka is Kandy. When developing a vernacular tradition. It builds taking the base as "Mada rata", because most of the isolated mountains situated in that area. So cave temples arrange on the natural caves of those mountains. When these creations happen, they use a pattern which will be unique to the location and create a vernacular cave temple.

In fact the vernacular cave temple treated with great care and sensitively contributed to there locality. Thus it is inevitable to achieve a proper balance or harmony between cave temple and their bio physical environment indeed the way such forms fit in well with the mature express this attitude through sitting materials and spatial configuration.

Cave temples were formed in such a way that they consist of minimal enclosure space for praying by the way majority of public or communal spaces one out to the landscape or nature. Open out or semi enclosed with raised plinth defines the building edges by raising it from the rest of the surrounding ground. It can be seen that such out ward spaces often provides panoramas of surrounding landscape that grater sense openness.

The use of locality available materials their colours and texture that all related to the landscape in fact cave temple were part and partial of nature.

#### 3.3.2 Climate:

When developing the vernacular architectural tradition in Sri Lanka one of the mostly affected fact will be the ultimate of the area where it ground to locate. Although, Sri Lanka considered as a tropical climate country, being it as an island caused for lot of changes to its climate.

Even though, Sri Lankan is a small island one can see a distinct variation in the topography forming the central hill country surrounded by flat low country. It can be divided in to climatic regions in relation to the rainfall pattern, the central western, south western and southern parts of the island coming under the wet zone with a high rainfall and subjected to the south – west monsoon. The remaining part of the country is dry with north – west monsoon rains in December, January and February. With these variations in the topography and the climatic, different provinces—in the country is subjected to varying micro climatic conditions with a change in vegetation and temperature. It is interesting to note that there variations have influenced the design and construct the traditional house form in remarkably interesting way. In addition to the climate the difference in ethno cultural groups, occupational patterns and socio behavior in different provinces have influenced in design of the traditional house.

As Kandyan vemacular cave temple tradition is developed in the isolated mountains. Most of the isolated mountains situated in the dry zone. Therefore most of the Kandyan vernacular cave temples are in the Dry zone. There fore develop this according to the dry zone buildings and their construction materials used in appropriate ways.

Clay -Used to construct walls. Thick walls clay walls helps to generate cool Environment in the interior as clay will be the good heat resistant material. Easily fin in the dry zone also

Illuk -This is used as the thatching material for roof. As these are commonly found in the Dry zone areas it is used. This is also a heat resistant material. Therefore it reduces the heat coming from roof and help to return the cool climate.

#### 3.4. Social Back Ground

When creating the Kandyan vernacular cave temple tradition, it has extracted the rhythmic life pattern of the common people and based the tradition according to it. Reason behind this is that Buddhist philosophy the main source that provides energy to the Sri Lankan life pattern, social ethics and to rule the country.

So the developed socio cultural frame work gives the supervisor state to the Buddhist religious place. When creating the places it was done in a way to depict the relationship of the Buddhist philosophy and the social life pattern. There for temple or the Buddhist religious places emerge as the symbols of showing the reality or the ultimate truth which describe from the Buddhist philosophy and social bond.

Electronic Theses & Dissertations

#### 3.4.1. Economic and Political Back Ground

When consider the social life pattern and the ruling system during the Kandyan period it reveals that the society has divide among them based on the cast system. Each cast has a certain task to perform to the economy as well as to the society. Ruling of the country is done by the person who is

belongs to radala cast. The king has considered as the ruler of the country and he will also be the owner of the land in the country.

"In Kandyan kingdom the land tenancy systems constitute the foam work of the economical, social and political organization in principal it was simple although its application may appear highly complex since the king was called as "Bhupathi" or lord of the land in Sri Lanka, all landed property was considered as inhering in his person" Tawsbuial (1958: p 16).

Ruling was done according to the Buddhist philosophies every one gets the equality and justice. Society accepts the cast system and it had spread to every where. Although, there is a gap between ruling people and common man, when fulfilling the needs common man doesn't suffer.

Although the land in theory belongs to king, at practical terms the crops are divided among the common man who work hard to bring that level, there is no private ownership of land. In that period of the time the ruler has concerned as the person who governed the people an identified as "Narapathi". It also reveals that they has become the owner to the land and called as "Bhupathi". Duty of the king is to construct and maintain the tanks and irrigation sector. Duty of build and maintain this and cultivation also done by the person as "Rajakariya".

Surplus of the crops taken as the tax and collect by the king. It was divided among the people who want be directly linked to the agricultural activities. Traditional economy is base on the barter system and there for there will be minimum of surplus. As most of the people are Buddhist they see the society in a Buddhist philosophical way. They identified as this life is just a resting point in the long journey that taking place of searching the "Nirvana". There for there life is highlight from simplicity and they refused the physical comforts and elements.

#### 3.4.2 The Religious Background

Sri Lanka is considered as a main Buddhist country. The cultureal and social Backgrounds which help to derive the traditions are minly backed by this . the buddhisum has penetrate to every single aspect on the society ' for this symbolisum of the temple is precisely indicative of the existence of one single religious structure '. has been clerly and more brodly stydied in the below areas

## 3.4.2.1 The Philosophy of Buddhism

The Buddha's discovery under the tree of wisdom enabled him to comprehended the unitary pattern in terms of which the discrete phenomena of the world could be integratively understood the law of the conditioned arising of phenomena (Paticca - Samuppada). Hence Buddha proclaimed to the world that underlying the bewildering complexity of phenomena one could see the operation of unitary pattern of causation. Now it is terms of this unitary pattern that man too if cares to can understand both the nature of his life and its complexities as well as the way by which one may get away from these complexities. The world being not an incomprehensible chaos all the different members of mankind share an essentially similar predicament and that is the insecurity and mortality and final unsatisfactioness of existence while the unitary causal process has brought about this predicament of man it also provides the way out of it. That is to say the exit (nissarana) from this predicament is also available to man is a similar causal process.

The path of release follows the causal pattern in the sense that it amounts to discovering how the present predicament came about and initiating action which sets one in a train of events that culminate in the discovery of the Timeless unconditioned reality (nibbana) and this discovery at one stroke transforms the individual. This discovery becomes the initial

causative factor of a process which eventually puts an end to the continuity of the conditioned existence of the person concerned.

There fore Buddhisum is empower the humanity; powers of human being. Buddha himself being a human ripples the concept of almighty god; As the Buddha discovers that among all living creatures; man (human being) is supreme. This concept strengthens man to look upon him rather than changing on to unknown power of salvation.

The ultimate objective of Buddhist philosophy is the extinction of suffering it is the phenomenon ne science (aridya) that barricades ones reaching this stage the eternal basis ne science can be expelled by the understanding of the for noble truths nearly "dukka" (suffering) the arising of dukka the ceasing of dukka and the path leading to the sensation of dukka. The nobel eight fold path namely right view, right thought, right speech, right action, right live hood, right effort, right mind fullness and right concentration. The path leading to the sensations of dukka hence one who understands the four noble truths reaching the destination the state of eternal blessfullness, the nibbana.

#### 3.4.2.2. Generated Values and Human Behavioral Pattern

Buddhist philosophy surfacing the time and space, embraces the hole universe by its portending every stratum of society is addressed at varying digress according to its ability to understand the philosophy.

The society is to fold according to the Buddhism; the deity and clergy. The eight fold path which unfolds the Buddhist the way of life is meant without distinction of any kind. On a daily ethical conduct, the five preceptors have been introduced to layman and there by they are directed towards higher essential of life, natural discipline and wisdom.

Through the Buddhist philosophy, is shows how the individual behavior should change with gaining faith and respect in order to make a prosperous society. There have been several in "Maha Mangala sutthra" and "Singalowada sutthra". As an example in 'Sigalowada sutthra' it described duties that performed by husband and wife in order to live a good family life.

- 1. Respect to wife.
- 2. Avoid humiliation to wife.
- Be faithful to wife.
- 4. Dividing the duties among the wife.
- 5. Giving beautiful things to wife.

As describe in the "Singalowada sutthara" reveals what should the husband do to the wife.

- 1. Arranging the functions in home.
- 2. Serving the relations in husband side.
- Be faithful to husband.
- 4. Saving what husband earns.
- 5. Performing each tasks in an efficient manor.

As describe in the "Singalowada sutthara" reveals what should the wife do to the husband.

It has also raveled the relationship of employer and employee.

- 1. Giving works understanding the capacity of the employee.
- 2. Treat the employee when difficult situations.
- 3. Serve the employee also.
- 4. Giving intervals to the employee at right time.
- 5. Giving relevant salary according to the service done by the employee.

As describe in the "Singalowada sutthara" reveals what should the employer do.

- 1. Start work early before employer stats work.
- 2. Call off the duty after seen the work for the day.
- 3. Take only what employer has gave.

- 4. Done the duty efficiently and effectively given by the employer.
- 5. Praise and respect the employer.

As describe in the "Singalowada sutthara" reveals what should the employee do to employer.

According to the "Maha Mangala sutthra" it revels what are the quantities that need to a person to be a noble person in the society. It also depicts the essential human values which one should have.

This show how to become a noble, respect person in the society one should de constant in mind and be educated.

This shows how to become a noble person one should also be patient, obedient, see the religious teachers and talk to them when necessary.

According to the teaching of Buddha explained the equality of mankind in terms of their function. Buddha also proved that there is no caste as such. There for admitted everybody without any distinction of caste or creed in to the sangha society. In "Vasala sutthra" of the sutthra Nipata for there explains this as chandala is a person who cherishes hatred; who torments and kill living beings; who steals or commits adultery; who does not pay his debts; who maltreats aged parents, or fails to support them; who gives evil counsel and hides the truth; who does not return hospitality nor render it; who exalts himself and debases others; who ignores the virtues of others and is jealous of there success.

Buddha is a person whom is free from sin; not by birth does one become a chandala nor by birth does one become a "Brahmana"; by deeds one become a chandala by deeds one becomes a Brahmana.

The Buddha established the order of monks which provides opportunity for those who are not willing to devolve there lives not only to

there own spiritual and intellectual development, but also to service of others. An ordinary layman with a family can not be expected to devote his whole life to the services of others where as monks who are not family responsibilities or any other wordy ties, in a passion to devote his whole life for the good for many, happiness of many according to the Buddhist temples become not only a spiritual center, but also a center of leading and culture

"There for according to the Buddha's philosophy these new type of Lumen values were enters to the society. Because of the Sri Lankan Buddhist, society change a lot. They consider the life style as a position between in a long journey that goes seeking the ultimate truth of life. So they used to a simple life pattern and lived according to that. They used to make a life style, ritual and social ethics according to them. They make their identical religious places, religious factors and religious rituals and festivals" Rahula (1922: p 78).

# Architecture Generated By the Buddhist Behavior Pattern

In a society which is been bounded and performed by the social ethics that is been enriched and encased by Buddhist philosophy has given a prominent place for temple. Therefore vernacular architectural tradition has emerged because of the human behavior pattern that has generated form Buddhist philosophy. This has been emerge though extracting the essence of the simplicity and truthfulness in Buddhist philosophy and the ultimate truth of the life pattern of the humans that live in the society with developing gradually according to time. When considering the Kandyan cave temple architectural tradition, this has also been emerging recording to the facts that explain above.

When according to the Buddhist philosophy the Kandyan vernacular cave temple architecture that has emerge form it depict the identical quality that it has been develop firstly based on a natural cave and then constructing

a temple. As usual the cave is used to create an image house, according to the image house in the relationship with man and the Buddhist philosophy. The spaces has created to the relationship with the humans and the Buddhist arranging it in to an order is also done according to that when creating these architectural spaces cave temple environment has designed and construct to give the massages and highlighting these massages that must be given from the Buddhist philosophy to man this has been done carefully and in an sensitive way which human can grasp. Therefore the interior and exterior of the cave temple has been designed and construct in order to give the human mind the interrelationship of the time and space extracting it and highlighting the "seela" the "virtue. Samadhi" or concentration "pragna" or the wisdom that has been state in the Buddhist philosophy in the mind of the common man . Ananda Coomarasawamy has describe the "sila" as "The control of the mind body and words it will lead to "Samadhi" or the right concentration of mind and that leads to wisdom ("pragna") it means to know the "Anithya", "Dukka" and "Anathma" of the all things that evolved in the world form the mind set of each individual.

> University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

When creating cave temple architecture behavioral pattern that will be taken place in the temple environment with time consuming, spaces created focused in to the generate "sila samadhi pragna" in the human mind through the movement occur. Therefore from the early period different spaces various spaces that depicts several spatial experiences has created to enhance this feeding. Therefore Kandyan vernacular cave temple architecture also created different spaces in and around the cave temple premises to enhance the feeling of "sila samadhi pragna" that occurred in the individuals human mind according to the Buddhist philosophy. This various spaces that will help to generate the ultimate feeling can be described as below.

Those emotional feelings are to be created from the journey of worship that the observer has to follow. The achievement in the journey is some sacred spaces and their interconnections where observer has to spend some time till he/ she achieves those spiritual effects. Those spaces are illustrated bellow.

#### Entrance to cave temple

This has created with doing a slight difference to the natural environment it is situated. The slight difference will be done in an appropriate for the natural environment. The feeling or the idea of that one has entered to the temple environment is give by using it and through that it also gives that the individual has started to progress on a special function or the progression. Rather than an ordinary function it may perform in the daily life, aim of the entrance is to feel all that were mentioned above in to the individuals mind.

#### **Pathways**

These have been created to retain or link the each space and their interrelationships which arrange according to the religious behavioral patterns with the entry point. This has done with harmonize with each spatial expression that will required in each space. This also will be fully with the ultimate feeling that derives form the cave temple. One of the significance in this pathways are they all construct according to the rhythmic ay of the natural setting and bonds the each spaces while maintaining their hierarchical order when considering the pathways flight of steps also comes under this.

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

#### **Terraces**

When creating the relationship of the each built objects with path ways for the ritualistic purposes, pathways are not directly linked to the each space. This has been achieved by using the existing rhythm of the

environment, pathways linked to the terraces when doing this in most examples they used a level differences—which—occurred naturally. These terraces may mostly act as the community—spaces or the gathering space. Or else these have construct to generate the idea or to see it as the temporary resting points in the ritual performances. In these terraces also there importance and the spatial expression it should depict will very and it has treated according to that,—the terrace is positioned by the hierarchical order of it.

#### Dagaba (The Stupa)

Considering the kandyan vernacular caver temple tradition it has been based on the caves. So when creating the Dagaba based on the cave it has been designed as a false climax. This climax designed form separating the main path way of the cave creating another sub-pathway and using a terrace. Because of the influence come through Buddhist philosophy "charity" or the "Dagabe" has been built on an elevated terrace. "Dagaba" is basically constructed on the center of these square terraces.

Construction of the "dagaba" commence with three circular based terraces which can be identified as pesavas built one upon the other in releding form. The sacred items were kept in the relic chamber and it was placed in the dome of the dagaba. On the top of the dome is a cubical structure called "hatarakotuwa" top of the dome "hataraskotuwa" springs the cylindrical shape solid item called "Devatakotuwa" The "Kotha" is placed as the "Devatakotuwa". Rather than being case "agaba" also designed in to human sacled but retain its large and massive quality.

#### Bo tree

When considering the Kandyan vernacular cave temple architectural tradition because it is based on the cave this has been designed from away from the main path way. With a sub pathway and sometimes there will be a level difference. It has been created a false climax and this also carries a separate terrace also. This is usually enclosed by a half wall and in it has a separate 'maluwa' which is used for "Pradarshinapatha" or to circumbulation activity.

#### Cave

In Kandyan vernacular cave temple architecture tradition created with taking considering the natural cave. There for it designed architecturally to be the main space or the climax of the designing. When designing temple based on the cave it gives a separate approach way entrance and a path space relationship. It also has false climaxes and post climaxes and softening places also calm down the climax feelings.

"Pathimagara" or the image house will be the main item that include in the cave. It is the place where a statue of Buddha or some times a number of it, is place for worship. It has been nicely decorated with art works which reveals the life of Buddha about the Buddhist philosophy and stories in the "Jathaka". Main function of an image house is to help lay men to condition there minds to understand the essence of Buddhism for the purpose of doing worship to lord Buddha. Because of that image house should make people respect Lord Buddha and his teachings and help them to concentrate without being hampered by mental stresses.

# 3.4.2.3.1 Spatial Qualities of Kandyan Vernacular Cave Temple Architectural Tradition

Spatial qualities in each and every space in Kandyan vernacular cave temple architectural traditions will depict the relationship between the Buddhists philosophy and the people in its society. When creating these spatial qualities it has used to show the internal bond that makes man and the religion. There for qualities of that is very close to once life and the feeling of that is posses to one self generated.

When achieving this it has been used the technique of making people afraid and deliver the idea of that is not a higher position, it is just a place that relates to the own emotions and inner life in the natural environment for that the simplicity and minimalism impermanent nature of life which has been in the Buddhist philosophy extracted and highlighted.

They have revealed the man's inner feelings, its relationship to nature and the ultimate truth. These relationships have been seen through the Buddhist philosophy and designed the spatial qualities to take the man's inner feelings in to a stable and controlled process with the help of the essence like minimalism on the Buddhist philosophy. Therefore spatial relationships which used to generate the spatial qualities in the Kandyan vernacular cave temple architectural tradition are illustrated bellow.

#### 3.4.2.3.2 Spatial Relation Ships

According to the behavioral Patten of the people guided by the Buddhist Philosophy, worshiping Was a necessity and this necessity gave rise to the development of Sri Lankan temple tradition, Kandyan vernacular care temple tradition is also part of it. A variety of spaces were required with in this tradition. Such spaces were found making the cave, the center of interest. Other spaces were also determined by the topography and, they were used

as the false climaxes. Pathway was developed according to the rhythm of the nature to relate those spaces requested by the philosophy in Buddhism. While the cave was in the deep end of this structure, the entrance of the temple rested at the shallow end; and the rest of the spaces in between. The interconnectivity among the spaces is discussed under spatial relationship. What is mare significant here is, having a separate entrance to the cave it self and false climaxes inside. It implies that the cave it self has a unique spatial relationship that can clearly be identified within the totality of the temple environment.

#### a. Approach way to the temple

According to the values created by the Buddhist philosophy, within the village community, the concept of temple always held a higher position. This was the mind that positioned the temple in a higher location even in its physical formation, so that it can be witnessed from any where of the village. And every body can approach. Then the paths lead to the temple from the village became its approach way. Father an emotional attraction was evoked setting a vista out of an object belonging to the temple. Path way was initiated unidentifiably mixed with the nature but closer to the temple gradually changed in to a defined pathway, ending with the introduction of the 'about to enter' zone.

#### b. About to enter zone of the temple

Before the entrance of a temple, the feeling 'going to enter' is to be evoked. This is done by altering the approach pathway so that the directional sensation is emphasized. In achieving this objective vistas are widely used. Setting up the mind accordingly is expected and should be supported by this set up of the topography. The evoked feeling lasts till the next change, the entrance.

#### c. Entrance to the temple

The seating up, made to generate the 'going to enter' feeling, endues to introduce the entrance. The sensation of entering is the emotion to be promoted here, pointing to the deference of the inside /out side. Unlike the feeling that to be generated, during the 'about to enter' zone, the feeling 'entering' is expected to be momentary, and to be the emotional attachment to the temple environment. The calibrations of the entrance are done according to the Buddhist philosophy, to identity the relationship between the man and the nature. And this also is governed by the concept of minimalism backed by the philosophy in Buddhism. The entrance become the beginning of the spatial movement towards inside, facilitated by the inside arrangement facilitate by arrangement sets by the built forms, pathways and nature set up, showing spatial density. Vistas play the directional role towards the climax.

# d. Having entered zone of the temple

This is the space comes just after the entrance. It changes the feeling 'entering' in to 'entered'. In doing this the person, who is moving through, is to be made pat and partial of the temple environment; the sense of belongingness to the environment. Here slight interruption of the monument is needed for him to keep idling, both physically and mentally as well, for a while, bringing him in to stable mentality, ready to explore the temple. This is the mood necessary to proceed.

#### e. Approach way to the climax (cave)

The relationship between the climax or the destination and the person who is on the move towards it is determined by a nature-defined path way. A long side the pathway the geography comes up with spaces which are used

as false climaxes that serve for worshiping behavior leading to the creation of transitional points. But the vistas enable to distinguish between the main pathway and the sub path ways lead to such climaxes. (The creation of transitional point)

The characteristic behavior of the main path way is mainly to concentrate the persons mind to the destination, and the path way it self is to be of the supportive phase, enclosed by the surrounding. When the pathway reaches its end, it becomes the approach way to the cave or the main space

Making the cave a strong vista, using it as a full factor here, the movement is made invisible and directional to the cave. As the promotion of the pathway takes the rhythm of nature it takes an oblique form; and gives the 3D image of the temple cave by exposure of the scale, proportions and materials etc of it. The enclosure feeling is the tightened by this and it inurn makes the person even more concentrated within the mind. This feeling is expected to last until he comes to the 'about to enter' position.



#### g. About to enter zone of the cave

'About to enter' zone is so arranged that arranged that the above molded, concentrated mind in relax a little and make ready, before the entering the cave. A natural terrace, having panoramic Views in one side is used to do this. The other side is the temple cave created letting the rock to serve as a back drop. Here the relaxed mind is recaptured by the familiarized built form; witch is of the close dimension to the human scale.

#### h. Entrance of the cave

The natural sentence defines by the back drop, is emphasized and redefined by the erection of walls, doorways and sculptures etc. to celebrate

the entrance. And this calibration is meant to generate the feeling of entering and acts as a filtering space too, with this faltering, the emotional attachment to the ultimate space, is achieved. This is done by providing a vista to the "Samadhi statue" of Buddha at the deep end. This initiates the final spatial movement to the climax.

#### i. Having entered zone of the cave

Stopping the spatial movement temporarily and giving the due determination to end up with the climax, letting him relax a while to make him think himself as a part of the cave, brings the sense of belong ness. Reduces the spatial destiny compared to the climax. Puts down the level of lighting and lets darkness grow. This makes the individual isolated. This is the mood expected here, retested by the philosophy in Buddhism. Celebrations again smoothly come in to the scene but without much spatial deepness.

# j. False climaxes of the cave with mrt.nc lk

Having entered the cave, the individual on his way towards the climax, then, finds transitional points generated by the existence of false climaxes. These false climaxes also serve the need of worshiping purposes. They are referred to as false climaxes because they do not stop the movement but only slow down. Use of lengthy "Sathapena pilima" (long sculptures) can be seen function to this need. As celebrations are less and the spatial destiny is comparatively low at such places they convey the meaning "no permanent stop",

#### k. Climax of the cave

After passing all the false climaxes the only and ultimate objective becomes the destination or the climax. The entire journey is condensed here at this climax it being the end of the spatial movement. The individual finds now the place, even darker; enclosed; dense; richly celebrated with painting with deeper meanings, probably abstract. Makes the individual realize that journey is terminated and he has been brought and stopped at the climax within his soul; The individual has ultimately stopped faced to the enchantment of the 'Samadhi statue'.

# I. Soften space for climax

This is a space comes after the climax on the way back, of the individual. Before bringing him back to outside world giving the due relaxation is the purpose of this space. A space, free from any calibration is used for this.

University of Moratuwa, Sri Lanka.

Electronic Theses & Dissertations

#### m. Coming back point

The individual passed through the soften space then comes out into a common space, which is wide open to the out side world with panoramic views. Then the procedure is reversed to let the individual totally out side the temple environment.

#### 3.4.2.3.4 Related Spatial Organization and Orchestration Pattern

Where the spatial organization pattern of Kandyan vernacular cave temple tradition is concerned, it's very simple in the context of the spatial relationships. It takes the shape of leaner organization with the entrance at the shallow and whitest the climax at the deep end, letting the false climaxes stands on the side ways. The location of the cave within the context is the principle importance here. This pattern is equivalent that in Buddhist literature. For instance, where the "Ummagga Jathaka" is considered, within the main story there comes short cross stories as well. The climax or the end of the main story, again returns to where it began, at the end.

Spatial organization pattern designed according to the spatial relationships each of these spaces organized in a manner that the spatial expressions and meanings generate focused on to the laymen his life style which relates to the worlds, arouse his spiritual feelings and make him to understand the reality of the world around him. It helps is perform the activity worship with mind concentrating to the act he doing.

Identified meaning and expressions in each space help to arouse the inner life of the individual or this spirituality according to the Buddhist philosophy. Because of cave temples situated in the isolated mountains and some what away from the social life of the common man help to arouse the spiritual feelings in the pathway for the worship.

When considering the approach way, at the beginning the pathway is created from the nature and when the movement starts it isolates the individual from the nature. Gradually defining the pathway leads him to a concentration in mind with the help of the nature. When of the edge of the about to enter space, vistas given by the temple environment use to arouse the expression and emotions of the isolated mind to full fill the main aim of worshiping. It also creates and emotional attraction to temple environment By forecasting the isolated mind which was done by using the nature define pathway and the levels in the path way; in to a one aim.

Entrance is created celebrating minimum way by using the rock boulders and trees in the nature. With the entering feeling and the vistas highlight the minimalism in Buddhist concept. Help to generate concentration of mind. Environmental qualities like calm and quite in the temple environment will calm down the mind. It is used with the 'here and there' principle. Therefore feeling is considered in relating to the other. It generates the entering feeling for the movement for workshop by the emotional attachments

Having entered space is situated after the entrance space. It will be the main space that makes the mind and body to ready to worship. Individuals who have make isolated form filtering in the entrance focused to panoramic views. With experiencing the nature, mind of the individual gradually calm down and concentrate to a one-mind frame. There fore individual will isolated in his mind and arouse the spirituality.

Vistas which can be seen in climax and false climax ant as the full factors and it drives the individual towards the climax pint which has been define on a nature define pathway. Mental concentration gradually makes strong by increasing the naturally define quality of the pathways and naturally enclosed quality of the pathway. So these strong mental concentration positions loosen at some points with out harming the mind. It will do by changing the spatial enclose quality that gets by the nature. These places have used as transitional points and create false climaxes. Essential places that required for workshop on the Buddhism philosophy 'Dagabe' and 'Bo tree' will be similar places like this.

Degree of spatial enclosed gets high when one move towards the temple environment. This has done in order to enhance mind concentration. While making the mind; cave visualize on vistas to the individual. Through the 'here and their' principal perceive the climax relating to his state of mind and concentration the mind to the ultimate space.

Approach ways to the cave space designed by making the proportion scale and the balance, repetition, rhythm in built forms; relating significant way to the human scale. There fore it mentally generate the idea that this

place is belongs to the individual and the place in more relate to the spiritual life of the individual.

About to enter space which come across after the approach way seen as a large podium or a "Maluwa". This will help to case the concentrated mind. It creates as a transitional point as it will help the individual who is closer to enter to the cave; to make and adjust the mentality for this they have create vistas on the false climax spaces and climax space in the cave. There vistas acts as pull factors and direct the movement to the care.

Celebrated small entrance created in the care generated the feeling of entering to cave. It acts as filtering spaces and takes the individual in to the space where there is similar proportions and scales to him. It will help to relax a bit and rebuilt the mind concentration. Ultimately he will get the sense of belonging which feel him that he also a part of the cave. In other words he feels that he had entered to the cave. This will act as a path way to direct the climax.

But movement of the individual directs to the false climaxes or the subspaces in the cave. In these false climax places paintings and celebration quality is kept to a minimum. To direct the movement inside of the cave there is a statue of Lord Buddha in laying position. This will help to increase the mind concentration and direct the movement in to the climax or the ultimate space.

University of Moratuwa, Sri Lanka.

Entrance door which used to enter the climax celebrated more than the other entrance doors with carvings. Individual makes to isolate inside the ultimate space by the abstract pictures and Samadhi statue at the deep end of the cave. It arouses his spiritual feeling and focused the mind to him-self. To this spatial density is used and in side the cave natural light has used in minimum, way.

After finishing the worships individual who has awakened his spiritual feelings retain inside of the cave for a while. Rather than making him directly leaving focused in to move to a squatting space. The squatting space will be a isolated small way which relates to the nature.

This space will help to harmonize the spiritual upliftment built on inside of a individual with the outside worlds where individual has to confront to live in both physically and mentally. After that individual taken to the podium or 'Maluwa' which has panoramic views, from the point where he enters. This will is the mind and make accept him with the nature he sees.

So the individual who finishes the worship makes to leave the place form the points he entered this has clearly shows according to the Sri Lankan tradition temple depicts rather than a place which come across the life, it visualize and emerge as a ending point of the life.

As above explain spatial expression temple environment orchestrate make the movement retaining the continuity and using of the space. By that spatial meaning locality of the space spatial kinship of related space derives to a one basic idea which help to retune the idea when consider the total spatial expression. While doing this physical progression has make through the created art effect and derives the required mind set up.

So thought the spatial expressions generate the spatial meaning and make the psychological progression. In the Kandyan vernacular cave temple and create the spatial orchestration pattern which has identified like this.



**CHAPTER FOUR** 

Case Studies - Special Orchestration Patterns

#### Introduction

"Maraluwawa rajamaha viharaya" is situated in the North Western province, 5km away from the "Kurunagala" in "Kurunagala-Ganawatta" road in "Maraluwawa" village. Cave is built on the isolated mountain called "Maraluwagala". The old cave temple is built during the "Kandyan" period time and village called this as "Gale Pansala" or the temple of the rock. When consider the built spaces it will be like this.

#### Approach Way to the Temple.

"Maraluwagala" is an isolated mountain with covered from the lot of trees and shrubs. It has got a calm quiet environment which will be an eye catching place of the "Kurunegala Ganewatta" road. Although large sub urban town in a close proximity, it success of retaining the calm and quiet environment, which will be a must for the temple environment.

The pathway which leads to the temple will come across when some one travels in the road. In front of the pathway the large paddy field makes the pathway memorable junction in the individual mind. Pathway leads through a small jungle. There fore it helps to comfort the individual from the busy environment he has come across in the towns like "Kurunegala". Fresh air, coolness and the sound of the birds and crickets makes the human mind true naturalistic feeling which help to build the emotional bonds with the "Maraluwawa" temple. Approach way has designed considering all these and extracting the natural quality from the surrounding to the path. So person who moves in the pathway tends to feel about the temple after he isolated in the nature. He sees and visualizing the "dagaba" situated in the fat rock.

It arouses the mind of the individual to full fill the main aim to worship. When this path or the approach way comes closer to enter the temple, convert in to the about to enter zone by nicely defining the edges of the path way.

# About to Enter Zone of the Temple

This zone can be identified as the link between the cave temple entrance and the approach pathways. What is significant here is the contribution of nature to define the pathways from the approach way by a natural rock in one edge

suggesting a directional movement towards the temple. With continuation of the directional movement the use of natural level changes can be seen to define the about to enter zone altering the direction of the movement maintained so far and provided a vista of a small and "Dageba" which is raised on a higher level of this zone to promote the feelings of recognition "about to enter the temple". This leads to establish the emotional attachment with the cave temple expected by the 'about to enter zone'.

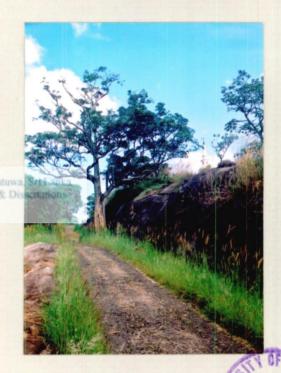


Fig 37: ....in between....

# **Entrance to the Temple**

The about to enter zone reaches its end with a rock boulder in one side and the natural rock on the other side. This boundary demarcates the beginning of the natural pathway that continues ahead and generates tightening and enclosing sensation reflecting the feeling of entrance (to the temple). With the

slight difference that accurse in the direction of the movement intended by the smooth bend in this region introduce vista of ongoing pathway defined and accompanied by "Araliya" trees bringing the view of the "Chaittyaya" too from the opposite direction that reside on the bold surface of the rock, emphasizing the entering feeling. These vistas are used to confirm the generated emotional attachment with the temple and to establish a sound bond with the temple environment.

# Having Entered Zone of the Temple

The open rock surface and the "Chityaya" built on it, sign both the physical and mental arrival to the temple in the movement. This space is utilized as a temporary resting point in the movement, opening to capture the panoramic views of the surrounding area. Further this space has been arranged and brought up so that the emotional attachment evoked, using the "Chityaya" as a vista in to its maturity and sets the correct mood. This can be considered as the beginning of the spacial arranged journey for worshipping.

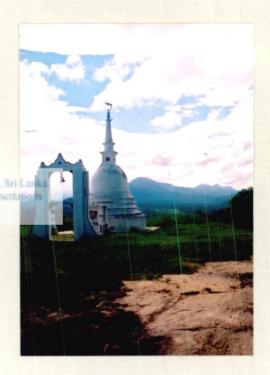


Fig 38: ...Endless...

## Approach Way to the Climax (cave).

The main pathway defined by the "Araliya" trees, starts from the about to enter zone. And it proceeds until it reaches its end, at the cave temple, main



Fig 39: Steps with the natural rythem.

shady trees.

space or the climax. Considerd this pathway it takes the shape of the topography.

There, its starting point is broadly and openly created. When it comes towards the cave, gradually the enclose ness has been increased as the nature comes up with rock boulders and densely grown

Continuing along the main pathway, according to topography, the natural levels are used to create false climax. They have been created in a way the vistas are provided to the main pathway creating sub pathways to them and as approach the ways transitional points accordingly.



Fig 40: Towards the end

# False Climax of the Temple

False climaxes are created to support the activities in the series of worshiping behavior. These climaxes are used to locate the other major spaces of "Dagaba" and "Bo-maluwa".

## Dageba

This has been created adjoining to the space where the having entered felling is generated, on the naked surface of the rock. This is discussed under 'about to enter' and 'having entered' sections too.

#### Bo tree

Bo tree has been rooted in a space reached by a sub pathways going off form the portion of the main pathway defined by the 'Araliya' trees. Created as a vista in the movement to get the attraction level changes are used to generate the entry sensation.

In addition, this has been created, as to a certain extent an enclosed space in an environment which is surrounded by natural rocks and boulders. That is in a way to concentrate the mind.

#### Climax of the temple (Cave)

Main pathway ends up in the cave the main space which is the climax being als used as a vista to the main pathway and the special Relationships are created centered the cave.

Where only the cave is considered it can be created to comprise a separate approach way , an about to enter zone, an entrance, a transitional zone and a climax of its own.

# Secondary approach to the Climax (cave )

The main pathway, passed to false climaxes has been used as the approach way to the cave. While the enclose ness is further improved in this approach way gives the mind the concentration together with the directional guidance.



Fig 41: Steps beyond steps.

Approach way can be seen created in organic nature in this region according to the surrounding natural environment. In addition, this creates a three dimensional image of the cave in the mind with advancing moment giving out an idea about the proportions, scale, rhythm, balance and the repletion of it. This approach ways comes to its and reaching some what flat land which can be identified as the about to enter space of the cave.

#### About to enter zone of the cave

Created as a preparation area for entering the cave, slowing down the movement continued form the approach way. Having two parts in this zone is a specific feature. These stages are created using two naturally available levels, the lower one as a resting point while the upper as a boundary which does the physical preparation needed to enter the cave for preparation. The staircase that begin at the upper level leads to the small door—way which is being used as the entrance to the cave.

#### **Entrance of the Cave**

The steps and the relatively small doorway creates the entrance and is holds some celebration too, so that an attraction is promoted in the movement. The deapth density and the celebrations of the inner space being used as a pull factor directs and speeds of the movement.



Fig 42: The last elevation

With the entrance the contact which was maintained so far with the outside nature is broken down, and catching a direct vista of the "Oth Pilimaya" brings the concentrated mind into the correct mood signaling the start of the final stage of the journey initiated for worshiping the Buddha. Surfaces of this area is decorated with paintings, religious paintings, so that the main concentrations is brought to its supreme level the seal proportions here, are somewhat large and created in the way that the special deapth and the density are lowered. This space is therefore created to recognized as a filtering space that separates the devotee from the nature and makes him more individual.

#### Climax of the cave

This has been crated as the ultimate space of the cave temple. That is, this has been made the end of the movement.

The creation is made increasing the spatial density together with the deapth while decreasing the scale proportion.

Thought this set up is so close to the devotee it further implies that he, himself has to find his spiritual liberation providing the enthusiasm to concentrate his mind.

Climax is fully celebrated and the "Samadhi" statue is created at the deepest end with the purpose of concentrating the person's mentality into the Buddhist philosophy

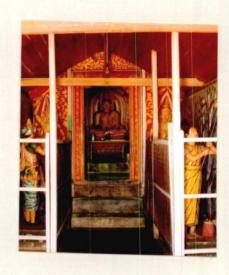


Fig 43: The spiritual isolation..

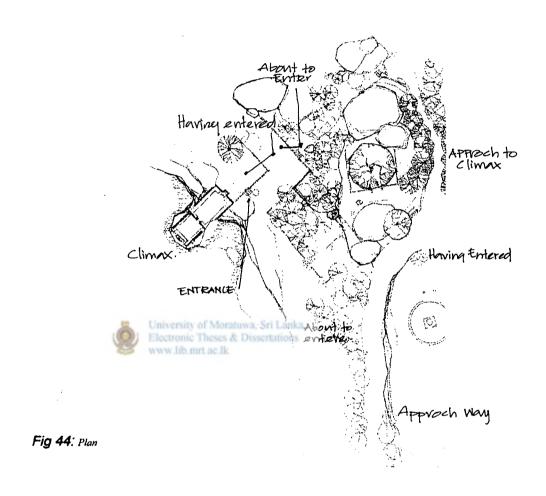
# Maraluwawa Spatial Orchestration.

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

When consider the spatial relationship of the cave temple which has explained above generates the spatial orchestration pattern through the spatial relationship. When consider the various spaces in the cave temple above explain it donate that spatial relationship builds according to the Buddhist philosophy in order to enhance the spiritual life of the individual. Spatial organization builds on the spatial relationship. When consider the spatial organization it has build to that cave temple in order to suit the context of the location, the hierarchical order of the spaces and their spatial expressions. When considering all these spaces arranges to generate the spatial orchestration pattern in "Maraluwawa" cave temple.

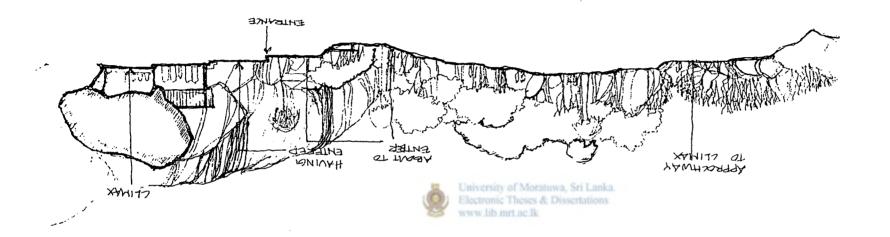
Various spatial expressions generate from the various spaces has created to a similar rhythm in the spatial organization. Spatial orchestration is done by using this rhythm in an appropriate way to the Buddhist philosophy and temple environment in "Mraluwawa". Various spatial experiences generate various

spatial meaning and through they are varied from one anther, it has kept in a same position and makes physical progression through this. So it gains the spirituality. Orchestration pattern can be identified from the below.



This has differed from the spatial orchestration pattern which derives from the socio cultural background and the Buddhist philosophy in several ways. In the "Maraluwawa" temple having entered zone connecting the "dagaba" and the nature this has been done because distance of the approach way of the temple is long. There fore individual spread more isolated time with the nature. When the individual come to the temple environment to full fill his arm of warship one should have to ease the isolated feeling of the mind. There fore according the Buddhist philosophies it had done in a fine way.

# SECTION



#### Introductions

This temple is situated also in the north central province 12 km away from the 'Maho" in "Maho-konwewa" road .temple is in the small village called "Niyandawanaya". Cave temple is created on the "Niyandawanaya" mountain which will depict the rural beauty of the village.

<

This has been built during the Kandyan period. And depict the qualities of vernacular cave temple features in the Kandyan period. When considering the build spaces in the temple it will be like this.

#### Approach Way to the Temple.

The isolated mountain which is covered from the thick shrubs and bushes has given a beauty to the "niyadawanaya" village. The mountain stands up showing the pride and identity of it through the paddy fields and tanks. It shows the beauty of it as well as the beauty of the village to others. The paths that carries the essence of this beauty and connect "niyadawanaya" and "kon wewa" depicts the real life of the nature its hardness.

When one follows through the path from village to "kon wewa" meets the small forest at the end of the paddy field. It gives the first of the cave temple by visualizing the individual to dilapidated ruin of old temple situated in the rock. Foot path which is lead from the rock directs in to the cave temple. It shows that the temple is created with the natural setting. By capturing the vast area of the land and its level quality helps one to be isolated in the surrounding nature. It emotionally transferred to the parson who approaches from the village. Directional sensation is shown with the help of taking the large rock which is in far as a backdrop and shows the temple cave. As explain the path way designed according to the rhythmus of the nature. When one crosses the small stream that

can be seen, gradually change the direction that follows and focused the mind and sight to the "bo shrine". Therefore concentration set to the cave temple retain while changing the visual direction from the cave temple.

## About to the Enter Zone of the Temple

When seeing this visual sensation, the small stream defers the edge of the path way while directing the movement to the temple. It helps to focus the isolated mind of the individual in to a one idea in a sensitive way. Unconsciously the picture of the "bo shrine" which creates as the natural rock making a backdrop to the picture helps to catches the eye sight of the individual. Rock boulder which situated perpendicular direction to the movement changes the direction of the path way while generating the feeling of about to enter. It helps to emerge to a balance mind when individual mind tries to be isolation.

# Entrance to the Temple. University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

This helps to retain the balance state of mind in the isolated individual mind. The change of the direction in the movement uses to derive the feeling of entering to cave. The idea of the sensation expresses by the stair way which helps one to reach to the upper level or the "uda maluwa". It has designed extracting the natural rhythm of the surrounding. "Bo maluwa" or the "bo shrine" area will be a direct view to this area or the "maluwa". Rock boulder which used as a backdrop highlighted these scenarios and helps to derive emotional attraction to the temple environment. Individual gets the emotional attachment

By viewings the scenario and by hearing sound of the tender leaves moves to the gentle breeze. Stair way which is in the "bo maluva" shows direction of climax and starts the spatial movement.



FIG 45: After the great elevation ...

# Having Entered Zone of the Temple.

This can be identified as terrace which helps to retain person who comes from the entrance to a little while. This has also done by using the natural rhythm of the surrounding. This resting place created to suite and arrange mind

in order to do the religious rituals correct way. This has designed basically in to two levels. Is it connected to the entrance rock boulders from one side and other side it connects to the natural rock It has created in a simple geometric form (square). Upper level has compromise the bo tree and



FIG 46: Preparation for worship.

the stairway. This has been created because to capture the human mind and body in order to adapt for the temple environment by both physically as well as mentally. It helps to gain the spatial movement and calm down of mind that required generating the feeling that one has entered to the temple premises. In there also "bo maluwa" is situated in the upper position of the upper level. It happens because it creates an impression that one has started the journey that



leads to worship the lord Buddha. Therefore it acts similar to a false climax in the journey. Ultimately it brings the isolated mind in to the path of journey to warship.

# **Approach Way to Cave**

Stairway that situated in the "bo maluwa" help to carries the individual in to the cave temple, which he has seen the entrance path way. Stair way designed to see it as a large one. On one side it will be the rock and the height of

the risers in the stairs are increased. This will help to get a clear idea about the surrounding while in vertical movement. It also gives the feeling that one has moving vertical on direction. When turning the last circle one can see the level land in the higher position. It helps to direct the mind along the land. This will generate the feeling that



FIG 47: The effect of filtering...

enter to the temple cave is closer by. The feeling transferred more elegantly by using the rock as the backdrop and visualizing the temple cave in to the mind. When one moves in the stair way, visual sensation expands while generating a positive approach to the cave temple.

#### About to Enter Zone of the Cave.

Stairway which comes from expanding the visual sensation interwove with the level land in the high ground. It ends with making a "maluwa" which will help to visualize the surrounding. From one side there will be the rock and the other side there will be the panoramic view of the area. Cave temple built by using two natural caves in the rock. Its hierarchical order depict with the natural environment. Therefore caves were situated by one set back from the other. This will help to explosion more from one cave to the other. When considering the "Maluwa" it also divided in to two parts. That also helps to emphasize the cave from one another. First cave that can be identified is set back from the other. It also situated in the lower part. Therefore easily it derives as a false climax in the human mind. Reason behind this is that creating the cave in this manner will be to generate the idea or the feeling that individual is closer to enter the temple cave, when considering the isolated mind in the stairway.

#### False Climaxes of the Cave.

This has created mind the set of the individual to enter the main cave. This false climax is design in a way to look. It as a cave temple in hiding, therefore this first cave temple emerges as a false climax rather emerging it as an ending point.



FIG 48: The first subway ...

This cave has created with two parts. One is being the "devalaya" and other part being the cave temple. "Devalaya" design as to look that it is in hiding position. Natural opening in the cave has used an entrance way to it, in a celebrating way. It derives the feeling that it caters only to the people who comes to worship it. And also it providers the feeling that one can go in if it really wants. The entrance and appearance of the area clearing depicts that to the individuals mind.

Entrance to the cave temple in the first cave situated in perpendicular to the direction where movement occurs. It has been created in left side of the path that has created to enter to the "devala" in first cave, direction of the movement in the cave because of the silence in the inside of the first cave and largeness. Dark large narrow corridor attracts the people because of the light beams which fall perpendicular to the movement. Though this it shows the path, which has to follow with arousing our inner feelings.

Direction of the movement is faced .individual makes to isolated in the gloomy, dark environment in the corridor. The feeling generates when the darkness coming through the door way, by making it more familiar to the scale in the corridor. The long narrow quality will help to individual to progress. Light beam which comes from help the individual to change the direction perpendicularly to left and direct to the ultimate space through the door way. Rock which is at the end of the corridor helps for this change. Light beam takes from the sides of the corridor, confronting it to the wall and gives the difference that one has to move.

Entrance door way in the ultimate space of the false climax is small light beams which will go through that to the inside light the abstract celebration. It moves the person in to the stature in Buddha which is in laying position which making him isolated in the environment. When after finishing the worship and coming back, these light beams frame the nature through the entrance door way. Through this one directs to the open "maluwa" which he comes, with isolating from the nature according to its mind.

#### Climax of the Cave.

Second cave temple is situated in the eye level of the isolated person coming from. It is situated in a position that looks naturally jutting out from the rock. Its scale proportions depicts similar to the views scales and proportions.

With these sceneries one arrange for move to his final worship place. The steps which help for that and the bell tower show that they are arranging that. There for individual attracts to that. This attraction and the entrance doorway which is in the wall that define the edge of the natural cave depict to the viewer the



FIG 49: The last step of the pilgrim ...

reality while he indulging on the natural beauty.

Mixture of the colorfulness and darkness in the cave that depict from the light that view from the entrance, attracts the individual to the cave. It will be like an invitation to the reality or else it likes telling the individual to open its inner feeling. While arousing the individuals inner feelings, entrance will separate the individual from the outer world. It makes the individual enter to the narrow long corridor which makes less isolated in the darkness while seen the ultimate space or the main space which is situated above. This will help to isolate the individual in the environment. Which does this by making the scale smaller it tend to build a relationship with the individual and the environment Ultimately it will lead the individual to cave climax by isolating one in one self. Therefore it also creates and designed as the entered feeling generate zone for climax.

#### Ultimate or Main Space of the Climax

Light beams are directed through the door way to the main space, when light penetrates the darkness it beautifully depicts the paintings. At night the light of their oil lamp penetrate the darkness of the window and transferred the direction. From that individuals are attracted towards the image house on the

ultimate space. Here paintings which can be identified by the individuals according to his mind set and isolated background, long narrow cave with a large statue of Buddha in laying position; in the darkness .through the isolation, the most appropriate scale and dense quality that will suit the individual paves the way to arouse and develop the spiritual feelings. There for the acts of warship is done with buildings a strong faith about himself.

# Soften Space for Climax.

After finishing the activities individual turn around to the direction were light beams falls with arouse spiritual feeling movement which done by the individual in to that direction stops when it sees the corridor.

and the large bowl. Large bowl act as a pull factor and direct the individuals movement towards the front door. Although it depict as similar form in nature an as an extension of the corridor. scale of it, rock that situated in one side and natural rhythm in the path movement will help to change it.

Although there is slight darkness in the



FIG 50: Filtering the mind ..



FIG 51: Coming back ...

beginning it won't affect the individuals caged in the nature. Without the celebration it tries to bring out the human spirituality by depicting the reality of the nature. The progression of the individual is depicting the reality of the nature. The light beams show the way of direction to the individual. Light beams depict the Pattern which one has to going through.. At the final stage individual release to the terrace. Therefore it shows the relationship to the natural environment and the spiritual condition in mind.

## Spatial Organization and Orchestration Pattern - Niyadawanaya

"Niyadawnaya" cave temple has done according to the described spatial relationships. So person goes to the temple, to fulfill his aim of worship. According to its environment, individual get a mental concentration, because of the meanings that generate through the spatial expressions in each space in the temple environment.

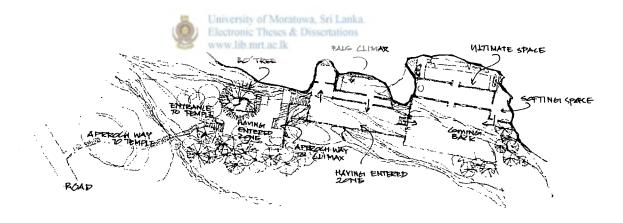
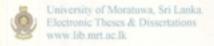


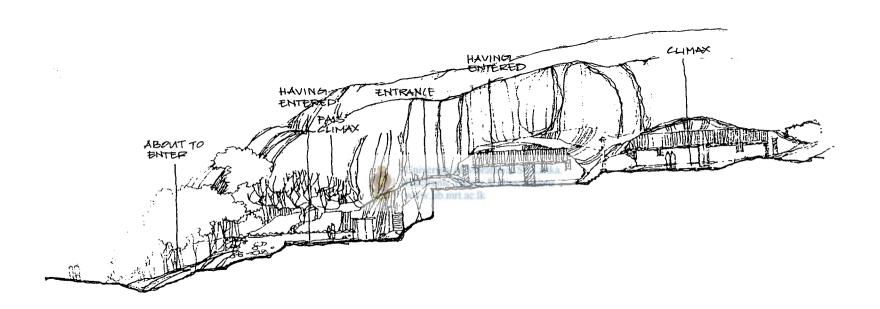
FIG 52: Plan.

Mental concentration individual gets helps to arouse the "spirituality" in the individual. Spatial orchestrations which will do to make a similar rhythm also help for this. The spatial orchestration derive from the above spatial organization pattern.

When considering the spatial orchestration pattern for worship in the Buddhist Philosophy the spatial orchestration pattern in "niyadawanaya" differs from many ways. Although naturally build two caves in the rock has used to make the "niyandawa" temple, first cave from its location and the related build forms help to emerge as a false climax.







ELEVATION

#### Introduction

This has designed as a "Rajamaha viharaya" during the Kandyan period. This is situated in the North West province. It is situated exactly 3 km away from the junction of "Ibbagamuwa–Madagalla" road, in the "Kaballalena" village. Cave has been created based on the isolated mountain called "Kaballagala". Significant of this temple quit large cave designed from foot of the mountain to up. Cave temple has created with using the various naturally made levels.

# Approach Way to the Temple

This will be a cave temple which is setback from "Ibbagamuwa Madagalla" road. It will be 3km away from "Koonwewa" junction. In "Kaballalena" junction path to that lead to the temple is covered with throne bushes and shrubs as well as the trees with dried leaves or not at all. It depicts the dryness and hardiness of the surrounding environment. The isolated mountain which can be seen from far away in the narrow pathway attract towards the temple.

Approach way will be the path that leads to the "Kaballalena" junction to the isolated mountain can be identified like this. The path will be a narrow gravel road and the dried trees that can be seen depict the real quality of the nature of the environment. Mountain in far away and the glimpse of the



FIG 53: The start ...

cave shows the path to move. This area will be end from the about to enter zone which will be define by the small wall.

### **About to enter Zone of the Temple**

Path way which connects the entrance in the end of the approach way and the approach way will identified like this. In the beginning of this area one can identify a path way which ran through the calm natural environment bounded one side from the small tank. It defines the pathway that directs the movement towards the cave which can be seen in the faraway. Through this it shows the direction to the mind which has attracted to the nature in the approach way. It also calms down the mind. "Dagaba" and "Boshrine" which considered as the false climaxes, which will be in the direction of movement, capture to the eye sight and transferred to the mind about the calmness and serenity in the temple environment.

Calmness and serenity helps to concentrate and calm down the individuals mind. It feels emotionally that one has opened the doors to enter to the temple environment. After this area end with the help of the natural level change takes individual on to the higher area which has the naturally defined entrance.

## **Entrance to the Temple**

When about to enter zone ends. There is a stair way which will help one to go to the plain level land which is in higher level. Large Na tree can be identified near to the stair way. It will help to generate the feelings, entering to cave temple by filtering the individuals. So this naturally made entrance celebrated and highlighted by creating a bell tower. It will give the feeling of entering to the cave temple in the mind. It shows the direction to the cave temple with the help of the nature in a silent way. It will be showing the idea to the mind

which has been calm down with the temple environment. Na tree which will be emerge with large branches depicts the relationship between the Buddhism and the individual

## Having entered zone of the Temple

This has been designed to slowdown the process of special movement which carries by isolating the individual. For this it has used the large plain ground and the water body which will be in same level in the left side and plain ground below level also connects and make the space look vast.

In this calm, silent large space individual become more isolated and aroused inner feelings while giving the impression that one also belong to that nature. Main of the large space is to create the mentality of the individual to worship the temple. It will also help to calm down the varied feelings in the mind. Making him isolated generates the feeling and makes the individual in the journey to worship in both mentally and physically.

Flat land which will be in left side of the main flat land is used to build the 'dagaba' and Bo shrine as false climax. When consider it location considering as in the foot of the mountain it helps to isolated more and more. After the individuals, come from finishing the worship activities. The visuals of temple cave depicts the real path that one has to move

#### Approach way to the Climax (Cave).

Main pathway is created in to the opposite direction to which ones entered it will be started at the end of flat land in the foot of the mountain. One significant feature of this pathway is, it given the impression that it will be the approach way to be cave from the beginning. It will lead from the foot of the mountain in between naturally set rock boulders. Small trees which located among the rock boulders provide a gloomy quality to the path and enclosed quality also. There fore it gives the feeling that the path is blocking the way of the isolated person. It



FIG 54: The final stairway ...

will help to generate mental concentration move to the cave. When at the end of the main path way enclosed quality is reduced.

#### False climax

This has created in the temple cave to feel after the entrance space. This will be on the side of the flat area in the cave approach way has design with using the rock boulders. It will focus on to higher stage from the flat land also. The path created from the rock boulders will be set aside from the direction. When considering the scales and proportions by designed it in to small scale it shows that it has design separately. Entrance doorway in the false climax has celebrated without contrasting the nature of the rock by using the materials also it has assured and depict the real nature of it. Because of that it generates the humble quality, when considering the qualities of the other spaces. Therefore the false climax space wont disturbs to the main directional moment. This has done because the space "devala" is not considered as a Buddhist worship place.

## Approach way to climax of cave

From the entrance lobby which feels the having entered feeling, climax or the cave entrance sees from above the eye level. The end of this area there is a stair way and this has considered as the approach way to the climax. This stair way connects the physical of surrounding open area to a dark area. Then



climbing up the cave entrance makes to see in eve level. This has designed to feel the individual the difference of darkness. light and Individual's mind used t isolated in the darkness and create a place which will calm down the mind.

FIG 55: A raised terrace..

## About to enter Zone of the climax of cave.

So the individual bring out from calm down mind take in to a dark, big short from the height flat area. Individual make following from the little stream. Sound and the environment help the individual to arrange and make the mind set to enter the ultimate space which will see in front of the individual.

The darkness in the space reduced to some level by the light beams coming from the opposite direction. The movement of these light beams has controlled by the half wall in the cave. When the individual also mind focused to this light, be will get the beauty of the surroundings environment. It will do by showing the Arial view of the small tank be show at the beginning. There fore it will make the individual mind who starts to move towards the climax; in to a concentration position according to him and the environment.

When one starts to move forward, cave height is increased and visualized the stairway that used to enter to the ultimate space. By the sculptures which at the entrance and the door way help to highlighted the entrance.

#### Climax of the cave.

So movement is due to the high lighted entrance space through stairway as because climax is started at higher position. It will help to isolate the individual more. It also acts as a filtering space because stairway provides

an access to only one individual. There fore when



FIG 56: The complete isolation.

individual moves towards the climax, one will see the Samadhi stature in the eye level though the entrance door way take the individual in to the interior by isolating line.

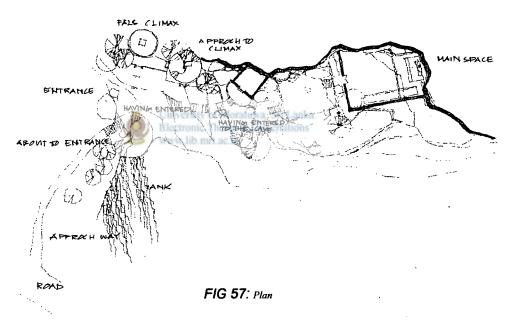
Ultimate space is created as a large one room. This has feel to an individual as a collection of spaces because of the height to the rock differs. It can be feeling to a person who moves inside the room. Space has celebrated by decorative paintings. At the deep end of the large room this is a Samadhi stature which will be face on to the entrance door. Light beam which comes from the lead position of the stature will be the only light source in the room. It confronts with the person who enters. In the opposite direction and generates the feeling that one has entered to the ultimate space. So individual tends to move to the light source there fore it makes from the more and more isolated in the isolated in the space.

#### Generated spatial orchestration pattern.

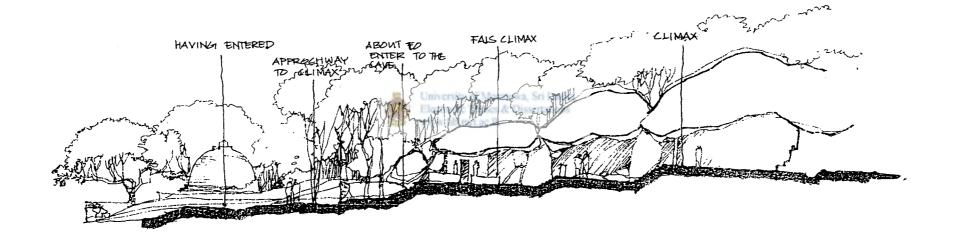
When considering this cave temple which has generate the spatial relationships as explain above; it reveals that all the other secondary spaces

arrange and designing to enhance the moment direct to the ultimate space in the cave. It creates the individual mind set in order to follow the movement. Each built space in the temple environment express their meaning as explain in an appropriate way to the task that should fulfill by the each space. There have been designed in order to highlight the meaning of each space. But according to the spatial relationships exposed above, it has created a spatial orchestration pattern. This has been done relations the unity of varies spaces which evaluated in the one creation and keeping the continuity. It has done according to the above explain by keeping the continuation of spatial expression and spatial meanings. There fore creating a psychological progression.

So the spatial orchestration pattern which has created generate from the spatial orchestration pattern. It will be like this.



This has been similar to the spatial orchestration pattern which orchestration pattern derived from the Buddhist philosophy. One significant change is Dageba and Bo shrine arrange in the "Maluwa" which connects to the having entered zone. They have created as false calmness. This has done because as they are important to the religious warships and because of the temple has designed according to the rhythm of both context and geography.



SECTION

#### Introduction

Ridigama is a vernacular cave temple which is located in Kurunegala district. It has a long historical background which goes 1<sup>st</sup> century B.C. But its main developments are done during Kandyan period. It contains a grand entrance stairway which made out of stone, a beautiful gateway building and three caves.

## Approach way

By the site of the Devala" "Ridigima which resides in isolation amid a topography quietly wavy which comes after passing "Ridigima" on the suburban road headed to "Keppitigala" from "Kurunegala" a narrow approach pathway begins its journey towards the temple along side is a paddy field which also contributes its



FIG 58: Turning point ...

shame to this pathway, to suddenly the monotony is broken coming to find the defined stairways. Then the approach pathway comes into the scene leading upward with the progression of steps with either edge defined well by nature. The directional feeling is sensed by providing the view of the temple as a vista.

#### About to Enter Zone of the Temple

As the pathway takes its turn to right & introduces a terrace with steps again at the end 3D composition of a temple is exposed evoking the emotional

attraction that the temple deserves. This terrace acts as a resting point to reset the wind before entering.

## The Entrance to the Temple

As the steps that rest at the end of the above terrace propel the person a little upward and make him stop on a podium which here identified as the entrance unfold a true picture of the temple. And make him able to distinguish between inside/ outside of the temple. The sensation of entering is celebrated. Additionally it brings a vista of the cave, the climax, into the scene for the first time in this temple environment and signals the start of the special movement.

# **Having Entered Zone of the Temple**



FIG 59: The First terrace ...

After bringing the person who was on the entrance podium down inside, he is onto welcomed narrow but lengthy terrace, which has its either sides defined by a "Walakulu plinth and

Bemma". Provision of panaroms is done by the

site of the "Walakulu Bemma". This terrace is capable of resting the person for a while before stepping into the main approach way. This paused gives him the correct mood needed to prolong and stabilizes the feeling of being belonged to the environment.

# Approach Way to Climax to the Cave

With the end of that terrace begins another terrace, a larger in dimensions with the paved pathway parting it into two. About the beginning of this pathway starts another subway leading a false climax, here a small rock-caved image house. And this main pathway ultimately becomes the approach way to the caved as well.



FIG 60: Equal footsteps ...

# About Enter Zone of the Cave

The cave provided as vista at an early stage of this approach way then convert into a much detailed view. Here the above to enter space is also a terrace consisting two parts. The first part is built into a hall

letting only a small doorway as the entrance whilst opposite side is kept by spacing directly to the temple cave. The second part bridges the gap between the first part and the cave.

#### **Entrance of the Cave**

The rock, perpendicular to the directional movement in the about to enter zone, acts as a back drop and highlights the entrance of the cave.

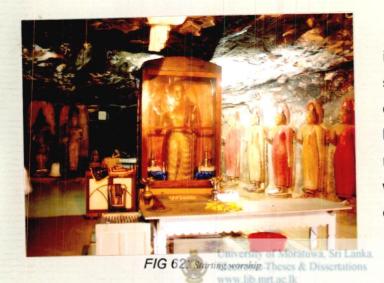
FIG 61: Framed path...





Meanwhile a vista is provided using a "Hitipilimaya", inside the false climax, to give the directional guidance and the doorway functioning as a filtering space, transforms the feeling of being common somewhat into that of being individual and prompts the person inside giving here the entering feeling.

# Having Entered Zone of the Cave



As the person entered in, he takes some time to sense the difference of darkness from light made by being entered coming to notice "Makara Thorana" which celebrates the entrance of the false climax

confirms him that he has entered and now become a

part of the environment and be behaved accordingly.

#### The False Climax of the Cave

As this cave temple consists of two caves the first one named us "Shri Lena" becomes a false climax itself. The person is made to move through the arrangement of the status in a round about



FIG 63: Celebration started ...



FIG 64: Continuation and progression of celebration ...

inside the caved way directed by invading light through the exit doorway to the right where he entered. Inside "Shri Lena" is a broad low-dense volume at human scale. The size of the enclosed be can conveniently judged since the surfaces are rich in celebrations and by the

beams of light invade through both the openings compared to the second cave the climax darkness here therefore is less. Three major statues dwell this enclosure.

The person comes passing these statues again releases into the about to enter zone of the climax across the corridor and experiences the enlarging level of light.

Electronic These & Dissertations

www.lib.mrt.ac.lk

## The Climax of the Cave



FIG 65: Next. ?

Just as a person comes outside, he then notices the upward stairway leading the second cave, the climax to his left. This stairway serves us the approach way to the cave; and its shortend as the about to enter the space. Shortly afterward comes the

entrance doorway with minimum celebration and serves as the filtering space to make the person more individualistic and enter. After entered space also a lengthy narrow pathway; a dark corridor the left resides another false climax of Devala (Natha Devala) creating a transition point at the beginning of this corridor to the left. But the corridor continues forward and then leads to the entrance of climax, is also to the left of the moving direction. The entrance is highlighted by a direct light beam coming through another doorway. This is the doorway that has to release the person after finishing all his worshipping. The



FIG 60: The final achievement ...

entrance door is occupied with some statues as celebrations. There the person who is in progress of worshipping is encouraged to enter the ultimate dwelling.

The dwelling, the cave, is unexpected darkness and unbearable dense. Amidst a pool of deep abstract celebration dwells the "Samadhi Statue". Worshipped the Lord Buddha, the isolated worshipper then takes the above exit doorway to turn his journey back.

The corridor into which he enters then handles the path of relaxation of the process and herds the worshipper over to a terrace with panoramic views.

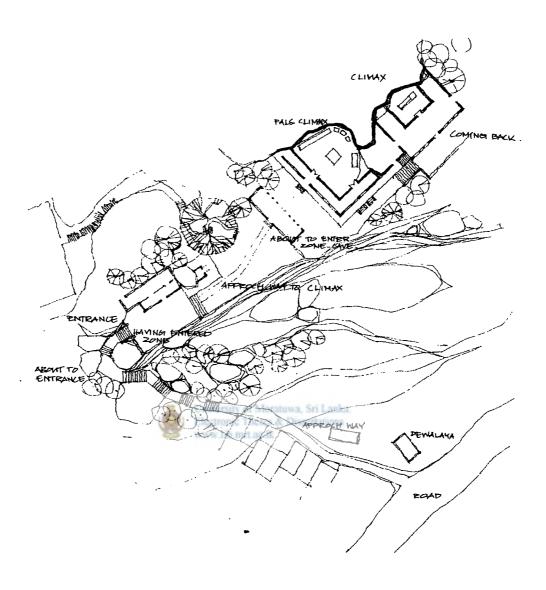
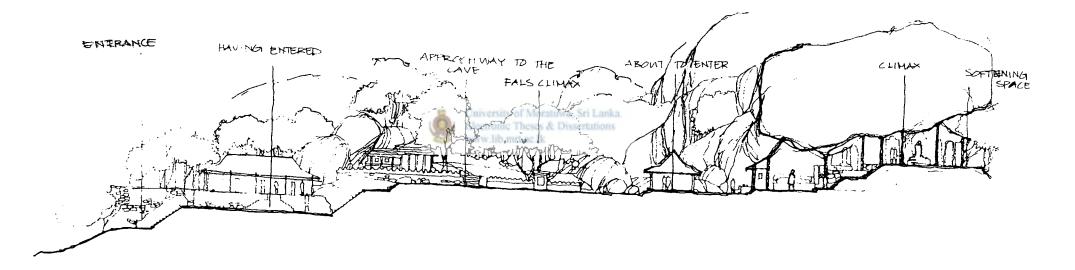


FIG 67: Map



SECTION



**CONCLUSION** 

This valiant effort has done to find out that is there really a unity in the cave temple in Kandyan period. When considering it, according to the theoretical base, spatial progression patterns will paves the way to judge that it is true. Because, it based on the physical environment and the theory pattern of the people who created and used it. These two emerge as the key fact which will be interrelated.

Term vernacular cave temple denotes that a place which has evolved with or with out the help of the rulers, to perform the religious rituals, to act as economical center point in the area. These are provincially made religious places. In Kandyan period these has spread taking Kandy as the main point and these are mainly considered as the agricultural settlements. In early period, up country has used to agricultural activities and day to day life. Therefore the isolated mountains which spread from the up country formed into vernacular cave temples. As there were difficult to use as agricultural purposes, and climbing up denotes venerable impression through the tradition may also causes for this.



This isolated mountain has compared with small rock and boulders as this will be the outlook of the Sri Lankan geography. Each place which has geography like this the activity happened and the natural effects also causes for this. In boulder gardens cave goes deep into the rock. In Sri Lankan context most of these can be seen in the human scale. As the rock look more likely to spread linier way these also looks long. After doing a drip edge to the cave and cleaning it, this can be turned into usable area.

When doing these changes, one develops according to need. This development has created from the traditional environment where he lives. Basic functions of the religious place and the activity pattern is connected the tradition, which enriched the thoughts and ideas of this individuals. The life pattern of the villager and the importance of the religion in the life pattern of the villager, impression done from the religion. To him, way they react to religion have caused for this. As Buddhist philosophy change from the Marxism. Rather than

doing all together and make physical revolution, it reveals that this has performed by each individual himself and leads to a mental revolution.

As looking clearly to the problem it reveals that these philosophical issues affect to the creation also. Because of all these reasons one proved that spatial orchestration pattern is also should be made into an order or a pattern.

Therefore the first chapter is the dissertation has used to understand the theoretically about the spiritual orchestration and aspect which connect to it. Second one is used to describe the Kandyan life pattern and the religious philosophical background. Thirdly it has used to describe the spiritual orchestration patterns after analyzing the fact in theoretical base. In here it can be successfully identified the spatial orchestration theoretical base.

One significant feature of this pattern is that it tends to isolate the individual gradually. Spaces orchestrated in order to highlight this spaces has created the mentality of the individual gradually to step in to the meditation process. This has done by increasing gradually the percentage of man made objects to nature and also increases the celebrations quality. It can be done by deviation from the ambions of natural animal and depicting the human quality. For this entrance should be powerful and it built the nature to man made conversion. As Sri Lankan depict the celebration as "something within something"

Ex: temple of tooth relic- celebrated with – casket

In a casket, a small casket, golden lotus, one of a tooth made into an elephant tooth and tooth relic is inside it.

Therefore to celebrate the cave temple there should be spatial organization and another spatial organization in it. Climax should be always at the end and, it creates in a way to derive that one can't progress without passing

it. It should also have the identity of order in the religious place. Therefore it will be arranged as to the

Sharirika Chethiya

- dageba

Uddeshika Chethiya

- bo tree

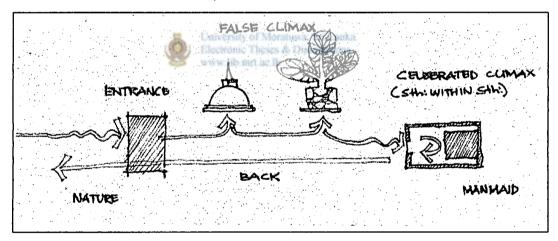
Paribhogika Chethiya

- shrine room

Therefore in a religious place "dagaba" get the first place. But, to the Sri Lankan, who familiar with the Eastern thinking it needs or there should be a celebration at the end of the pilgrim when applying to the site. The linear spatial organization which has reveled in the study has change into the organic form. In some places vistas has used.

Ex: to make the entrance powerful

In a contemporary linear pattern in the site. Sometimes site has used for this and transformed the need, in to the site.



During the fourth chapter it used to prove the practical way of the traditional ideas understand from the study. Therefore in here, cave temples which are varying from another have used as the case studies and the attempt was a successful one. The theory which identified from beginning reveals that when in practical terms it slightly changes due to the problems like applying to context. So it reveals that in architectural tradition of the country it should depict the philosophical ideas of the citizens and traditional values. There for the basic organization pattern will be like this. According to the act of telling story which

refers above depicts that the Kandyan vernacular cave temples are basically linear spatial organization pattern.



View of Niyandawanaya





view of Kaballalena

It derives that one can identify all these through studying scientifically about the creation. Therefore it shows that the architecture has a life, and it can speak. What should be done it is to be sensitive to hear what says by the creation in order to speak with it

#### **BIBLIOGRAPHY**

Adhikaram, E. W.,

Early History and Buddhism in Ceylon,

M. D. Gunasena & Co: Ltd., Colombo, 1953

Alexander, C.,

A Pattern Language,

Oxford University Press, New York, 1977

Bachelard, G.,

The Poetics of Space,

Beacons Press, London, 1964

Bandaranayake, Senaka

Royal & Monastic Gardens at Sigiriya &

Anuradhapura Colombo.

Bandaranayake, Senaka

Sinhalese Monastic Architecture

Leiden, Netherlands, 1974.

Basnayake, H. T.,

Sri Lankan Monastic Architecture,

Sri Sugathodaya Publications, Delhi, India,

Electronic Theses & Dissertations www.lib.mrt.ac.lk

Bawa, G., et, ai,

<u>Lunuganga</u>,

Times Edition Pte. Ltd, Singapore, 1990

Carter, John Ross

Religiousness in Sri Lanka,

Maga Institute, Sri Lanka, 1977

Ching, F. D. K.,

Architecture: Form Space and Order,

Van Nostrand Reinhold Co. Ltd., New York, 1979

Coomaraswamy, A.,

The Transformation of Nature in Art,

Dover Publications, New York, 1956

Coomaraswamy, A.,

Sources of Wisdom,

Ministry of Cultural Affairs, Colombo, 1981

Dissanayake, J. B.

**Mihinthale** 

Lake House Investment Ltd, Colombo, 1989.



**BIBLIOGRAPHY** 

Holgate, Alan,

Aesthetics of Built Form,

Oxford University Press, Oxford, 1992

Houtart, F.,

Religion and Ideology in Sri Lanka,

Hansa Publishers, Colombo, 1974

Kalupahana, David J.,

Weeraratne, W. G.,

Buddhist Philosophy and Culture, Essays in

Honour of N. A. Jayawickramwa,

N. A. Jayawickramwa Felicitation volume

Committee, 1987

Karunathilake, K.,

Weerakoon Bandara, Y. G.,

Kelaniya, 1994 Sriyani, W. D.,

Gnanasekara, H. M.,

<u>"Samaja Sameeksha"</u>

Dept of Social Science, University of Kelaniya,

Relph, E.,

Place and Placelennness,

Pion Limited, London, 1976

Schulze, Christian Norberg, -

Existences, Space and Architecture,

Studio Vista Limited, 1971

Silva, N.D.E.

University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations

www.lib.r.Landscape Tradition of Sri Lanka

Deveco Designers and Publishers (Pvt)

Ltd, Colombo, 1996.

Susan, J & Geoffrey

Landscape of Man

Themes & Hudson Ltd, London, 1975.

Ya-Sing Tsu, F

Landscape Design in Chinese Gardens

McGrow Hill Book Company, New York.

