

ORGANIC NATURE IN SRI LANKAN VERNACULAR ARCHITECTURE

AN EXPLORATORY STUDY

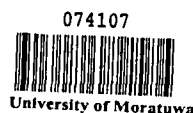
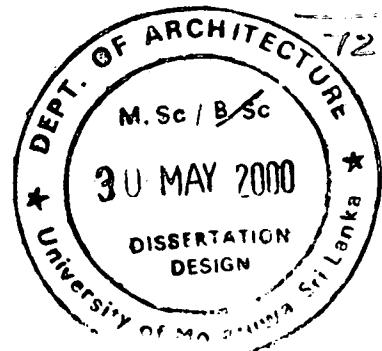
A Dissertation submitted to The University Of
Moratuwa as a partial fulfilment of the requirements
for the Degree of Master of Science in Architecture.



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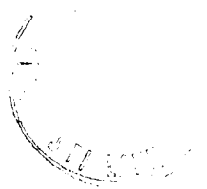
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Organic Architecture is living being. It has its own soul and moves forward all the time. It goes beyond from making and it achieves its power through subtly and presence with a sense of flowing space, as in a living organism and thus blends with nature. The significance about organic architecture is that it steers a middle path between the extremes of narrow traditionalism and extravagance of contemporary commercialism. It is metaphysical in essence as it deals with nature of being. Accordingly organic architecture is not rhetorical, but transcendental in form. It is loosely defined most oftenly and most people fails to understand its subtlety power of essence. However the Architecture practicing today is in the absence of organic Architecture.

This study is an attempt to examine the notion and essence of the organic Architecture which is transcendental in his nature and related to creativity. Organic Architecture as an idea has not been explored very often either in Architectural literature or in practice. So, this study is geared towards emphasizing its importance of application, and attempts to analyze, how organic architecture is achieved its essence, the way it is interesting dealing with the sense of flowing spaces, and its subtle relationship with natural metaphors.

Organic Architecture which is intangible in its nature can be best understood by theoretical hypothesis. By this study it was intended to analyze the idea of organic architecture its components, and the its provision of becoming as more tangible idea through the experience of place. It will be understood by relevance and application in realistic terms. Following this hypothesis the procedure is established, the methodology of application is ignored to create organic Architecture; Basic hypothesis is very important in understanding what soul or essence of organic Architecture is. In order to establish it, theoretical ideologies will be used based on available literature. This will be further confirmed by analysis of existing spaces in the Sri Lankan context, through selected case studies.

Finally this study will be important to establish a new interpretation of organic architecture as sense of flowing space having a subtle power rather than form making.

INTRODUCTION



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Topic Explanation

Organic Architecture has its own soul. It lives through its immediate impact, and it's a challenge for complacency, and insists on renewal. It shares a more literal identification with Nature. Frank Lloyd Wright a key exponent, identified it as a symbiotic embrace of Nature, not a conquest of Nature. In philosophic means, organic architecture is entity, where the whole is the part as the part is to the whole and where the nature of materials, the nature of the purpose, the nature of the entire performance become a necessity. Organic Architecture is totally a rational architecture. The result of organic architecture is not subjective to any pre-occupied situation, personal bias, inspirations etc... It rejects the accumulation of tradition in favor of the operation of the human mind acting in the present. The emphasis on present activity is shared with radical rationalism. As Hugo Haring, a key exponent of organic architecture stresses in his architectural theory, buildings are the fruit of social process and according to him the architect is not so much as God like form giver, but rather as the interpreter of the building's circumstances, coordinator of the various forces that bring it about. The significance about organic architecture is that it steers a middle path between the extremes of narrow traditionalism and the extravagance of contemporary commercialism.

Organic Architecture is a continuing tradition, not only blends with nature but also responsive with the demands of place, purpose, culture, materials, etc..... Above all its spiritual foundation helps for the spiritual upliftment of the occupant. Although Modern Movement and capitalism sets the tradition apart from the main stream, it is still a continuing tradition. There are many contemporary Architects who contribute to it all over the world and Sri Lanka is not an exemption.

In Sri Lankan Architecture "Built" and "Environment" is ever so harmonious. According to Archt. Ashley De Vos (1992) "The Architecture of Sri Lanka is not Architecture of buildings, but one of spaces. It is an Organic architecture

follow the rhythm of Nature, surrounding geometry and the recourses of the context etc..

So, they are far away from rhetoric secrets of organic traditions. What is happening today is just form making and it is utter failure of our built environment. But as professionals our contribution to the field should go beyond form making and by proper understanding of organic can achieve this high aims of built environment.

The Hypothesis

Organic Architecture can be compared to a living being. It has a soul and a body. It has a physical and spiritual sense. Like a living being it must be conceived, nourish, and given birth to. Then it will become the sanctuary for the mental and spiritual upliftment of the occupant, where he is taken along the path of experience towards a destination which is the healing of mind.



The Aim

The primary aim of this study is to examine the notion and the essence of Organic Architecture, as being transcendental and creative in its nature. Organic Architecture as an idea has not being explored or practiced sufficiently, this study is geared towards emphasizing its importance of application as it's very important for modern day practitioners.

"Organic Architecture is rhetorical". this is the most popular definition of organic architecture given by the most people in the world, including Architects. Some of the available literature point out, organic architecture, as being nothing than the formless and mindless caressing. In other words " Fantasy Development ". However the opportunities of new application of organic architecture have been lost. So, the study is an attempt to analyze the essence or soul of organic architecture through

comprising of a multiple of levels and terraces, and different types of canopies . The roofing element varies according to the usage, from timber framed roofs, rock ledges, trees and at times even to the sky”

So, studying Sri Lankan Architecture is the best way of understanding the adaptation of living spaces to suit the existing situations. “Organic” in the sense is specific to certain situation or out come for a certain specific situations. So , within Sri Lankan Architecture the “ Organic nature ” can easily be understood.

Here it is intended to study Organic traditions in Sri Lankan vernacular architecture with special reference to the factors that influence the concept.

The Issue

According to organic architect Sidney Robinson who consider organic movement in context says Organic Architecture is a challenge for complacency, and its tolerance is for pursuit rather than certainty. The tradition which is free from geometric rigidity and explore the past as well as present in the joyful engagement of Architecture, and it is potentially way ward and uncontrollable. The Architecture it produces is not simply licentious but is exuberant in its creations. Like a living being it has an essence and a body. It has a physical and spiritual sense and it will become the sanctuary for the mental and spiritual upliftment of the occupant. However Organic Architecture is an idea, that has not being or practice sufficiently. The tradition which has close connection with Green Architecture and sustainable development, always produce buildings that may capture the rhetoric nature of surrounding, use compatible materials and grow within the site ensuring spaces to further grow due to geographical changes and other changes of nature. So, the products of Organic tradition are the products actually demand by the nature. So, they may long last as so many good things of nature lasting forever. Although Organic tradition is the best way of having sustainable built environment, which is relevant for ages not for one period, it is not practiced successfully. Today’s trends in built environment is far away from environmental existence because they hardly

metaphors (plants, human, animal) and through the application of good Architecture. So, it is intended to examine the work of various Architects who had practiced or have been practicing organic architecture in the world and their concepts and its applicability in Sri Lankan situation. See whether there are similarities with Sri Lankan situation. Eg: concepts of pioneer organic architect Hans Scharoun has similarities to our organic concepts. Although the phrase “ organic architecture” is almost unfamiliar to most of people, if we look carefully at this phenomenon from a historical point of view then it is easy to realize about the organic concepts adapted and explore those will be the ultimate aim.

The Way

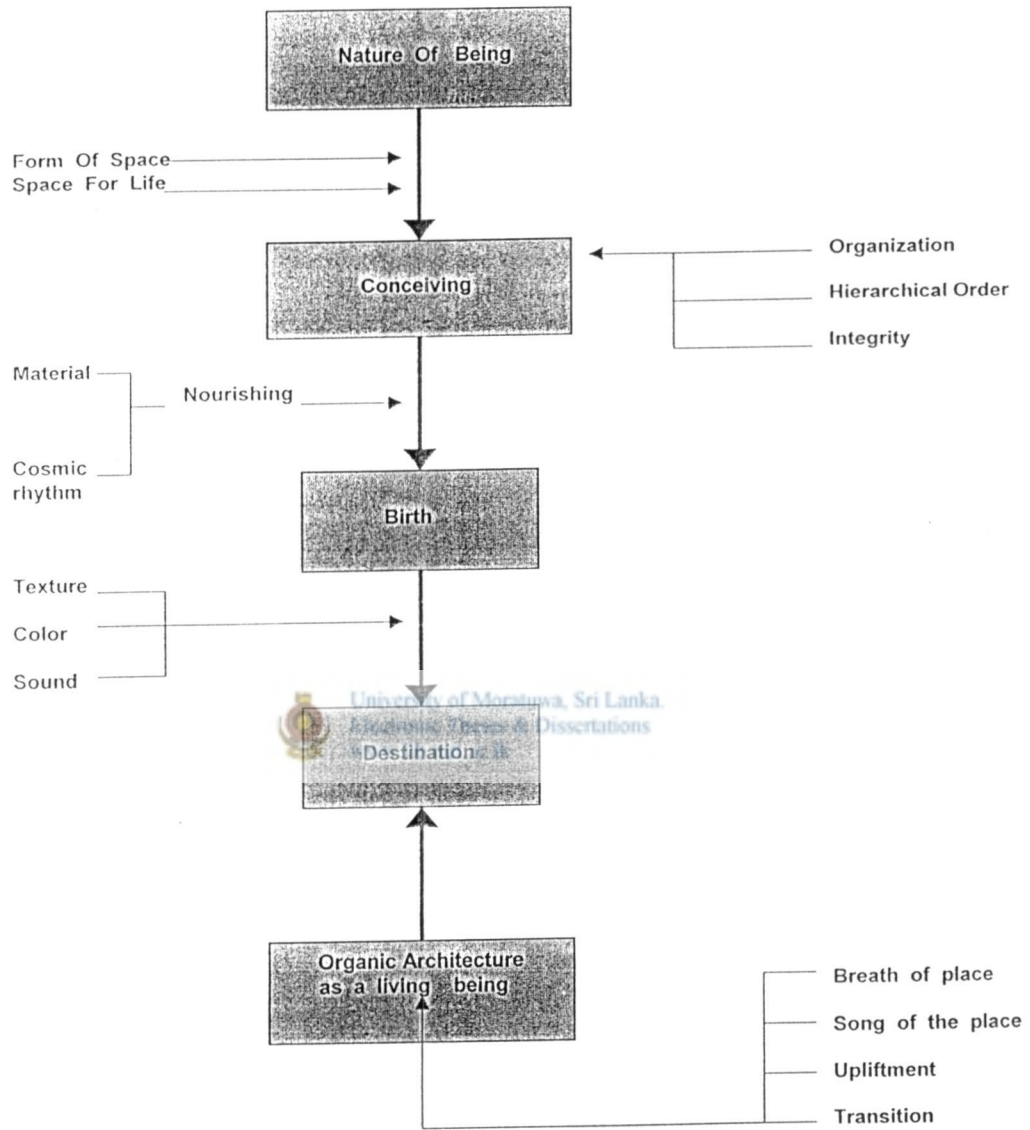
Objective one is achieved by written documents. See various concepts of the Architects who had practiced or have been practicing organic architecture and the way that the built environment was shaped by such concepts. Objective two is achieved by comparative analysis of illustrations and written documents to determine organic concepts of Sri Lankan vernacular Architecture.

Limitations

As a continuing tradition there were many architects contribute to it in different eras of world history and changes happened the process of evolution can be seen. But the study is geared towards only few architects and their work.

Organic traditions in Sri Lankan vernacular architecture is examined by selected examples belonging to the different eras of history. (In macro planning, micro planning and individual building planning aspects.),

Though there are contemporary Sri Lankan architects contribute to the tradition their work will not be studied as this study is limited up to few selected examples of Sri Lankan vernacular architecture at certain periods of history..



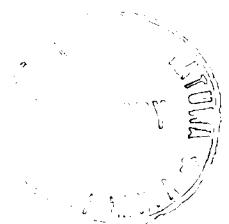
CHAPTER ONE



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ORGANIC ARCHITECTURE AND VERNACULAR ARCHITECTURE

THE PREFACE



1.1 Organic Architecture

1.1.1 Organic Architecture: An Interpretation

There are various stand points for organic architecture. However " organic" is a term often loosely defined and mistakenly identified with none geometrical physical forms. To many people " organic " means an actual out come of Nature. They mistakenly think that the only way to exhibiting the greatest proximity to Nature, is imitating the Natural forms like the forms of animals, the human figure, the trees and so on... But, if such an idea takes an actually built form, it is almost pure fantasy or pure friction. It will be a product of some one who is not an " Architect".

The architect should be equipped with knowledge of many fields, like history, philosophy, music, medicine, law, sociology as well as architecture. Good architect is not merely a form giver, and organic architecture is not only a form making architecture.



According to **Hugo Haring** (1882-1958), the architect is not omnipotent creator, But rather the interpreter of buildings' circumstances, helping to bring together the forces that give it form. Organic architecture has it's own philosophy penetrating beyond visual fantasy. It links the experience of place with the inner being. It establishes connection between man and his external space. (plate 1-1 & 1-2)

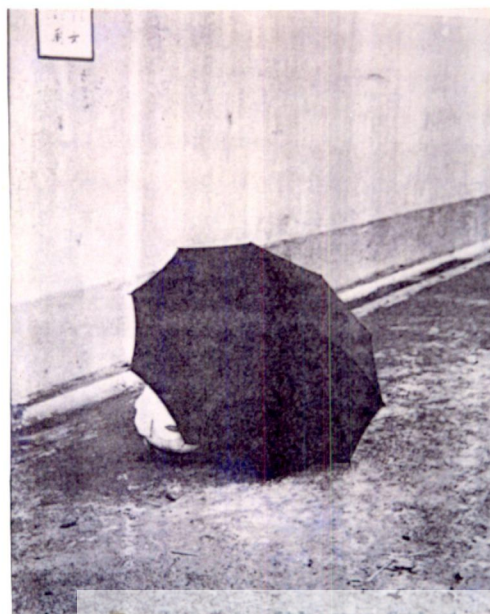
what is organic architecture ?. The terms organic, organism and organization can be used interchangeably to the extent that they are all delimit things. which are whole - that is, containing both a rigid external boundary, to which nothing can be added or subtract without endangering the balance of the composition. So, organic architecture can be defined as the method of organizing and establishing an order of things. In reality a meaningful organization of a building, collection of elements, elevate them into an organism would have good chance to elevate as an " organism ". In philosophic sense it means " entity " where the whole is to the part as the part is to the whole. And where the nature of materials, the nature of purpose, the nature of entire performance become a essence. It is this kind of



architecture that could be called " organic architecture "

plate 1-1 & 1-2

...man and his space.



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1.1 2 Conceptions of " Organic "

Here it is intended to outline the accumulated claims for either Natural, the functional or ecological basis for organic architecture made by various exponents. To some " organic " means imitation of Natural forms. While others feel it as, curved, asymmetrical thing. It also identified as holistic approach, using Natural materials etc.. These definitions originate mainly because of the existence of specific styles and indefinite concepts.

Hugo Haring (1882- 1958) father and principle theorist of the German organic tradition sees organic architecture as an out come or an interpreter of a buildings' circumstances helping to bring together the forces that give it form. Haring's conception of organic building did not involve in borrowing biological forms. According to Haring form should not be imposed out side according to the laws of Geometry but rather allow to grow from the inside organically. As an example Hugo Haring's house plan in 1946, one of a series of exploratory designs. The plan is assembled hierarchically and carefully oriented with complex transitional sequences between inside and out. Here it can be identified the way that each and every function determined the quality of the space, and the way each and every space grew from the site. (plate 1-3)

Plate 1-3

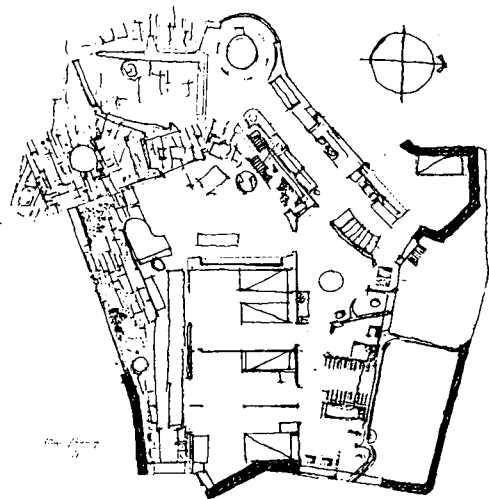
...the house plan of Hugo Haring in 1946

source: "Organic response", The

Architectural Review, vol clxxii

No.1060. 6/1985 (p. 24, 1985)

JONES, BLUNDELL ,PETER.



Thus Haring intended to give primacy to the socially and symbolically significant relationships. The idea is much different to Frank Lloyd Wright, who always worked within Geometric grids, beside believing in an organic relation parts. But Wright also believed that his grids reflected a harmony with the structure of the universe and that nature, ultimately was organized geometrically. (plate 1-4 & 1-5)

Plate 1-4

...Wright's studio and home,
Oak Park, Illions.

Source : Frank Lloyd Wright

Architecture and Nature (p.3, 1986)

HOFFMAN, DONALD



Plate 1-5

...Taliesin, near Spring Green, Wisconsin.

Source: Frank Lloyd Wright

Architecture and Nature. (P.2, 1986)

HOFFMANN, DONALD



Nature was Wright's constant preoccupation , and the way he abstracted and represented it in his architecture is very interesting. The main theme of Wright's work is the intimate relationship between architecture and Nature, as revealed through the process of abstraction and representation. The natural rhythm of the site was very important to Wright. He try to get associate that rhythm with the built environment. So, this is purely an organic concept and Falling Water , Pennsylvania is the best example for it.

However Haring's stand point was the man-made and by no means a property of the world, and he did not agree with the Geometric grids of Frank Lloyd Wright. The conception of organic architecture of **Hans Scharoun**, also compatible with Hugo Haring. Scharoun did not consider his buildings as isolated objects but places. Thinking in terms of space rather than form was fundamental to his work. Rather than imposing a particular plan shape for aesthetics or constructive reasons and then dividing up according to functional needs, as many architects do, he tried to instead to allow each function to determine it's particular form, and to grow his overall plan out of the relationships between functions and the site. Scharoun's Philharmonie (concert hall) at Berlin growing on a devastated site is the best example for this. There is probably no design by Schroon which was not conceived with respect to it's intended context. The Philharmonie was never seen as a solitary building but was intended to be surrounded by further elements. It was the first element in the formation of Berlin's cultural forum. Research institute and musical instrument museum was incorporated later into the Philharmonie. This was gladly accepted by Scharoun and this shows continuous growth and flexibility of organic traditions. This new addition gave shape to the Northern part of this overall conception and integrate Philharmonie with the park beyond. (plate 1-6, 1-7 & 1-8)

Plate 1-6

...Philharmonie, Berlin.

Source: Hans, Scharoun. (P 179 , 1995)

JONES, BLUNDELL, PETER.



Plate 1-7

...Philharmonie, Berlin.

Source: : "Organic response", The Architectural Review ,vol clxxii
No.1060. 6/1985 (p. 24, 1985)

JONES, BLUNDELL ,PETER.

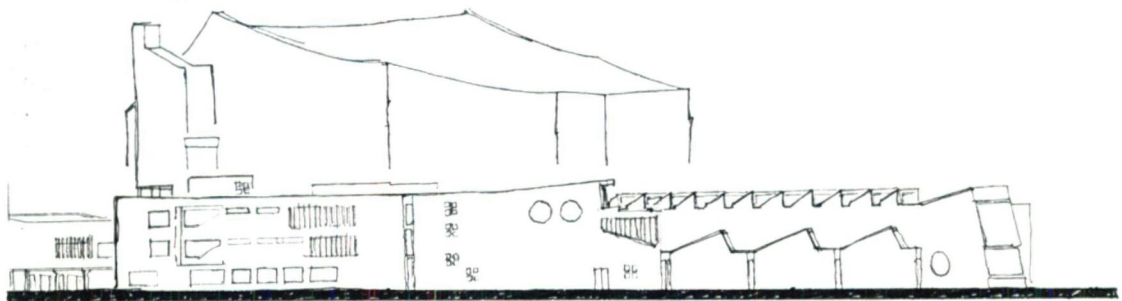


Plate 1-8

... East Elevation: Musical Instrument
Museum left, Institute right and Philhamonie behind.

Source: : "Organic response", The Architectural Review ,vol clxxii
No.1060. 6/1985 (p. 24, 1985)

JONES, BLUNDELL ,PETER.



Sidney.k. Robinson (1993) considers the " organic movement " in context. He says organic architecture insists on renewal and challenge for complacency. So, it's tolerance for pursuit rather than certainty. According to Sidney Robinson it's delight in argument and it's rebirth all contribute to it's rhetorical rather than philosophic status.

Italian organic architect **Bruno Zevi** (1986) author of the one of the earliest attempts to define an organic tradition (" Towards an organic architecture") define it as the architecture where the human dynamic spaces prevail over volumes, surfaces, and decoration. **Farrelly** (1986) says that, the new spirit inherits and extrapolates from thursting , dynamic imagery and savage beauty as well.

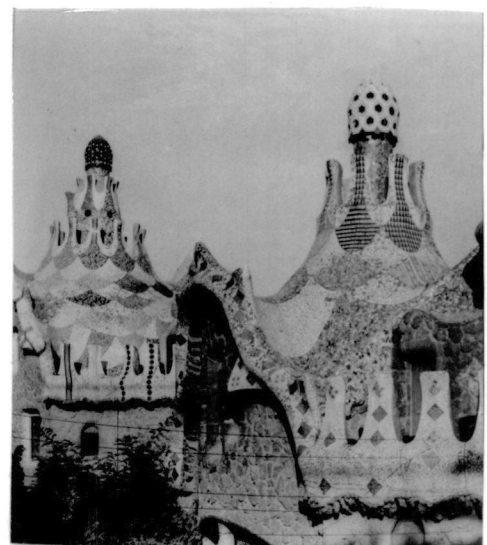
Most of the people all around the world, classified organic architecture as " fantastic",even Architects. As an example for Antoni Gaudi, organic forms means forms reproducing the rhythm of Nature. The Guell park (1900-1914) one of the famous work of Gaudi, reflects the imitation of Natural forms as it was. In Guell park Gaudi designed the perimeter wall reproducing the contours of the hill. The net work of roads in the park is characterized by similar harmony with Nature. What distinguishes Guell park from all Gaudi's buildings is that it exhibits the greatest proximity to Nature. From this point of view the Architect then created his later buildings. These placed a second new Nature alongside first Nature. But creating a second new Nature is not actually means by organic architecture. (plate 1-9)

Plate1-9

...part of Guell park

Source: Gaudi Guide (P 93, 1991)

GUELL, XAVIER.



According to **George . R. Collings** (1980), "soft (organic) architecture refuses to use the process of production, industrial procedures. It is involved in new relations between man and Nature, in its respect of ecosystems, and its refusal to squander energy and materials, it pursues autonomy. It proposes itself as a possibility of poetic expression and total realization "... (Shuyt , 1980 :11). This rejects the advances of industrialized capitalism and reverts to idealistic and liberal individualism.

Frank Lloyd Wright, a key exponent who expanded the spatial frontiers of architecture into curved and warped spaces that has a significant empathy and bond with Nature, identified organic traditions as symbiotic embrace of Nature not a conquest of Nature. Wright was of the view that, if the purpose of architecture is to present man, then all buildings should serve to liberate the lives of individuals; all houses should take on the character of the individual with perceptual and bewildering variety. These ideas has close connection with the ideas of Jens Jensen and Emerson. **Jens Jensen** said that the Nature was the model for style; style was the poetic manifestation of character, and the true poetry of character was individuality. Each individual plant has a song to sing, a story to tell. Emerson said that Nature never rhymed her children nor made two men a like. He further says " if Nature can be seen as a metaphor of architecture, then architecture can become a metaphor of Nature" So, if the architecture is a metaphor of Nature, it should present the individual, and each building should represent individuals. These ideas in another hand are similar with the ideas of Hugo Haring and Hans Scharoun who are the pioneers of the organic traditions. **Imre Makovecz** who has effected considerable impact on architecture, done wonderful structures that possess the ability to free the mind and facilitate fantastical.

According to **Christoper Day** for one to feel the pulse of a building is important. To that the ability of the building to breathe and instill its totality superseding appreciation through analysis of separate parts is important. **Erick Mendelsohn** had a same train of thought. He considered "every work a Natural organism, a human body in which no part was functionally separable from the whole. (plate1-10)" **Grey Lynn** has a different train of thought to Christopher Day.

Plate1-10

...integration of parts into a meaningful whole...

" every work a Natural organism, a human body in which no part was functionally separable from the whole"

source: The Arts and Man (P.25,1969)

. IBANCH, ROLF.



He wards off "whole some organic architecture". He says after all not organisms but organs or provisional structures which are already multiplicitous. As many organic architects **Nari Ghandi** says, buildings are not necessarily drawn before construction begins ; rather forms marked out on the site, to indicate how they should grow , so many details are developed in-situ ensuring full explanation of the location. **Jean Jacques Roussey** has a firm belief in collaboration with the environment exists. He posists, when man work directly on land he is happier and the happiness is inversely proportional to his distance from it. **William Morris** found in Gothic architecture a magnificent manifestation of organic order. That evolves its form in the spirit of strict truthfulness following the conditions of use, material and construction. **Lucien Kroll, Rolf Keller, Peter Sulzer and Peter Hiibner** who have pioneered experiments in participation and self- build continuing in a new way, the tradition of organic said that the ideal of the organic was the notion, that the architect is not omnipotent creator , but rather the interpreter of a buildings circumstances, helping to bring together the forces that give it form. The work of Rolf Keller demonstrate his emerging concern for the lively textures of Natural materials. Keller's holiday house in Flimswaldhaus, (1965-66) is a best example for this. (plate 1-11& 1-12) The conscious agglome ration of consciously designed parts of the building into a meaningful whole is considered to be a necessity for the work of organic architecture. Staudenbuhl school in Zurich (1965-68) is good example for it. The planning is agglomerative respecting the identity of the single class room and the building elements protectively enclose the play

ground. (plate 1-13 & 1-14)**Gunter Behnisch** who is the one of the leaders of the organic traditions in Germany today, seeks a democratic architecture which is found not in external appearance but the generative process involved. According to Benisch the democratic process should not involve users in the design and administration not only their dwellings but also of their immediate locality, their neighbour hood, working place, company and school.

Plate1-11& 1-12

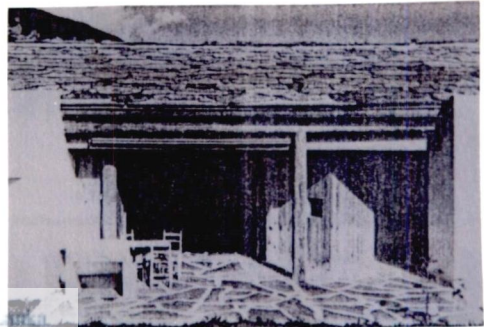
...Keller's holiday house in Flimswaldhaus,1965-66

source: : " Organic response ", The

Architectural Review ,vol clxxii

No.1060. 6/1985 (p. 24, 1985)

JONES, BLUNDELL ,PETER.



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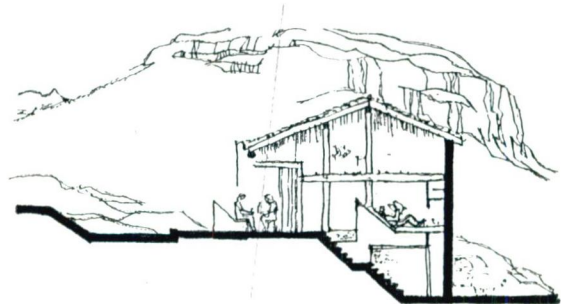
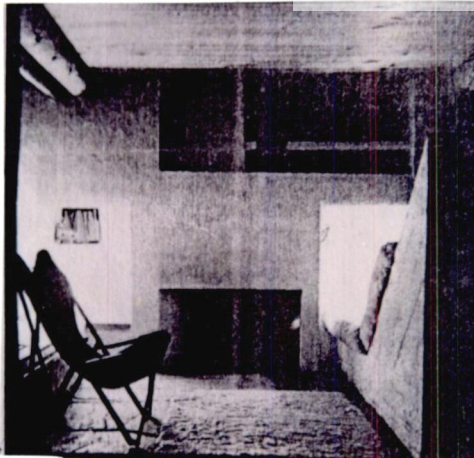


Plate1-13 & 1-14

...Staudenbühl school in Zurich,
source: : "Organic response", The
Architectural Review, vol clxxil
No.1060. 6/1985 (p. 24, 1985)
JONES, BLUNDELL ,PETER.



These classifications indicate that there are many views and concepts behind the definition of organic architecture. Robinson considers it has being rhetorical, Bruno Zevi thought it was the creation of spaces, Farrelly realized it was a form. According to these interpreters, two main divisions in classifying organic architecture can be identified; as form and it's rhetoric nature. In general they agree, organic architecture as architecture that is related to the context.

A contradictory idea to above classification is given by **Rudolf Steiner** (1973) who suggest that organic architecture is a perception of higher worlds and deals with spiritual status and theories that is transcendental realm was revealed through " spirit " or " soul " found in Natural metaphor. (pehnt ,1973: 139). And **Laurie Louekari** says " the artistic imitation of Nature has a little to do with art as music as to do with the imitation of Nature's sounds. In an artistic process basic form stem from man's soul, not from imitating the out ward appearance of reality" (Laurie, 1988:67) what the " soul " or "spirit" is? It feel as " life " of the building. It is the known fact that is the home and not the house that has life. The life or spirit means, sensation, perception, and discretion. The " soul " can be possess through the ideas, constructional design, and the function of the building.



They offer nothing other than architectural qualities, such as space, light and so on to built upon and to work together with. So, soul of the space offer architectural qualities which are intangible, which may grasp by the interlectual of the user. Therefore, the soul of a place is intangible. For instance, it can be sleepy or friendly, or take you ahead a sequental manner for higher perception. So, that every thing can always be seen a new each time you pass. It begins to feel as if there is some thing special to this space. In other words space it self talk to our perceptions. So, the building should achieve this quality of "soul". It is the soul that will help to understand the identity of building. There are many buildings that we visit during our lives. But only very few will make a lasting impression, on our minds and hearts. These may be places that have "soul". Slaces that have soul can be identified as "Places". So, for the identity of the buildings , buildings should have "soul". To achieve this "quality of soul" the building it self needs a meaningful organization of spaces, suitable architectural languages, careful choice of materials etc..

On the other hand Frank Lloyd Wright understood it through Nature . " this form of architecture realize the significant empathy and bond with Nature: designs which are not a conquest of Nature but a symbiotic embrace." (Toy 1993,7) It can be said that Nature is every thing around us. Nature offered only true guide to scale, proportions and the right relation between whole and parts.

In materialism, it is said that consciousness is derived from material. Matter or material can be identified as combination of qualities and interchangeability of objects and substances around us. In other words, matter or material is the objective reality felt through the human senses. Therefore, existing world around us is a continuing material one. In philosophic terms materials are not destroy or broken down, but convert into other material form. All substances and all incidents are forms of existence of material. These existence and form can be man made or Natural. They come together, but always exist together , but never one alone. Further it is said in Buddhist philosophy, consciousness and material form come into exist together and at the same time as a whole.

So, as a whole people do not look at either architecture or at materials. However, right material that fit with a particular space, will help to create a sensory

atmosphere to that space. On the other hand, Frank Lloyd Wright said that every true aesthetic, was an implication of Nature, because Nature laid fountainhead of all forms what so ever. Nature not only was the source but the standard. The standard of Nature called for unerring consistency between the whole and the parts. Therefore organic architecture can be identified as man made derivation of Nature.

1.1 3 The Origin and Evolution

Erick Mendelssohn considered that, " every work a Natural organism, a human body in which no part was functionally separable from the whole ". In Buddhist philosophy, it is said that " Sthwa " or sentient being is constituted in the five kandhas namely, the organized body (Rupakandha), the sensation(Wedanakandha) perception (Sannakandha), the reasons of power(Sankarakandha)and the consciousness (Winnanakandha)



In addition to that the idea of whole is evident that, eye and the sight, the ear and the sound, the nose and the smell, the tongue and the flavor, the body and the touch, and the minds and the events, where the whole is the part as the part is to the whole and where the nature of purpose, the nature of the entire performance becomes a necessity. So, it can be identified that, " sathwa " or sentient being is a whole, organized body. It is an " organism " all parts holding rationally together and working as a whole.

The following verse from Kavyasekharaya, depicts it very clearly.

නම් රූ දෙක නැත
 නැත අත් දුග්ධ්‍ර් කැනැත
 චූච්ච දෙක නිකොත
 සියම් කවච්ඡු නිස නිකොත

Besides, Nama,Rupa (consciousness and material form) there is nothing else that constitute the individuals. By conjunction of these two every thing is properly performed at all time. As a living being for the tradition call "Organic" to be prevailed, should have this meaningful combination and symbiosis, between whole parts.(plate1-15)

Plate1-15

...the symbiosis of part & whole



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" organic", " organism " and " organization" are the terms that can be used interchangeably to the extent that they are delimit things which are whole. That is containing both a rigid external boundaries and an interior space, closed to the unpredicted and unconditional influences of external forces. Frank Lloyd Wright has similar idea of "organic ". He means "organic " or idea of " organism " as a thing pertain to a certain meaningful organization but not an accidental organization. In the biological sense, it can be identified as a thing that has derived from organism. According to biological sense it's a derivation of living organism. (Sergeant, 1976:16). Peter Blundell Johnes (1988) says," The Natural, the Natural person, life style, environment, is a persistence vision has kept resurfacing throughout.. wholesome and honest, unspoiled by the artifices of culture, to be Natural is fundamental to authenticity and integrity- two key virtues for modern ethics and organic architecture. (Jones, 1988:79). For Franck Lloyd Wright manifested, integrity and being organic is one and the same thing. The wrightien dictum "" out of the ground and into the light ", nicely contains the layers of meaning involved. Out of the ground refers to the roots or origin of organic action, the inner nature of the

context or problem generating design. " Into the light "", is the ever changing present that the action meets, while between the two is structured process of growth. It is the first principal of any growth that the thing grown is mere aggregation. Integration as entity is essential. An integration means that no part of any thing is of any great validity in itself except as it is an integrated part of the harmonious whole. According to Hugo Haring, the building should become an organ of its occupants, its final form should not be the results of aesthetic or constructive speculations but should be the depiction of the purpose which it serves.

Organic form originates from the nature of purpose. The unity obtainable from the geometric forms is dead, unlike the integrated unity of the living substance. Ethical value is superior to aesthetic values. Hence, the first task should not be the technical and economical analysis, but the deliberation of the essential sense of inner purpose, which comes not only from utilitarian needs but from the mentality of its sensor and the character of the place. The character of the place, must be conditioned by the locality. In the organic context the total work of art has a double meaning. Has normally used, it means the union of all arts in architecture. In addition, it also refers to the total environment that requires the attention of more than one sense of man. It appears to the eye, the touch and the synaesthetic sense. It awakens both in time and space. It must emerge as a free play between its form and purpose, material and construction. The building become an image of function. For example the newspaper building, would reflect not only the editorial and administrative work of the paper itself, but the tempo of modern life as distilled in the metropolitan press. As the inside space and activities and out surfaces and appearance is interrelated the whole building and all the activities it generates is involved in conversation, between what it will be and what it has been.

So, the architects specially the one who involve in organic traditions should develop his ability to absorb and concretize the context. For example he should look for site, its terrain, features, its rhythm, social context. for example the past memories attached to the place, socio-cultural relations, religious influences etc.. Then, there should be an organic brief. For that organic thinking and living style that related to organic concepts is essential. For example the Falling Water had

not been come into effect if the client had not agreed to build it in association with that particular stream. So, the brief that encourage for organic architecture is essential and to that thinking pattern that relate with organic ideas is essential. Accordingly organic architecture can be identified as a metaphor of a mix between the current socio- cultural context and the Natural world. A work of organic architecture, as a whole and its parts acts as symbolic statement, which conveys through our senses, humanly relevant qualities and situation. These symbolic statement are formed by metaphors applied to the element found in the biosphere. Therefore in organic architecture the metaphors used are symbolic statement. Such a symbolic statement can assume two basic attitudes towards the Nature. There is no attempt to imitate Nature literally, and there is no attempt to pretend that the buildings are the products of Nature. The architect can conceive of man as an out growth of Nature. From this point of view, architectural creations although unashamedly human in origin, should confirm to the Nature and be shaped in the manner of Nature. Buildings should grow out of the landscape, " in the image of the tree", as Wright said, and perhaps inclined towards biomorphic shapes rather than geometric ones. Such "sorganic" architecture may favor curving deviations from the straight line or plane, and merge in the continual flow of the landscape that eschews the clear definition of elements, so characteristic of human reason. Nature of course, can be conceived in different ways. The identification of Nature with biological growth is a romantic interpretation conveyed by the architecture.

1.2 Vernacular Architecture

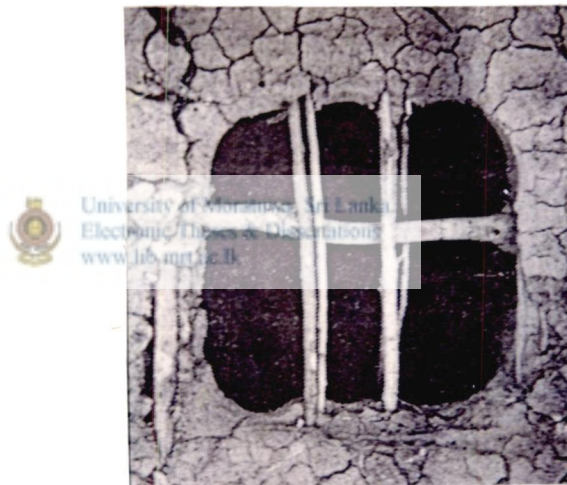
1.2.1 Vernacular Architecture : An Interpretation.

Vernacular can be termed as native or indigenous form of activities, such as Art, Architecture, Music or language of a nation. It is not limited to one particular period. The house form of veddah community of Sri Lanka, their language and songs too could be termed vernacular-similarly the temples, palaces and houses built during certain period of history using available resources, technology and the context. A nation could be well judged from its vernacular traditions & buildings.

The vernacular in all arts has always been a source of inspiration for every one, and it helps to tie one to its roots. The 'self sustained' products are not a significant way of satisfying peoples wishes. There should be a basic foundation or a basic knowledge to produce a qualitative product. From the past 'vernacular' has been involved in producing successive outputs. Therefore it is important to retain it in any art form including Architecture. Unique characteristics of vernacular architecture assign it as an important role in built environment of any human settlement dwelling. Vernacular is not copying what is there, it is a reaction to something. Therefore vernacular architecture has an important role to play in built environment, of any settlement.

plate1-16

... "vernacular" not copying
but a reaction to some thing



1.2.2 Evolution / Changing Face

It's the fact that should be accepted, that vernacular art form, be it music, dance or architecture will undergo changes with time, because of external influences. An example to this effect can be seen from the ancient architectural masterpieces seen at Pollonnaruwa, which was influenced by south Indian and North Indian architectural forms. But of late it is being destroyed by external forces, who does not give thought to traditions, be it architecture, music or dance forms. Thus there



is a great danger, looming over the surface of reference of our roots which may be lost eventually. Architecture evolved through a long period of time which has gone through many changes during the past. Man is related to the built environment he lives and normally tries to change and modify it to suit his needs, whims and fancies. As the time passes, art music and architecture evolved with changes. It grows & develops with time. The success of Vernacular building, over a time may lie on the constraints which were guided by architectural tradition of the particular locality.

According to Martin Wicramasinghe " Tradition is very essential for the presentation of stability and advancement of a nation, Society or even a family. No nation or society will survive as an integrated whole if its tradition is completely wiped out".

In this process each generation inherits an existing built forms shaped by the proceeding generation, and continue to alter and develop before handing over to successive generation. Nowadays people are slaves of new ideas, because of the changing society and also the marketing of new materials. The danger is that, if we detach ourselves from our roots, we would be lost in the international culture of architecture without regional or national identity, in the world where high tech is creeping, into all fields of science & art at an alarming rate. Hence whatever we do must be done in a manner which will not destroy our traditions, which were preserved over generations.

Although the vernacular buildings are molded by the use of local technology, materials, organizing of labour and cultural aspects they could be considered as a true mirror depicting the living style and social behaviour of the society. With the time passes people try to change their buildings according to new trends of development and adjust themselves to it. The continuity of vernacular tradition in rural / urban, has lost it's momentum in recent built forms. Most of the new forms are results of 'inspiration'.

CHAPTER TWO



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ORGANIC ARCHITECTURE *THE SPIRIT*

2.0 .“Organic Architecture As a Living Being”

As discussed earlier organic architecture is a living being. In a symbolic sense “the organic building” together with all its material and spiritual functions, a cover taken out of the inside of man, similar to skin protecting our body, or to the cloths protecting our skin.. We are in constant physical and emotional contact with such a building.. We daily meets its its entrance which reminds us of time, timelessness, existence, growing, culture and experiences and we talk and share our experiences with its spaces. Accordingly organic architecture is a “ living being Its peculiarities and characteristics can only be measured against the category of living creatures. So, this chapter is an attempt to crystallize the similarities between living being and organic architecture. Erick Mendelsohn says,

“ Every work a Natural organism, a human body in which no part was functionally separable from the whole “.

“ The new spirit .” The Architectural Review, vol.clxxx. No.1074.(P.28, 8/1986)

FARRELLY, N.



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2.1 Nature Of Being

The cave was the first shelter of man and with the evolution of man, he was worked out in developing structural forms by observing Nature, and rationalizing such Natural forms into perfect geometrical forms. According to Paul J. Grillo, when analyzing the Natural forms, it can be found that they stem from two concepts, which appear to share the world around us. These concepts are “ Discontinuity “ and “continuity “ and these two concepts are always present in Nature in one way or an other. The day and night, life and death, and the beat of heart are example for it. The beat of our heart in every second reminds us of the existence of the discontinuity, while the passing of the time is a most evident example for continuity.

74107

According to manner of Nature crystal represents discontinuity. All forms of life including plants and animals seems to have monopoly of continuity. It is evident that ruling of the visible world around us by this two themes and man has borrowed forms for his structures. (figure 2-1 & plate 2-1)

figure2-1

... continuity and discontinuity

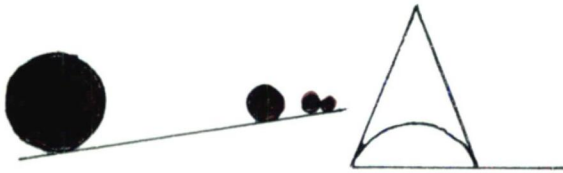


plate2-1

... Eiffel Tower, Paris



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Plate2-2

... Einstein tower after Mendelsohan



2.1.1 Continuity

One of the two characteristic of nature of being is continuity. In order to understand this idea a metaphor can be found in geometry, namely the curve. According to Paul.J. Grillo pure curve resulting from algebraic equations are never completely satisfactory in design. The sphere can be considered as a surface composed of an infinite number of points at equal distance from a single center. Further this idea is strengthened by Grey Lynn who says that the sphere that existed for Plato has been handed down to us identical across cultures and through history. "vague" objects that are merely round may be more or less special yet no two are ever absolutely identical. According to Grey Lynn "Roundness" it self can be defined with probability but never ideally described with exactitude. Like wise, the ideal sphere can never be realized in matter. Certain things are beloved to be spherical even though their specific matter guaranties that they can never achieve pure form. According to Geeti Sen circumambulation around the specular of the stupa is done by Buddhist pilgrims, along the "pradakshina patha" or stone path that represent the movement of the Earth around the sun. In this example man appears to have realized the center of the circle is the most powerful place. It is used to concentrate the mind of the man and help the process of meditation. However the curve is also inflexible. Therefore the curve could be considered as having characteristics of continuity.

2.1.2 Discontinuity

The second characteristic of nature of being could be defined as discontinuity. This characteristic can be observed in the geometrical entity, the straight line. A line can be thought of as a chain of spots joined together. When the single force coming from without moves the point of any direction the straight line results. The initial direction remains unchanged and the line has the tendency to run in a straight to the infinity. Bullets travel in a straight line and it is the shortest route between two points. In other words it is only one concern. Structurally it is the line

of tension. Usually one line meets another at right angle. Here it is directly related to human being according to Christopher Day who says,

“ we oriented ourselves in three great plains: forward, vertical, and horizontal and the product of these axes are in front- behind, above- below, side to side. These axis have completely different characteristics: one is the axis of time (past and future), one of surrounding and one of one self standing in tension between cosmos and earth”.

Places Of The Soul, Architecture and Environmental design as a healing art (p.61, 1990)

DAY, CHRISTOPER

“Horizontal “ is the most familiar and the simplest form of straight line, and this corresponds to the line or plane upon which the human being stands or moves. The horizontal line is also a cold supporting base which can be extended on the level in various directions. Coldness and flatness are the basic sounds of this line and it can be designated as the most concise form of the potentiality for endless cold movement. These two straight lines (horizontal and vertical) are, as already been said things living solitary and alone. They therefore represent discontinuity.

“ plants that grow in axis of gravity constitute an essential part of Nature’s pattern. Without play of the vertical and horizontal, there can be no experience of three- dimensional space”.

Frank Lloyd Wright- Architecture and Nature (P.22, 1986)

HOFFMANN, DONALD.

Thus, all forms are affected by ever present physical forces acting on the structural elements, namely, gravity. The pull of gravity on the horizontal and vertical are the basic characteristics of all building elements and therefore influence our perception on them. Because of gravity it produces horizontality and verticality at right angle to each other and when further right angle is made the three dimensional world is form.(plate 2-3) However when these planes meet at right angle, their characteristics are geometrical, “ give lack “ and “take lack “ as it is constant and dead and different to the characteristics of organic architecture.(plate 2-4)

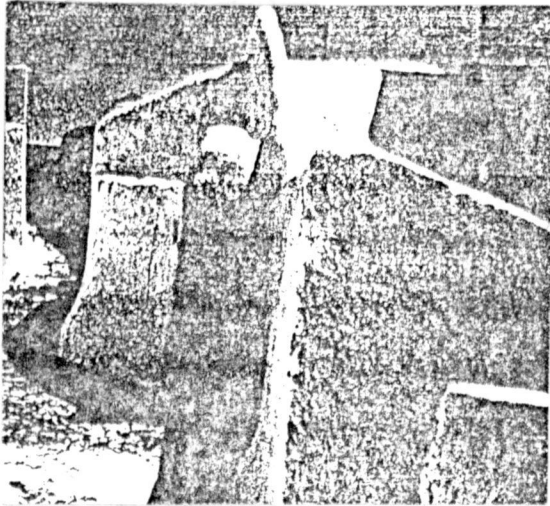


Plate2-3

...street sequence of Greece

Plate2-4

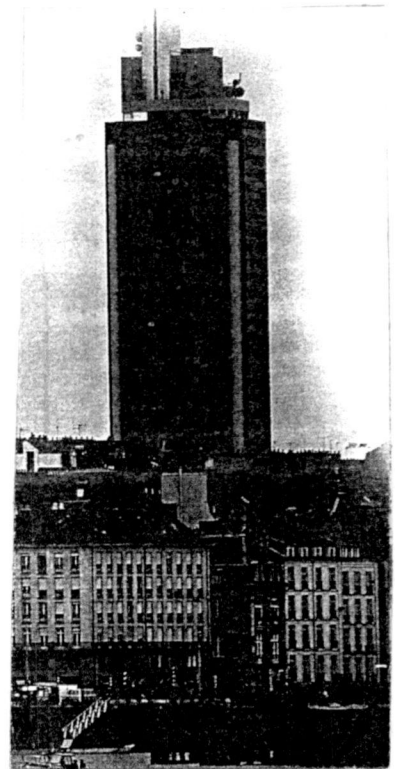
...The Brittany Tower at Nantes, France

source : Wonderful Brittany (P.105, 1999)

RENOUARD, MICHEL



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The military camps during Roman time was concentrated only on the strength of the rectangular figure. It lost the capacity to respond to the surrounding. The hull of the slave trade ship or an Egyptian village had right angle characteristics where slaves were forced into a rigid right angle discipline. The grid iron plan here is typical of the military camps, is made of a rectangular lattice of dead end lanes, symbolizing the dead end of the life of the slaves. (figure 2-2 & 2-3)

figure 2-2

... floor plan of slave ship
showing the packing of
Negroes

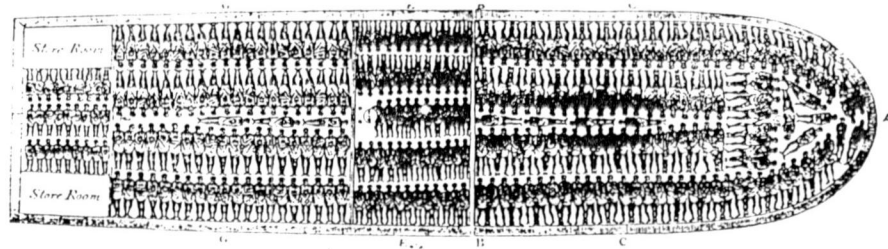
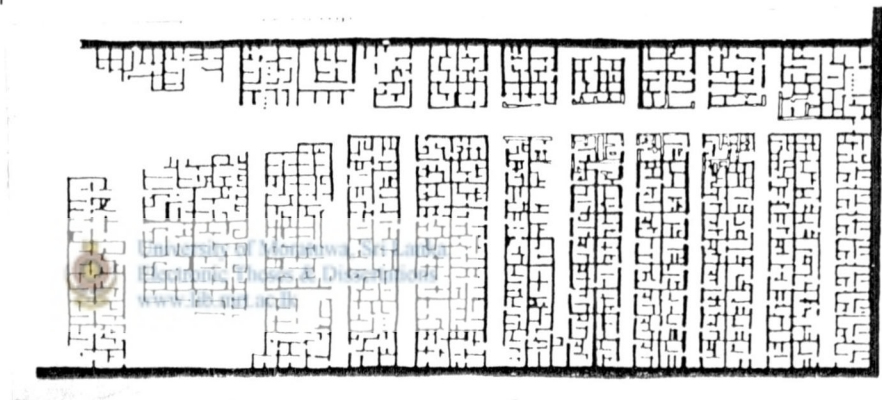


figure2-3

... slave workers quarters in the
enclosure of the temple of
Horus, Luxor, Egypt.



When considering the early Roman and Greek cities the ordering principle of the town planning can be considered as "right angle". The road lay out pattern was in grid iron pattern and it formed the building blocks called "insulae ". This road lay out gave a general order for a building. So, the rigidity of the town planning principle made the whole environment a monotonous one. (figure 2-5)

Figure2-5

...part of the town of Palaeocastro



Christopher Day says,

“ acute angles are uncomfortably comprising and abute angles are invitingly embracing, the right angle has a stable balance “

Places Of The Soul, Architecture and Environmental design as a healing art (p.61, 1990)

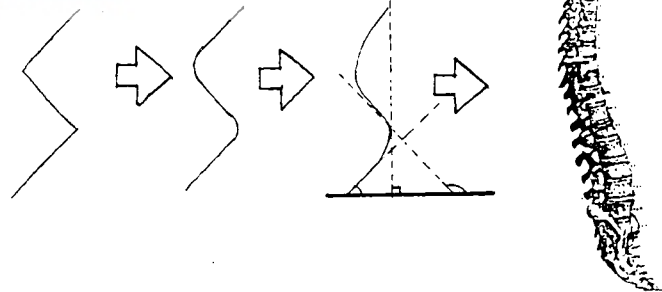
DAY, CHRISTOPER

When these three things are well organized and put together, they can give a good balance to the essence of the creation (figure2-5). These contains such a wealth of meaning that they provide the basic texture of organic architecture. They reveal the natural impulse which pass through the man and united him to the cosmic order. It is a product of the human spirit.

figure2-5
...human spine



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2.2 The Form Of Life

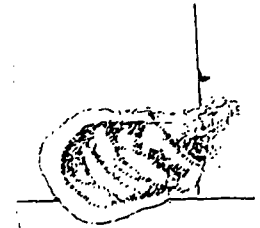
Straight and curved suggests different meanings. First one suggests stability and orientation while the second suggests life and fluidity. For an example life can be found when the curves in movement like paddy field during the breeze. Here all lines and movements have a breathing rhythm. (figure 2-6). Thus the swaying paddy field during the breeze is having a series of interacting physical forces such as gravity, momentum, friction so on...Here one meets the fascinating

approximation of the form of life. The curve shell, design by Nature , offers the least resistance to the wavy motion of the pressurized fluid (figure 2-7).

figure2-6
...rhythm of the
paddy field



figure2-7
...the sea shell



So, it can be said that a balanced healthy human life lives some where between two extremes of straight line and curve. There are occasions that human needs more firmness from the environment, where at the other times he needs more fluidity. The balance between firmness and fluid life forms it self needs not be one quality measured against the other, but at every moment weaving into a single whole. To support wholeness, freedom and health one needs to find ways in which the essence of the straight and curve can be meaningfully integrated. The integration of the straight line and the curve results in the spiral which twist around it self and contains the principle of growth within the universe. Therefore, the principle controlling the world is spiral and it expresses as the strongest, deepest and richest element in Nature. We all know it as DNA. Therefore DNA is a origin of man's psyche similarly. Therefore, similar to curve and straight line coming together and forming DNA which is the essence of the human being, the curve and the straight line combine to form the essence of organic architecture.

2.3 The Space For Life

Every object has it's own form. So, " form " is the property of a object. " space " is at where things can happen and in which living things can be. Buildings are objects from out side but have spaces within. The space in the object must have

the new meaning at every time. If the spaces of the building have a monotony pattern, it will become a lifeless giant. (plate 2-5)

plate 2-5

...Standarded apartment
block for Tapani
source: An Introduction to
Modern Architecture (P.28, 1961)
RICHARDS, J.M.



The physical and mental environment of the human being become unbalance in such a space. The human body, it's human movements, and human activities are not monotonous in any way. Christopher Day says,

“ Architecture is set of moods. It also provides spaces or boundaries to out door space where things happen”.

Places Of The Soul, Architecture and Environmental design as a healing art (p.72, 1990)
DAY, CHRISTOPER

According to this point of view, any creation of man ,influences both the mental (mood) and physical relationships happening within it's surrounding. The house plan of Hugo Haring in 1946 is a good example for this. It concern about, discontinuous and continuous and inside and outside etc...Every space is created to match with the particular set of moods (plate1-3). However there is an essential difference in Farnsworth house (1950) of Mies Van der Rohe. (plate 2-6 & figure2-8)

Plate2-6

... Farnsworth house
source: "Organic Response", The Architectural Review, vol cxxxii, No.1060,6/1985 (P.24,1985)
JONES, BLUNDELL, PETER.

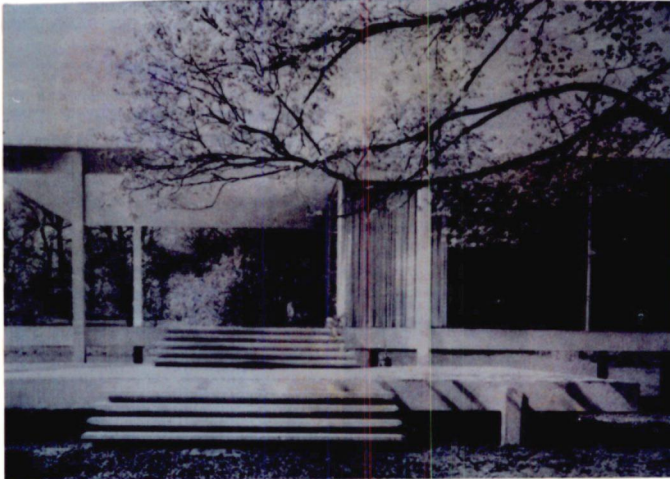
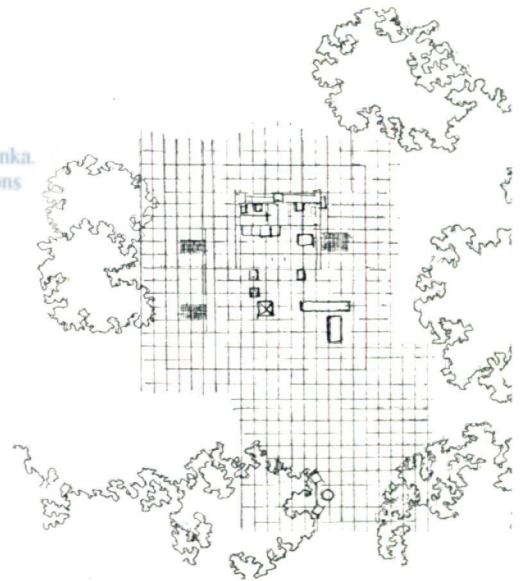


Figure2-8

... plan of Farnsworth house
source: "Organic Response", The Architectural Review, vol cxxxii, No.1060,6/1985 (P.24,1985)
JONES, BLUNDELL, PETER.



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To Mies "structure is spiritual" His great passion was the perfection of structure, proportions and details. But for the life of the object, mere skeleton or skin is not enough. The steel or concrete skeleton and the glass skin of the house does not express the life or soul. To make it alive it should have the relationship between inside and the out side and the relationship between mental and physical and so on. In other words, metaphysics dealing with nature of being, is missing in Farnsworth house. Farnsworth house is a square house having four column & glass walls and flat roof. There is only the barest acknowledgement of the entrance.



Furniture is minimum and rigidly placed in a universal grid. Each piece of furniture is treated as a sculpture of the exhibition. When it comes to bodily functions, they only accommodate within an enclosed room. Curtains provide privacy and spatial subdivision else where if necessary. This house is like a temple promises an enviable serenity, a tantalizing relief from all the culture of life. But this is the opposite of homely.

In most of the countries the dominant house form is rectangular. Geometrical spaces may not be life enhancing but they are the best shape to store the objects in. Curved cabinets are not practical for storage. However rectangular spaces need lot of things to make it alive. In ancient culture, which was not dominated by material possessions created more humane spaces than today. They were not purely Geometrical. For example, typical town square was more likely to be squares than pure square. These places in other words live places where human activities took place more actively and lively and not rigidly bounded by a dead geometry. (figure2-9 & 2-10)

Figure2-9
...square at Venice



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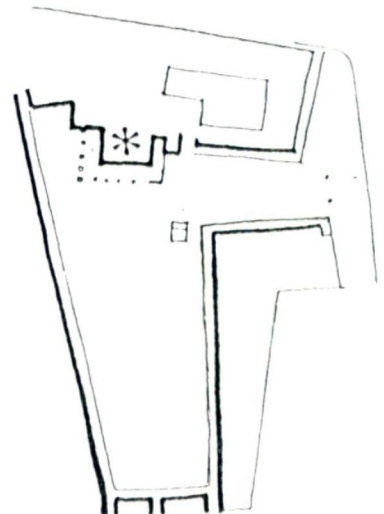
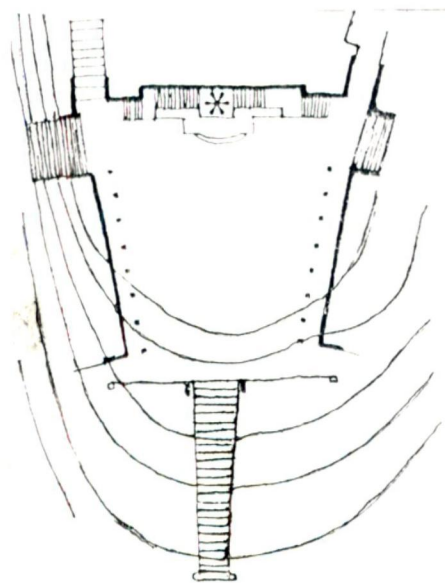


Figure2-10
...square at Rome



At present materialist culture is controlled by machines and computers. These save money not the human minds. They create things of high geometrical rigidity and repeat the same thing having a minimum of destruction. Such a repetition is monotonous and refuses to respond to the surrounding and does not think of the importance of the life making process. However the true repetition should be happened in accordance with the rhythm of the surrounding. Therefore, when things are repeated a rhythm has to commence. If the object and space has not variation, the rhythm becomes boring or dead. Therefore for the evolution of life within the space or object the natural rhythm may help lot. Accordingly if the space is expected to be alive, a suitable environment has to be created where that life can be conceived.

2.4 Conceiving

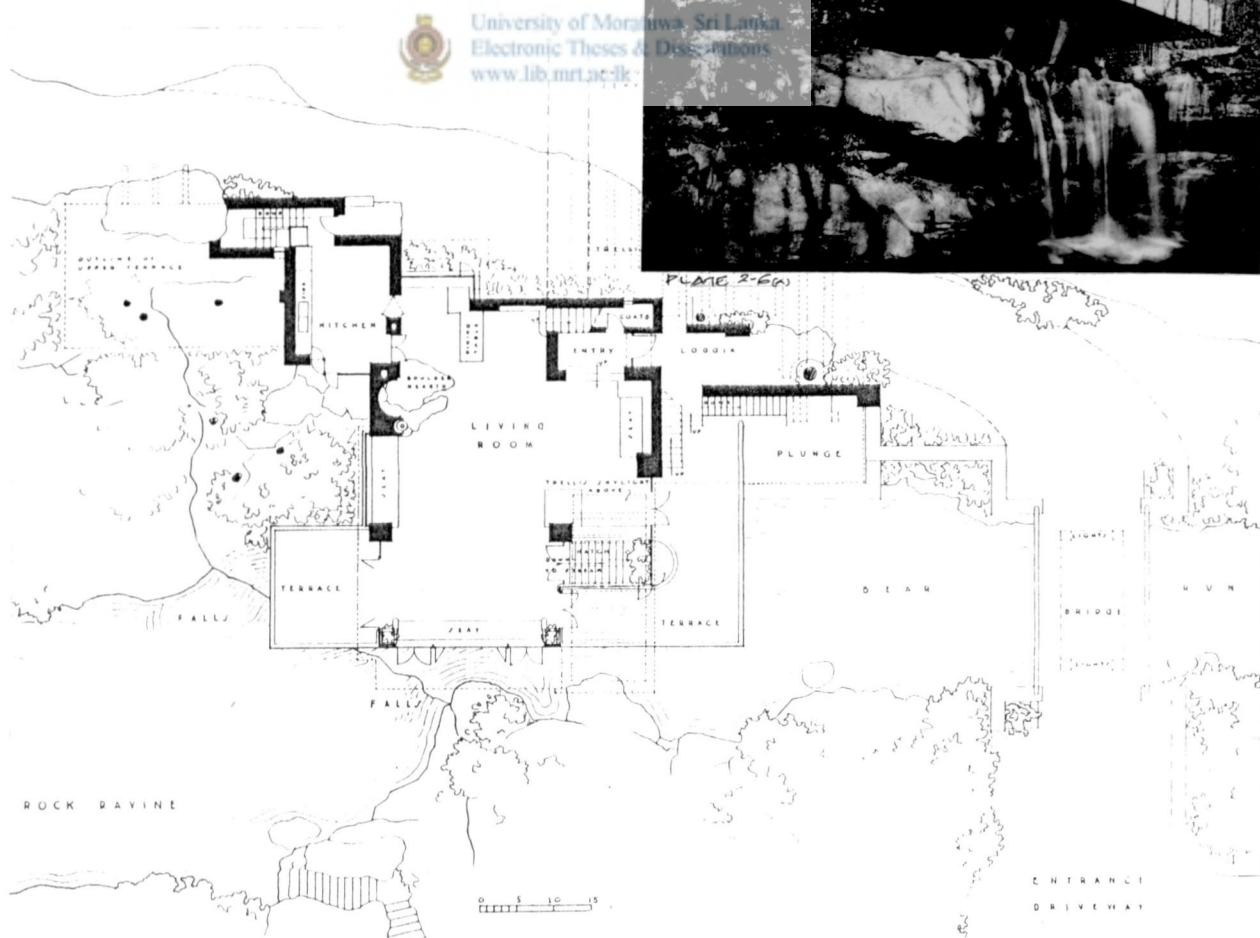
In the world of nature of being, some requirements have to be full filled for healthy life to be conceived in the womb. These are orderly organization of elements and the integrity within the womb environment. And other important thing is, the mother must be nourish and give good health to this new life, in order to give birth to a complete being.

In order to be "alive" organic architecture is based on the proper use of basic concepts that found in natural metaphors. These metaphors are, organization of spaces, hierarchical order and integrity of the inside and the out side. These concepts can be conceived as natural metaphors of the nature of being. No organic analysis or design can be undertaken without a good understanding of this basic concepts the nature of being. Hence organic architecture is achieved not only by means of volume, solid and void, light and time experience, the proportion of the edifice and their relationship to human being, but only through meaningful combination of elements. At the same time it gives integrity, wholeness and harmony to the work which these elements represent. These are the properties found in nature, and it is only through them the architectural entities come alive.

Such a building communicates with the occupant, share its soul with the occupants and give a memory that will remain with the person for ever. For the conceiving of an organic building the context and the things related to that context for example, the geography of the site, views, natural features, etc.. are very important. The brief that related to organic concepts is important and for "organic brief" the thinking pattern related to the "organic concepts" is necessary. For example if the client will not think of relating his building to the geography of the context the organic architecture will not be conceive. Falling Water at Pennsylvania is good example for this. If that particular client did not accepted of the placing of his house (Falling Water) over the water fall such creation would not have come to be existence. (figure2-11) Apart from the correct response to the context, brief (organic brief), the availability of materials and the technology also influenced for conceiving of an organic building. Organization of spaces.

Figure2-11

... Responding to the context,
Falling Water, Pennsylvania



2.4.1 Organization of spaces

Any living organism is made of various organs. These organs linked together by a circulate system that carries the blood cells through the whole body. Every organ is there to full fill a definite purpose. Each one is designed to accomplish most efficiently it's particular function.

This function is derived from the natural forces. A building can be defined as man made organism. As it is hard to imagine of human organism where the brain is placed in chest and the heart is placed in the head, a building with arbitrary arrangement of spaces is a fun to think of.

For every element in architectural program, there is a certain place which fits it's function in relation to others. The positioning of each and every element in particular position is the most important in organization as this directly affects for the " life " or death of that particular organism. It is a known fact that, if the head of a human being is too large in proportion to the rest of the body, this person will look like an abnormal creature. If his heart, lung or liver are reduced in size by some disease, he will not live long. There fore the proportion of one organ in a composition in relation to the an other is very important to the life of a building.

2.4.2 Hierarchical order

If the elements (organs)that compose any organism should properly organized in such a way as to have first things come first, it can be said as properly organized organism. This can be seen in the " nature of being". " The order" is therefore a quality of work in organic architecture; which tells the occupant or the sensor that there are not inequalities in the organization of the elements. Therefore, an equilibrium, or balance is alive. This balance or equilibrium may be observed or sought by the architect either in terms of function, activity or form.

2.4.3 Integrity of the inside and the outside.

The previously mentioned concepts have to operate within a balance and equilibrium which holds the work together as a whole. This can be called integrity. If some part of a building does not hold together it sees that the building possesses the elements of conflicting qualities which are unfit to the soul of the design. Such a building can be identified as a building that lacks unity or integrity. So, the absence of integrity is the disturbance to the life of the space. Therefore integrity evolves through careful analytical consideration of the relationship of internal function and environmental constrains. Accordingly, the inside spaces, activities, and the qualities of a building and outside spaces and appearance are interrelated.

Therefore by combining the materialization of the idea and the physical substances of the surrounding, the spirit of place can be brought into being. Accordingly when a building is being designed the breathing of the place, must be listen, and should find ways to symbolically reinforce each other. So, the building should be a great manifestation of the activities within and around it, and the quality of space accepted by that particular environs. For this the meaningful choice of materials is needed. Traditionally, materials found in surrounding, were raised artistically to become buildings. Today architects are free to use any thing , but must carefully fit into the heart beat and soul of the place (plate2-7). The mission church of Saint Francis at Ranchos de Taos, in New Mexico is a good example for integrity of all parts, and with the out side. Geometric form and the juxtaposition of Natural and man made forms look like a surrealist canvas. This tiny church makes the most from the simplest of materials, turning a humble structure into timeless architecture. (plate 2-8)

Plate2-7

...integrity of all parts ,Falling Water, Pennsylvania

Source: The Architecture of Frank Lloyd Wright (P3, 1996)

LEVINE, NEIL.

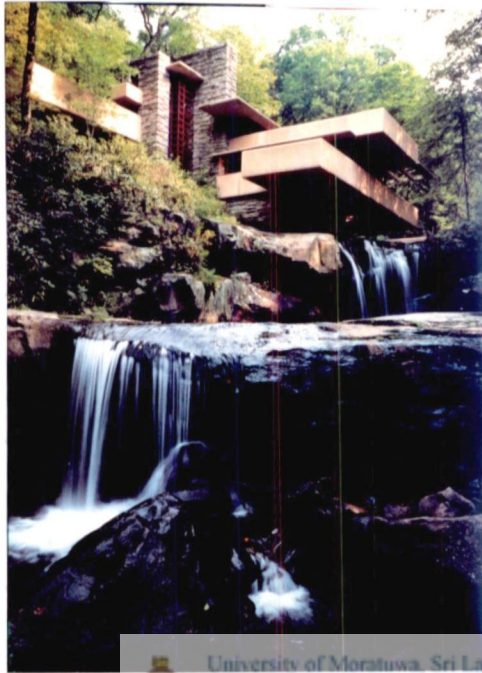


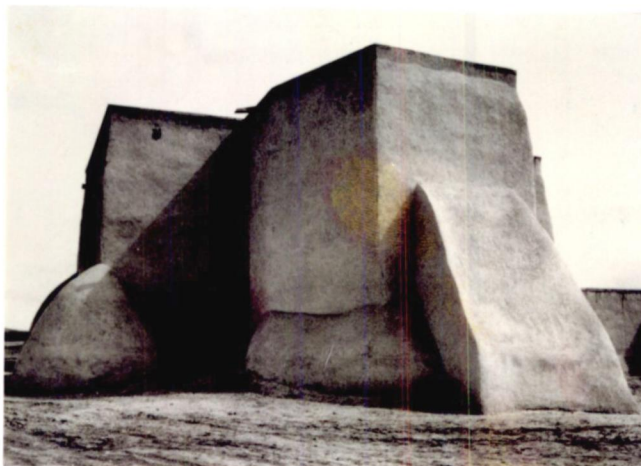
Plate2-8

...mission church of Saint Francis at

Rancho de Taos in New Mexico

Source: Minimum (24,1997)

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Elements of design may have various relationships to the environmental constraints, which demands the special importance to be made when orientating, placing and grouping on the site.

The order therefore, evolves only after the architect goes through careful analytical consideration of the relationship of internal function and environmental constraints, and formulates a statement of priorities.

2.5 Nourishing

To nourish the "soul" of the building, material elements must be raised by artistic means to touch the spirit. For the purpose of nourish human being mineral elements should be raised. Any half-cooked protein is poisonous as if for instance vegetables grown in warmth but inadequate light. Well grown, well-nourished food are further raised in the kitchen to provide a truly nourishing food. Like-wise half raised food are uneatable. Cooked without love and delight, they only full fill the stomach. They do not nourish us. Nourishment from the environment is the same.

2.5.1 The material

The basic quality of the material is the movement. Therefore the quality of the material is based on it's movement. This movement happens within the space and time. Space is recognized as an attitude of materials survival, by the philosophy . This attitude shows its spread, its special place and its spreading among other materials within material world. Time is the other attitude of the material. It shows that the all the materials have a life time. Therefore materials cannot survive without time and space, and these two are interrelated. Eternal materials or incidents can't be found in the universe. Sun, moon and earth also have a start and end. Therefore nature is not a thing that is everlasting. But man made artificial things like glass, plastics, polytheen etc.. do not decay easily. They will last

long. When using these materials for the building industry, there will be a conflict between man made and Nature.

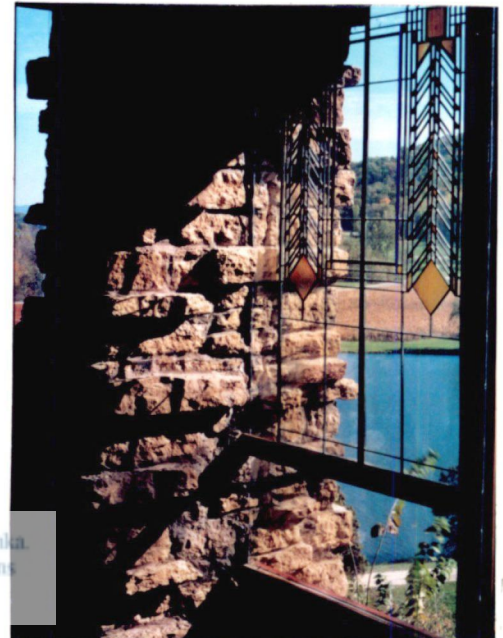
Nature always fight with these things and the results are evident as acid rains, dying forests, poisoned ground water, collapsing ecology etc...Nuclear power, florescent light, thermal insulation etc.. affects to human life very badly, and lead to ecological break down. (plate2-9)

Plate2-9

...the effect of materials, living room alcove at Taliesin by Frank Lloyd Wright, ..stone he used for walls, sand finish plaster surface reminded him flat stretches of river below.

Source: The Architecture of Frank Lloyd Wright (P4, 1996)

LEVINE, NEIL.



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Making and building is the stage, at which materials meet. During this process the soul of the things can be last or enriched. The soul can be emphasized by the quality of material. There is little more in stone fresh from a quarry than a pile of broken rocks. It is the result of the stone finding an appropriate place and from for waiting stably. But the every stone has a quality of "stone ness "

Materials have their own qualities. Glass is cold and machine pressed. Plastic is alien and those materials have distract and push away qualities while bricks and wood are warm and full of life.

Natural materials are Natural for the human environment. Natural materials means of course modified Nature. The tree is sawn and planked, earth is baked into bricks or tiles etc.. but there is a strong link between finished appearance and Natural origin. They help to give us roots to find our life, of place. What can be done to bring up this spirit of place ? It can be done in two ways. One is matter of conversation between what already is and what we bring with a new idea.

Secondly, the occupants has to be bound into the space by physical things and cosmic rhythm. This cosmic rhythm is called natural light.

2.5.2 Cosmic rhythm

Light is life giving element. It affects all the aspects of mind and body. It has the special effect on the physiology of man, mostly upon on feelings. Just like the warmth is related to activity and cold is related to still and relax. Light can be considered as a matter of physical quantity but as a life bearing principle. Light can be enhanced by the texture, shapes, color, the substances and so on..

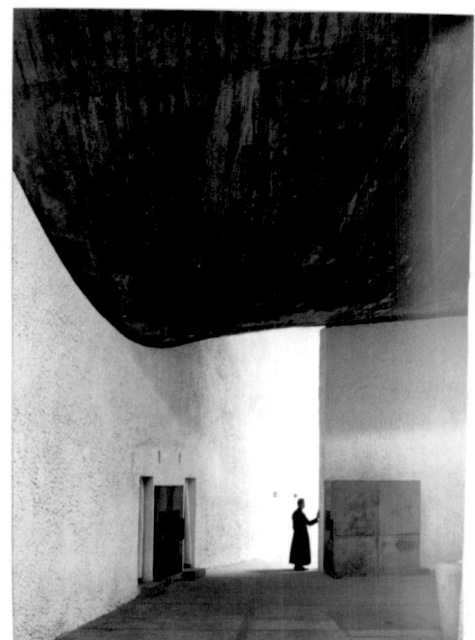
Although light cannot see or touch itself, any substances is made to appear due to the existence of light. Light gives life to the space. Natural light can bring joy to the heart. If we totally depend on artificial lighting or use inadequate light, this may cause for the physical disorders. Too much light like glass walls in a room is unbearable, too much openness is unproductive. So, the essential conditioning of light is necessary. It should be presupposed for every situation with the subtle understanding of the exact quality of light required for living. This is the problem of today's glass buildings. The excess light and glare does a great harm to the human eye and blunt the sensitivity. (plate 2-10)

Plate2-10

...existence of light, Pilgrim
chapel by Le Corbusier

source: Minimum (24,1997)

PAWSON, JOHN



Light can be modulated for different moods and activities of man. Giving light to a space is much more a matter of quality than quantity.

Architecture, as Le Corbusier said many years before, was the masterly play of light on mass. And no where did he demonstrate that truth with more fluent than in Pilgrimage chapel of Notre - Dame - du - Haut at Ronchamp. The chapel, completed in 1955, has as much the character of sculpture as of architecture and is an exceedingly personal building, full of subtle experiments in the use of light and form and color. This is an example for massive with delicate. Above all Le Corbusier uses light and mass as essential architectural elements, and in so doing succeeds in intensifying the impact of both.

The modulated light has a health giving quality and it aesthetically satisfy the life. The human spirit needs this life filled light. Even the body need it for physical health.



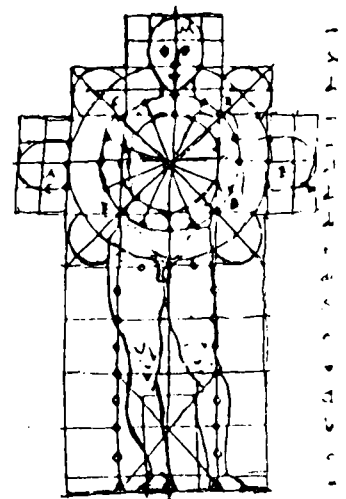
3.0 The Way Of Becoming Transcendence

3.1 Giving Birth

Building is not merely a shelter for things to happen. It means much more than that. It has so much to do with the spirit of man. Beside giving shelter and protection it should be a spiritual home of a man. In order to make a building a meaningful whole and to nourish it , all important qualities of the human must be identified and carried out. To make meaningful whole and to nourish it, all important qualities of the human must be identified and carried out. To make a meaningful whole, the physical and intellectual conditions of user should brought together, as a harmonious relationship. Indeed balance and harmony are vital to the human health; within the individuals as well as in society. Here harmony combines with balance to create a complete being. Balance can be further related to symmetry. According to Vitruvius, symmetry is a proper agreement between the members of a work itself and relationship between the different parts and understanding of the general scheme in accordance with a certain part.

The beauty of the whole scheme consists of a rational integration of all parts with appropriate proportions, that every part having its absolutely fixed size and shape and nothing could be added or taken away without destroying the harmony of the whole. This conformity of ratio and correspondence of all parts in other words "organic geometry " should be able to be experienced in every " humane scheme " (figure 3-1)

Figure3-1
...rigid symmetry



Symmetry is always loosely defined and identified by us, and it no longer has its original meaning of harmony and balance of forms. It has come to mean geometrical symmetry or mirror like reflection. In other words a strict duplication of forms on either side of an axis.

Symmetry in its present day meaning is a rigid thing, which excludes "life". It denotes preconceived idea of forms. In Nature also the small scale symmetries can best be seen (plate3-1)

Plate3-1

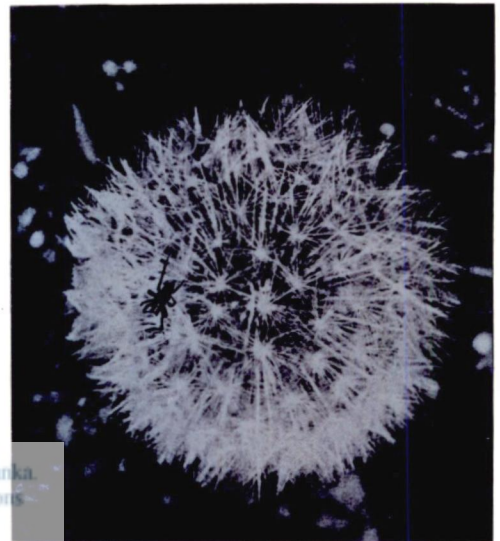
... symmetry found in Nature

Dandelion with spider

Source: Frank Lloyd Wright,

Architecture and Nature. (P.63,1986)

HOFFMAN, DONALD

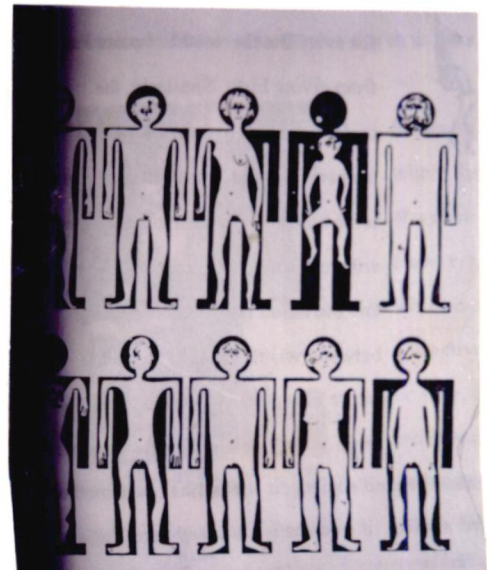


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It shows the prevalence of mathematics or manufactured by machine. It represents the doctrinal rule of an elementary reasoning over sensitivity and intuition. And it also means the existence of an axis and therefore a focus. However organic symmetry is not such. It has full of life, balance harmony and it talks to our intellect (figure 3-2)

Figure3-2

...organic symmetry



Nature is a best example for " life ". Almost all examples of Nature are the best examples for organic symmetry.

To act with this harmony past human experience is required. Places have been formed by the past. Any change of the future is the development of the past. Hence knowledge of culture of ten or twenty thousand years ago is very important to understand the present.

3.2 The way of giving birth

As mentioned earlier the significance about organic architecture is that it steers a middle path between the extremes of narrow traditionalism and the extravagance of contemporary commercialism. It is metaphysical in essence as it deals with the nature of being.. Accordingly organic architecture is not rhetorical, but transcendental in form.

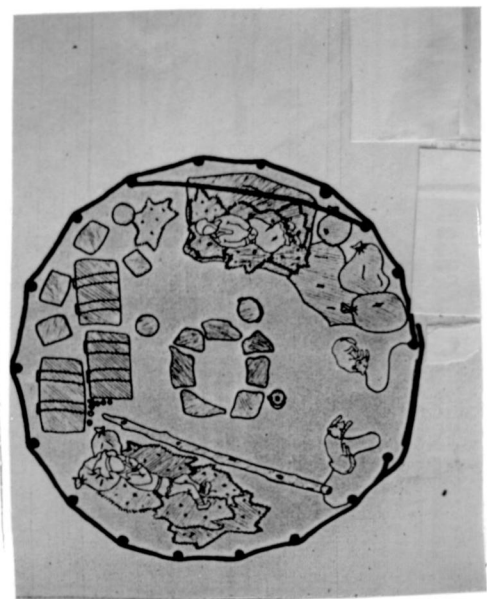
According to Oliver Mark the inner compulsion of the man tore him from the protective earth and forced him to build the houses. But that houses took form because the potentiality of it has already existed within him. Man had to have the idea, the perception, the desire and finally the need to build it. And it had to correspond to something inside himself to an interesting image(figure3-3)

Figure3-3

...A child drawing and Lap tent

source Psychology of the House(P.19,1972)

MARC OLIVER

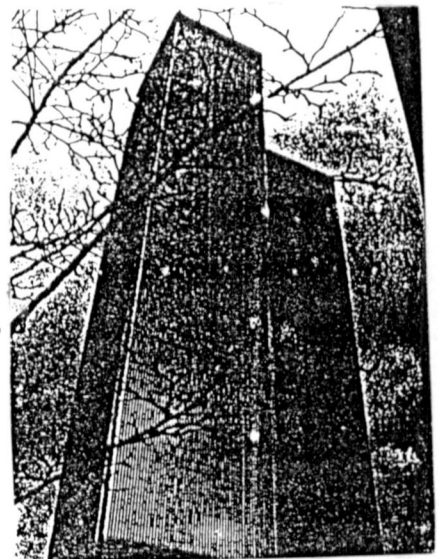


when a child draw a house, he never refers to an outside objects, but expresses a truth he sense within himself. He produces it from his past experience - mother's womb. It is the place for the baby to be comfortable for ever. But the mother cannot keep him from giving birth.. Similarly the building cannot be ever alike the mother's womb for ever. It requires some kind of evolution to go along with man towards the future. Now this evolution is at a critical point. That means between two extremes, - whether it will serve to the Nature based society or whether it is served to the commercial oriented society. If it is served to the first, that is Nature based society. It looks like ever mother's womb. If it serve to commercial oriented society it becomes a tragedy like the skyscrapers. So, without imitating the architects can learn from the past, and can use them at every aspect regarding to the designing. These can be based on three stages. Firstly consideration of the past (place) and future (idea), secondly ecological and aesthetic harmony and mutual responsiveness and thirdly the organic development. But the most evident fact of today is, solving design problems by means of money and time without responding to human intellect and physical conditions.

The buildings that are based on commercial society, mostly not have " life ". They are mere a shell for things to happen. It is hard to experience , spatial qualities, transformation etc.. It is like living in a box. The result is many people living this buildings are affected psychologically (plate3-2)

Plate3-2

...dull spaces to live



Hence, the physiological aspects are important in the human health than money and time. Physiological aspects means healing of mind and consciousness. It

depends on sensation, perception and discrimination. In the same way architectural intentions, the idea, sensitivity, mutual responsibilities, and organic development. need some kind of healing. Therefore these architectural intentions should not only have conservation with middle path of these qualities to heal the human mind. The path of healing the human mind by contrast can be enhanced mainly by the texture, colour and the sound.

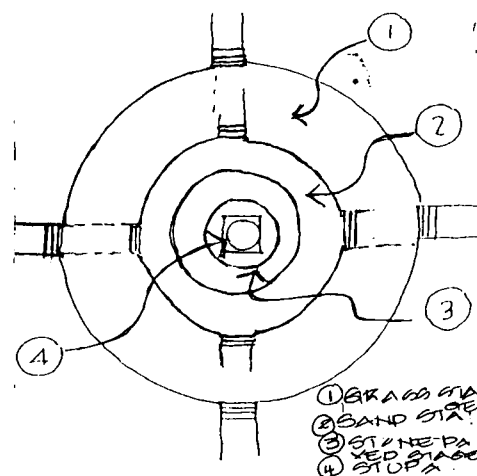
3.2.1 Texture

the texture is a quality of material. The contrast of texture helps to avoid people from excessive monotony. Some times it demarcates total unit. The change of texture feel to us, that the end of one thing and start of another thing. For example, the life story of Lord Buddha reveals many instances of association of various textures. The crossing over the river Anoma by prince Sidhartha is regarded as the first step taken on his mission in search of eternal peace. The sandy bank left represent the life left behind, with the path over the water, representing an approaching to the new life, the change being symbolized by the changing texture.

The quality of texture makes it an interesting element to deal with. The required mood can be achieved by using correct material. Roughness, Liveliness, intimacy or serenity can be achieved by the nature of material.

The Sri Lankan stupa has three kinds of stages (maluwa) around it. Lowest is the smooth, lively grass stage, second is smooth sand stage (weli maluwa) and the upper one is stone path (salapathana maluwa), ultimate is the stupa (figure3-4).

Figure3-4
... plan of stupa



It means a person comes to the eternal truth, passing various kinds of textures. It is a notable fact, that in every day life, one of the greatest sources of pleasure to the individual is furnished by texture. In effect texture is equivalent to absence of monotony.

3.2.2 Colour

Different colours help to create different moods, and this is the physiological fact. These moods are the result of the stimulation of mind by harmonic glands, to create different moods. Different colours stimulate different glands. For instance, yellow-Thyroid, blue - Pituitary, red-male sexual, violet-female sexual glands.

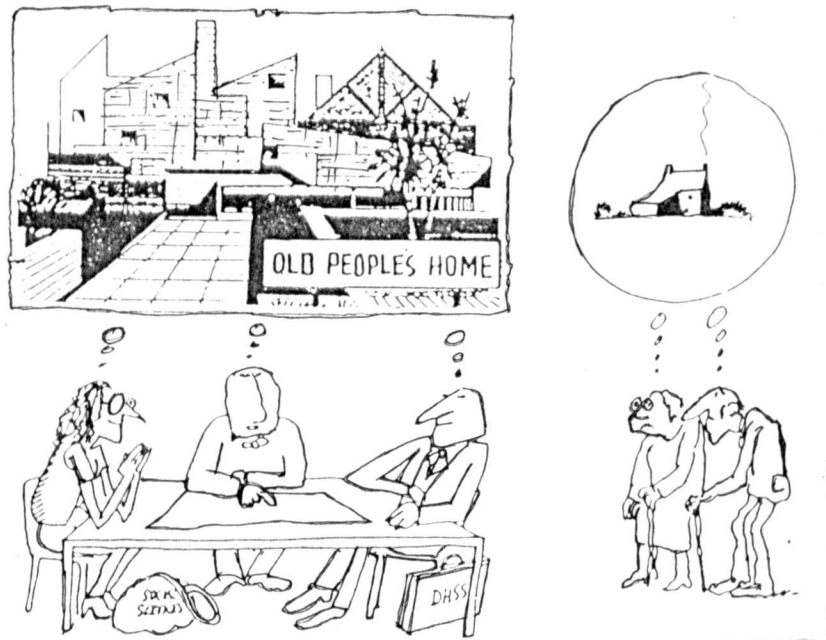
And also all colours have universal aspects. Green is a color of balance. It has a peaceful, calm and smooth effect. But it is a lifeless color to paint with. Red can bring warmth, stimulation, passion and aggressiveness. Considering all colors, the associated qualities such as coolness with blue are bound up with physiological effects. Yellow for instance can bring light to a sunless room. It can also bring vitality and cheerfulness. White is the mother of all colors. It has all moods in it. It allows each individual to develop its individuality. White can be calm, life filled, joyous, timeless and yet often mean silence. Like wise considering built environment, colors can do lot of things. For instance the dull colors together with rough and mat finish, mostly maintained unpolished, non-shining and non-glistening texture will enhance the intimate quality of a particular space.

3.2.3 Sound

sound is a quality of feeling sensed by the ear. There can't be think of the existence of human beings in soundless spaces. Sound means "life " and in quiet places ears sharpen to hear it. In other hand noise is harmful for human health and a pioneer of the environmental pollution. The sound created by traffic, factories, music, refrigerators, florescent light and so on...are dead mechanical

sounds not like the sound of bird's singing, fluttering of leaves, wind flowing on water etc...Although the dead noise is a cruel, life filled sound help for the peace of mind . As a instance, think of a example done with plants. If two equally grown plants are treated at equal times, one with very cruel words with cruel voice, and for the other with soft words with lovely voice, eventually the growth of the first plant will be stunted and the other will full blown. This can be applied to a human being as well. So. The correct sound associated with correct spaces will do lot of things. So, the sound can be said as a fact that help to increase the qualitative aspects of built environment, which is the ultimate goal of the built environment. So, to create living tranquil organic architecture the architect needs to understand the essential qualities of serenity, the gentleness, beauty, unconstructiveness, the eternal and the life supportive qualities. When a architect design a space with tranquility, the occupants mind can be concentrated inwardly to cure his life. According to above the spiritual is the reality behind the physical sense. Therefore the architect design with organically, can cultivate the human sense of what a place says .In organic Architecture, it is considered the sounds of the functions of the site. In Japanese Zen Buddhist ideas of sound might have influenced for organic concepts of Japanese. The architect of organic tradition, always look for the sound of the functions of the site. For example the sound of birds, fluttering trees etc.. and try to integrate it into the Built-Environment. For example the Falling Water of Pennsylvania was designed to integrate sound of the stream into the building. He begins to sense the invisible values lie behind the physical phenomena. Not just the outer differences, but the differences of the spirit of place. On the whole the outer sense can give us good guidance whether the environment is harmful or healthy to the physical body and human spirit. In today's world every thing is determined by money. However, if the architect do not listen to these senses, they may not be speaking for human spirit any longer. Therefore in the development of organic places, the architect must meaningfully cater to all physical and physiological senses of the human being.(figure3-5)

Figure3-5
...relationship between
place and people...



3.3 The Destination

The building industry of today is totally a value added process. Any alteration done, change of design, and time spending, all cost money. So, it is hardly to allow the building grow itself on the site as many organic architects doing. But when a project is done merely for the accumulation of money, the inhabitants and the environmental responsibilities become secondary, and immediate results are inevitably destructive. The task that is done in designing is giving practical solutions, and this depends upon the intellectual and physical actions to maintain its balance. If not the spaces will not communicate with the occupants and the spaces will remain as isolated entities. Organic architecture needs to build buildings and places of life-renewing, soul-nourishing qualities. Such places really speak through their spirit of place, and the phenomena accessible to the outer senses are consistent with that spirit., and the phenomena accessible to the outer senses are consistent with that spirit. On the other hand, the adaptability and flexibility of organic architecture is very interesting. The buildings of Hans Scharoun under the Nazi rule, is the best example of it's flexibility. Hitler was dead upon modern buildings and Scharoun's buildings at that time, was adapted to as Hitler's wishes and the buildings at that time were in pitched roofs can be seen. This shows how flexible the organic buildings are. Although at that time the buildings of modern movement were very monotonous the buildings done by Scharoun under the Nazi rule were not like that. This depicts how flexible the organic buildings are and the way the monotony of the buildings of modern movement was over come by

adapting the organic concepts. As an example the high-rise buildings done by Hans Schroon were much different to the high rise buildings done by the followers of modern movement at that time. For example Hans Scharoun's best known high-rise housing, "Romeo" and "Juliet" in Stuttgart, built between 1954-1959, was not followed the monotony of modern movement high risers (plate 3-2). Here scharoun gave variety to facades, create live spaces etc.. According to Christopher Day soul can be given by soul not by computer system or industrial might. So, the places designed to people should be places that help to fulfill human intentions. So, to work with organic architecture it is important to think qualitative aspects of the built environment. It needs to experience more consciously and uplift the senses and then it became a gateway between reality and feelings. Therefore organic architecture is a method of environmental design where art nourishes the senses with reality.

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Plate3-2

... "Romeo" and "Juliet" in Stuttgart
source: Hans Scharoun (P.125,1995)
JONES, BLUNDELL, PETER.



Human life is unique and individual. But it shares certain biographical patterns. It develops not only physically but through past experience as well. Outwardly humans meet both stress and stimulation, obstacle and opportunity from the environment and the society. Inwardly he travels a path of transition of mind. People must want to make this journey with although they will widely varying in motivations, spaces and success. The destination is the healing the mind and the body.

Summary

Organic architecture is a living being. Like a living being it has an organized body. It is a organism that obey to the manner of Nature, and live with Nature while enhancing the spirit of itself. Like a living being it has an essence and a body. It must be conceived nourish and given birth to. So, it is important to understand the fundamental responsibilities of organic architecture. First try to listen to the breathing of the place and song of the place, and then find the way to symbolically reinforce each other. This reinforcement can be further strengthened by organization of spaces, hierarchical order of spaces, integrity of out side and the inside, and materials of built masses within the Nature. The major expectations of organic concepts are, make those concepts to become transcendence and to make it as a thing that emotionally uplift the soul to levels that enhance the essence and meaning of life and mankind. And then it becomes the sanctuary for the transition of the mind., who must taken the path with various textures, colours, sounds, light and so on towards the destination which is the healing of the mind and the body.

4.0 Organic Nature in Macro Planning, Micro Planning And Individual Building Planning.

This chapter is an attempt to illustrate organic nature in Sri Lankan Vernacular Architecture in the context of macro planning, micro planning and individual building planning. Here in this chapter macro planning refers to city and village planning, micro planning means the detail planning of different land uses within the framework of city and village planning. The individual building related planning (e.g. Monastic complexes, palace complexes) is the micro level planning in the context of macro level planning

As discussed earlier, organic architecture is a successful outcome of some basic concepts that found in Natural metaphors namely, organization of spaces, hierarchical order, and the integrity of inside and outside. The Sri Lankan Vernacular Architecture is the best key to understand these organic concepts, as these concept itself exists within it. As we know "vernacular" is not limited to one particular period and here for this study, some selected examples that were done at certain periods of Sri Lankan history were taken into account.

Integrity of inside and outside or the unity and the harmony between the natural environment and the built environment can be provided from various ways. It is interesting to understand the aesthetic, environment, symbolic architectural topographical integration. The concept of adapting the topography, the terrain, water flow, rocks and boulders, as part and parcel of the layouts and design of buildings could be considered as one of the excellent achievements of ancient Sri Lanka.

4.1 Organic Nature In Macro, Micro An individual Building Planning - Early Settlements of Agriculture Based Society

4.1.1 Early Settlements.

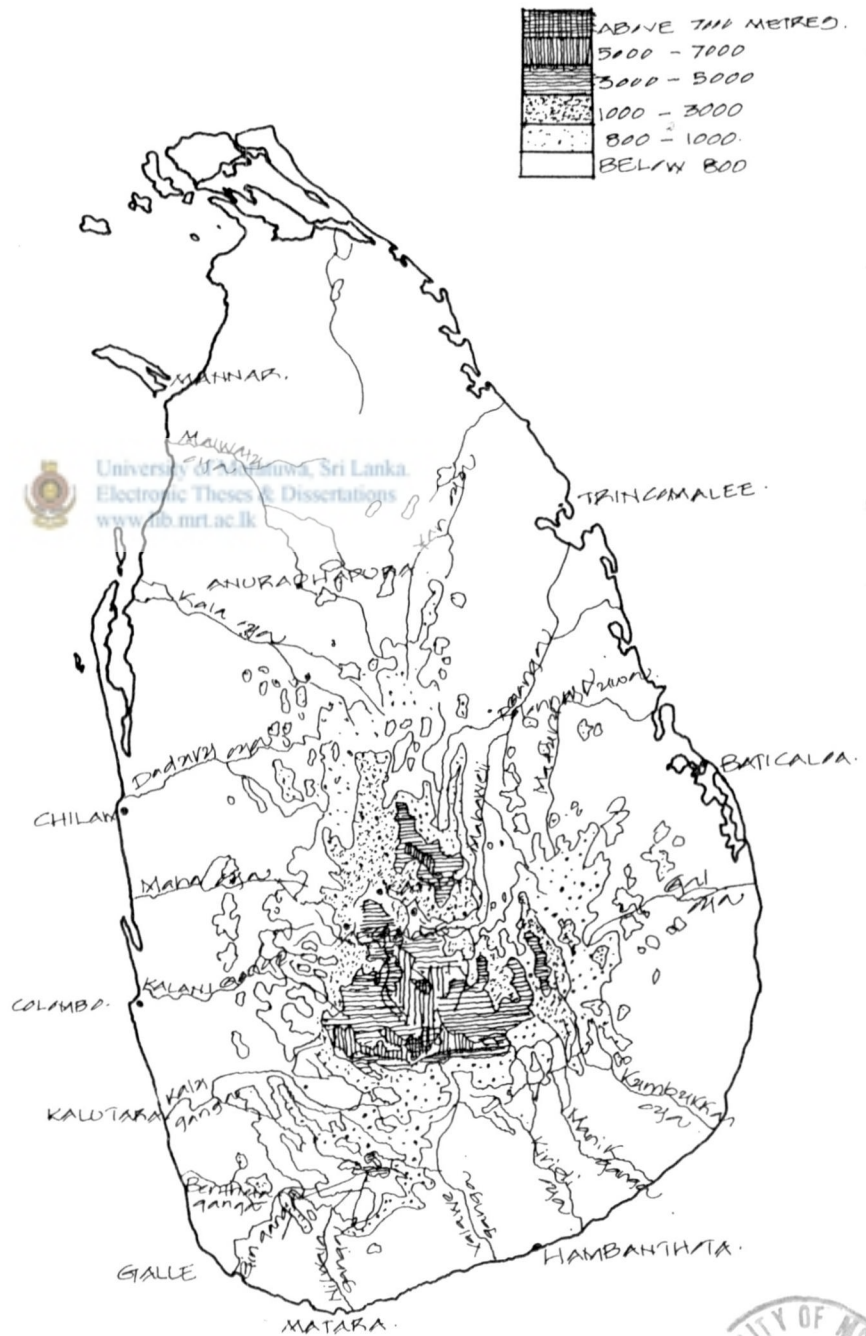
The story of man in Sri Lanka goes back to ancient times and it is probably thousands of years before the arrival of people who spoke the Indo-Aryan language. Earliest settlers who came to Ceylon have left no written records to say when, where or how they came to this island.

Veddas were probably the people who were living during the earliest stage of development of human habitation in island. They lived in most commodious caves, in which all members of the tribe slept and were protected from the wild animals by lighting a single fire. Quite a number of such caves containing pre-historic stone implements which seem to indicate that they were used for a long period by primitive men, have been found. When early inhabitants took to chena cultivation, they lived near this cultivated land in order to drive away the wild animals who came in the night to destroy their crops. According to E.K Cook, first town mentioned in Mahawansa, the village of lankapura was developed from a such a settlement. The joint family was the earliest unit of settlements in Ceylon. A group of houses comprising a number of such large families formed a "Gama" or "Village".

After the advent of Vijaya and his companions its' stated in the Mahawamsa there had been two main settlements in Ceylon. They were the Nothern part with Anuradhagama as it's capital, and Ruhuna or south eastern part of Magama as it's capital. Anuradhagama became the capital both on account of it's central position and because of the Malwathu oya. The south eastern settlements were mainly along the four rivers, Valave ganga, Kirindi Oya, Manik Ganga, and Kubukkan Oya (Figure 4-1). There had been a direct route between two capitals, Anuradhapura and Magama. It passed though Kahagala and Ritigala and reached Magantota which is near the junction of Mahaweli ganga, Which lay on the upper part of Manik Ganga before it finally reached Magama.

There was a third settlement in the area watered by Kelani Ganga, but there is relatively little information about it either in the chronicles or in the inscriptions. In the early period this region did seem to have come under the influence of kings of Anuradhapura and Magama. By the third century B.C, Practically the whole of Ceylon with the exception of hill country and the eastern coast seem to have been populated throughout not very thickly. Perhaps almost habitable spots were occupied.

Figure4-1
...map of Ceylon



4.1.2 Factors Influencing The Selection Of The Settlements

Most of the settlements were along a river or a water way. That shows that water was the most important factor when early settlers thought of places to settle down. The geographical factors too may have influenced in the selection of sites for settlements. The dry zone was more suitable according to the geographical conditions required for the construction of tanks. Most of the early settlements were in areas where the rainfall was not heavy, i.e. what is now referred to as dry zone. Establishing a settlement in the dry zone was easier than in the wet zone, because the forests were not in the dry zone. The early settlements were established, not haphazardly, but at suitable locations where the physical environment offered certain facilities – the availability of water, level land and fertile soil for agriculture, useful mineral deposits, easy access from landing places along the coast, and the means for defense and protection was a decisive factor in the establishment of early settlements and many of these were sited on promontories, on slopes, of hills or meander loops, where walls were often built to strengthen the natural defenses. P. Vidal de Blache aptly comments,

“Man organizes the site prepared by Nature, so as to enable her to satisfy his needs and desires “.

Early Settlements in Northern Sri Lanka (P.36,1995)

ISMILE, MARINA.

4.1.3 Development Of Settlements.-Macro Planning And Its Organic Nature

Places – names referred to in our sources both literary and epigraphic suggest that there were two forms of settlements, the village settlement (gama) and the urban settlement (nagara or pura)

4.1.3 (a) Village Settlement & It's Organic Nature

There are evidence that the habitants of the people in the early stage of colonization has been in the caves that found many hills, mountains & rocks. The

inscriptions above the drip ledge on many such caves reveals that the caves were donated to Buddhist monks by owners of different social standing groups. As soon as Buddhism was introduced to Ceylon the custom of living in cave dwellings must have changed to house dwellings in villages. In other words village life in Ceylon was fully developed by the time Buddhism was introduced in the 3rd century B.C.

Many names of the village occurring in the historical records give a clue to their origin. A number of villages, names ending in -Vapi, Sumanavapigama, Pelivapikagama, Viharavapigama, suggest that there were " tank villages " which were found after the building of tanks. There was other instance, too, where the tanks were build after the villages were found. According to the Mahawansa Tika, the availability of water was considered the most important factor for opening up a new settlement. When the water was not available large reservoirs had to be built to make the settlement available. So, it depicts how the typical sinhala village was. The typical sinhala village has most of the time been very open in character, which has been due to no doubt to the informal habits and open air life of the people. The village lay out was the successful out come to the constrains like, topography, terrain, climate, culture etc....So, it can be considered as a successful out come of organic concepts.

The layout planning of new settlements, building complexes and individual buildings all had as much as relationship to organic concepts. The " organic concept " might have been nourished by simple and humble nature of Singhalese. Singhalese were very flexible people as they were best understood the impermanency of everything by teachings of Buddhism and their village settlements, depicts that flexibility and impermanency. Leonard Woolf in his novel on Ceylon life, " Village In The Jungle ", clearly illustrates, the Buddhist view of life.

***" Tried, carrying a pingo of pots & pans,
At an 'Ambalama' I rested,
The pots & pans a bull did smash,
At which I laughed & laughed. "***

Aspects of Sinhalese Culture (P.121, 1952)

WICHRAMASINGHE, MARTIN.

Above folk song reveal the Buddhist view of life, the expectations of loss, as something inevitable and a readiness to be reconciled to such loss as the only practical course. So, the flexible and informal character of village settlement was influenced by the Sinhalese culture shaped by Buddhism. The teachings of Buddha the main religion of the country also promoted respect towards trees and Nature. In tradition it is believed that there are divine sprits living in association with large trees. All these religio-cultural practices have influenced the Sri Lankan society to respect trees and Nature and that was a blessing for the existence of organic nature in Sri Lankan vernacular architecture specially when we looking at historical point of view.

So, Nature was given prominence and the planning of villages was normally based on the effect of Natural resources. The highest slope or hill-top was selected for ritualistic purpose, which played the most significant role; and it can be called the hub of village life, since most of the activities were originated from there. This may be a temple or Devalaya. Natural valleys or lower grounds were selected for dwellings and were made out of very simple materials like wattle & daub & thatched roof(figure 4-2) Although the physical boundary of the village cannot be defined well – it had its own environment well blended with Nature. Sinhalese village was highly influenced by a popular Buddhist concept called

Wewai (tank) Dagabai (stupa)

Gamai (village) Pansalai (temple)

(plate 4-1 & 4-2)

Few examples of the Sinhala village can be drawn out by the description of the island by tourists.

...” Gillemale, a beautiful spot; It is a green plain, about a mile circumference skirted by a border of different kinds of palms and fruit trees amongst which are the dwellings of natives, and surrounded by wooden mountains...”

An Account of the Interior of Ceylon.& its Inhabitants. (P22, 1821)

DEVY, JHON

“...Rambukwella, where there was neat little vihare, a small ambalama or rest house, several scattered dwellings surrounded by fruit trees and a considerable extent of ground cultivation, and then covered with green paddy. The ascent beyond this village was steep and maintain was entirely covered with forest...”

An Account of the Interior of Ceylon. & its Inhabitants. (P22, 1821)

DEVY, JHON

Plate4-1

...wawai (tank) Dagabai (Stupa)

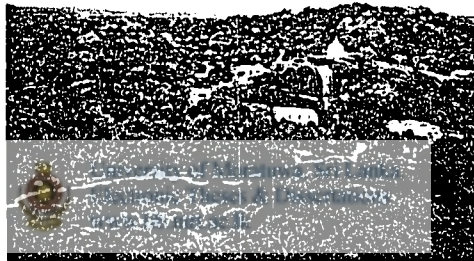


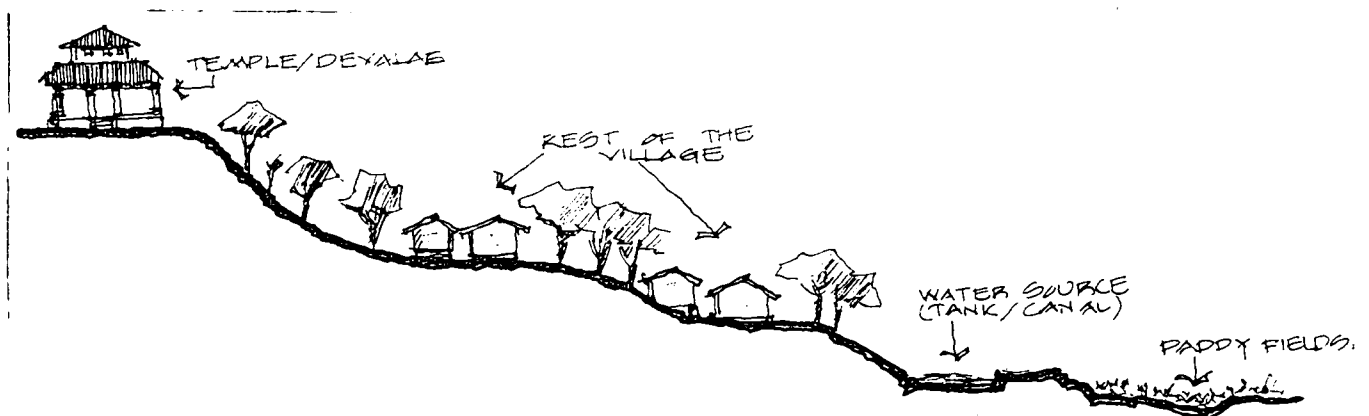
Plate4-2

... Gamai (village), Pansalai (Temple)



Figure4-2

...sketch of a "village setting"



The village territories are demarcated basing on Natural Phenomenon, on one end of the village there may be a Natural stream or a river which flows through a village, while thick jungle or wood form another boundary of the village. In hilly environment hill slopes or mountains forms another boundary. These Natural surroundings are known as "*Jala Durga*", "*Wana Durga*", and "*Giri Durga*". This also depicts, the way they lived, in harmony with the context. The lower flat land beyond the dwelling called *mada idam* are usually consisted of paddy fields, which some times made a boundary to the village. The boundary between *goda idam* and *mada idam* is normally formed by the vegetation, such as coconut, breadfruit, etc. After the British period the plantation of rubber also took place. The taller trees such as Coconuts, Areconuts forming a natural fence added more and more beauty and making unending line between the sky and greenery to the land with it's Natural and charming effect. The common bathing place of a village was stream or spring in the middle of the paddy lands which is well covered by the foliage. Sometimes it would be a well under the huge shady tree at the end of paddy lands. The village has evolved an aesthetically pleasing and functional use of levels, storage and flow of water and to bring harmonious marriage of the natural environment with the built environment. The houses were not build in separate plots of land. They were put up in a group. No physical boundaries to demarcate territories. So, the traditional village settlements of Sri Lanka is not static in concept. It is alive, full of surprises, and dynamic. (figure 4-3) These were the environments where people can feel safe, environments that are relaxing and

invigorating. In some cases the functional feature of the village may have dominated the character of the settlement. In the case of agricultural community the tank or the water reservoir was the major element in the settlement pattern (figure 4-4). It is around the tank that the people build their huts. For building up of tanks, settlements etc...the geographical conditions of the area might have influenced lot.

Figure 4-3
...housing lay out in
agricultural community

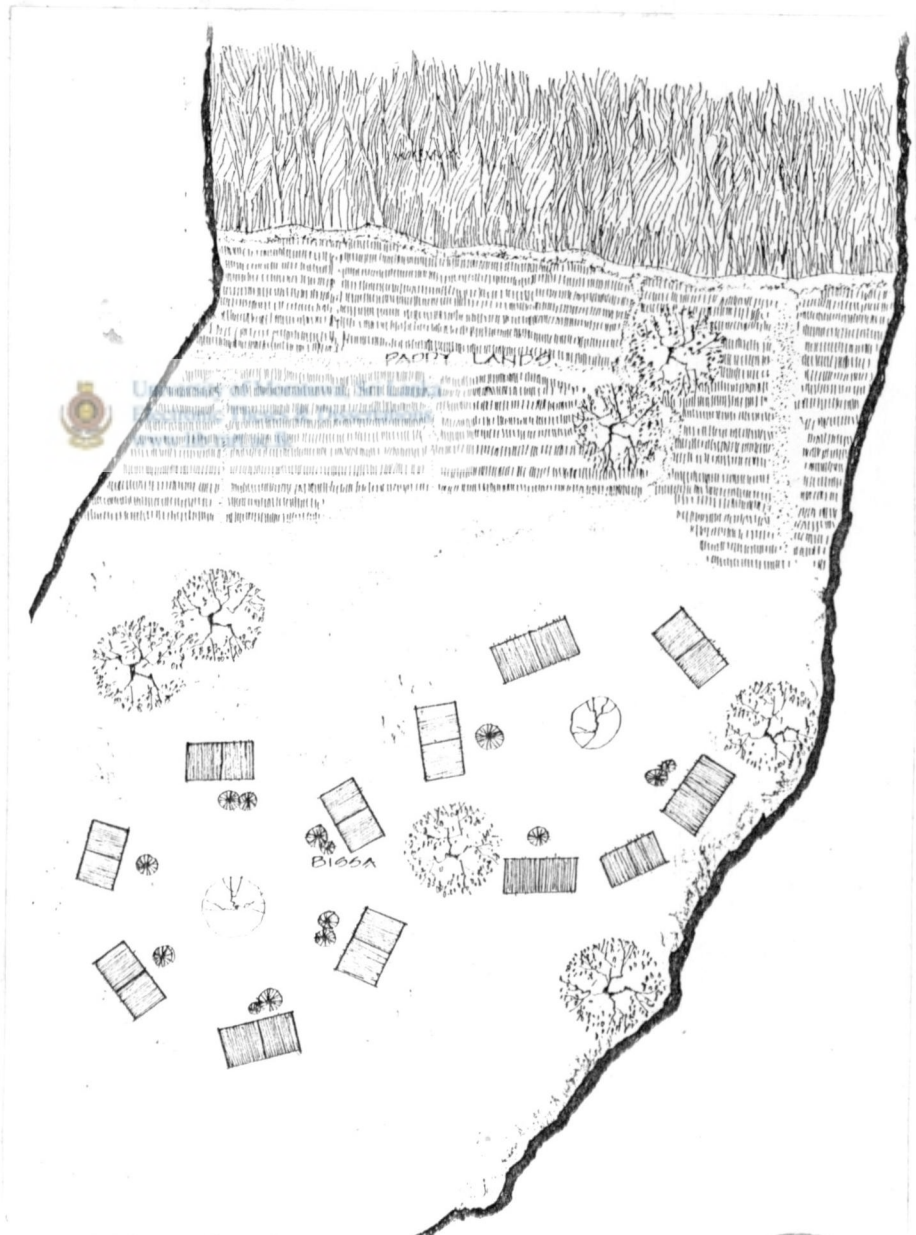
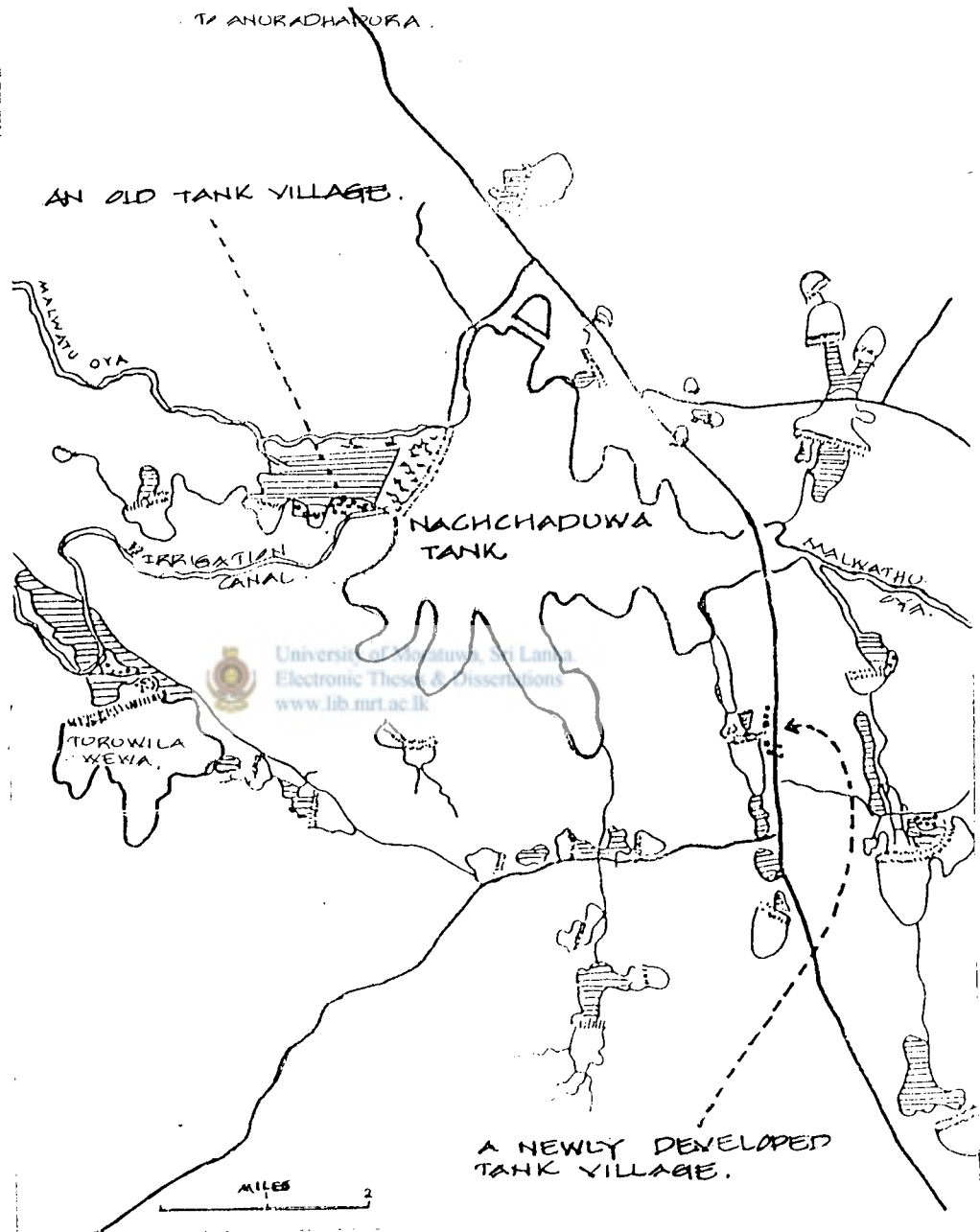


Figure4-4

...settlements formed in
association with the tank

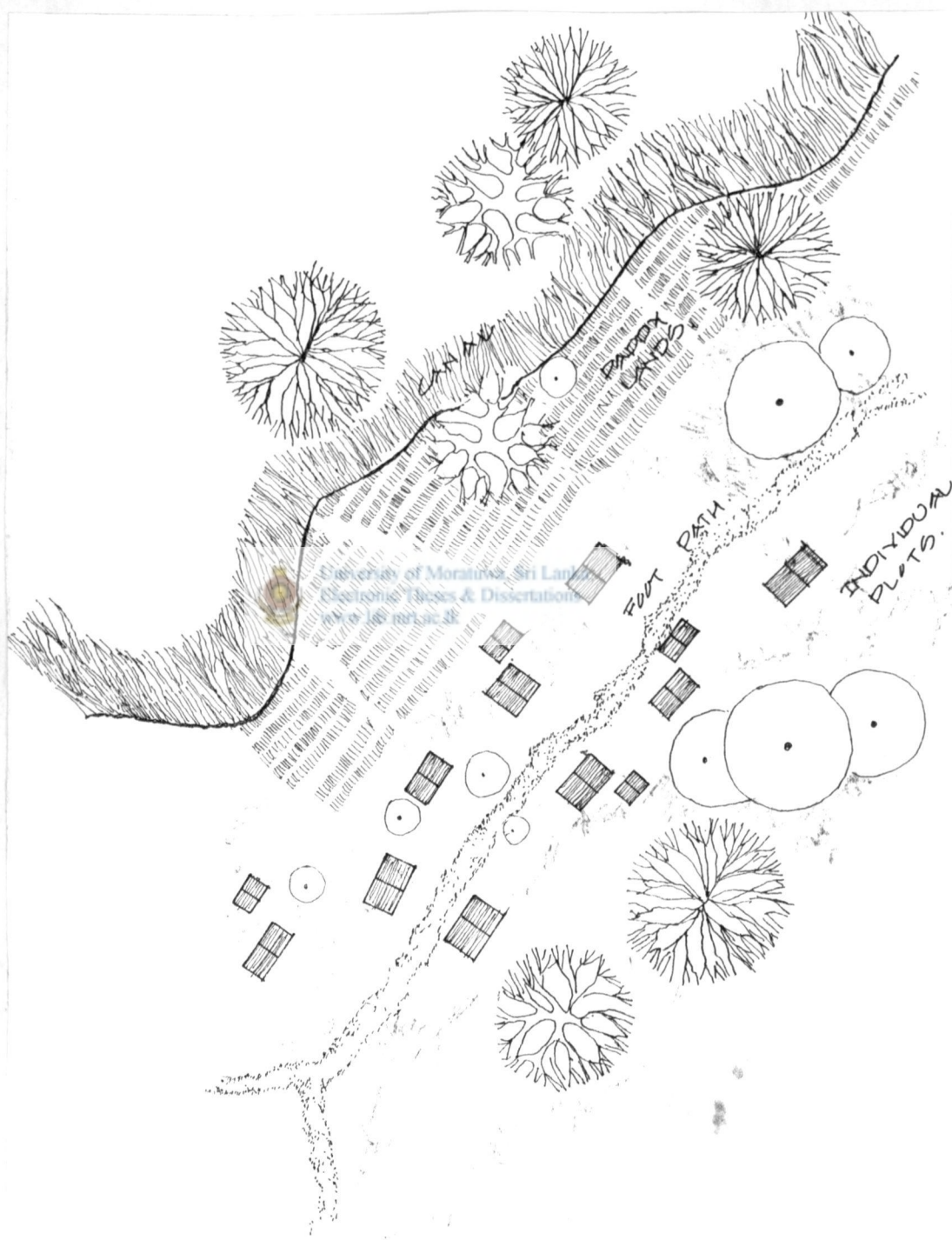


The settlement development around the Nachchaduwa wewa, is a good example for the adaptation of the topography, terrain, water flow etc...The tank was built in association with the Malwathu oya and the shape of the tank is a successful outcome to the certain forces surrounding. (figure 4-5) The tank was built to the

fertile soil for agriculture, near Malwathu oya also might have influenced for this settlement development. It can be identified the harmonious setting of the tank with the forest, scrubs, high lands etc...Almost all the land which situated to the close proximity to the tank were used for paddy cultivation and the old tank village was situated concentrating to the some what higher land than the land used for paddy cultivation. The beauty of the whole setting is largely due to the swaying paddy fields around the tank and the discontent to destroy the harmony might have influenced for the formation of the old tank village at the west side of the tank, a less evident area, in a dispersed manner. The geography of the North central part of the country suggests high lands here and there coming up from the flat land. The land selected for this tank fed settlement has comparatively large flat area to build such a large tank and that large agricultural settlement and there is minimum disturbance from the gradual rock out crops. At the time the tank met such disturbance it was treated nicely and the shape of the tank is a result to such reactions.

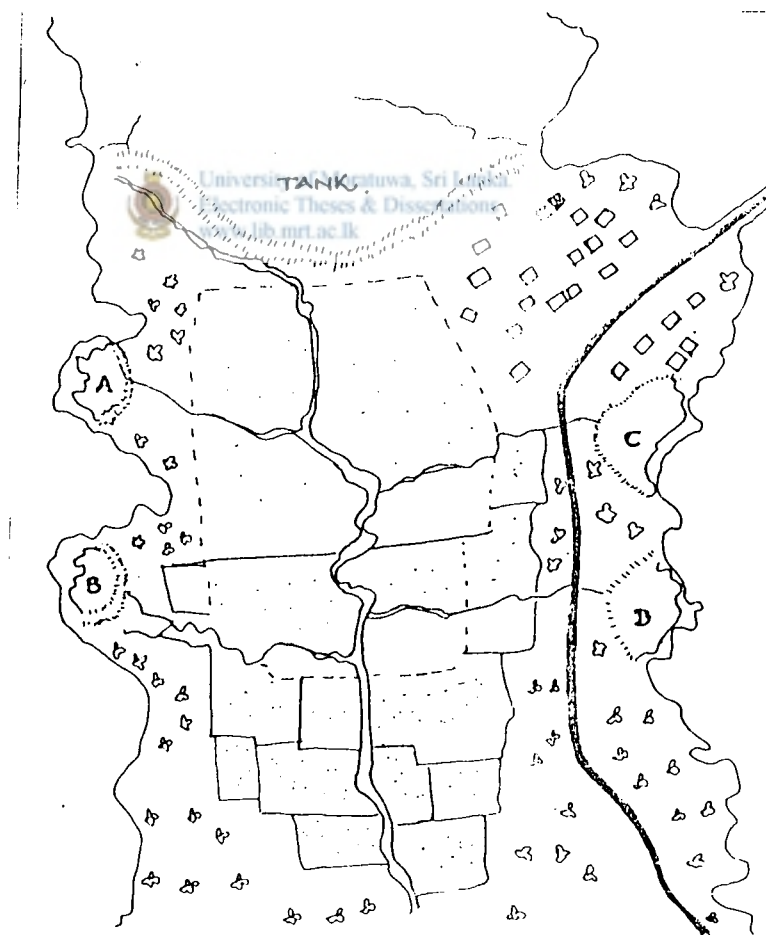
Village types were originated considering the topography and environment. Geographically the island can be divided into two major zones, hill country in the middle of the island and rest of its plains. Those lay outs were originated with the highest objective of social, cultural, and economical organization and keeping the ideas of aesthetics (figure 4-6 & 4-7). Rain fed villages were formed in hill side or in plains where rain fall throughout the year made it not necessary to store water. People settle down where the irrigable land is located, specially close to the stream or canal flows down. Dwellings were spread and located along the foot paths all over the village. Chenas or *hen* are located further away from the dwellings. Paddy fields mostly can be seen at the rear part of the dwellings, sometimes chenas or vegetable yard, where the vegetables that are grown located next to it. In rainy season the cool environment is full of life because of ever green vegetation, but in dry season, leaves covered with dust and different type of landscape is created.

Figure 4-6
...lay out of rain fed village



Tank fed villages were formed in areas where the rainfall could not be experienced throughout the year. Such villages were almost seen lower plains in Dry zone, such as Anuradhapura and Kurunegalla etc...Irrigable land below the spill level of tank bund were converted to *mada bim* or wet paddy lands. Occasionally when the water dries, the tank beds are converted into paddy fields. High lands with gardens and dwellings were lying at a higher elevation than the flood level. The foot path is going through the villege square or *gammeddha*. This type of villages have very interesting landscape. Around the tank bund it was shaded by the huge trees such as Nuga (Ficus Bengalensis), Mara (Caesalpinia Pulcherima), Wara (Calotropis), Dhombha (Calophyllum Inophyllum)

Figure 4-7
... typical tank fed village



Grey Lynn says,

“Buildings are after all not organisms but organs or provisional structures which are already multiplicitous.”

“Organic Architecture”, Architecture and Design vol63,11/12, (P.9, 1993)

TOY, MAGGIE (ed)

According to Nari Ghandi,

“Buildings are not necessarily drawn before the construction begins; rather forms marked out on the site, to indicate how they should grow, So many details are developed in-situ ensuring full explanation of the location”.

“Organic Architecture”, Architecture and Design vol63,11/12, (P.9, 1993)

TOY, MAGGIE (ed)

So, it can be clearly identified that the planning aspects of these rain fed and tank fed villages were entirely based on organic concepts. As discussed before those organic concepts were originated mainly due to the Buddhism, the main religion of the country. “Impermanency” which is highly emphasized by Buddhism, might have encouraged for the provisional structures (dwellings) that found in these rain fed and tank fed villages, and thus the flexibility of the entire lay out is promised. In tank fed villages when the water dries, the tank beds are converted to paddy fields and this reflects the flexibility of the lay out. The use of available materials in the locality, the simplest materials like wattle and daub and thatched roofing, turning a humble structure into timeless architecture. The assembly of materials were in a way, whose individualities responding to the sense of whole. Materials used for walls, roofs etc. reminded the user of the Nature surrounding as they were extracted from Nature and the delicate primitiveness of the way they used (eg. Mud feel as mud etc..) made them free from direct physical and physiological contact with people. The dwellings could be like as part of the context surrounding as they are free to participate to the dialogue with the context surrounding.

Planning of village lay out might be a successful response to the forces of social, cultural, climatic and contextual. In rain fed villages the fertile land near stream or canal were used for paddy cultivation, while much higher land beyond were

selected for dwellings. The arrangement of dwellings were not rigid and it reminds us "organic Symmetry". Dwellings were arranged responding to the geography of the terrain, Natural features, aesthetic aspects etc..In side the dwelling there were only intimate family relationships and in out side there were relationships with the dwellings surrounding. The water body was over looking by each dwelling. The garden of each dwelling represented abundance and endless potential. In other words "gardens are never end and buildings never begin". It was not necessary to bridge between things in the lay out. Because every thing was in touch with every thing. (completely interconnected). Martin Wichramasinghe says,

"...the path of the way of living and the contemplative method are the basis of Buddhism. It is an intuitive method that that enables the contemplator to project his personality towards his idea- Nirvana. At the end of the Nirvana contemplator, like the artist escape from his personality. So, the essential teaching of the Buddhism is spiritual discipline".

Buddhism and Culture. (P. 28, 1958)

WICHRAMASINGHE, MARTIN



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So when planning of the lay out , the provisions for the spiritual discipline of the dwellers might have been considered.

In the lay out there can be seen integrity between inside and the out side, hierarchically organized spaces, open ended flexibility, timelessness etc. and every space was created listening to the breathing of that particular context. Every space was created having potential for further grow into "places ". So, whole lay out had a " soul " like a living being. Buddhism encourage to respect Nature and it also abandoned the concept of cast. This helped for the arrangement of lay out that breathing as whole. All shared same land, same materials, same context in an equal way. No competing structures and the whole setup had a unique harmony and tranquility. According to Buddhist teachings there is no auspicious and non auspicious direction and this also gave freedom for the planning of the lay out. Those factors also influenced for the organic nature in planning of the lay out. Thus organic nature in the lay out planning of the rain fed villages can be identified.

Like in rain fed villages the organic nature in tank fed villages can be identified. There were very interesting landscape around the tank bund and the tank was shaded by huge trees. Irrigable land below the spill level of the tank bund were converted into paddy fields and the rest of the high lands were occupied by dwellings. Dwellings were scattered and the whole set up had a unique balance. Dwelling structures were provisional and most times they were arranged creating a center place. But this was not a static arrangement and due to the geography etc... this arrangement was changed. In both of these village types the highest land in the locality was dedicated for ritualistic purposes which was at the top of the social hierarchy.

Hill side villages were rain fed and the most dominant feature was the terraced paddy lands. The houses were scattered and were located on the slope of hills, along the contours. Access to the village by the stepped foot path. The paddy fields were mostly rain fed and located either at the foot of the hills or at a central location, mostly in high lands.

When various types of religions were well established, the settlements were planned according to strict conventions of religion. In the Kandyan period one finds this type of planning principle based on strict religious traditions of that period. The religio-cultural village or the settlements that were formed according to religious beliefs and accordance with the culture of that period shows this functional features very clearly. Example of this can be named as Ukgal Aluthnuwara. The streets in this village were laid with the 'Devala' or the temple as the focal center, of the scheme, with inner and outer processional streets circumscribing the shrine. The residential houses were located along the street. (figure4-8) This pattern of village planning was based on the temple layout and the 'Maha Vidiya' or the main street, leading away from it with residential buildings on either side. Lankathilaka Gadaladeniya, Embakke face into this category. In temple or Devala villages temple or *Dewalaya* (shrine of God) was built at the highest level of the land and it is the focal point of the village and the all the paddy lands around the temple was based on *Rajakariya* or the Royal Duty. In Emmbekka the main street is lined with dwellings owned by the ancestral office bearers of the Devala.(figure 4-9) They had their paddy fields behind the dwellings. In other words, Emmbekka

consists of a Devala and a depository at two ends of main processional street which was surrounded by an agricultural ring.

Figure4-8

...lay out of Ukgal

Aluthnuwara Devala village

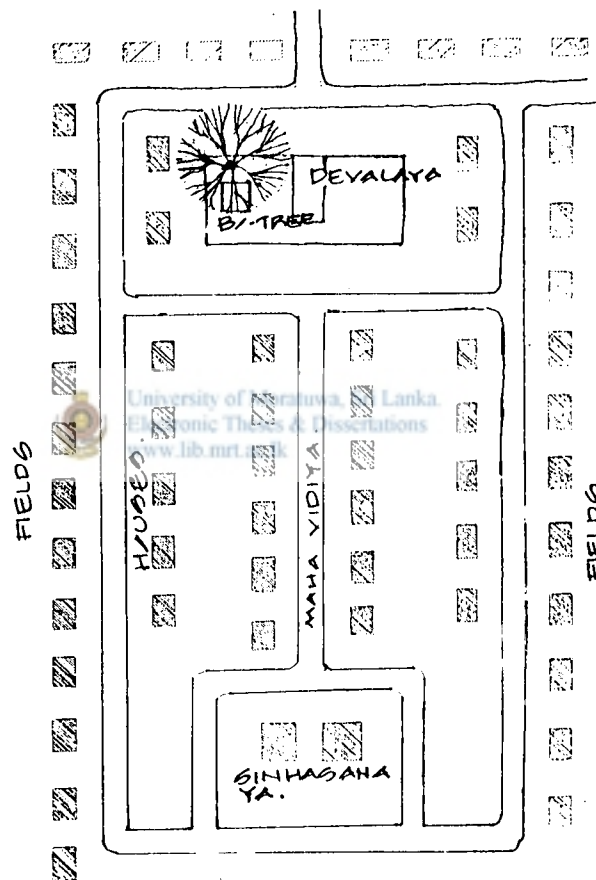


Figure4-9

...Embekke village

source: The book of Ceylon (P.380, 1908)

CAVE, HENRY



Architectural lay out of these villages was very linear organization. Community of the village and the spaces for dwelling clearly organized and their paddy lands laying at the lower elevation of the street further away from temple or Devalaya.

In Gadaladeniya and Lankathilaka Vihara too has retained functions similar to Embekke. (figure 4-10, 4-11 &4-12)

Figure 4-10

...lay out of Embekke Devala village

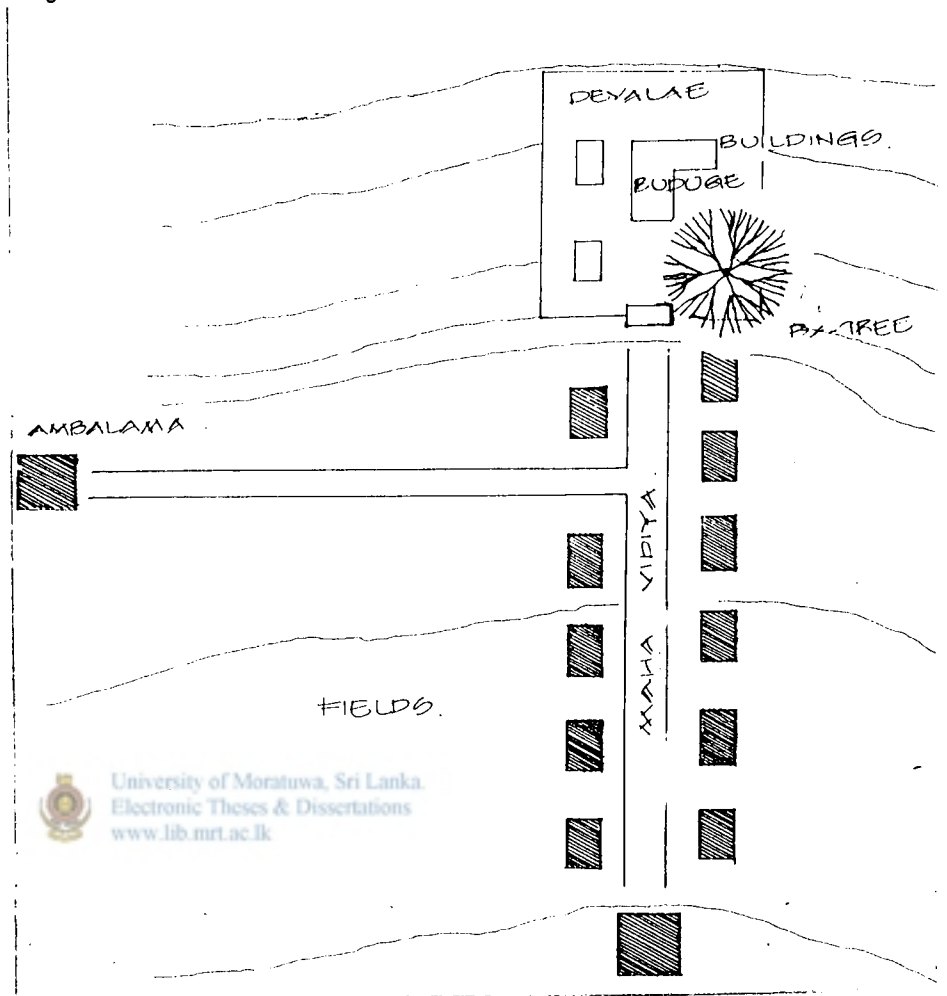


Figure 4-11

...lay out of
Gadaladeniya temple village

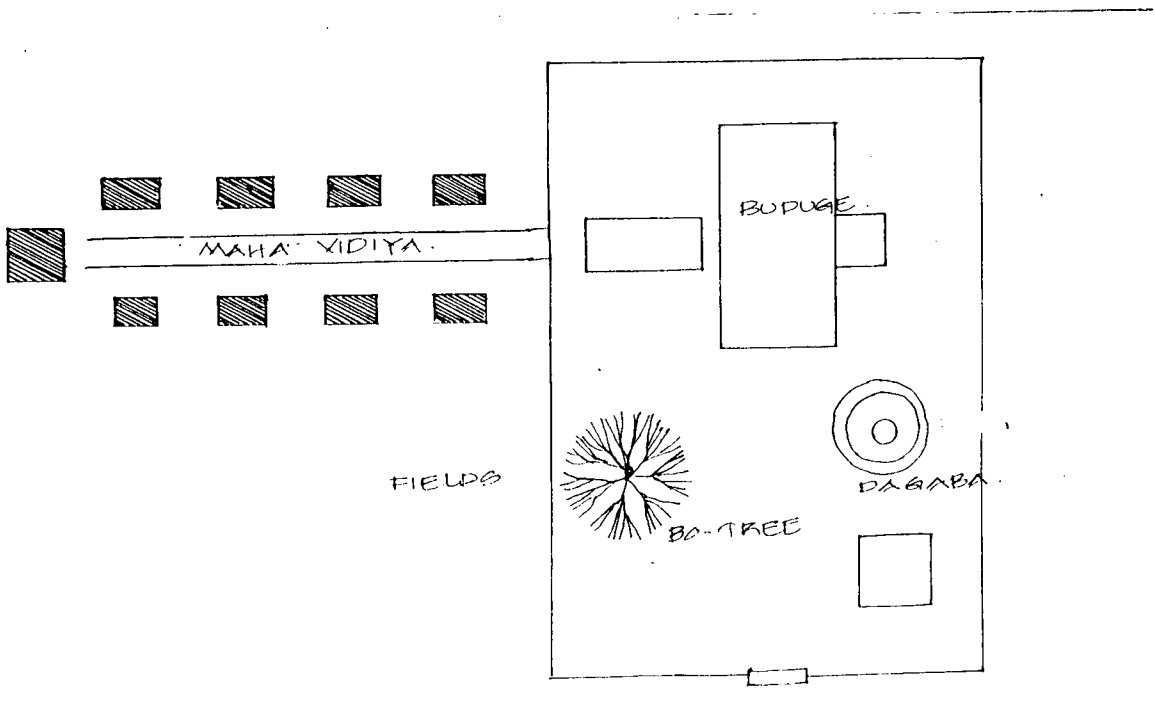
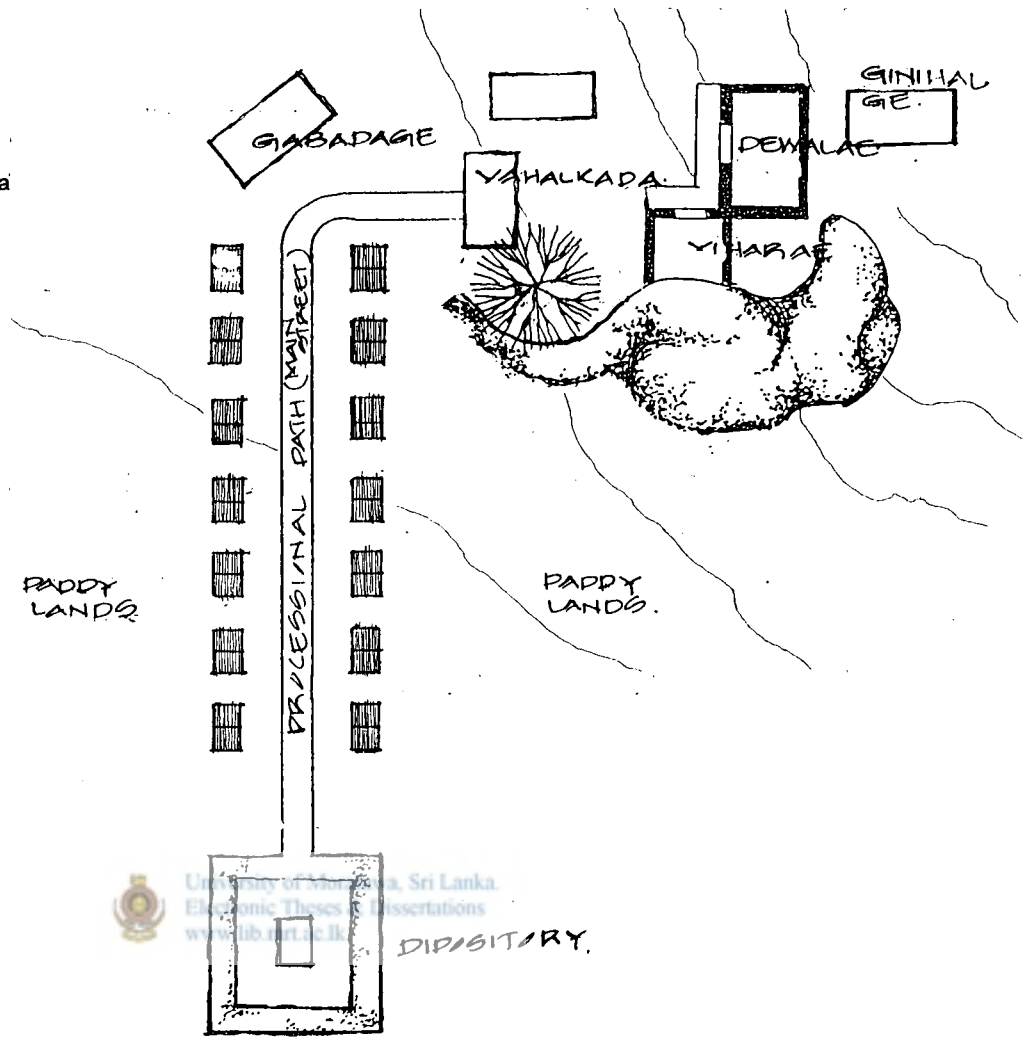


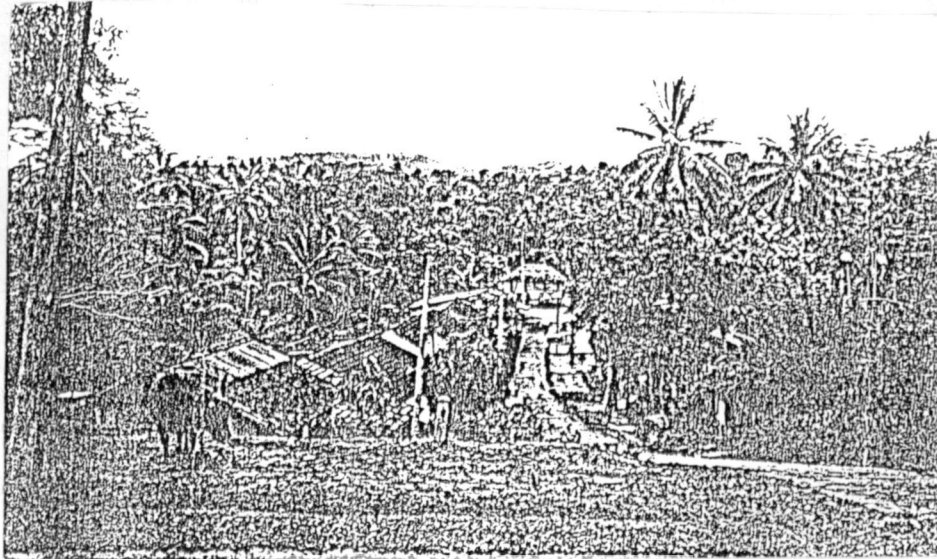
Figure4-12
 ...lay out of
 Vegiriya Devalagama



If we look carefully at these temple or Devala villages their organic nature can easily be identified. In the planning of Embekke Devalagama, the high land was selected for Devalaya and the buildings located by the side of processional path, were arranged in such a way that harmonizing with the surrounding context. This reduced the rigidity of the axial processional path. Buildings proceeds in its own, undoubtedly following the terrain. The existing natural environment was a paramount and was not destroyed. (plate 4-3)

Plate 4-3

...houses located on either sides
of the processional path that extended
to the Embakke in Embekke Devalagama.



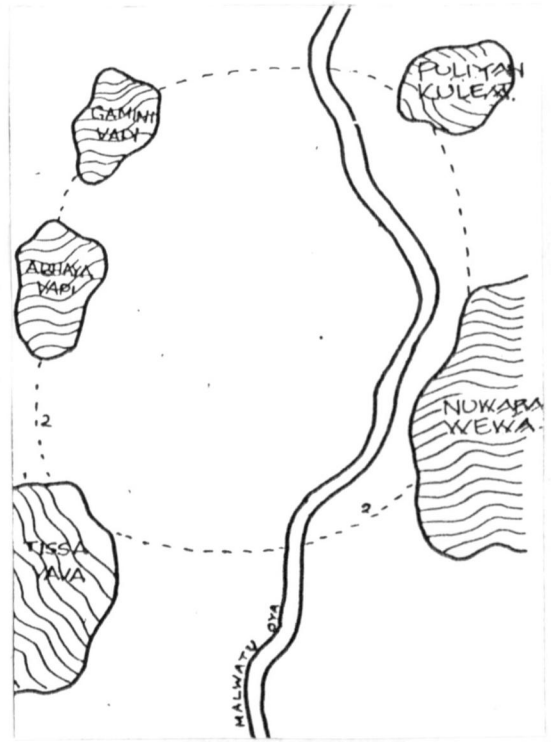
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4.1.3 (b) Urban Settlements And It's Organic Nature

When the villages settlements grew in number some of them gradually developed into towns or cities such as Anuradhapura, City planning with great emphasis on natural phenomenon was a common practice in Sri Lanka. The context suggest what and where to sited. Areas of high ground that had not been used for agriculture or trade was assigned for ritualistic purpose and for royalty. That's how most monastic complexes and palace complexes were sited on high grounds. Considering the formation of Anuraadhapura town, Anuradhagama was built by a man called " Anuradha", came into existence in the 5th century B.C. The early settlements were located on the two banks of Malwathu oya. The early settlers dammed the valleys and steams and stored the water that flowed in the river. The low ground was used for agriculture and around irrigable land the settlers built their huts. (figure 4-13)

Figure 4-13

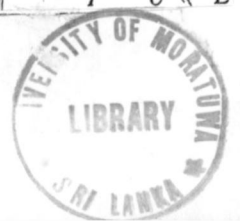
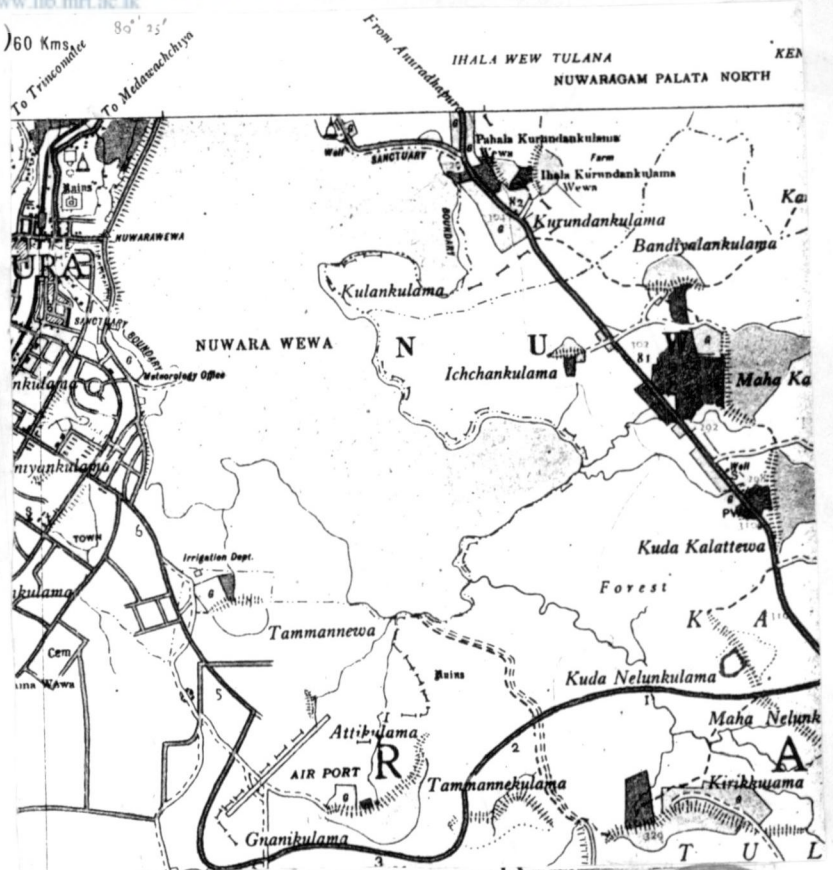
...agricultural communities
(ring 2),500 B.C Anuradhapura.



Tanks were built totally in accordance with the context, responding to the topography, Natural features etc.. Tanks even got it's shape due to those reasons. For example Nuwara wewa has got it's shape due to Natural features, such as forests the topography, the ruins surrounding etc...At Northern side there were high lands that dedicated for ritualistic purposes and to the West, there were forests and to the South were ruins and the land selected for tank was at lower level than surrounding. (figure 4-14)

Figure 4-14

...going along with all constrains
-Nuwara wewa & surrounding
source: Survey Department, Sri Lanka



Considering the geographical condition of North-central part of Sri Lanka, it's terrain is almost flat except the rock-out crops that arise, here and there. The height of terrain is not exceeded 900 ft from mean sea level, and in some areas it's about 800-1000 ft, and the rock out crops, that arise from here and there is about 1000-3000 ft in height. (figure4-1) The urban rural settlement planning and ritualistic building planning is in accordance with that the geographical conditions. Sigiriya, Mihinthale, Kaludiyapokuna, are some palace and monastic complexes, that sited at higher grounds associating with rock-out crops. So, the highest position in of the geographical hierarchy always acquired by the activity that is in highest position of the social hierarchy. Siting of the ritualistic buildings at highest positions of ground will remind of its existence & it's purpose to the beholder, and thus it will talk to the intellect of him. This depicts the Sinhalese priority to intellect than to heart. So, this beautifully says how the lay-out planning is shaped by the religio-cultural context.

Macro and Micro Planning in Sri Lankan Vernacular Architecture is the best evidence for the way of adapting of the built environment in accordance with the Physical, social and Physiological context. So, "Organic concepts" were not new for Sri Lankans. If we look carefully at this phenomena from a historic point of view, then it is easy to realize that the "built" and the "environment" (context) were so harmonious, and the architecture, were always a part of their environment (context) using its resources on friendly terms and thus belonging to the place.

The 2nd phase of development of the Anuradhapura urban settlement was the formation of city center (citadel). With the increase of population, the weekly "pola" was inadequate to meet the daily requirement of the people. Therefore the city centre with the shops and the residence of the chieftain came into being. The city center was enclosed with a wall, enclosing about ½ mile square. With the introduction of Buddhism (In 265 B.C) the next phase of development was happened. The royal patronage extended by the kings resulted in the allocating of temples and dwellings for monks. Areas of high ground that had not been used for agriculture or trade was assigned to these viharas. Therefore it resulted in the formation of a ring of Mahaviharas located between the city walls on one hand and agricultural communities with it's reservoirs & fields on the other. During 7th & 8th centuries the major reform and subsequent change became evident in the

Anuradhapura town plan with the addition of an external outer ring of forest monasteries.(figure 4-15, 4-16, 4-17)

Figure 4-15

...agricultural communities (ring 2)
& city center ,400B.c. Anuradhapura.

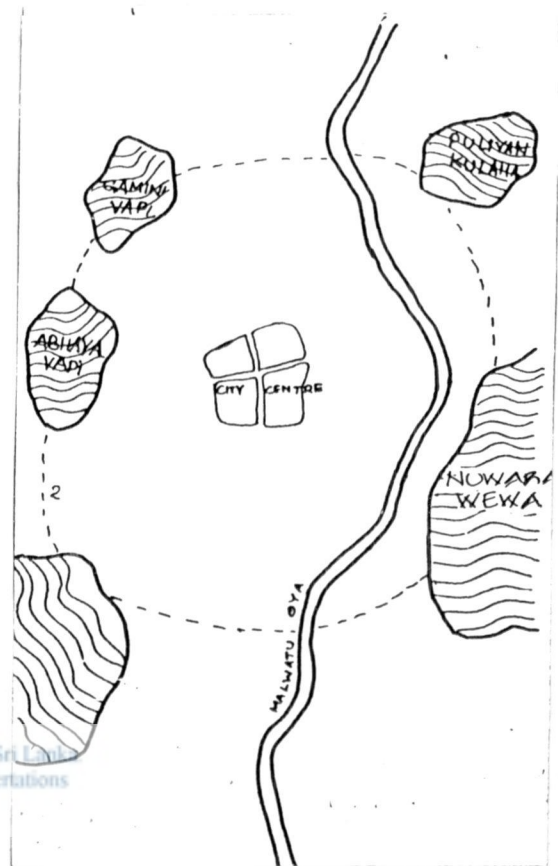


Figure4-16

...agricultural communities (ring 2)
& city center ,Mahavihara (ring 1)
250 B.c. Anuradhapura



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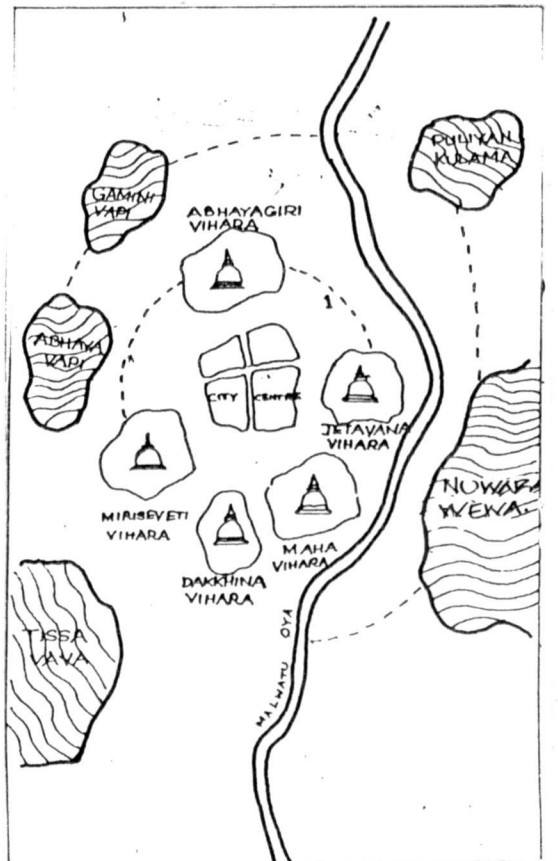


Figure 4-17

... agricultural communities (ring 2)
& city center ,Mahavihara (ring 1)
forest monasteries (ring3),700 A.D
Anuradhapura.



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4.2 Organic Nature In Micro Planning – Planning Of Building Complexes And Individual buildings

Case study - Kaludiya pokuna Monastic Complex

4.2.1 Historical Perspective In Wider Context

The monastery identified today as Kaludiya pokuna that found in the valley between Ethvehera kanda and Anai- kutti kanda, is one of the many extraordinary sites of Sri Lankan landscape. It's no accidental creation of man. It is a best example that existed as a dependent of environment while also adding to that environment. It is a step by step growth process that has that has been sensitively woven around to feel of man in his work with rocks, sand, trees, turf and water . The pond [Kaludiya Pokuna] is the main attraction of the monastic complex and the largest of ponds in Mihinhale. It is identified as the "Porodina Pokkarani" referred to in the tablet of king Mahinda 4 [956-972 AD] found at Mihinhale. According to H.C.P Bell, a more perfect sanctuary for the sons of Buddha, could not be found any where throughout the length and breadth of Ceylon. [Bell, H.C.P. ASR 1914, Colombo. P.47]. Bell further says, " The first peep of his delightful glen as it suddenly bursts as the charm of aze, is entrancing in it's quite picturesque ness.

4.2.2 Planning Aspects of The Lay-Out

Considering the Sri Lankan context, there has always been a strong, symbolic relationship between Man, Architecture and Environment. No building can be conceived without this consciousness of landscape and architecture. Therefore, Kaludiya Pokuna is the best example for this interdependency co-existence with the environment. The architecture of Sri Lanka is not architecture of buildings but the one of spaces. It is an organic architecture and for this people's thinking pattern related to " organic concepts" might have influenced lot. Buddhism, the main religion of the country might have compelled for these "organic thinking". According to Buddhism man is a part of Nature and being part of Nature, respect it and serve to it is considered as a noble thing in Buddhism.

ආරාම රෝගා වන රෝගා
 යේ ජනා සේනා කාරකා
 ඊර ක්ව උදු පානංච
 යේ දුදුනි උපස්සයං

(සංයුක්ත නිකායේ - දේවතා සංයුතියේ
 චතරෝථ සූත්‍රයෙන්).

Here it is said that planting of trees, constructing of bridges, ponds, uposathagaras etc ... are noble things and it will may cause for merits.



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රමණියානි අරඤ්ඤාණි
 යත්ථන රමණි ජනේ
 චිත හගා රමෙස්සනිති.
 නතේ කාම ගචේසිනෝ.
 (ධම්ම පදය).

තේරුම: සුඤ්ඤාණික තුල්ලකාවන්ගෙන් ගැලපුණාටු නානා අයුරින්
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 සාය කල ආභවනී ඉති රහතුන්, ඒනි අලමන්නාන. මන්
 නිසාද යත් උනිවහනියේලා කෙලෙස් කාමයන් නොසායන
 බැවින්.



Here it is said that the serene and tranquil quality environment that can be achieved by place with trees.

In selection of the site for this monastic complex, the availability of water might have been considered the most important .Because of that it was sited, in association with Kaludiya Pokuna. It was invigorated by a dynamic relation between dominant and subordinate masses and the combination of geometric and organic terraces. It was set out to enhance the sense of serenity. It rejoices in a setting that spread as an axis, which is harmonize with the surrounding. The form is in a search of a new freedom of shelter within Nature, and relationship between inside and the out side.

In Sri Lankan context people's thinking pattern is based on agriculture and culture. Each and every inch of land emphasis it very clearly. In designing this building complex the cultural environment of the area might have considered. The Kaludiya Pokuna is related where ever possible to the site, to the adjoining sites- Rajagirilenakanda, Eth-Veherakanda and Anai-Kuttikanda without destroying the integrity of the place (figure 4-4 & 4-5)



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Plate 4-4

...siting in relation with the adjoining sites,
view of Rajagirilenakanda from Kaludiya pokuna

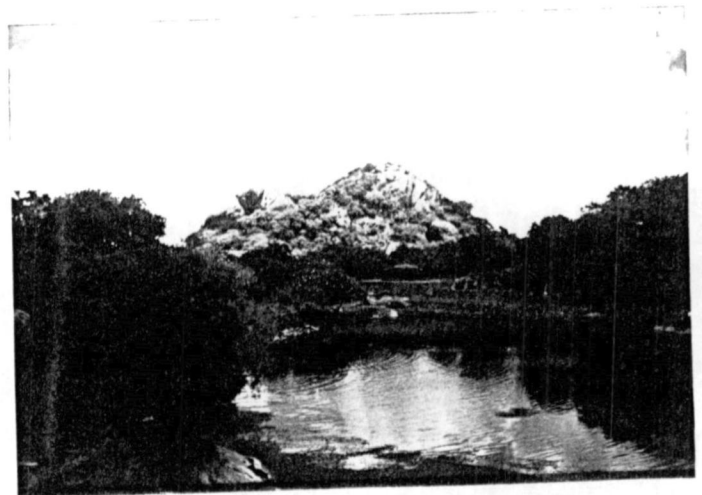


Plate 4-5

...view of Anai- Kuttikanda
from Kaludiya Pokuna



Built masses organized within the site were carefully thought of and based on the living pattern of the Buddhist monks. The place first talk to the intellect and after that to the heart. This reflects the Sinhalese priority to the intellect than to the heart ; as they have influenced by the Buddhist philosophy where the main teaching of it " impermanence " make him simple and humble man who admires serenity to talk to his intellect. The rectilinear and squarish built spaces , boulders and terraces are correctly organized for the equilibrium of the whole setting, and the whole setting is harmonize with the surrounding Nature.

In general organic place represent the sensitivity and the intuition. It actually balance in air and does not show any axial composition. It is design, so that the weight of one side exactly balance the other side ; at the other center of gravity. This organization of spaces shows a discreet understanding of the Natural site. It is by the excellence and the experiences of the free thoughts and free people. It is the organization that expresses the most simplicity and the casualness of the life of Sinhalese thinking pattern is nourished by the Buddhism, made him a simple and casual man and for organic concepts this might have contributed lot.

4.2.2 (a) Organization Of Spaces.

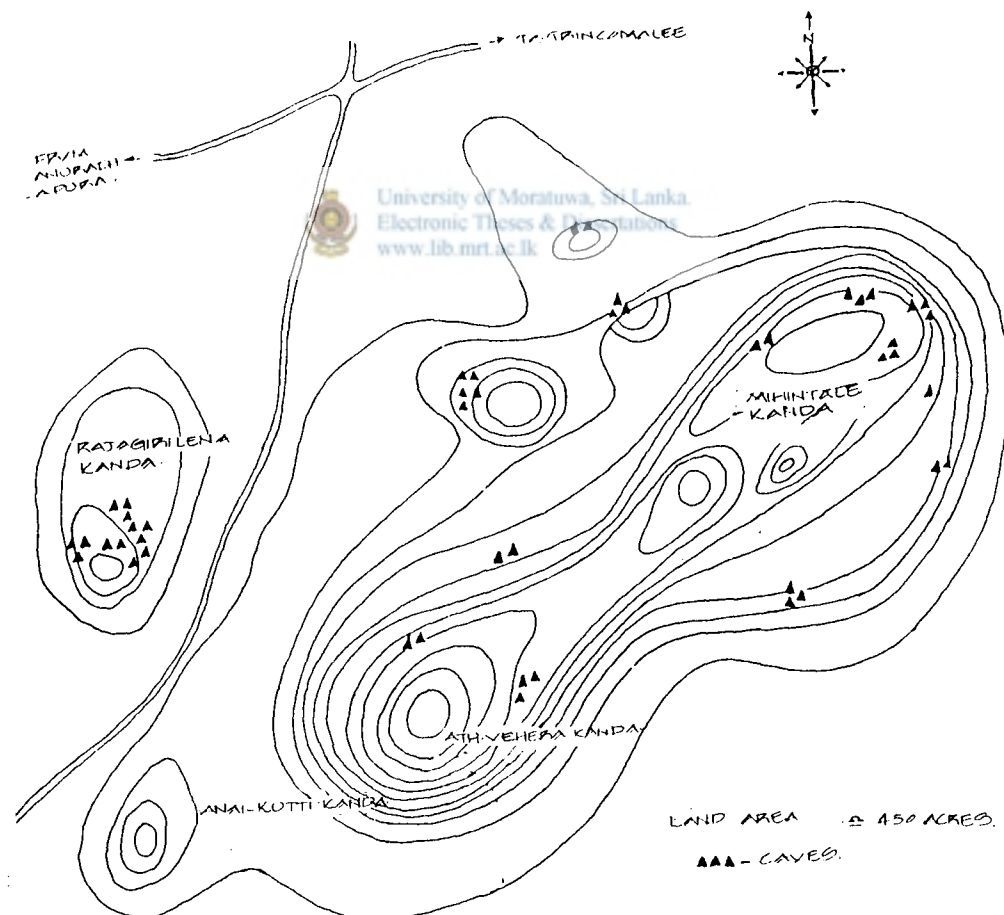
Kaludiya Pokuna or Black water pool is situated in the valley in between Eth-Vehera kanda and ani-Kuttikanda , and due to the geography of terrain and the surrounding the spaces were organized, in the most harmonious manner (figure 4-18). The lay out of the monastic complex had got it's shape due to adjoining rocks - Eth-Veherakanda and Anai- Kuttikanda. This oblong shape of the pond had got due to this natural setting of the rocks and boulders.

Figure 4-18

...the geographical map of Mihintale

source: Purana Annuradhapuraya.(P.221,1995)

SENEVIRATHNA, ANURADHA.



Thus the lay out got it's shape mainly due to the geographical conditions of the terrain. The selected site for Kaludiya Pokuna was 400 feet high from the mean sea level and the surrounding area is about 500 high from the mean sea level. (figure 4-19). In accordance with the contours running (500 feet contour) around the site the monastery had got it's shape. The narrow south East corner, might be due to the shape of the 500feet contour that going close by. Thus the context had determined the shape of the whole complex and this is purely an organic idea. The approach to the complex doesn't emphasized much although it was sited along the side of Kandy- Medawachchiya main road. This is also one of the concepts of the architects of organic tradition. Instead of providing well elaborated entrance, they make the mind of the beholder to fit the actual setting of the complex by talking to the intellect, through spaces created until enter to the complex. Buildings in the complex was composed to the South-West of the complex viewing all beautiful views of the surrounding.

The other spaces of the monastic complex was organized considering the Kaludiya Pokuna or Black water pool the most dominating natural feature in the landscape , as the main feature , while using another existing natural features and the terrain. (plate 4-6 & 4-7)



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Plate 4-6

...responding to the context
the way that the natural features of the
context determined the built environment.



Figure 4-19

...Kaludiya Pokuna in
it's geographical context.

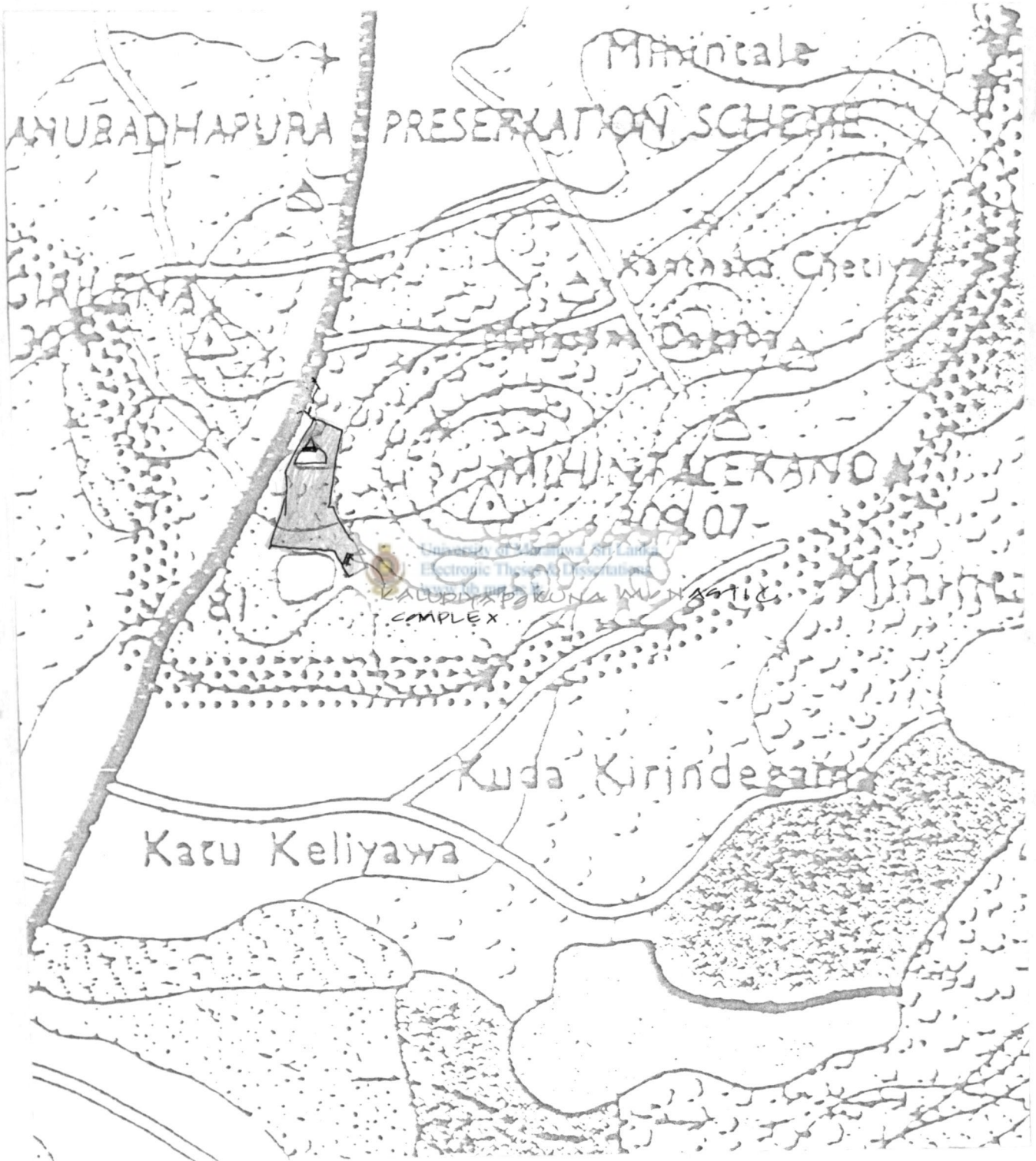
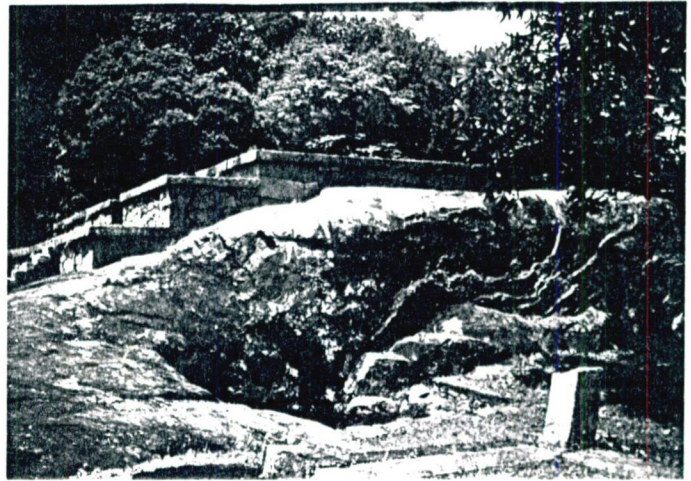


Plate 4-7

..built environment that
harmonize with natural
environment (context)



The solitary life of " Pamsukulika" bhikkues asked for a serene environment, and the carefully organized built spaces with natural elements might have fulfilled that need. (plate 4-8)

Plate 4-8

...the solitary life of
the Pamsukulika Bhikkues.

Source: Purana Anuradhapuraya (P.187,1995)

SENEVIRATHNA, ANURADHA



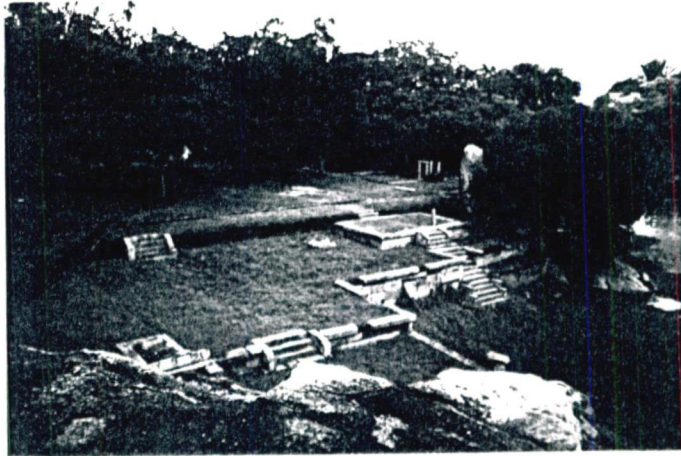
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The lay-Out of Kaludiya Pokuna is a good example to understand the principles adapted in introducing an axial geometry into an organic setting. It is meaningfully arranged integrating the natural forms in visual and plan lay out. The natural beauty of the site is enhanced by introducing geometric discipline with the creation of rectangular terraces. (plate 4-9)

Plate 4-9

...the geometric discipline created by terraces.



The linear terraces along the main axis has the levels gradually reducing up to the longest terraces, and climbing up again step by step, from terrace to terrace, reaching the buildings.(plate 4-10)



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Plate 4-10

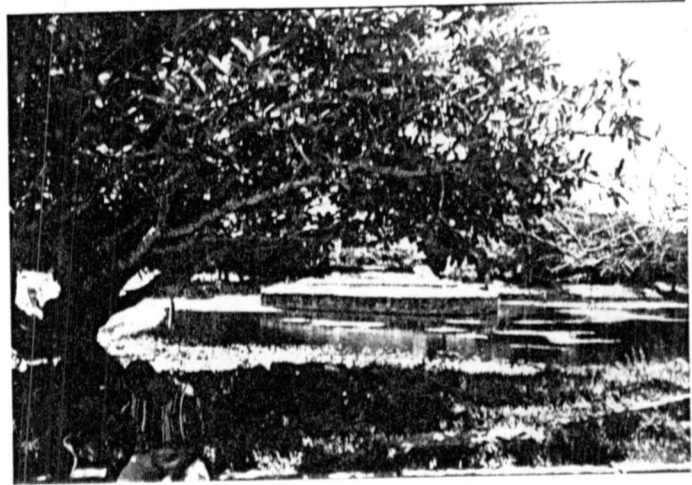
...the width of the terrace reduced to form a path way



In some places pathways were created having side spaces for buildings and trees by reducing the width of the terrace (plate 4-11)

Plate 4-11

...width of the terrace
reduced to give a space
for a tree



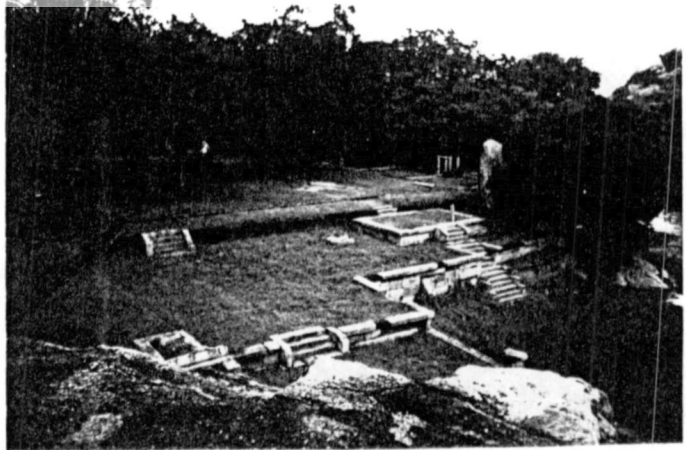
More than twenty levels have been created with the terraces and the rain water is carefully brought down to the pond through gargoyles and spouts (plate 4-12).



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Plate 4-12

...terraces created
towards the pond.



Natural boulders and rock out crops were consciously integrated to architectural lay out. Natural levels of the terrain were retained and formed terraces. Some buildings were constructed on the top and reached by steps that cut out into the rock, some were constructed at ground level and some rocks were

integrated into buildings converted to caves, some caves were extended with stone structures. Many boulders were left purely for aesthetics. For the life of the building complex meaningful organization of spaces is very important. When organizing the spaces of this building complex, it was done giving provision to see the beauty of the site, siting almost all the buildings of the site at the South- West, overlooking Kaludiya Pokuna and surrounding beautiful sceneries associating with Rajagirilenakanda , Eth-vehera kanda , Anai- Kuttikanda and other surrounding . This is what most of the architects of organic tradition doing. For example the Baensch house plan (in 1935)- the best private house of Hanse Schoroun during the Nazi period, placed the main body of the house at North – West corner of the site. (figure 4-20,4-21) So, the organizing of spaces, giving prominence to the context is a main feature. Similarly the of approaching has close relationship to Kaludiya Pokuna. Like Kaludiya Pokuna it has a winding flight of steps, and until the beholder finishing of the climbing up the flight of steps, he is not aware of the site and the surrounding with vast views etc... This situation is similar to Kaludiya Pokuna. All the spaces in Baensch house was arranged to capture the view of the site, and it's diagonal shift is a response to the view. As the main body of the house was placed at the North- West corner of the site, the minimum disturbances to the site and to the views happened. Looking at the site is a thing done by most Architects of organic tradition. In this case the way of organization of spaces to capture the views of the site and the surrounding has similarities both in Kaludiya Pokuna and Baensch house. It is evident that Scharoun' s interest focused on the relationship between the " places " in the plan and on the handling of the route through to the garden. Natural features such as trees, rock outcrops and the topography of the terrain was used interestingly and this is also similar to the situation at Kaludiya Pokuna. Terraces were formed using the different topographical levels of the site.

Figure 4-20

...Baensch house plan (1935)

source: Hans Scharoun (P.88, 1995)

JONES BLUNDELL, PETER.

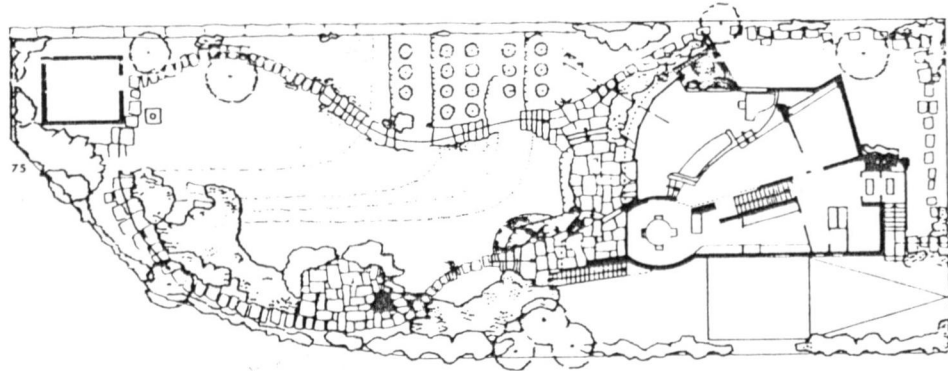


Figure 4-21

...lay out plan of Kaludiya Pokuna
siting is similar to Baensch house



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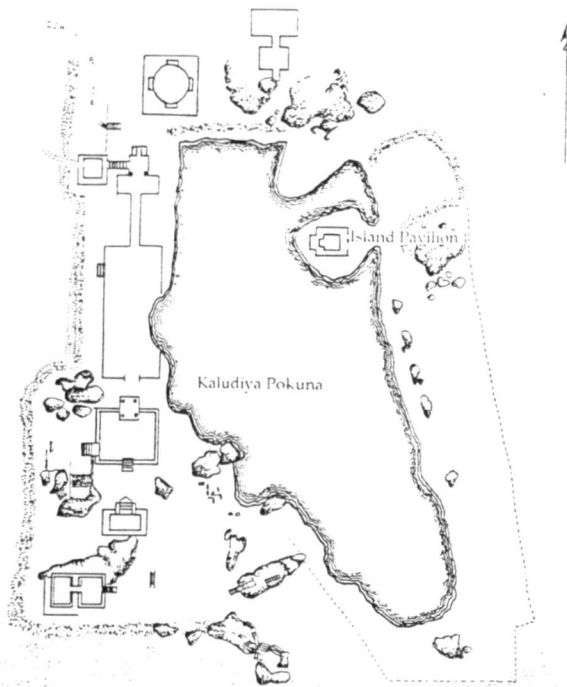


Fig. 22
Kaludiya 1
8th-10th ce
Source - F
ICOMOS

4.2.2 (b) Hierarchical Order And The Integrity Of Inside And The Outside

Kaludiya Pokuna is situated, above a quarter mile to the South of Mihintale bazaar. The flight of steps lead to the Kaludiya Pokuna is rather inconspicuous, and the flight of steps the person who climbing up the flight of steps will not think of having such a splendid area at the beginning, and when climbing up further his eyes moves with the rhythm of the terrain and attracted towards the Dagaba, the very first thing that will see of the monastic complex.

It acknowledges the existing natural environment, the local traditions and craft from this point onwards. The building complex proceeds on it's own undoubtedly following the terrain nestling into it and exploiting to the maximum the beautiful surrounding. In Sri Lankan context there has always a symbolic relationship between architecture and environment. No building can be conceived without this consciousness of landscape and architecture. The monastic complex was invigorated by a dynamic relation between dominant and subordinate masses and a complex sequences of turns passage to spaces, oblique and wholly unexpected perspectives. The whole design is set out to enhance a sense of serenity. In Sri Lankan context peoples thinking pattern is based on agriculture and culture . Each and every inch of land emphasizes it very clearly. In designing this building complex, it has been carefully considered the cultural environment of the area. The kaludiya pokuna monastic complex is related wherever possible to the site, adjoining sites- Rajagirilenakanda ,Eth-veherakanda etc.. without destroying the integrity of the place. Built masses organized within the site are carefully thought of and based on the order of the living pattern of the Buddhist monks. When one finishes the climbing up of the flight of steps of the entering direction he may capture the view of the Dagaba at the North-Eastern side and the guard house. At the entrance to the complex the Dagaba plays the key role in transition and is placed at the head of the building complex. There is a doorway framing the view of the East side of the Kaludiya Pokuna and through main entrance, the beholder may grasp the vast view of the complex. So, the beholder may use his perception here to choose the quite right way to his destination. However, the Sinhalese habit of giving first place to the intellect and then to the heart is reflected. Each and every spaces passing changing of views, changing of light and wind breeze, all help to achieve this.

The highest place of hierarchy given to the most important activity. Here "Padhananghara" or the double platform building was acquired the highest position of the ground and it is the end of the axial layout which is at the South of the complex. The outer platform or Malaka was an open space probably used for the purpose of meditation and preachings and the inner platform Pasada is composed of one solitary cell for meditation and kutti of residence. Meditation and preaching is the most important activity in the monastic complex and the prominence was given to it. The sequence of experiences one was gained when coming to the highest position is very interesting and amazing. This recalls us the Sinhalese sensibilities and awareness of the context and the way they keenly placed the buildings according to it, their awareness of the relationship between inside and the outside etc.. In other words it depicts the Sinhalese perception of organic concepts and this recalls us the timelessness of good architecture.

4.2.3 The Way That The Elements Of The Lay Out Were Arranged To Achieve An Organic Form.

4.2.3 (a) Flight of steps

Flight Of Steps leading to the Kaludiyapokuna monastery is winding / circular one and the reason for this nature is the presence of rocks & boulders. This asymmetrical line of approach suggests informality, incompleteness and movement. Nevertheless asymmetry must always maintain a certain harmony and balance. It also help to change the view of the beholder. The flight of steps are made out of rock-cuts that had got the surroundings. The trees and Shurbbery along the path cast their shadows over it. So, that the open area at the entrance of the complex looks brighter and larger, when the visitor finally see it for the first time. There is thus a certain pleasant surprise in the approach to the complex. So, the closeness to the context (here Nature) may help to create the qualitative aspects of the built environment or it leads to the health giving architecture- an organic architecture. This approach is also similar to the approach to the traditional Japanese house (called Sukiya style) which is a reflection of certain traditional Japanese moral attitudes. For instance, the

Japanese avoids directly in the face, because he regards averted eyes as a symbol of respect and humility. This reflects how the Japanese moral attitudes influenced for organic concepts. But in the case of Sri Lankan situation this asymmetrical way of approaching to the complex was not influenced by the such moral attitudes instead of that, the encouragement from Buddhism to respect nature might have influenced for this asymmetrical way of approach. However this winding flight of steps, creates constantly varying and quite often beguiling vistas as one moves along it. As an example, at the beginning of the flight of steps, only two boulders and surrounding trees can be seen. When going further the path is further gloomy and trough the boulders and trees, the beholder can see a vista-a glimpse of light and that will arise him a hope. When he further proceeds the trees and shrubs beside the path is much less and the shadows cast by them is also less. So the beholder gradually open out to the light and to the vast view. When proceeding ahead this flight of steps the element of the complex that first appear is Dagaba reminds the presence of such a ritualistic complex. (plate 4-13, 4-14,4-15 & 4-16) (figure4-22, 4-23)

Plate 4-13, 4-14, 4-15& 4-16

...sequence of experiences

...approach to Kaludiya Pokkuna.



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Figure 4-22
 ...a winding path way
 plan of the entrance path

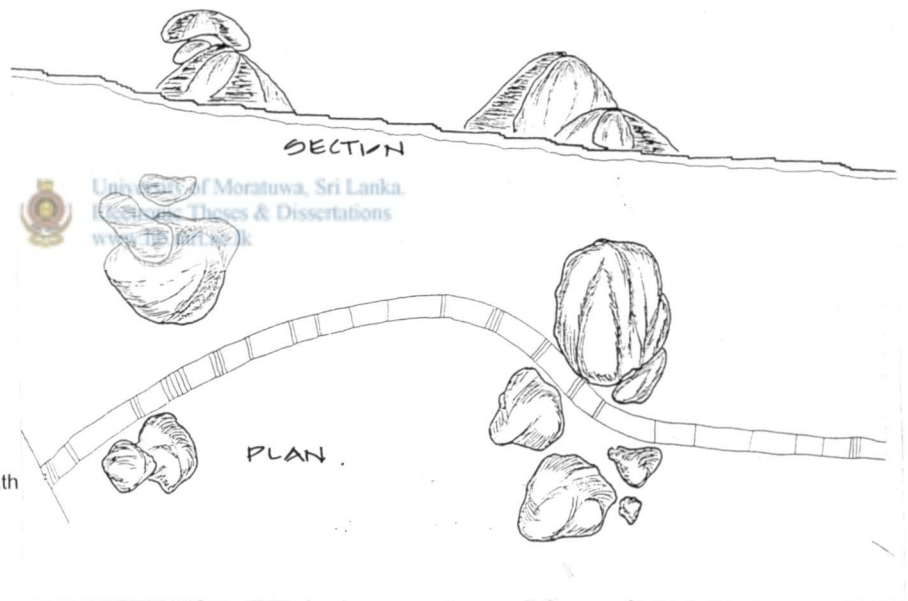
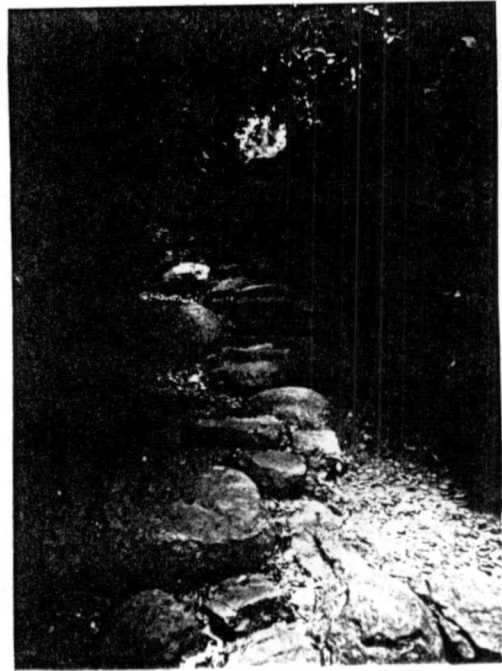


Figure 4-23
 ...section of the entrance path

The secondary flight of steps that leading to the complex at the West, is not as much as prominent the main flight of steps, but reflects the same experience as of main flight of steps. (plate4-17))

Plate 4-17

...the glimpse of the complex through secondary flight of steps.



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.Here also, for the vast, splendid view of the complex, the beholder may not open out directly. At the finish of the journey through this flight of steps, the beholder will open out to the open space with, Panchavaṣa on one side and the cave house and the library building at the top of the rock. This level is rather low level than to the level of main level of the monastic complex. Here the beholder may grasp whole view. This gradual transition make the mind of he beholder to the transcendence of the presence of the places with the soul. The use of rock, stone cut outs and existing rock pieces were used for these steps and it indicate the use of naturally existed materials. All these caused or it's organic nature.

4.2.3 (b) Entrance Doorways

Entrance demarcate the entering to the different realms of the building complex. Terraces are steps up gradually and, every terrace is associated with an

entrance door way. All entrance were aligned and of almost the same scale. Any of them are not dominating. They are very simple and not monumental. The simplicity of craftsmanship will help it to rest compatibly in this natural context. For this organic thinking might have influenced a lot. Actually this simplicity is an award of Buddhism. The human scale of doorways might have made feeling of beholder and user, that the entrance as a part of the context and himself. (plate 4-18, 4-19)

Plate4-18

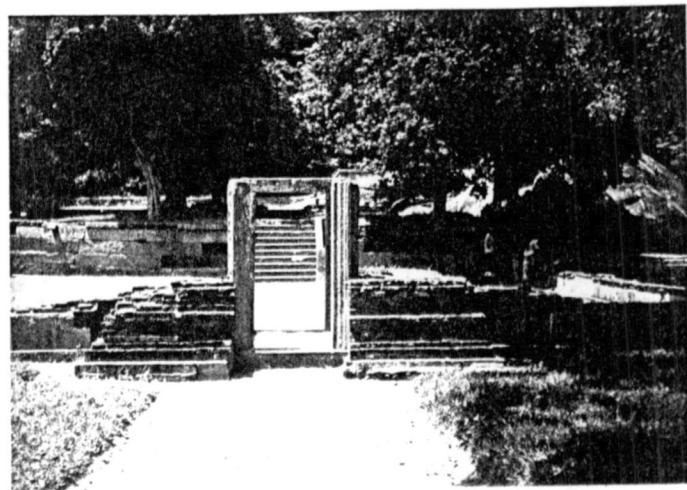
..the simplicity of craftsmanship
main entrance to Kaludiya Pokkuna



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Plate 4-19

Secondary door way

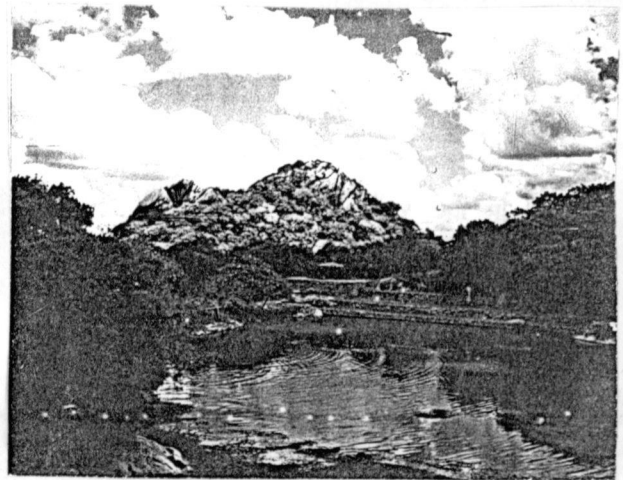


4.2.3 (c) Natural Elements - Water , Rock and Boulders

The use of natural elements were done in such a manner, that might have due to the “organic thinking .” The effect of that t natural elements considered as a moderator of building circumstances. That shows how best they were connected with the context. For example architects of organic traditions, always try to capture the rhythm of the site into their buildings. Likewise here , the meditating caves and “Sakman malu” were designed facing to the pond. The quite nature of the water of the pond give quite effect to the mind and greater deal of concentration. Buildings were sited to capture the view of the pond at any where of the complex .

The black colour effect of the water in the Kaludiya Pokuna adds a gloominess to the environment. This gloomy effect gives a sad feeling which makes the meditating monks to realize the uncertainty of the life, through the Load Buddha’s teachings (plate 20)

Plate 20
...the black colour
effect of Kaludiya Pokuna



Rocks and boulders were used to give a symbolic structural and a esthetic qualities to the environment and some times to demarcate the boundaries. The

natural rock and boulder were exploited in a very skillful manner at the Kaludiya pokuna monastic complex.

Unlike in the other monasteries the rock and boulders at the Kaludiya Pokuna complex are scattered all around the site, without giving prominence to any particular rock and were made use of in a different concepts. Here , only three boulders have been used for building purposes while the others stands isolation or in clusters of three or four. There are instances where the natural rock has been used for structural purposes , but in keeping with the landscape , one system is buildings are made on a rock which is terraced . The Dagaba at Kaliudiya pokuna has been built on a factors by giving prominence to the rock and to give a clear view of it (plate4-21) the other system the rock is used on a foundation for building. (figure 4-24)

plate 4-21

...The Dagaba at Kaludiya Pokuna

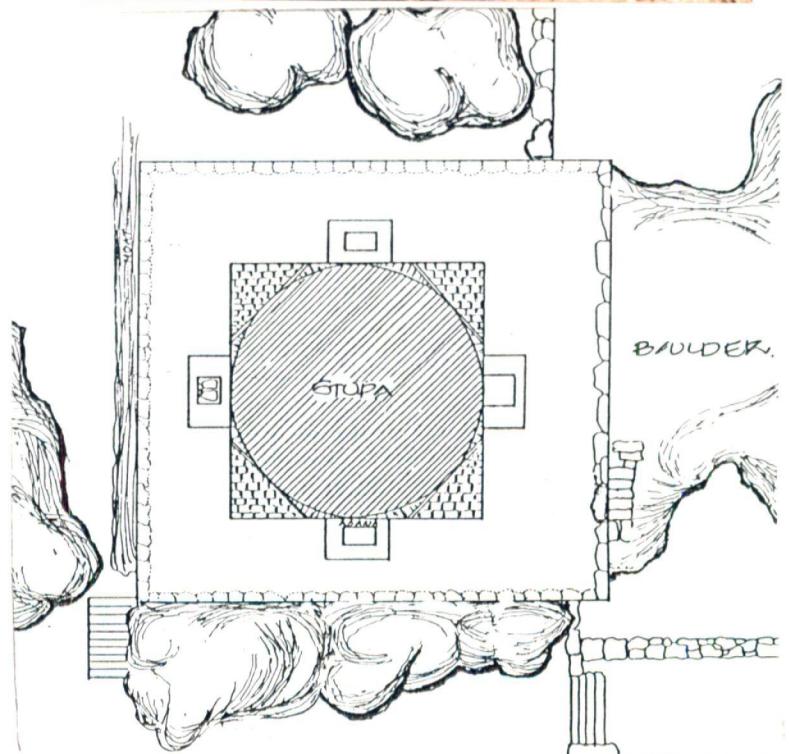


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Figure 4-24

...Plan of Dagaba at Kaludiya Pokuna



The other system, the rock is used on a foundation for the building. The lower platform of padhanangara at Kaludiya Pokuna serves as a rock foundation and resist the heavy structural load(plate4-22)

Plate 4-22
...the lower platform
of padhanangara



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This depicts the way that the ancient monastic designers, have taken the maximum use out of rock & boulders .

Caves and other buildings of the monastic complex had been widely incorporated with natural rock & boulders and use of granite and brick along with the natural boulders have also been carefully done to create a good design in keeping with natural setup.

So , these are purely organic ideas. According to the architects of organic tradition building that connect with its roots make it's existence with it's context and thus create integrity of it with outside.

4.2.3 The Way that the Elements of the Layout were arranged to achieve an Organic Form



4.2.3 (a) Individual Buildings

Cave House

As discussed earlier , the caves and other buildings have been widely incorporated with natural rocks and boulders. “re-use” is a thing that caused for reuse of caves for building purposes (plate 4-22)

From Japanese concepts of Zen it is said of simplicity and minimal living as a way that offer a sense of liberation, a chance to be in touch with the essence of existence, rather than distracted by the trivial. Zen Buddhist philosophy which is at the root of Japanese culture encourage for simplicity and the re-use is in association with that simplicity, and thus the interest for re-use is made on Japanese. Similarly in Sri Lanka the simplicity and casualness of people is an award from Buddhism and thus it had been encouraged for re-use. So, re-use is an organic concept where man get the chance to contact with his roots, and this organic concept can be seen at Kaludiya Pokuna. In Kaludiya Pokkuna cave house it is interesting to see the way that the volume of the interior of the cave house had determined by the rock it was associated with (figure 4-25,4-26)

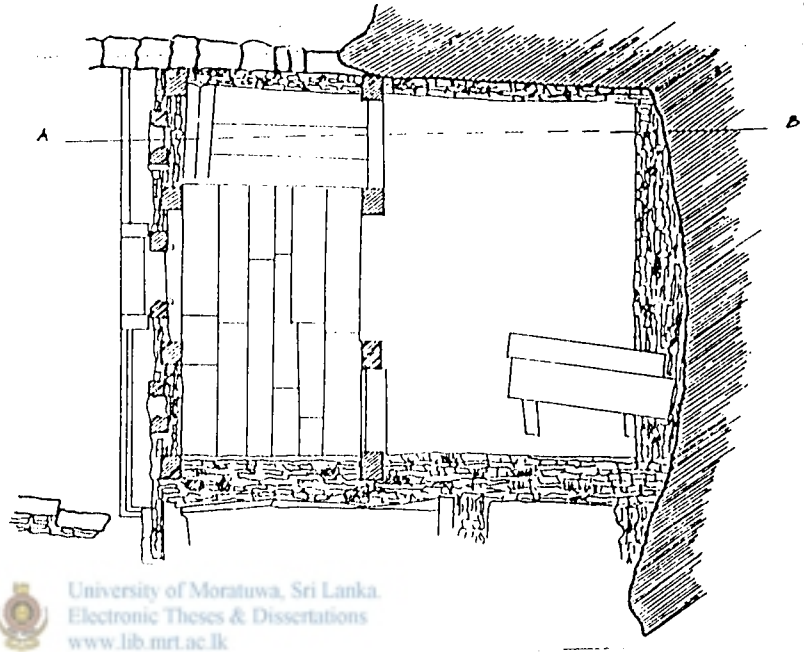
Plate 4-22

...cave house at Kaludiya Pokuna.



Figure 4-25

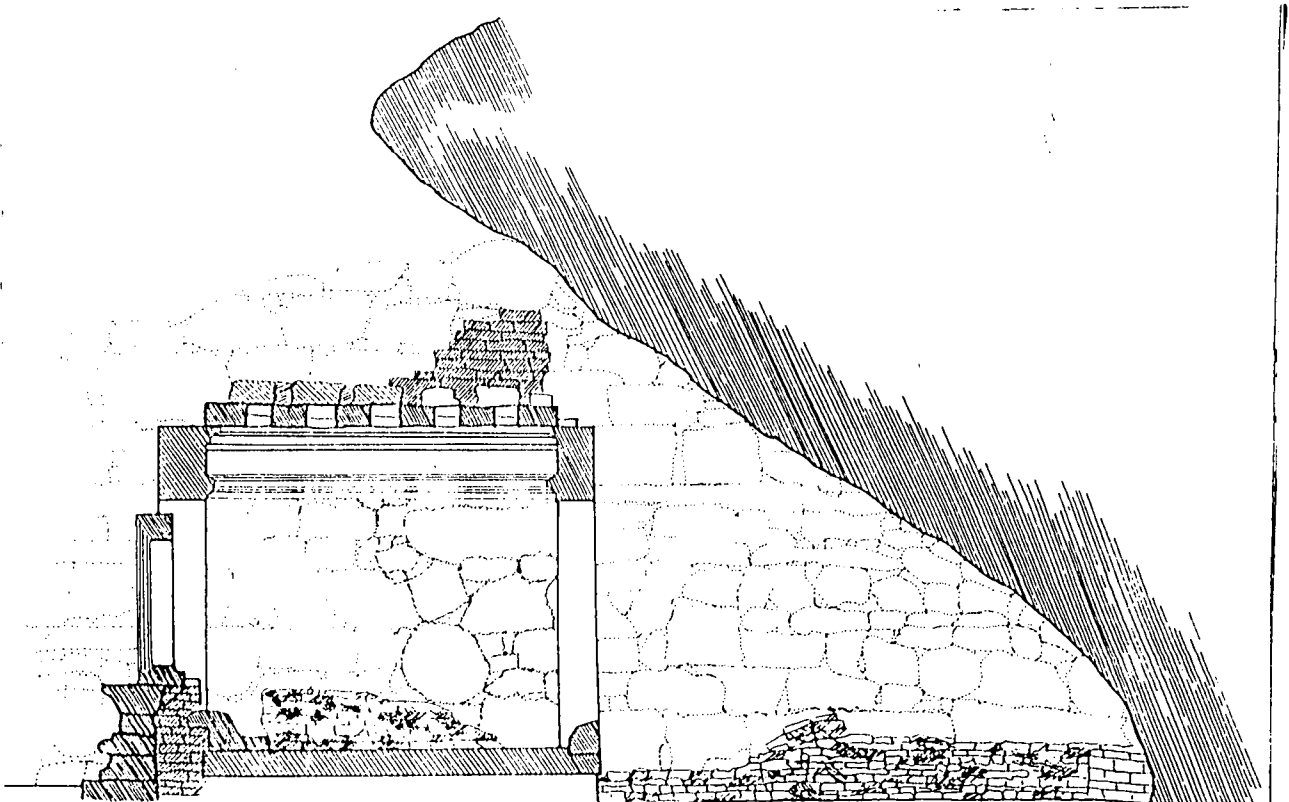
...plan of the cave house, Kaludiyapokuna



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Figure 4-26

...section of the cave house, Kaludiya Pokuna

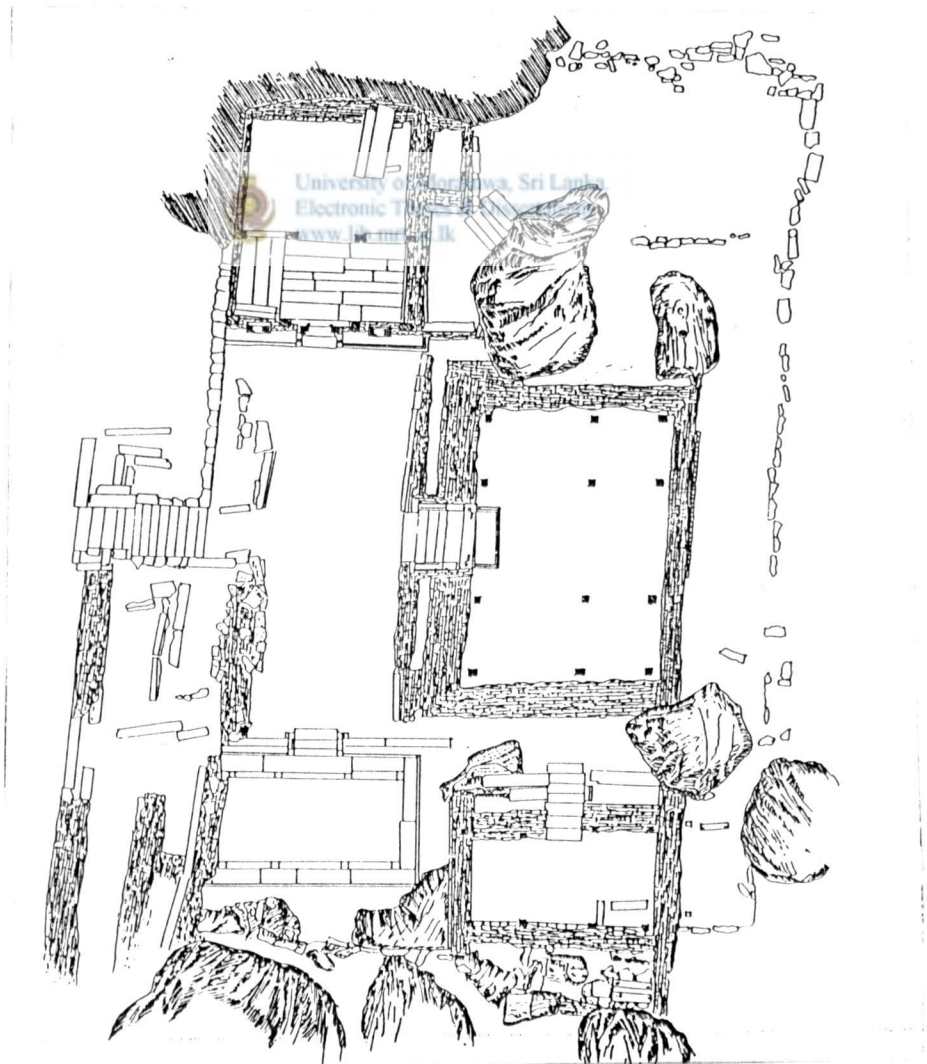


Panchawasa Complex

Ruins of the panchawasa complex near the cave house also a good example for the way the context determine the plan form, building volume, location of the buildings etc.. This panchawasa complex was sited some what below the main level of the complex, thus created a more tranquil, isolated environment for monks. (figure 4-27) Like in cave house the volume of the building sited to the North of this complex was determined by the context.

Figure4-27

...Ground plan of panchawasa complex



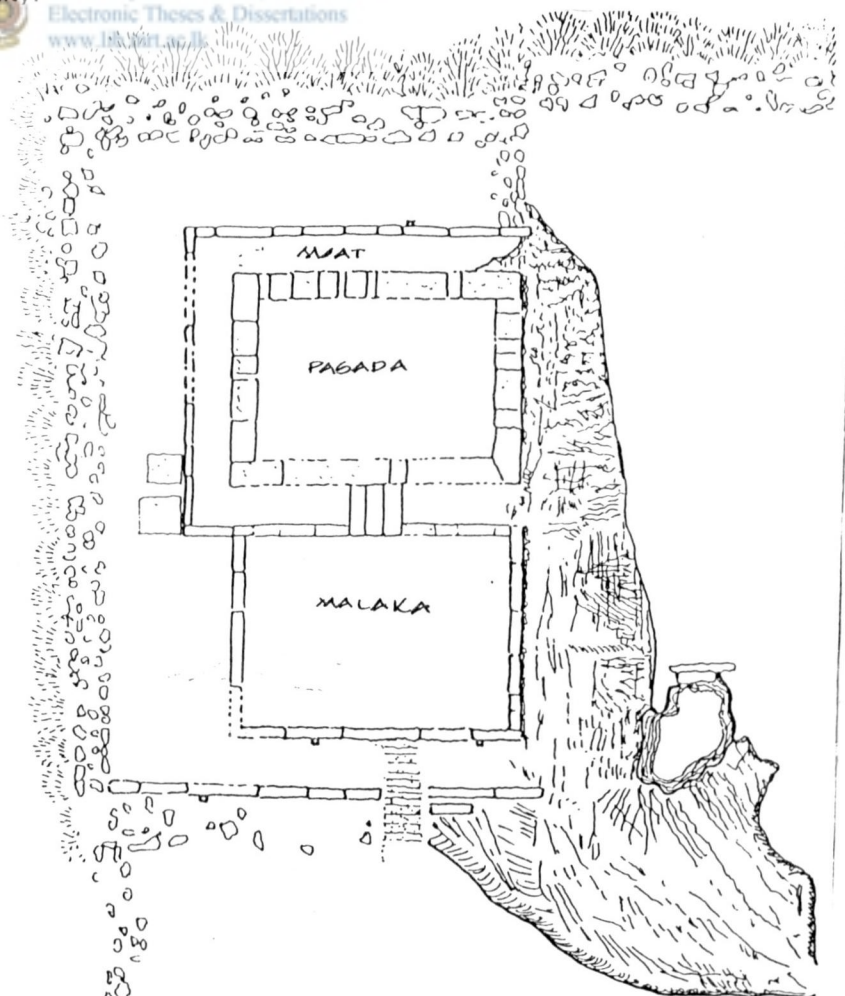
Padhanangara

The way of siting padhanangara or double plat form building in the context is interesting. The padhanangara was made up of two sections named Malaka and pasada which joined together by monolithic stone slab. The outer plat form or Malaka was an open place probably used for meditation and preaching. The inner platform or pasada is composed of one solitary cell for meditation and kutti of residences. (figure 4-28). Padhanangara was sited at the highest position of the complex and this depicts the social hierarchy of it. The most important function of the complex might be meditation and preaching and the activity which is was in the highest of the social hierarchy, was acquired the highest position of the context of the complex and had the large volume than the rest. The typical geometric plan of padhanagara was nicely incorporated with the adjoining boulders and made the " life " of the place. Viewing the pond at the distance, remind the place of it's existence of it's context while gaining the necessary tranquil quality.

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Figure 2-28

...plan of padhanangara



CONCLUSION



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CONCLUSION

Nowadays if you stand in front of, or go into a new building the usual experience is one of emptiness. It waits for someone to come, along and give it love, cosines, individuality etc... This says how lifeless they are. According to Christopher Day such buildings have not yet started the of being ensouled, and he describes the process of giving a building a soul. According to him the soul can incarnate progressively gains substance from wish, through ideal planning, constructional design, buildings & occupation Each stage develops, deepens, & extend that which had come before. They are not stages which alternate from aesthetic to practical, but, with these aspects inseparable throughout, are stages of continuous process of incarnation into substances until we architects complete our task leaving a shell for life which will continue to grow.

Soul of a place is intangible feeling made up by so many things. That it conveys Every place, have a spirit, For instant sleepy, Friendly, airily, and sensory experiences, reinforced by historical associations. So this spirit of place should be appreciated. However modern trends in built environments is unresponsive or little responsive of this fact, and as a result , buildings are imposed without response to time or place. This process is easily adapted to assist in the what we call pollution or waste. Waste can also be viewed as a resource which is located in the wrong place, at wrong time and in the wrong concentration.

It is now necessary for us to pay particular attention to clean up of architectural industry, without this, famous industrial revolution will very likely poison us and bring about the downfall of our world wide living, health giving architecture. Therefore more, it is neither desirable nor it is possible to return to nature as Aboriginal ancestors lived life. Architecture must now evolve into a new relationship of symbiosis with Nature based on the deeper understanding combine with acceptance of human responsibilities to become a good architecture as organic architecture. In this study, organic architecture presents a "word" to man to experience his environment along through the immediate sense relations of his body and through out his intellect. It concretizes both

experiences into the totality. In other words, it is a more total activity than other the pure science.(mathematical geometry or aesthetic).

This study rests itself on argument that the organic architecture is primarily life giving architecture, like a living being it has its own rhythm, which is the rhythm of that particular locality, or context, and the rhythm of it's occupants or users. It will not cut –off man from his locality, society, culture, climate etc. It is a meaningful compatibility with all these. In other words organic architecture can be identified as an experience of place as a whole. Well ordered and well organized volumes, materials, light, rhythm, were enough to stimulate the life of space. It tells every thing to sensor about the soul of the place. Organic architecture will always exists where, society has an organic way of thinking, organic way of life and where people live near to Nature (or context), where the community have maintain natural human community in helping and understanding each other.

Life takes place indoor and outdoor nor on the edges. In a sense one could conceived of buildings 3D entity, composed out of plains sometimes straight sometimes curved and sometimes combination of these two, which constitute the edges that define the indoor and outdoor territories of life. There is therefore, space inside the building and space outside the building. There should have harmony between those two territories – inside and outside. There should be harmony between the inside and the outside for a building to become a good one. The particular design solution for the particular problem should be the result of an integrated concerned of the solution for the problems regarding the indoor –outdoor consideration and the interface between two.

The integrity of Nature and built masses as living being appears to be the strongest document for the survival of the building in the environment.This study reveals that the necessity of following organic growth process, ecologically whole life support cycles strengthen by the use of sensory makers such as trees, turn of path, water, sceneries etc.. to the inevitable conclusion of experimental way. The qualities belong to the particular place such as scale, form, color, shape, sound, materials and linking elements are inevitable factors to be considered at the organic growth process.

Today everything in the world is value-added, and building industry as well. So , buildings are imposed without responding to time or place. The practices in

fashion today will lead us into several problems for example; the present fragmentation of land, especially the six perch block will go a long way to create slums in our cities. Further, the fragmentation into smaller blocks has not only increased the land values but has also destroyed the traditional concept of the expansion of the dwelling unit with the increase in family size, and the expansion of the inside of the built environment into the outside.

When following organic growth process the building scale and the way it fits to the context is very important. Using low scale buildings, siting in hollows and relate to backdrops and building into slopes will help to fit perfectly into the context. Hardness and brightness of color have marked effect on visual impact. In general, the brighter the color harder the texture, the other qualities have quitter, softer and smaller. Subject to not looking out of place with the neighboring built language, relative forms, rough finished walls and earth colors and local materials tend to blend in harmoniously.

Man is shaped and shaped by his environment, just as human inner development steered by human biography. This process is so indissolubly bound that he can't step outside or be shaped differently without conscious action. However, in this study, it was attempted to explore an organic architecture so nourishing, life renewing good architecture as living being.

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