Water in outdoor as transitional space in architecture

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University of Moratuwa
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Gunawardana I.K
Department of Architecture
University of Moratuwa
Sri Lanka
March 2005
I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this university or to any other institution for a degree, diploma or other qualification.

Gunawardana I.K

Dissertation Supervisor
Archt. Varuna De Silva
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ABSTRACT

Marcel Brener says "space is never complete and finite. It is in motion, connected to the next space, and to the next space…and to the finite space." (Quoted in Siminds, O.J – 1983) Along this flow of spaces, the ‘transitional space’ becomes more important, because it is an intermediate space which has capabilities of condition the human mind for subsequent environment. The transitional need in human mind will be governed by the expressive qualities of the spaces and their relationships.

Normally designers try to upgrade the building quality by using different forms, colors, materials, textures, etc. and make architectural work more attentive. But this would create an artificial and uncomfortable impact on user, for adjusting the new experience immediately. Such sudden change of experience would lead for generate inappropriate behavioral pattern in human. Therefore the transitional (in-between) spaces can be introduced between spaces to harmonize the contrast in the context and; to enhance the quality of architectural experience. "The transition must, in effect, destroy the momentum of the closed-ness, tension and distance…” (Alexandra C, 1977)

As a natural phenomenon, human ingenuity firstly depends on the natural pressure and later by the artificial means. Therefore eventual instincts of human being tend to be with the nature due to its flexibility and appropriateness on conditioning human mind for the changing contexts. Especially, properly designed out-door would promote physical and psychological comfort on user, in order to become a conditioning space of behaviors as the ultimate purpose of the building. Therefore the out-door space cannot be considered as a just left out space by the building; it should be utilized as a conditioning space of human spatial experience. Water as one of mans’ inherent motivational factor of giving inspirations and emotions, can be utilized as a design element of out-door formation. Water in out-door would become a successive conditioning factor for generate proper human motivation and it enhances the spatial relations in more meaningful manner.

This dissertation would discuss transitional need among the spaces, and how the water in out-door could be used as a conditioning factor for humanized the spatial experiences in satisfactory manner.
INTRODUCTION:

Observation

"Did man not always search for god in nature?" (Schultz N, 1971) There is an inherent need exists in man to form an emotional relationship with his environment and thereby become part of it. He formed an intuitive relationship, which brought him into the eternal order of nature and try to arrange the elements around him to fulfill his needs.

Trees and their shades, water waves and their wetter breezes, ponds and their reflections would provide peacefulness, seclusion, quietness as well as other motivational attributes, which would enhances the character of space with the architectural quality. And this remains a constant contentment in man.

Topic Explanation

Mans' experience of space in relation to a building would be different from one to another. If there is a change in spatial experiences, man's actions and reactions would be vary, prior to adopting that new condition. And it will depend upon the level of appreciation in perceiver and his ability to receive what it is expressed. Mostly, the designers giving attention to create and upgrade the spatial quality by using different forms, interior spaces, usage of materials, colors etc. and make architectural experience more efficient. But this could generate sudden behavioral changers stressfully, by creating difficult condition on perceiver, for adjusting the new experiences.

To avoid such condition; the spatial environment could be humanized and it should have ability to convey the massage that was intended, by evoking emotions in perceiver. Therefore an in-between space or a transitional space would be required as a 'conditioning zone' of behavior. In the case of human behaviour, the transition space would play a significant role. Sudden change of experience from one condition to another will cause physical and psychological separation, resulting in stressful and inappropriate behavioral pattern in man. Therefore the transitional space can introduced as a in between space; to avoid such behavioral arguments and thereby leads for stimulate the spatial experiences.
However, due to the lack attention given on transitional spaces, the coherence of the built fabric is fading away and it generates socially unacceptable architecture. As human nature we like to experience natural environment and it gives great strength to conditioning the mind-set for changing context. So while the spatial experience change accordance to the building; the out-door spaces in and around the building could be utilized, in such a way to act as a 'conditioning space'. So the well designed outdoor spaces with usage of water would become a successive transitional method, which guides and helps to achieve the ultimate goal of the building in order to become an 'in-between breathing' space. Water is the only element besides birds and human beings, which brings life and movement in to the spaces; to condition the feelings and behaviour of people.

Intention of the Study

Spatial experiences and spatial behaviors are always conditioned by the way of space has been formed and the way it is conceived. Thus in relation to the architectural experiences, properly designed transitional spaces would simulate satisfactory behavioral response in human, in order to achieve the ultimate goal of the building. So the transitional spaces would play great role to make architectural experiences more efficient and successful.

Therefore the presence of transitional space would minimize the physical and psychological separation which could occur due to the stressful formation of spaces. So it is a necessity to understand the importance of arranging surrounded un-built fabric in meaningful manner to act as a 'conditioning space'. Because of the emotions of a person is always conditioned by the way in formation of spaces. It leads for proper spatial experience by satisfying certain objectives of the building. Properly designed outdoor always become a strengthen factor of architectural experiences therefore it can not be considered as just a left out space, should be utilized as a part of architectural experience. Unfortunately, transitional spaces are diminishing rapidly while creating socially unacceptable placeless-spaces. The study will basically discussed on water in out-door as a transitional factor in architectural experience.
Methodology

Basically the discussion builds on four areas. Firstly space and spatial relations, secondly transitional space and its impact on user, thirdly water as transitional medium and finally creating transition through water in out-door. Perception or the existentiality of an architectural space always based on humans' psychological process. Place provides identity, comfort and sense of belonging to the user and becomes personalized place which can physically occupied (in-space) and psychologically perceived (out-space). With regards to the particular build mass, the experience of outer spaces would be a great assist to sequence the spatial experiences by enhancing its transitional value. Especially usage of water in out door would enhance the physical and spiritual comfort on user and thereby become a conditioning space for human behaviour. If the arrangements of outdoor-to-indoor relations become a sequence of spatial experiences; it will assist to achieve the ultimate goal or the purpose of particular building. After identifying the achievable objective of the building, 'water and out-door' can be arranged as a method of providing transition; as the required purpose of the building.

The first half of this dissertation will stipulate deeper understanding on transitional spaces and achieving such need successfully by water in outdoor. For that, the dissertation would firstly follow the quality of the space as a factor of generating spatial behavior and experience on human. Then this will discuss the role of transitional spaces between two extremes. After that this argument would emphasize transitional attributes in water and how it could enhances the architectural quality by leading to generate gradual spatial experiences.

The second half of the dissertation will comprise the careful examination on properly designed build masses which have particular goals to fulfill. Further more; it describes how those spaces transit human emotions and behaviors according to the particular condition by creating comfortable transition, which is capable of enhancing the architectural value and social acceptability. Basically the argument will base on transitional behaviour, while carrying out photograpical survey and selected case studies.
Scope and Limitations

Transitional spaces lead to generate proper environmental ambience which could able to satisfy the human mind, without creating stressful condition on them. So 'the transitional spaces' would generate successive transitional behaviors, and takes him for gradual journey through the spaces. Three selected examples have taken from public category to give the idea of the importance in properly designed water in out-door as transitional factor. As public buildings, they have definite goal to fulfill; so the respective incorporation of transitional spaces would be a great assist to achieve the ultimate objective of the building. Therefore the basic scope of this study is to build-up an overall understanding on transitional need between spaces; and the way of that transitions help to fulfill the ultimate objectives of the particular building. The selected case studies are,

- Sigiriya pleasure garden as a leisure oriented public space
- Blue waters as a recreational oriented public space
- Parliament Complex as a public space for selected group

Those three public spaces have used to give the idea of satisfying the ultimate objective, by using water in out-door as a transitional factor. The knowledge gained from the chapter two and three have taken as the frame to discuss above case studies. Discussion have focused to study, how the water in out-door could lead to generate successful transitional behaviors on perceiver; by providing sudden or gradual transitions between spaces. Further more it builds up an overall understanding how the perceiver could able to change his emotions and behaviors; according to the changing context of water (static, dynamic, etc.) in out-door.
Chapter One

Space as a Factor of Generating Experience and Behavior
CHAPTER ONE: SPACE AS A FACTOR OF GENERATING EXPERIENCE AND BEHAVIOUR

1.1 Concept / notion of space in architecture

Architecture as a work of art evokes certain emotions in perceiver and expresses meanings; it may be varied from person to person due to the level of appreciation. Therefore to be a meaningful work of art, architecture could communicate its message through its spaces; because of spaces are the communicating media between architecture and perceiver. As Marcel Brener (Quoted in Siminds, O.J – 1983) “space is never complete and finite. It is in motion, connected to the next space, and to the next space...and to the finite space.” Therefore it is understandable that the spatial experiences are never static – it processes.

Although the spaces are formed as separate entities, the spatial experiences are connected with the successive perception from one to another. With regards to the architecture, the spatial experiences are always connected and conditioned by the natural spaces around it. Because of the conception of space is a psychological process which reflect the mans’ responsiveness to the surrounding environment that he enters.

1.1.1 Space

Simply, the word ‘space’ denotes volume defined by the bounding surfaces of the surrounding masses. But in the broader sense it reflects the notion of human behaviour, their values, cultures etc. Space can be considered as the basic element in architecture. So the composition of spaces could generate positive and negative emotional responses and make a person as a part of it. “Space is here, there, vast, profound, and boundless. Everything is in space; every action happens in spaces, everyone lives in space.” (Schulz, 1971) For a man, the space is something more than just orienting...
himself; likewise it becomes the integral part of the pattern of behaviour which leads for better adaptation to the environment. Therefore it is essential to understand the attributes of space, which are leading to generate conscious formation.

Figure 2: Space reflects human behaviour

1.1.2 Attributes of space

Attributes of space are concretizing the spatial relations between spaces. Basically three attributes can be identified such as; centre, enclosure and continuity which helps for qualitative experiencing of space.

Centre

This is the reference point to understand the space, which is the utmost important fact. From the beginning, man compares himself to other surrounding spaces; then centre becomes the reference point of their spatial experience of journey. And this attachment provides a perfect beginning for harmonic relationship with the triangle of man, his existence space and whole space broadly.

Enclosure

Any expressive space should have sense of enclosure; it might be tangible or intangible. It makes internal parts in man’s spatial experience which brings meanings in to the space. In this instance the enclosure is rather quantitative spatial experience. While the enclosure is present, the people get physical and psychological comfort.
Continuity
Perceptually as a scheme any path is characterized by its continuity. Space does not exist in isolation; it should continue with the other spaces and provides views and relationship with adjoining spaces. Continuity creates spatial relations which brings living soul to humanized the spatial linkage. Presence of proper continuity brings gradual transition to the scheme, both in physical and psychological manner.

When those attributes are presented in successive manner, such architecture can be experienced as a spatial domain. It is an utmost important phenomenon in architecture, as an enhancing factor of spatial experiences.

1.1.3 Architecture as a spatial domain
Architecture as a purposeful human creation it deliberately attempt to create spaces, by addressing humans’ physical and psychological needs; in order to create successive spatial experiences. It is a symbolic medium and found to be one of the most direct and subtle ways to communicate. This spatial order leads for feeling the spatiality, by evoking deeper meanings in human more effectively, than the other medias. William Dedok states that the architecture is a beautiful and serious ‘game’ of spaces.
1.2 Human attributes related to space

Human attributes are the instinctive ways of reacting to the environment. Man and space cannot divorce from each other; therefore the value of space is added in different manners in different communities. Ex: sky, sun, water etc. For a man space is something more than a volume. It always becomes an integral part of their behaviour and guides them for better environmental understanding. “Space constantly encompasses our being. Through the volume of space, we move, see forms and objects, hear sounds, feel breezes, and smell the fragrances of a flower garden in bloom” (Ching, 1979) Therefore it is understandable that the better survival of human will have relations with the spaces. As discussed, human attributes related to the space, perception, existentialism and spatial behaviour can be identified as three significant concepts which involve in this psychological process.

1.2.1 Perception

Perception is started as a process of obtaining or receiving information from the environment. “Perceptual space has emotional overtone. We not only grasp by our senses but also live in it. We project our personality into it, we are tied to it by emotional bonds; spaces is not just perceived...it is lived.” (Matone, cited in Ralph, 1976) When the space is perceived, it becomes a self conscious experience which links a sense of awareness and sensitivity within it.

Through sense → Sight, hearing, smell, taste, touch, mind that holds → Emotional Bonds → Personal experience

Perception gives an ability to identify the environment which involves the process of thinking; remembering, feeling etc. Though the sensing of space is common to
everybody the degree of perception is varied from person to person. When the space is consciously perceived by a person it becomes existential for him.

1.2.2 Existentialism

"Existential space or lived-space is the inner structure of space as it appears to us in our concrete experiences of the world as members of cultural group." (Bollnow, 1967) Certain spaces evoke pleasant or unpleasant memories and it embedded mind in differently as socio-cultural groups. Some spatial experiences exist with in us as group and become particularly meaningful for that group of people according to an accepted set of norms, attitudes, values and judgments. Therefore it gives special memory for (within) that particular community and become existential for its inhabitants. Degree of the existentialism would evoke or restricts human spatial behaviour in satisfactory manner.

1.2.3 Spatial behavior

"Within the physical and geographical environment there is an operational environment within which people work and which affect them. Within that is the perceptual environment of which people are conscious directly and to which they give symbolic meaning and within that is the behavioral environment of which people are not aware but which also elicit some behavioral response." (Sonnenfeld in Saarinen, 1969; as quoted in Rapoport, 1977)

Therefore the conscious formation of man made environment should always provide better behavioral environment which has qualitative values of conditioning spatial experiences.

"Behavior can be considered to be a goal directed attempt by an organism to satisfy needs that are perceived and cognitively organized" (Lang J, 1979)
When a person experiences a space, he will invariably continue his imagination until he is quite sure of the validity of particular environment meant to be. If he succeeds in perceiving, he would organize himself to satisfy his needs prior to achieving the goal. But on the other hand, if the imagination would fail to understand or perceive the space; he would try to make use of it by changing the environment. If neither of these options is possible, he would be negatively creating a highly stressful condition. Therefore it is understandable proper formation of spaces is essential to generate proper behavioral responses; and also it would enhance the spatial relations in the particular physical setting.

Figure 7: Behavioral responses are depending on physical settings

1.3 Arrangement of spaces and condition the spatial experiences

As discussed so far, the conscious formation of spaces would stimulate proper behavioral responses, in order to enhance the qualitative aspects of spatial experiences.

1.3.1 Formation of space

The type and character of spaces would differ due to the need for particular spaces have being using. "Any space is established by the perceived relationship between surface, screens and objects." (Proshansky H M, 1970) Due to

Figure 8: Different overhead definitions of space
the conscious formation, the vast infinite space can convert in to the finite and perceptible space. Then the space would be successively communicate with the human mind and evoke noticeable behavioral responses.

Therefore it is essential to be understood the purpose or the objectives of the space, prior to spatial formation. Then only the space would able in evoking the appropriate behavioral responses.

As Brensers' quotation which has earlier mentioned, space always links to the next space. It is important to maintain this as a sequence; so every element in the environment should be handled to satisfy this need.

1.3.2 Conditioning the spatial experiences

As said earlier, man can not perceive infinite spaces and therefore for the perception, spaces should be formed as finite spaces. So when the space has formed, it is momentous to identify the purpose of it used. After that every element needed to be
handled to satisfy that particular need by proper formation. Then only this successive spatial relation leads for manipulate proper sequence of spatial experiences.

1.4 Experience of spatial relations in architecture

Experience in architecture always involves reciprocal relation of different kinds of spaces in a sequence. Every element of surface should be handled to satisfy the expected need by proper formation. Though the spaces have formed for carried out different functions as separate entities, the formation of spaces would be lead for sequence of spatial experiences. "From the outside, architecture is never alone, surrounded by other buildings, by landscape, or by unoccupied spaces; a work of architecture depends upon its environment."

Therefore the building as an object in natural space; always characterized by the external environment. So the experience of a building is beginning from the outside; both built and natural elements would influence the experience. Surrounded build mass is experienced as an 'out space' or a 'view'. Once the perceiver enters to the territory of the building, he becomes the 'member of occupied' or 'in-space'. So keeping this 'out-space to in-space' relation as a sequence is very important for condition the proper human behavioral response.

Figure 12: Building as an object in nature

Figure 13: Entrance as an 'out-space' and compound as an 'in-space'

Figure 14: The room as 'in-space' and views as 'out-space'
When the experience changers are occurred between different spaces; the physical and psychological disagreement can be happened. It can be minimized by introducing an 'in-between zone' or a 'transitional space', which would condition the human mind for better adaptation to the environment.

1.5 CONCLUDING REMARKS

Space, which lies at the centre of all things happen in our surrounding, needed to be understood deeply to establish and enhance the formation of space. Man and space always depends on each other. Space is integral part of human behaviour and guides them for better understanding of the environment. Perception, existentialism and spatial behaviour can be identified as three significant concepts which involves in this psychological process. According to the phenomena of perception, spatial experiences always form a sequence from one to the other. Therefore if the spaces have arranged in a manner which could be perceived by the perceiver, that situation would arise their mind to generate a proper noteworthy behaviour.

Unless there is a conscious formation in sequence of spaces, it would lead for happen sudden changers stressfully on perceiver. To avoid such condition; the spatial environment could be humanized and have ability to convey the message it was intended by evoking emotions in the observer. Therefore an in-between space or a transitional space would be an essential requirement for condition the human behaviour towards the satisfactory process.
Chapter Two

Transitional Space as a Conditioning Space of Behaviour
CHAPTER TWO: TRANSITIONAL SPACE AS A CONDITIONING SPACE OF BEHAVIOUR

2.1 Transitional space and its impact upon user

Man needs differently formed spaces such as natural, built, combined formed etc to carry out and perform his activities. When the space is properly designed, the sequences of spatial experiences stimulate particular behavioral responses according to that specific condition. As the changing context, person conditions his emotions and behaviors due to the adaptation of the particular environment. This adaptation must be smooth enough on perceiver and should not create any mental or physical stressful condition on him. Therefore 'transitional spaces' needed to be formed as in between spaces to incorporate gradual transformation and to avoid such uncomfortable impact. According to the Oxford Dictionary, the term 'transition' can basically defined as "the change from one place or state or act or set of circumstances to another." It would act as a conditioning space, by forming gradual sequence of spatial experience.

Mies (1938) described the transition space as a "places in which the world reverses itself." They may be the beginning of spaces; they may be the end of spaces; they may be the beginning and the end of spaces. Therefore the transitional spaces can be identified as 'in-between' space from spatial point of view. In behavior basis transitional spaces are the conditioning spaces which generate behaviors of arousal, regulation and sustenance for the adaptation of human beings into different spatial experiences. However arrangement of the transitional zones would evoke different transformational attitudes on user.
2.1.1 Transformation with in transitional space

All transformations are happening in association with the space and spatial experience. “Everything man does is associated with the experience of space. Nothing occurs, real or imagined, without spatial context, because space (along with time) is one of the principle organizing systems for living organism.” (Lang J, 1973) As this statement it is clear that the man and space can not divorce from each other. Further more in relation to the space, all transformations within spaces might occur differently, in two ways;

- Sudden or sharp transformations
- Gradual or progressive transformations

Sudden or sharp transformation used to arouse excitement, it happens due to the absence of transitional zone between two extremes. Progressive transformation will transform the user in gradual manner to the changing context. This second situation would create smooth spatial progression from space to space. “Some times the transition is subtle. One may be let through a sequence of varying spaces that provide a complete change in use and mood in such way that the transition is almost unpredictable. Sometimes the transition is powerful. One may, by planned intent, be so compressed into a low tight, dark space that release...by spatial manipulation, can play upon human emotions, reflexes and response as surely as does that skilled musician with the harp or flute or drum” (Simonds J, 1983)

When a change between two settings is abrupt, the occurred change might be incompatible with the ongoing behavioral pattern and probably leads for stressful and
inappropriate condition. So it is a necessity to create compromising areas which allows for gradual change with combining qualities. Transition is a physical and psychological necessity which generated in human mind as a vital requirement.

2.1.2 Physical and psychological need of transitional space

Transitional spaces have physical and psychological aspects. There is an inherent need generates in the human mind to transform a stressful and unsatisfying situation into a satisfied condition. When a person happens to face a change of experience, transition need generates, as a force in the mind of user by making stressful impact. So the transitional zone would help to transform the mind through the psychological process.

In relation to the architectural experience, such transitional spaces may be designed as built spaces or un-built spaces. It mediates between two realms and acts as some kind of ‘breathing space’. Then it would allows a gradual sequence of experience by conditioning the behaviors of people by motivating them to be aroused, regulate or sustain their actions and emotions; prior to achieving the ultimate needs of the building.

Figure 18: Physical settings of space generates various impact on human mind

Those psychological involvements are managed to generate proper behavioral responses physically, as adaptation of different spatial realm. However transitional spaces have to be generated due to the relationships of patterns.
2.2 Generation of character of transitional space

Christoper Alexender's patterns

2.2.1 Organic order

Every place, space and every organism has its own character and this character begins to express when its order being satisfied with its patterns of relationships. Christoper Alexender defines this organic order as the kind of order that is achieved when there is perfect balance between the needs of the parts and the need of the whole. In the same manner, the above order of transition space has been generated with relationships of patterns.

2.2.2 Structure of patterns

Structure of patterns can be discussed under three areas, such as

- Context
- Forces
- Space configuration

Context

Christoper Alexender states that the character of place depends on the context where it is located and each pattern is a relationship between a certain contexts. Particular character of space, which is directly related with the patterns of relationships, has its own set of patterns organized due to the constant generating forces in that context.

\[
\text{Context} \rightarrow \text{System forces} \rightarrow \text{Configuration}
\]

Therefore the generation of transition space will vary from place to place. The full character of space can be seen in a place where the generating forces are high in numbers. Christopher Alexander states the context for a transitional space lies in between the street and the main door of the building and the forces, which are generating through the context, will vary from place to place.
Forces

Christopher Alexander states that, people built up a street mask to behave in such a street, in a second. As a result of this street mask, constantly in a mind, would generate a field of forces in conflict as follows. When people having this 'street mask' they try to find out breathing space, between the outside and inside – a place of preparation, where person can change his frame of mind and adapt to the different conditions.

Space configuration

<table>
<thead>
<tr>
<th>Context</th>
<th>System forces</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>The space between the road and the main door of the building</td>
<td>Conflict between forces of street mask</td>
<td>Transition space</td>
</tr>
</tbody>
</table>

2.2.3 Patterns of transitional space

As the behavior pattern of people, it is identified that there is a physical force has been set up in their mind as a transitional need. The main force would be trying to place in-between and the outside-inside place; for preparation. Therefore the following forces are in conflict,

- People try to find out a place of preparation before they go to the building directly
- People try to find out a place to protect from the exposed feelings

Figure 19: People try to find place for preparation before go to the building directly

As discussed above, the type of transitional spaces should vary according to the contexts presented.
2.3 Types of transitional space

Transitional spaces could be largely divided into two groups, such as spatial transitional spaces and visual transitional spaces. In the first situation, the interaction outcome is tangible, which is capable of creating physical change. The second situation is intangible and it changes moods and feelings.

2.3.1 Spatial transitional space

Spatial transitional spaces provide spaces for actual physical movements or human activities to take place. In relation to a building, they basically provide 'rooms'- three dimensional forms of spaces. Physically user feels the transition when he is at these spaces such as steps, entrance porches, corridors etc and it transforms the user physically into another movement. They would give static feeling to occupy, enclosure with privacy, movement etc.

However proper handling of transitional spaces of built, un-built or combination of both situations would provide ability to change or transit the human behaviour according to the charging conditions. "What matters most is that the transition exists, as an actual physical place, between the outside and inside, and that the view, sound, light and surface which you walk and change as you pass through this place. It is the physical change-and above all the change of the view-which creates the psychological transition in your mind." (Alexander C, 1977)
2.3.2 Visual transitional space

Visual transition occurs specially because of the vision of out-door landscaping. The word landscaping brings the idea of out-door space, where nature is presented in its varied forms for man's pleasure, by providing vistas or views; to transform the user into a set of circumstances. There are three basic types of landscape spaces; vista, room, panorama. (Appleton J, 1986) The visual transition can be experienced as an outsider to certain spaces or places. "Visual reinforcement occurs through the use of the design elements of view and vistas, correlating with the changes in directional site feature." (Todd W, 1953) When the visual satisfaction is more often, the space should handle to give the 'panoramic view' transition. "The panorama is a wide view from a good vantage point..." (Appleton J, 1986) This total visibility gives feeling of comfort and relief. 'Vistas' would provide restricted view, which focused the attention on specific space or feature. "Each vista has in simplest terms, a viewing station, an object to be seen, and an intermediate ground" (Appleton J, 1986) Vistas could frame the view and ensure different transitional need; according to the circumstance.

Likewise these two transitional spaces could generate various behavioral responses by conditioning perceiver's mind for satisfactory realization.
2.4 Transitional Behavior in relation to the language of architecture

In relation to an architectural experience, transitional spaces may be designed as built, un-built, combined formed, natural gardens etc. So it is essential to understand the transitional need among spaces and maintain it as a spatial sequence to enhance the architectural quality. "The mood of a space is often established long before one physically enters the site. How the site fronts on the streets or walk, whether its entrances are large and open (inviting use) or are small and solid (suggesting private ownership) and whether anything of the character of the site is revealed to the casual passer, all help to determine the way in which people will use the site." (Todd W, 1984)

The glimpse of spaces would be arise comfortable feelings by making confidence on user. So when a person happened to face a change of experiences, intuitively the transitional need generates in a mind by creating a stressful condition. Therefore as a precaution, 'in-between breathing space' should be introduced to transform user's mind from unsatisfied into satisfied condition.

When a person experiences a transitional space, it psychologically motivates, control, regulate or arouse specific behaviors and emotions suitable to a particular entity. We may call them 'transitional behaviors.' Not only the physical transitional spaces, but also the visual transitional spaces are used to arouse transitional behaviors. "Motivation, like so many other complex variables has many definitions. In essence, it is the process of arousing, action and sustaining activity in progress and regulating the pattern of activity." (Lang J, 1973)
2.4.1 Arousal of behaviour

Human mind always respond to the external environment and behave accordingly. When the external environment has positive movement it may instinctively stir the mind to activate emotions as arousal of behaviour. This may basically motivate human mind from one condition to another.

![Figure 24: Out-door would arouse behavioral change in human mind](image)

2.4.2 Regulation of behaviour

This situation would tend to control or restrict physical and psychological movements as adapting to the environment. This happens due to the negative environmental impact comparing to the movements of human mind.

![Figure 25: Regulation of behaviour due to calm panoramic view](image)

2.4.3 Sustenance of behaviour

Sustaining of behaviour would motivate people to have a static experience in a particular place. This basically deals with the physical movements through the arrangement of space.

As discussed so far, transitional spaces would allow generating successive behavioral responses by arousing, regulating or sustaining them according to the external environment. Specially out-door environment always become an important motivational factor which can govern for better human habitation.
2.5 Out-door as a transitional factor in architecture

The word 'out-door' brings to mind the idea of landscape, where nature is presented in its varied forms for man’s pleasure, relaxation, etc. In a larger sense landscape is the enhancing factor of architectural experience. “Architects employed a number of different landscape elements to create enjoyable out-door and in-door spaces...Such elements could be identified as earth forming, plants, bodies of water etc.” (Garrett E, 1969)

In order to act as a media to enhance the quality of the building, outdoor space is the man's inherent motivational attributes of giving inspirations and emotions, by creating ‘in-between breathing’ space. Therefore out-door can be utilized as a ‘transitional space’ for a better human adaptation for the subsequent environment. “The integration of the two arts- architecture and landscape designs make a great deal of sense. Both are concerned with the impact of man upon his surrounding and visa-versa. Both serve mans' comfort and convenience and both serve mans' pleasure by providing an uninterrupted experience of changing relationships-with his own body movement in space and time.” (Garrett E, 1969)

Whatever the quality or relative proportions of building and open spaces, the fact of regular transitional experiences between them for most inhabitance remains constant; also it may help to enhance the particular quality and the character of the built environment. “Architecture and the landscape provide site and setting, material resources, inspirations, discipline and responsibility.” (Lewis P, 1979)
Impressive architecture has always taken this into account; such as Sri Lankan monastic architecture, works at Anuradhapura and Polonnaruwa, Sigiriya and its pleasure garden has followed those concepts respectively. Therefore, as a designer, it is essential to understand the importance of outer space as well as the inner space. Because of attributes of out-door, give an open, free feeling to the mind by giving relieve from other tensions. "Landscape is a part and partial of architecture. The beauty of architecture sometimes purely depends on its landscape, man-made or natural." (Sylvia C, 1981) Then it leads for maintain the balance formation of the three components: which is man, building and nature.

2.5.1 Formation of out door transitional space

Architecture never complete, if it only give the attention to design innovative building forms and interiors, but it should be considered with the surrounding context. When a person attached to the open space he will reduce his stress and tension and tend to transit freely in physically and psychologically. So it is obvious that the building should relate with its site and out-door environment for enhance its spatial value.
“Gardens are just not plants, not architecture either but inextricably both” (Christopher T, 1979) Due to the infinite attributes in out-door, it influences great flexibility in formation to satisfy different transitional needs. They would form a gradual sequence of experiences or sudden behavioral changes in user by combination with the built spaces of the building; visually and spatially. On the other hand formation of garden should be done according to the motivational needs of the particular built mass and the context. Once Geoffrey Bawa states, “You must ‘run’ with the site; after all you don’t want to push nature out with the building.” (Aung T, 1984)

However, it is understandable that the freshness of out-door which combines with the cool water waves would greatly stimulate the sense of behaviour as a positive transitional factor. Unlike other elements, water brings life and movement into the out-door space as human beings and birds.

Figure 32: Conscious out-door formation generates transitions and thereby influences architectural experiences

2.6 CONCLUDING REMARKS

Transitional space can be identified from two view points; from a spatial basis-‘in between space’ and from a behavioral basis-‘conditioning space’. The transformation occurred at these transitional spaces gives dynamic experience, in the existential space. Either sudden or progressive transformation would occur within transitional space. It generates physical or psychological transition by providing physical or visual transition upon user. Within a transition space, expressions are used to control, regulate or arouse specific behaviors, suitable to the particular entity. The formation of transitional space is a part of the design process of architecture and landscaping and it is an essential part of enhancing architectural experiences.
“the transition may be formed by a bend in a path that takes you through a gate and bushes on the way to the door; or again you might create a transition by changing the texture of the path, so that you step off the sidewalk onto a gravel path and then up a step or two and under a trellis. In all these cases, what matters most is that the transition exists, as an actual physical pace, between the outside and the inside, and that the view, sound, light and surface which you walk on change as you pass through this place. It is the physical change- and above all the change of view-which creates the psychological transition in your mind.” (Alexander C. 1977)

When considering the formation of out-door spaces, ‘water’ could play a great role as a transitional medium by enhancing spatial relations. Water with all of its variations, interpretations, and presentations; has inherent immutable properties that time cannot alter.
Chapter Three

Use of Water as Transitional Factor in Architecture
CHAPTER THREE: USE OF WATER IN OUT-DOOR AS A TRANSITIONAL FACTOR IN ARCHITECTURE

3.1 Spatiality of water

Water is the only element other than birds and human beings, which can bring life and movement into the man made environment. It would enhance the transitional quality in out-door by giving soul and spirit to out-door spaces. Architecture has inevitable relation with its surrounding environment. Since the out door act as a conditioning space between spatial experiences of the built fabric, it succeeds physical and psychological needs of the perceiver. "In fact water is an element that provides a welcome contrast to the solidity and stability of the architecture" (Lehman J, 1980)

Water has been used to create various emotions in architecture. It is a source of powerful fascination and peaceful inspiration. Its vital qualities transform the ordinary to extraordinary. Its sight and sound captivates the eye at a distance, and become delightful when near. The moving and falling water breaks the silence and brings a feeling of companionship. Likewise, due to its intrinsic qualities, water would arise the qualitative aspects of out-door; by enhancing transitional emotions and behaviour in the perceiver. As discussed, though the transitional needs can be provide by out door spaces, the qualitative aspects of it would depend on the way of the out-door has been formed and detailed.

So, it is clear that the quality of out door transition can be improved by using water. This situation would condition perceiver's mind for a better adaptation to the existing context, in order to satisfy the ultimate goal of the building.
3.1.1 Water as material of out-door formation

"Water irresistibly attracting and ever changing; the sight, sound, and motion of water transform the environment and immeasurable value to any landscape or architectural project." (Architects Journal, 7th July 1993-no.1-Volume 198)

Among the other elements used in out-door formation; water has its own intrinsic qualities. It was a major landscape element from ancient time. That could be seen from the delightful work in Sigiriya, Kaludiya pokuna etc. Water has used in such landscape to provide dramatic and aesthetic impact. Still water or a reflecting pond can mirror the world beyond. Moving water can duplicate the sound of a stream. Splashing fountain also has psychological and cooling effects which make people feel more comfortable. When combined with a sculptural work it becomes an integral part of the overall aesthetics.

Apart of creating such an aesthetic impact, those numerous qualities of water would lead for different behavioral changers which could make people more comfortable. Color of the water body varies according to the sky above, its depth, nature and the surface below; would add more qualitative impact on the surrounding environment. Also, water combined with paving and plants, provided detailed quality to the space. "Water is the essential source of movement in the garden and courtyards." (Lehman J, 1980) All the great gardens in the world have made use of water, and its use has been adopted by each country according to its need and the climate. (Ex: India, Sri Lanka, Japan, Islamic world) Because of water exerts an immense fascination, focusing attention on itself as few other garden features do.
However, when water is used, it should be treated with respect; as an important part of out-door design. Because of its inherent qualities with extremely variable character and the qualitative appearances are depending on the factors external to it. Also its ability on responding to the human psychological process is admirable. Therefore it becomes an essential point, in relation to the transitional attitudes in the out-door environment.

### 3.2 Water as an influencing factor of transition

As discussed in the previous chapters, proper experience of spaces is a vital necessity; thus in relation to architectural experiences. Properly designed out door spaces would condition the behaviors of people to achieve the ultimate goal of the building. Due to this motivational ability, it makes reciprocal relation with architectural experiences. Such water and out door combination could be a great asset to utilize 'transitional character' in architecture. Simultaneously it becomes a space for harmonizing physical and psychological comfort.

#### 3.2.1 Motivational attributes of water in out door spaces

The quality out door transition can enhance by use of water; because of water used as a method of achieving spiritual comfort since ancient era. Water is one of the natural elements with a strongly compelling quality
with a highly varied character. It can be used to enhance the wholeness in the built environment through the balance formation of man-nature-and building. “From time to time the character of water has inspired design and given it an overriding personality” (Jellicoc, 1971)

3.2.2 Spatial and visual importance of water in out-door

When comparing to the other elements, water become a main element which cold effectively amplify the process of spatial progression. Unlike other building elements, water exists vast range of expressions which will be discussed in future. However water inherits this quality due to its natural character and its different modes of existence. These different modes of water would create numerous expressions on perceiver; in differently by generating diverse emotions; such as movement, pause etc. When the environment change is occurred between spaces; conscious usage of water would be a harmonizing fact and thereby become a transitional medium for human mind. Also it transfers ordinary to extraordinary. (Manipulation of broader view - panorama of water body would provide contemplative pause in human mind. Vistas or restricted views make glimpse and it directed perceiver towards the terminal space. When the vista formed by framing a part of broad view, would make enframement and create different transitional need in mind.)

3.3 Water in out-door as transitional medium

Most of all expressions have a relationship with the moods of space. Those characteristics of spaces would create numerous transitional behaviors on perceiver. As the nature of water changes, its mode of expressions also changes simultaneously.

3.3.1 Water in static state

When considering the static form it symbolizes flat, quite water body; which acts as a reflector. Water gardens at Sigiriya and hotel Triton are the best examples for this. “The passive collection of the still-water brings the mind back to a contemplative state.” (Moore C, 1990)
Main character of static mode is calmness and its surface reflects the entire world because of the stillness. This stillness would evoke transitional behaviour in mind for deep senses, and concentrate mind to understand the spatial relations in the surrounding environment. Its vast range of colors also convey different transitional moods in perceiver, such as providing directional qualities like pause, movement etc. Also the reflective character of static water would bring extraordinary to the ordinary building. This static character can be identified as pools and ponds which depend on the plan, shape and the character of the container.

Pools

Pools have finite character which can frame human mind in single definite form. They are more or less artificial and depend on other design determinants. And its reflectivity depends on level of water surface, depth of pool, color of the bottom and the size and the location etc.

Ponds

Pond is more effective in bringing responsive feelings and tranquility to the out-door space; because of its natural shapes. They reinforce rustic feelings of undisturbed serenity when combined with visually rounded and land forms with natural planting. Ponds would provide intrigue and land a person through a sequence of out-door spaces by creating spatial linkage.

3.3.2 Water in dynamic form

Dynamism of water would bring life and movement to space and its rhythmic sound could create conceivable mood change such as amazement, joy etc. by enhancing the spatial value. Dynamic water can be seen as flowing, falling, and fountain jets.
Flowing water

The behaviour and character of flowing water depends on volume of water, steepness of slope, channel size and properties of channel bottom and size. When considering the presence of channel condition, the character of water is more dynamic and effective. The turbulence is able to result the transition between narrow and wide channels abrupt. This roughly distributed character creates more impact on perceiver and stimulate them positively in behavioral basis; in the outdoor environment.

Falling water

Falling water expresses the force of gravity in more dramatic manner and create more noticeable transition in the outdoor environment. Free falling water used to provide dramatic focal point due to its huge sound and create sudden transitional impact on the perceivers mind. Sloped fall would enhance the visual quality due to its combined character of two planes. Obstructed character of falling water is abrupt to produce more commotion in sight and sound.

Fountain jets

Most fountain jets are effectively used as focal points in the surrounding based on their verticality and its interplay with light. Mostly fountain jets are located in quite static body of water so that they can be fully appreciated against a neutral surrounding. This character can be seen in the ancient water gardens in Sigiriya as well.
3.3.3 Symbolizing water with other means

The concept of symbolizing water is a main character in the Japanese temple tradition. The spatial composition in those dry gardens was clearly imaginations in nature by using numerously arranged stones, sand etc. "Dry-landscape gardens are in themselves a mean toward Zen Buddhists' self-examination, spiritual refinement, and ultimate enlightenment." (Hayakawa M, 1981) Such out-door formation would sustenance human emotions and behaviors for comfortable pause by providing serenity, tranquility and isolation.

Figure 45: Expression of a vast expansion of water through racked gravel

3.3.4 Water as generating factor of 'rasa'

An architectural work has capability of transcending its different 'rasa' through expressions of water.

**Heroism (Veera)**

Water expresses *veera*, by reacting against of something; by flowing in a violent mood. Velocity of water and its sound also play a vital role for influence the characters of heroism

**Devastation (Bhakthi)**

Water transits mind for the mood of *bhakthi* by evoking purification feelings. Purification is especially done before the religious activity.

Figure 46: Water creates moods of contemplation

**Peace (Shantha)**

This creates the mood of contemplation, and leads for psychological well being; by introducing long pause in human movement. Further more water creates *shanthe rasa* by evoking deeper pleasure, tranquility and convinced concentrated mind.
Humour (Haasya)
Sudden discovering of water creates haasya rasa, due to its dramatic joyfulness of rhythm. It evoke a less deepen sense, simply gives joy.

Tearful (Karuna)
This simply expresses non-existence nature of world. In architectural sense this acts as a symbol of impermanence. “The bubble shape thus purports to remind the Buddhist that life is like a bubble of water-impermanent, there for subject to suffering.” (Moore C, 1990)

Love (Shrngara)
In simply shungara means love. As Coomaraswamy, Claiming water is equivalent ‘pathi’ (mother), who plays vast range in verity of love between husband, children

Fearful (Bayankara)
Expresses mood of baya would transit fear in mind due to something.

Excited (Raudra)
“Water is not only a life giver but a life destroyer as well.” (Dissanayake JB, 2000) huge water body or faint stream of water would evoke the mood of raudra.

Amazement (Abdutha)
Mysterious quality of water can be evoking by creating surprise and sometimes it says something beyond the sight.

Disgraceful (Vibathsu)
This symbolizes the impurity; by making changers to the physical nature of water.
3.4 Relationship between water in outdoor and the built environment (architecture)

As discussed above, water has excellence ability to motivate the perceiver in differently through its numerous moods. These balance relations between buildings; water and open spaces would able to enhance the transitional quality in the built environment. "Architecture brings the landscape to life by injecting the highest form of human imaginations into it. The landscape receives and resolves all of the multiple forces extruded by the building in the simplest, most direct and satisfying centrifugal pattern. The focus of architecture can meet and resolve them in designed interplay." (Garrett E, 1969)

Out-door spaces as one of man’s inherent motivational attributes of giving inspirations and emotions; also can be designed to act as a media to enhance the quality of a building. Properly formed and detailed out-door would be a great asset to enhance the quality and the transitional character in architecture. This external environment creates greater convenience and comfort on user. So the architecture and the immediate, associated out-door design concept must be always correct and develop reciprocally to each other to satisfy both aspects. Therefore, that would give true value to creations of both aspects as one coherent unit.

Previously discussed, water is the motivational fact of out-door transitions and it establishes greater convenience to become a conditioning space for human behaviour. Architects can use the flat plane of water to an embellishment in composition, and also its reflectivity adds an element of fantasy to architecture by filling shadows with reflected light. Apart from this aesthetic impact, such static character of water would become a conditioning space for human behaviour by sustenance mind to be tranquil and contemplative. When consider the dynamic water in out-door, it becomes a transitional factor of arousing emotions and behaviors; to be active and alive.

3.4.1 Conditioning the behavior and the mind-set of user

As discussed water in out-door would influences the transitional quality of spaces without creating stressful behavioral impact on user, for adapt to the existing environment. It motivates emotions of people to be aroused, regulate or sustain their behavior, according to the need; required at the particular situation.
3.4.2 Enhancing spatial experiences

While generating transitional behavior, the properly designed water in out-door spaces would lead for better spatial orchestration. When the transitional zone has incorporated between two realms, it could able to create a spatial linkage as a sequence. Then the spatial progression can be achieved due to this rhythmic relationship of spaces. Because of that, the building would not become a collection of isolated spaces, but a series of spaces having meaningful connection and a rhythmic movement.

“A man who moves rhythmically starts the motion himself and feels that he controls it, but very shortly the rhythm controls him, he is processed by it. It carries him along; rhythmic motion gives feeling of heightened energy.” (Lynch, 1959) These rhythmic linkages of spaces are not only for physical satisfaction but also for mental satisfaction. It creates an emotional impact and end up with a specific meaningful message.

3.5 Transitional behavior and satisfaction of transitional need by water in out-door spaces

As discussed so far, water has identified as a medium of evoking moods; thereby it leads for behavioral responses by motivating and translating perceiver according to the circumstance involved. These behaviors that come out as a result of being motivated in a transitional space can be called as transitional behaviour.

3.5.1 Water as factor of arousal of behaviour (Portland plaza-San Francisco)

When the human mind is in balance state and the external environment has a positive achievement; as the result of that the internal mind state to activate emotions and actions. This would lead persons mind and behaviour from one condition to another by arousing emotions and actions. Ex: Portland plaza-San Francisco
Portland plaza—San Francisco

A motivational quality of water is a nodal experience of the Portland Sequence, which combines gardens, civic auditoriums, shopping areas, apartments etc. into fantasy. Love-Joy plaza is one part of the Portland plaza, which has central fountain with its dashing cascade water forms and water courts; was designed as a man-made evocation. The beauty and excitement of falling, sparkling, flashing, rolling cascades would arouse peoples' imaginations to explore the situation as a transitional need; and would motivate them to be active. Particular nature of water in this place generates moods of behaviour such as joy; excitement, amazement etc as a transitional factor of conditioning minds.

Pettigrove Park is a peaceful oasis in Portland plaza, a place of inviting quietness, rest and contemplation. This need of affiliation arouse behaviors for the purpose of keeping friendly, positive relations with each other. Auditorium plaza is quite different from Pettigrove Park, becomes most fantastic with water stairs and pool below which transit mind for the excitement due to the sudden transitional character.

Figure 50: Portland plaza, exciting experience of water

Figure 51: Love-joy plaza, gives dynamism of water

3.5.2 Water as factor of regulation of behaviour (Ryoanji temple—Kyoto)

When the external environment has a negative movement comparing to the movements of minds or emotions, a person would tend to suppress his emotions and actions as adapting to the environment. This change of physical and psychological behaviour leads for contemplation which regulates both emotions and actions. Ex: Ryoanji temple—Kyoto
Ryoanji temple- Kyoto
This was designed as a garden for contemplation; and walled space expands suggesting a vast space with a composition of racked gravel, simulating the sea. It owes its distinction to its simplicity; has no insinuating or sharp contrasting symbols. Space providing a sense of serenity and peace, isolation, privacy, detachment, tranquility etc will enhance this effect. Thus all attributes are directed towards to set free the human mind and spirit.

3.5.3 Water as factor of sustenance of behaviour (Residence of P. Jayawardane - Sri Lanka)
Sustaining of behaviour would motivate people to have static experience in a particular manner. Ex: Pradeep Jayawardane residence

Residence of Pradeep Jayawardane - Sri Lanka
This was designed as a combined journey through greenery, sky and blue ocean; by evoking moods of ‘calm but yet alive’ quality. Framing of panoramic view of ocean would sustenance interest to have a static resting, by absorbing colorful serenity of vistas. A panoramic view of the outermost qualities of the ocean (peacefulness, excitement) would sustenance the interest by making mind to be alive. Therefore it always accompanies the feeling of expecting, awaiting or pausing for something more.

Figure 52: Residence-Calm but yet alive quality
3.6 CONCLUDING REMARKS

The transitional spaces are essential as conditioning spaces of spatial experiences. When comparing to the other elements, water becomes a main element with its own intrinsic qualities of enhancing transitional attributes in spatial relations. Because of water could easily touched human spirit in differently by creating various emotions through its moods. Those expressive qualities would condition and transit the behaviour and mind set of user; apart of strengthening the spatial relations between spaces.
Chapter Four - Case Studies
Creating Transition Through Water in Out-Door Spaces
CHAPTER FOUR: CREATING TRANSITION THROUGH WATER IN OUT DOOR SPACES

4.1 Transition as an influencing factor for achieve the ultimate goal of architecture

Architectural experiences are needed to be generating comfortable physical and psychological behaviour pattern in human, in order to achieve the ultimate goal of the building. When the achievable objectives are different from one building to another, formation of spaces and behavioral responses would be respectively vary. Therefore it is essential to identify the particular need; and establish spatial relations as an interrelated experience.

In order to act as a media to express the quality of the building; outdoor space is mans' inherent motivational attributes of giving inspirations and emotions, by creating 'in-between breathing' space. Therefore the out-door area can be utilized as a 'transitional space' for a better human adaptation. When consider the formation of out-door spaces, ‘water’ could play a great role as a transitional medium by motivating emotions and actions; in order to enhance the spatial quality and cohesion. The key to understand the 'water of architecture' is to understand the 'architecture of water'; what physically govern its behaviour to actions and reactions with our senses.

Figure 53: Out-door would conditions the behaviour according to the achievable goal of the building

4.2 Basis of selection of case studies

Due to the attained objectives, the formation of the spaces would mention to be different. To elaborate above behavioral responses, it is important to study different types of consciously designed build masses. Further more it is essential to observe whether the conditioning
characters of water in out-door could enhance the rhythmic movement of man; in order to create proper transition. When consider the public building category, the satisfaction of needs almost depend on achieving the ultimate objectives as a whole, but not aim at satisfy particular individual need. After having identified such ultimate needs, all spaces should be handled as a method to conduct meaningful message, according to the building requirements.

For example if it is a recreational oriented public building, the transitions should be designed to enhance the pleasurable qualities of space. For another building, this transitional attitudes and sequences of experiences would be different and aimed to satisfy another objective. In this chapter, three selected works would be studied to observe and understand their means of achieving the ultimate goal; by using water in out-door as a transitional factor of behaviour.

Once Geoffrey Bawa stated "We have a marvelous tradition of buildings in this country that has got lost. It got lost because people followed outside influences over their good instincts. They never built right “through” the landscape...you must “run” with the site; after all you don’t want to push nature out with the building." (Quoted in Aung T, 1984)

4.3 CASE STUDIES

- Sigiriya pleasure garden as a leisure oriented public space
- Hotel Blue waters as a recreational oriented public space
- Parliament Complex as a public space for selected group
4.3.1 CASE STUDY 1: Sigiriya Pleasure garden as a leisure oriented public space

4.3.1.1 Introduction

Palace in the sky - Sigiriya; the lion rock is a fortified city, palace and garden complex created by King Kashyapa 1 (477-495 AD). Sigiriya was the short-lived capital of Sri Lanka, which established as a hide-out fortress of king Kasyapa, who was the elder son of king Dthusena. Though the Kashyapa gained throne of Sri Lanka in 478 AD, his younger brother Moggalana was the rightful heir to throne. Kashyapa left out the main kingdom due to the fear of Moggalana and sought to create a unique fortress on 600 feet high rock boulder like the 'fortress in sky'. Kashyapas' intention was to build another 'Alakamanda', which was like to the Kuveras' (God of the Himalayan Mountain in India) palace. 'Alakamanda' was considered as the palace which rose out from water, and it has used water extensively to create pleasurable environment.

Five major zones can be identified as the architectural remains of Sigiriya complex.

1. Sigiriya rock palace on summit
2. Inner citadel and terraces
3. Western precinct with water garden, rock garden, parks, moats and ramparts
4. Eastern precinct
5. The Sigiriya wawa (Tank)
4.3.1.2 Transitional attributes of spaces and its impact on users

Visibility of the ‘Sigiriya rock’ gives a feeling of majestic respect for the king. This panoramic view of the massive scale of rock, compared to the surrounding greenery would generate first transition by urge a person to respect their king. Though when the journey begins, the rock palace is not clearly visible from the approach path. The physical barrier is visible as Sigiriya wawe (Tank), around the region; and this panoramic view of static water body sustenance actions for a pause due to its quite character. And this would remind the majestic value of the place by transiting persons’ mind from one condition to another. Dr Paranawithana stated that this reservoir symbolized the rock ‘Mount Kailasa’ which was believed to be rising from the water. And this concept reflects the kings’ expectation of introducing him as a god ‘Kuwera’, by sustenance perceivers’ emotions for respect and obedience. The reflected rock and surrounded nature through the wawa (Tank) creates novel experience and visually extend the world beyond.

The layout of Western sector of Sigiriya comprises three well defined sections by cross walls extending east to west and parallel to the outer walls on the northern and southern sides. The sand laid directional path leads a person to form an anticipated vista with unseen palace. This open and calm appearance of the linier approach creates gradual transition by arousing positive movement. This path way is well defined by the greenery at both sides and few lime stone steps lead them for the first enclosure which has consisted four ponds surrounded by an island.
Those four ponds were same in scale, and more effective in creating responsive emotions and tranquility in perceivers mind. This static character of water would enhance the mood of relaxation, which introduces pause for human movement. This silent water often makes no sound of all, or very little; so people find emotional rescue in the rare commodity of silence. The relaxation through the enjoyment of landscape would reduce the tension and giving physical and spiritual calmness; at certain points visitor may pause and again leads through the rough paved sand path. Due to this approach path, particular space has divided in to two square sections; which consists two ponds on either sides. The undisturbed serenity of each square surrounded by the island and its enclosing moat is occupied by a rectangular demarcation. Again this region has divided into two equal halves and center of each half was occupied by a pavilion (Sunken pavilion).

The second enclosure comprises of a fountain garden and an artificially raised island with a deep and board irregular moat around it. Fountain gardens are found either sides of the path way which originate different response by arouse exciting and dynamic behavioral impact on user. In this area water has been used in an exciting manner such as fountain jets and water staircases which still works successfully. And this soft sound of water contributes to enhance the dynamism of place. This lively character would address different transitional need by arousing emotions and actions for enthusiasm. And the play of flying water together with cool wet breeze creates a physical and psychological transition in mind-set according to the changing context. 'Water touching our skin' is most personally intimate experience for leading us towards successive behavioral responses.
An artificial river, a shallow stream of water in natural organic path, constructed in a rectangular garden space by the western access path; it is an extraordinary example for dynamism of water in this complex. Dynamic quality and novel experience of water in motion being able to arouse emotions due to its moveable character. While such transitions happen, the axial path lies between them by adding more majesty to the composition.

"The third section of the pleasure garden is broader than the second and hitherto symmetrically laid out garden had been purposefully made irregular in plan." (Ibid, 1982) The third enclosure is irregular in plan; which consists of two ponds, one octagonal and one rectangular. Two huge water bodies and rocks around; would have created similar qualities even though located separately. And they add multiple experience of water as a transitional medium. Stairs lay between them and natural rocks giving access to the palace complex which could able to change the environmental ambience of the second enclosure; which has discussed earlier.

Combination of trees and rocks in the out door environment create a tranquil, secluded 'room spaces' for in-between breathing and contemplation. From this level, flight of steps leads to the top most level, by achieving gradual transition. Transitional need of ascent again forms the arousal of emotions and actions of the people. This behavioral change is offering of respect to the unseen palace of their king.
As one move along, the ascending stair way, and their vistas from one level to another, gives expectations and anticipations with no visibility of a palace but a natural forest. Enflamed by the narrow rocks, these vistas arouse emotions and behaviors to move further. The awe-inspiring nature of the surrounding massive rock controls and regulates the actions of people.

Then it suddenly opens to the infinite panoramic view of the forest, and it would allow lower down the tension and tiredness; and the landscaped spaces beyond assist this relaxation. This progressive transition has established by forming man-made landings as natural ‘room space’, which is surrounded by trees. And this allows happening gradual behavioral responses by reducing tension and leads the journey towards.
The sudden appearance of the panoramic view of the 'lion plateau' would end this progressive transitional character by arousing gasp emotional and behavioral response. It imposes majestic impact on the perceiver by arousing physical and psychological excitement and amazement. The 'lion plateau terrace', is immediately below the summit. It includes the staircase which goes through the lions' body and leading towards the summit. This creature generates transitional need in person to regulate his emotions and sustain his behaviour for a static pause for a while; because it reminds, 'the area, which specially belongs to the king and his family is begun'. Rising of every step has enflamed by high walls on either sides, would assists the need of offering respect. And the restricted views of vistas arouse emotions and behaviors which needed to be calm down and discipline the body actions.

The summit constitutes buildings and structures of various levels and it is believed that the place included kings' private residence and gardens. Ponds on the summit are the masterpiece examples for ancient landscape and irrigation skills of Sri Lankan. Massive scale of ponds with shadiness of trees and panoramic view of the surrounding landscape which blends with the forest below; has all attributes to release the tension by giving physical and spiritual comfort. On a bright and sunny day, ponds amidst a dense surrounding will appear bright and shiny reflective character, thereby it enhances pleasurable qualities. Each and every conceivable mood change in the sky would be reflected to condition the perceivers' mind-set according to the inviting environment. Those qualities of water being to transit emotional and behavioral responses in a gradual manner which appropriate to the out-door qualities.

The infinite panoramic view of the surrounding forest and the entire palace complex from the
edge of Sigiriya rock would depict overall enthusiasm with tranquility. It invites man by regulate his emotions for complementary relaxation by releasing all tensions. Those spatial and visual transitional sequences in Sigiriya palace complex, would lead for satisfactory psychological process which helps to achieve the ultimate goal of the entire architectural work.
4.3.2 CASE STUDY 2: Hotel Blue Waters as a recreational oriented public space

4.3.2.1 Introduction

‘Blue Waters’ is the place where the sky can speak with the sea. This was considered as the last hotel completed by Geoffrey Bawa (1996-1998); located near to the coastal railway line of Wadduwa. Site consists of few hectares coconut plantation which runs towards the blue ocean. ‘Playing with water’ is one of the most important characters in Blue Waters; the transitional attributes of water has extensively used to enhance the spatial and visual quality of the built and un-built fabric. This hotel meant to name as ‘Blue Waves’, but has got the name of ‘Blue Waters’ due to this dynamic water-language.

Specially this was designed by aiming the foreigners who has come to experience the Sri Lankan sea coast, therefore the ‘Blue-Waters’ get the concept of ‘The hotel that experience the Western sea coast and Climate’. As its way of tough on the human mind, the attainable objective was to create a deep pleasure and relaxation. And thereby the transitional need would regulate mind to be tranquil and lead the perceiver for considerable contemplation.

4.3.2.2 Transitional attributes of spaces and its impact on users

The entrance to this premise will arouse the mind by giving first impression of a sudden transition due to its symbolic and contrasting appearance on a serene coconut plantation. The massive
colonnaded structure with a roof itself gives an impression of 'domination' over the observer and the surrounding environment. And it stands out majestically among the other elements in the context in an impressive way. The panoramic view of the region gives the well secured feeling in the perceivers mind and regulates actions for positive movement towards the entry. The calmness of out-door environment would enhance the sharp transitional character of the entrance, by arousing emotions in the mind-set for behavioral movement.

Blue Waters can be identified as and interplay of axis. When someone at the door steps to the entrance he will feel the long axis which gives the vista of the sea at far end. The pleasing view towards the path accompanies to calm down the behavior by arousing gradual transitional need in mind. Though this movement happens; the reflecting ponds at either sides to the axial path and landscaped out-door contributes to achieve contemplative state in mind by giving pause for a movement. The comfort of fluidity of wet air regulates actions and emotions for static concentration and relaxation. And the framed vista of sea would dramatize the climax of journey by focusing attention and encouraging a person to move in. Continuous greenery in out-door would further add tranquility in perceivers mind. The recreation through the enjoyment of such landscape would reduce the tension and gives physical and psychological calmness and comfort.

Then the continuous axial path would lead a person to the dynamic experience of water. The huge water pool with a cascading water feature will originate different behavioral response by transiting mind to be arousing exiting behavioral impact. The flashing and rowing sound of
water would enhance the dynamism of place. This lively character brings different transitional need by arousing emotions and actions for enthusiasm. And the cool wet breeze which comes from the blue ocean and the gentle breeze which has generated due to this dynamic pool would meet together at this point and creates novel experience on perceiver; by arousing physically and psychologically comfortable transitional impact.

The artificial path created on pond links interior and exterior by enhancing the pleasurable quality and the dynamic character of nature. So the transitional need of assent again forms the arousal of emotions and actions for positive movement. On the other hand due to this visually pleasing environment, it becomes a lobby for having pause and sense the spiritual relaxation. Therefore this lobby space acts as an architectural climax by intensifying the spatial relations. The combination of water with out-door environment would provides maximum satisfaction on perceiver, who paused on lobby for a moment. It takes ones' mind to the infinite relaxation by sentencing emotions and behaviour for static contemplation.

The sky, the sea which meets at the horizon acts as a boundaries to this extended lobby space and make it an enclosed space. This spatial field with an artificial swimming pool, temple trees at close proximity, the sky and the ocean at the horizon contribute to retain a required comfortable mental condition. Then the transitional need would assist in mind to be calm down by sustaining the emotions and actions to releasing all tensions. Only the Araliya flowers which are falling softly to the pool will disturb this tranquility and calmness.
The dining space which lies between all those beauties will also get the infinite view of the palms, which brings open calm feeling to the perceivers mind. This blending character to the interior to the exterior would allow ones' to regulate his motions and actions due to that static tranquility. A parade of palms reflects the golden as the sun tips below the horizon. Such characters of the elegant nature would express greater degree of pleasure in perceivers mind by transforming him in to a complementary relaxation with the context.

The continuous character of water-to-water in Blue Waters' could be a great asset to utilize a 'transitional need' by harmonizing physical and psychological comfort on perceiver. The artificial pond made in front of the dinning area is a unique feature created, with the combination of man made and natural landscape elements. This vast still water pool with basic natural landscape elements - water and coconut trees - has a powerful impact as a transitional factor, which brings tremendous pleasure to the perceivers' feelings. In order to enhance the qualitative aspects in out-door this novel experience of water would bring the feeling of tranquility and purify ones' mind to achieve the maximum relief.

The irregular plan shape of the swimming pool and man made ponds would enhance the architectural quality and the composition of the scheme, as a unit. Therefore the infinite view from the edge of the lobby depicts the overall tranquility, relaxation and stillness prevailing in the
environment. It leads a person to regulate his emotions and sustenance his behaviour from static contemplation to overall relaxation with enthusiasm; by deviating him from the temporal world for a moment.

Such balance formation of water in out-door becomes the most strong factor which influences the transitional quality and the character of the building complex. Those 'in-between breathing spaces' condition the human mind and behaviour appropriately, for the surrounding settings and thereby influence the sequential process of achieving the ultimate goal of the building.

Figure 81: Deep pleasure and relaxation will deviate mind from temporal world
4.3.3 Case study 3: Parliament Complex as a public space for selected group

4.3.3.1 Introduction

New parliament at Sri Jayewardenepura (represent (sri) city (pura) of victory (jaya)) was a decree of J.R Jayawardene's first act, after becoming the president of Sri Lanka in 1978. Bawa was invited to be the architect of new parliament in 1979. He conceived the parliament as an island capital surrounded by new garden city of parks and public buildings. Although the idea of garden city capital newer materialized, the new parliament complex was completed on April 1982.

By designing the parliament, Bawa's aim was to create an accessible national and public monument which gives different expressions by overlapping various cultures in Sri Lanka; and also symbolized the democratic character of the government. Therefore transitional need would assist to feel the nationality by arousing perceivers' emotions to be a proud Sri Lankan.

Further more; the shape of the parliament roof is more familiar to emphasizing Sri Lankan culture and hierarchical volumetric expressions of spaces.

Rather than its ceremonial, dominant quality it gives piquancy to the user due to its harmonizing character with nature. Once Geoffrey Bawa stated “We have a marvelous tradition of buildings in this country that has got lost. It got lost because people followed outside influences over their good instincts. They never built right “through” the landscape. I just wanted to fit (parliament) in to the site, so I opened it into blocks. You must “run” with the site; after all you don’t want to push nature out with the building.” (Quoted in Aung T, 1984)
4.3.3.2 Transitional attributes of spaces and its impact on users

As the most prominent governmental organization – parliament - emphasized its importance by creating the very first transition on perceiver, from its majestic and ceremonial but calm panoramic view. It was purposefully planned to stand above the huge water body; and thereby becomes impossibly over its surrounding, to prove its majesticity. Due to the static and reflective character of the water barrier around the parliament, transitional need generates in mind by regulating emotions and actions to realize the hierarchy of the place. So it becomes a conditioning space which transit perceivers mind from one condition to another, in order to be a physical territory around the building.

Symmetrically located solid gate posts at the beginning of the drive create a vista of the main building. Ceremonial line drive demarcates the entrance path by separating water body into two large sections. Continuously anticipated vista of the path enframed by the majestically stands trees at either sides, would arouse emotional movement towards the building by making gradual transition on user. Static and calm appearance of water body, shadiness of trees and serene panoramic view of the surrounding landscape would contribute all attributes to release all the tensions, giving physical and spiritual comfort. Every element has been laid out perfectly related to the whole composition, by creating gradual transition towards the building complex.

Figure 83: Stands above the water

Figure 84: Gradual behavioral movement aroused, due to water and surrounding environment

Figure 85: Layout plan of the complex
Entry to the site is marked by the central water body, which leads a person to regulate his emotions and sustain his behaviour for static contemplation for a while; by create an oblique approach and taking the user away from the main axial path. It breaks the monotony of the central axis and make perceivers experience richer. Again rectangular ponds on either sides of the central path enhance the majestic character of the drive with its flight of steps which take the user into the upper level. Rectangular ponds were made as cascading ponds, so its lively character and soft sound contributes to enhance different transitional need by arousing emotions actions for enthusiasm. This balance formation of out-door environment would be a great assist to condition the human mind for the changing context from built to un-built.

As mentioned earlier the parliament has a goal to fulfill as a public oriented transitional space. The main transitional need in such place is to give a welcome feeling and curiosity; and then the user would be urged to search for the unknown, by using his vision and knowledge. But the difference of the parliament is; it is for permitted entrants. Therefore the main transitional need has to be slightly deviated from ordinary theme to extraordinary. Therefore the transitional attributes in the out-door formation of parliament has handled with many respects and disciplines. Thereby water in out-door has mostly used as a static form, to sustenance and regulate emotions and actions of perceiver to realize the new experience in an attentive manner. The change of directions and level differences add more value to the drive, by making gradual and disciplinary movement towards the building complex. Therefore no body will tend to move in the wrong direction though the approach is change from the main axial path.

The long rectangular shaped colonnaded space, articulated perpendicular to the main axis. It is the first transitional point which harmonized out-door with the in-door built form. As one enters to this grand double height space, it gives a curiosity to proceed further. Rear of this rectangular
space is articulated with a solid wall in contrast to the front colonnade. This partly open space thus keeps a visual relationship with the out side, giving him a sense of place, deviating any feeling of isolation. The comfort breeze of air regulates actions and emotions for static concentration and relaxation.

After this point the transitional attitudes of the parliament complex had limited in to the room/built transitions, because to maintain the functional purposes. The solid walls at either sides of the colonnade would urge a transitional need to move inside the complex. The massive scales of the volumes encourage perceivers' curiosity to move towards the steps which has started from the end of the space. Those series of steps form a gradual transitional attributes on user by creating as a 'built room' space. Enclosed vistas at both sides sustenance disciplinary emotions and actions, to establish different transitional need according to the situation required. It thus regulates the emotions for concentrative realization, so the spaces would allow only for limited views and vistas through the openings formed in the wall. It arouses emotions and regulates actions to be active in a subtle manner only for necessary activities and to proceed through the passage.

When the journey continues, the panoramic views from balconies provide calm and serenity by regulating emotions and actions for concentrated resting. While this happens, the sequences of spatial linkage progressively increase the spatial density towards the main entrance of the chamber. The sudden appearance of the entrance door starts the immediate movement towards the destination - climax. It majestically ends the journey by creating well secured grand enclosed chamber, which arouse transitional need in mind to be curious about the major space, so he moves inside.

This leads the user in to a massive volume of the major space and sudden transitional need urge in the mind to sustenance the emotions and actions for static pause and necessary activities.
Majestic view of the main chamber expresses the higher purpose of the building by regulating mind for integrated and live discussions. It urges different transitional need on them according to the specific requirement by deviating them from the temporal world for a moment.

Figure 89: Enclosure demarcates the higher purpose of the building
4.4 Analytical conclusions on case studies

Achievable objective or the ultimate goal of the building should be respectively vary according to the purpose of that particular building have been using. As discussed so far, ‘the goal’ is utmost important phenomenon needed to be considered prior to arrange the spaces, whether they are built or un-built. Therefore it is essential to identify the specific need; for establish proper spatial relations between spaces, because the emotions of a person are always conditioned by the way of that spaces have been formed.

Transitional space as an ‘in-between space’ thus assists to keep a gradual sequence of experiences between different spatial relations, in order to become a conditioning space for human behaviour. In relation to the architecture, such spaces lead a person gradually to achieve the ultimate aim or the objective of the building. Water as one of mans’ inherent motivational attributes of giving inspirations and emotions; can be used as a design element of out-door formation; to act as a transitional factor in relation to a building.

The selected case studies which has discussed earlier would clarify the way of utilizing appropriate transitions to achieve the ultimate goal of the building. The first case study was the leisure oriented public space-Sigiriya. It was intended to design for give the complementary relaxation by releasing all tensions, and give maximum physical and psychological comfort on user. Therefore Sigiriya has the main goal or an objective to fulfill through the entire architectural arrangement of spaces. It has complex and extraordinary spatial relationship which covers vast land area. Though the spaces have formed as separate entities from one to another; the transitional spaces between them has consciously handle to conditions the human behaviour by creating ‘in-between’ breathing character in order to enhance the overall enthusiasm. It maintains the spatial relationship either by allowing spatial transitions for actual physical movements or by allowing visual transitional spaces to condition the emotions. So these transitional attitudes would create comfortable behavioral impact on user in order to achieve the ultimate goal of the complex.

The second case study was the hotel Blue Waters, and its attainable objective is to create a deep pleasure and relaxation. The transitional need therefore would assist to bring overall enthusiasm with static contemplation by arousing perceivers’ emotions and sustenance his behaviour by deviating him from the temporal world for a moment. The balance formation of
water in out-door was the most strengthen factor which enhances the transitional attributes of Blue Waters and also it influences the relationships among spaces, to establish deep pleasure and recreation as its intended goal.

Third case study was bit different from previous case studies because, though it has a public character it purposely become a space for selected group and permitted entrants. Therefore the transitional attributes in out-door and in-door formation of parliament has handled with many respects and disciplines. Thereby water in out-door has used to regulate emotions and sustenance the behaviour of perceiver by giving the realization on new experience in an attentive manner.
CONCLUSION

"It can be started categorically, on the basis of our experience of great architecture and great natural scenery, that the experience of being within fine three-dimensional spatial volumes is one of the great experiences of life." (Eckbo G, 1986)

Being with nature is the one of mans' inherent desires; and architecture is the satisfactory process of harmonizing nature with the man made artifacts. Therefore it is a vital necessity to understand this compromising character prior to design any built forms. Water as a natural element, it motivates attributes and gives emotional inspirations for the architectural communication; therefore can be used as an enhancement factor of such architectural experiences. So, water becomes a transitional factor in out-door formation which assist to keep gradual sequence of experiences between different spaces. Therefore water in out-door can be identified as a transitional factor which generates human behaviour of arousal, regulation and sustenance; in order to become an enhancement factor of architectural experiences.

According to the study, it revealed the 'water in out-door' as a transitional factor in relation to the architectural experiences. As an example, if the water presents dynamically in out-door it would generate sudden transitional impact on user by motivating his emotions actions to be active and live. So it is understandable, when there is a presence of transitional zone, a person begins to change his emotions and actions by conceiving the massage that the spaces have been intended for. Then he must able to adapt to the each of spatial variations, without facing any stressful and uncomfortable impact, physically or psychologically.

For that, this study firstly discussed the vital necessity of finite space and spatial relations; because space can not be understood in isolation and therefore not capable of perception. Proper formation of spaces would lead for successive perception as a linkage from one to another. Though the spaces are designed as separate entities, the spatial experiences are never static-it processes. Therefore out-door environment in and around the building would be a great assist to establish the transition in human mind by creating a 'breathing spaces' between various spatial realms.
Secondly it clarified the need and the role of a transitional space as a conditioning space, to generate successive behavioral responses. Transitional space would allow happening spatial transition by providing physically occupied rooms or, allow visual transitions which could only perceived as view and vistas. Such motivations would lead for happen successive psychological adaptation; which conditions the behaviors to be aroused, regulate or sustenance according to that particular situation. Therefore the proper formation of transitional space would lead for appropriate behavioral responses in order to become an influencing factor of spatial relations.

Thirdly this has discussed the motivational ability of water as an enhancing factor of transitions in out-doors formation. Water has been used to evoke various emotions in perceiver by establishing transitional need in human mind for better adaptation. It becomes a space for harmonizing between built masses and nature, by creating physical and spiritual comfort on user. For example the static character of water would sustenance emotions and behaviors, by creating gradual transitional need in mind. It provides complementary relaxation by releasing all tension and gives physical and spiritual calmness. Conscious play of dynamic water would arouse emotions and action, by generating sudden transitional impact. It would arouse mind to be live and active and thereby leads for overall enthusiasm. Likewise water in out-door can be consciously formed as a 'conditioning space' between various spatial relations, and then it governs people towards the intended goal of the building. Therefore in relation to the other elements water plays a major role as an influencing factor of out-door transitions in the architectural communication.

Finally the study has discussed three selected examples, which has used water in out-door as a transitional factor to generate proper behavioral responses as a sequence. The provision of such transitions would help to form the spatial experiences as a linkage, according to the achievable objectives of the particular building. Therefore it builds up an overall understanding, if the out-door has formed properly it conditions human emotions and behaviors to feel the place as its intended goal.
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