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BUILT ENVIRONMENT AND THE USER PSYCHOLOGY RESPONSIVENESS OF THE BUILT ENVIRONMENT IN THE PROCESS OF REHABILITATION WITH SPECIAL REFERENCE TO; REHABILITATION CENTRES FOR DRUG ADDICTS

DISSERTATION SUBMITTED TO
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FOR THE FINAL EXAMINATION IN
M.Sc. (Architecture)

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THE DEPARTMENT OF ARCHITECTURE
UNIVERSITY OF MORATUWA
SRI LANKA

2007

89506

DECLARATION

I declare that this dissertation represent 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 any other institution for degree, diploma or other qualification.

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INTRODUCTION

Subject explanation

Architecture is the art of creating built environment, composing of spaces; to be inhabited by the men. Which he has physical, emotional and intellectual experience and facilitates his bodily comfort as well as emotionally attaches him to it.

Architecture as a work of art, through symbolic communication leads him towards a higher realm of contemplation. Architecture generates a longing and an emotional bond where he will identify himself which is an essential psychological need of man.

Architecture expected task is creation of place, and this place would be in communication with the user which will make his life comfortable. By attending in to his psychological needs and allowing releasing his emotional stresses in a rather subdued manner

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Buildings should express the appropriate meaning to the people who use it and it should be comfortable physically as well as psychologically. More this relationship exist more the building will function, so that the building as well as the user will live in.

This study is an attempt to discuss the relationship between design attributes of the rehabilitation centre environment on the user psychology and their performance.

Need of the study

In buildings, which are primarily for a particular user group, this architectural space and user psychology relationship is more vital. This could not be achieved only by using architects own personal perspective.

In order to create architecture it is important for an architect to understand the needs and the requirements of the user regarding their physical and psychological social as well as economical requirements.

Rehabilitation centers serves predominantly to a particular user group who needs much more psychological support. For this rehabilitation process to take place a conducing environment is essential. There for the inter relation ship between the user and the architect is more vital.

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When designing a rehabilitation centre an architect has to make decisions frequently that have an impact on how the user think, act or respond to the built environment. In fact there is a wide variation among individuals in their responses about the environment.

Intention of the study

Catering to user requirements and needs by creating appropriate environments for them is a main purpose in the making of architecture. To achieve such ends it's essential to understand the requirements of the user through broader perception.

Through an understanding of the individual differences of psychological needs and knowledge about attitudes and values,

An architect will be able to provide much requirements of the user, as he resolves design problems to get satisfactory solution. In making appropriate decisions user should feel comfortable physically as well as psychologically.

The intention of the study is to acquire sensitivity and familiarity of user psychological requirements in designing different design environments through identifying actual user requirements and to indicate how it may be applied in the designing of the rehabilitation centre.

Method of study

Study will be based on a theoretical framework and number of analytical case studies. Under the theoretical base it will first be examined the idea of space, built environment and the human behavior. It will theoretically establish that the concept of space goes beyond the physical setting.

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In the first chapter the architectural space and human need, concept of space and place, human behavior, environmental and human qualities will be discussed in theoretical basis.

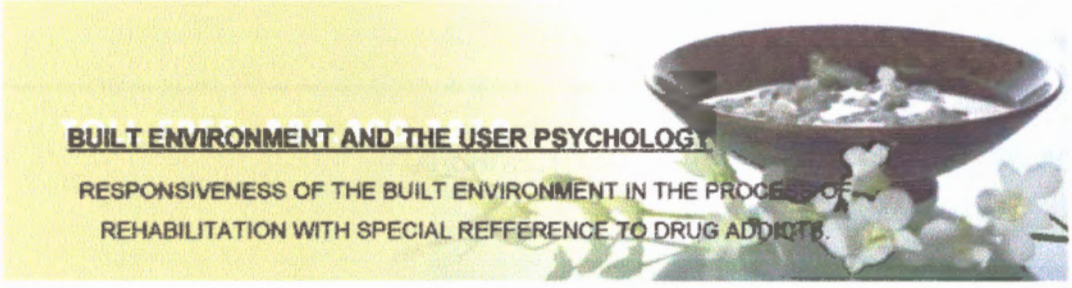
The second chapter will be based on the drug addicts and the rehabilitation process. Social implications of drug addicts, psychological implications on the path of life, different approaches in rehabilitation and social awareness in rehabilitation will be discussed in theoretical basis.

The third and the final chapter will focus on the relationship between behavior and the built environment and how the built environment is used to uplift psychological state in the rehabilitation process. In this analysis selected case studies will be cover out in the final chapter.

Studies could be carried by analyzing data from published literature to study theoretical basis of architectural space and user psychology.

Observing physical traces and behavior from selected rehabilitation centers

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CHAPTER 01 – ARCHITECTURAL SPACE AND THE HUMAN BEHAVIOR

> *"Expressionless art is really not an 'art' that does not evoke any beliefs, feelings or thoughts"*
>
> (Harold Osborne, 1970.p 94)

Art is a media which express human thoughts, desires and emotions and also capable of conveying messages. Being an art form, architecture utilizes its language to create expressions. An important aspect which needs to consider is architecture is not only involved with perception and experience but being lived in.

> *"As an art, architecture is more than satisfying the purely functional requirements of a building program. Fundamentally, the physical manifestation of architecture accommodates human activity. However the arrangement and organization of the elements of form and space, will determine how architecture might promote endeavors, elicit responses and communicate meaning. These elements of space and form are presented, therefore not as ends in themselves, but as means to solve a problem, in response to conditions of function, purpose and context, that is architecturally."*
>
> (Francis D.K. Ching, 1943. p 10)

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Architecture represents a form of communication and like a language of any other art form, architectural language too has its own vocabluaries and syntax, which fulfill with current social and cultural situations. Architecture employs this language to communicate various expressions, particulate concerning with the philosophies and ideologies of the society. Therefore it is important in architecture the form and space created and the expressions intended to give to be related to the purpose of the objectives that intended built space must achieve. Built space or form must be able to achieve its objectives and areas in terms of user, activity and the purpose it is going to serve.

The process of creating a good piece of architecture requires responses to both potentials and constrains. They range from user, context and activity pattern and also to the purpose identified as the main generators which result in both form and place making in architecture.

However a built environment to be considered as architecture it requires responses to the both qualitative and quantitative requirements of the user. In other words architecture must fulfill physical as well as social and psychological requirements. Therefore in creating architecture an architect has to take in to account and respond too many other issues in addition to technological, constructional aspects, services maintenance aspects.

The building could be considered as a competent building if the consideration has been given to obtain proper circulation, acceptable lighting acoustics, ventilation levels and other basic functional requirements. It will fulfill the physical needs thus answer the quantitative requirements. But to be considered as architecture the building should cater qualitative requirements too. Other wise it would be considered as a mere building. The quality varies from place to place as the design requirements vary. Within a similar type of building there are large variations of the term quality to satisfy the required objectives.

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> *'Communication through art shapes and gives meaning to life. It thus forms an essential element in any form of development evolving man. Works of architecture from one of the mans most intimate expressions of his conception of his environment and conversely provides one of the prime explanations of his environment"*
>
> (Oakely, David, 1970, p 47)

This art of architecture conveys a meaning full message and evoke emotions in the mind of the beholder. This meaning is the resultant of architectural elements in a

disciplined and orderly manner. Architects use their languages to convey an appropriate message by using this communicative ability of the architecture. Architecture symbolizes the intentions as inspirations or attitudes of user in built forms.

Considering about the user requirements different built environments cater different user categories as each user category has different needs than others. The need can be quantitative or qualitative. Considering the building design theory in architecture we have found 'user', i.e., the direct and indirect users of the building has created constrains or potentials as generator in making of the architecture.

1.1 Human Need And The Built Environment

Human being is a social animal who cannot lead a complete and happy life out side the society. He likes to associate, interact and work with his fellow members. In order, for him to function in the society there are certain needs, which should be made available. The basic phenomenon is to satisfy the human needs. This can be achieved by providing properly designed spaces. All these needs can be described under two main headings.

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Primary needs – physical needs
Secondary needs – psychological needs

The built environment has a profound influence on man and his behavior, in terms modifying physical world to accommodate his physical, psychological and social needs. Man is an emotional as well as an intelligent being. Therefore, he is affected by psychologically by socio cultural and by physical comfort.



Fig 01

My corner....

Particular environment have a definite and definable influence on man and his behavior. The quality of the environment with such space has to be encouraged and propagate the activity within, in order to succeed.

1.1.1 Physical Need and Built Environment

Physical needs associated with food, clothing and shelter should be satisfied first and foremost for the preservation of the species. They are quantitative, and also the user should be satisfied with his special requirements in relation to correct anthropometrics and correct dimensions which make him physically and psychologically comfortable.

> *"Shelter is of supreme importance of man. It is the prime factor in his constant struggle for survival. In his effort to shelter himself against the extremes of weather and climate, he has over the ages, evolved many types of buildings."*
>
> (Rapoport, 1969)

Since the time of Paleolithic era, man started to build different structures to dwell him. The factor of weather climate, availability of certain materials, different attitudes and environments affected to the formulating of the dwelling places. Similarly the concept of identity of the family was integrated in to the dwelling to create that physical boundary.

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> *Shelter indeed summarizes such of its meaning, implying the basic desire for protective enclosure which is common to most*
>
> (Paul oliver, 1987, p7)



Fig 02
A place for day to day habits

The dwelling place has been employed for the people's day to day habits such as fire making, food preparation, cooking and eating, the fetching

of water and fuel, care of dwelling, work a home in the practice of crafts, sleeping and the periods of leisure spent visiting and entertaining.

1.1.2 Psychological Need and Built Environment

Secondary or psychological needs include intangible such as sense of belonging, personal affection, self esteem, status among ones peers and the feeling of accomplishment or personal fulfillment. Person's secondary needs are much more difficult to satisfy. There are needs of the psyche or inner person. Deprivation of these secondary needs may cause stress and strain in to the individual psyche resulting in anxiety, boredom and even covert behavior. To be able to develop built environment that fit the need of the human beings, some form of the classification structure must be developed.

Psychologist Abraham Maslow presented a very useful model that classified not only needs but also the manner in which they are satisfied. He proposed a hierarchical structure of needs, the basis of which is that lower order (more basic) needs must be fulfilled before higher order (more complex) needs. As the lower order needs become satisfied, the higher order needs become silent. What this means is that only after a person find a secure shelter will he or she be concerned with higher order needs of belongings and establishing identity. The structure in the order of lowest level to the highest is as follows.

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- Physiological needs - to carry out bodily functions
- Safety needs - security and protection from the physical and psychological harm.
- Belonging and love needs



Fig 03
A place of satisfaction

1.1.3 Psychological Attribute of the Architectural Space

Architecture harmonize with the inhabitant, where the inhabitant finds the oneness of himself and his built environment, where his self flows free in to the outside world, where he find himself easy to let his forces loose and run them past each other by allowing them to escape from the locked in conflicts, which oppresses them, then the architecture is believed to be in existence.

Creation of intimate spaces, spaces where inhabitants are free and relax, where they find the life is easy and comfortable....this is what is expected from architecture. Not only in physical quantifiable terms but also in spiritual and qualitative terms too.

1.1.3.1 Sense of Belongingness

> *"we know perfectly that we feel calm and quite and more confident when in the old home in the house we were born in where we belong than we do in the houses in street where we have only lived as transient"*
>
> (Bechelard,G. 1969; p 32)

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Personal behavior pattern in childhood shape out according to special arrangement of old home, having some memories of experiences. That meaning causes a sense of belongingness in the home. Each and every person has their past memories of home and his behavior pattern in home is basically based on them.



Fig 04
The place where we belong

1.1.3.2 Sense of Privacy

Good sense of privacy will affect psychologically and physically and would satisfy the occupants. The privacy fulfils the sense of security because considering the occupants particular place owned by him will not be challenged by another. The basic need for security is one of the primary reasons why man has to define "place".



Fig 05
The protection.....

> *"The need of the privacy, which results in the demarcation of territory, is a result of crowding. Recent work by behavioral psychologists suggest that man, no less than animals is subjected to stresses generated by penetration of the individuals bubble of spaces".*
>
> (Rapoport, amos; 1969; p81)

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Man throughout the ages has established the need for privacy, spatially through architecture. This is particularly seen in the form of the traditional houses, which by its very nature required privacy.

1.1.3.3 Sense of Identity

> *"There is a strong psychological connection between the individuality and the house not anything else that it's his home, where he gets maximum psychological satisfaction"*
>
> (Richard, J.M; 1976; 112)

Fathy says that, to satisfy a person one should cater to his individuality. Because each and every person is different from each other by his thoughts that effect his aspirations,

ambitions, tastes, goals and the way he sees the world and reacts. That is his personal identity. Even in a family, the family encompasses members who are different from each other. But they have very close relationships, which stronger than with the outsiders. The way of articulating spaces may vary from family to family even in the same society. That will be the individual identity of the family within the society.



Fig 06
My corner of the universe.....

1.2 Built Environment and the Human Behavior.

The main objective of architecture is to create an environment that will provide for the activity patterns required by a set of users to achieve their goals. This involves an understanding of movement, human physical dimensions and far more subtle use of space such as for territory and settings for interaction between people; and it is important to understand the complex system of behavioral components.

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To understand why people build different environments for different behavior we need to understand how the human mind works. Schemata represent one product of what seems a basic process of the human mind, to give the world meaning, to humanize it by proposing order within it – a conceiving order often achieved through classifying and naming or differentiating. The human mind classifies, differentiates and prepossesses the environment. We could say that the order is thought before it is build. Architecture is formation of an environment which facilitates the behavior needed or desired by people to achieve their goals, it is concerned with the meaning that different aspects of the environment have for different people and what things tend to be known and liked.

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If we are to discover how to design to fulfill or change the mental image which people have of desirable architecture, to have their patterns of behavior it is as important for them to understand how these images come in to being as it is to recognize their pervasive role in behavior.

1.2.1 What's Human Behavior

Man is both a physical object and living organism; it is inter play between these two aspects of his nature that is relationship to the physical world is revealed. As a physical object characterized by the size, density and shape, he necessarily occupies spaces in his environment. In this respect, he does not differ from any other component of the environment. As a constituent he acts upon his physical environment and as a living organism however his influence on physical surrounding goes far beyond. This is being objected to find in the environment. Man is readily mobile, goal directed organism. Where he goes, how he position himself and how long he occupies a given space in pursuit in his goal, are all facts that contributed that he experience as his physical setting in the behavioral context.

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1.2.2 Spatial Behavior

Architectural space cannot be merely a container of activities, but also an integral part of the behavioral pattern. To create a meaningful and proper architectural space, the well understanding of functions and required emotions and feelings is a vital. This would bring right frame of mind to the designer. Different spaces with particular qualities should be provided with particular activities to the satisfaction of its user.

One of the objectives of architectural design is to create special layout, which will provide for the activity patterns required by a set of buildings user to achieve their goals. This involves an understanding of movement patterns, human physical

dimensions and for more suitable use of space such as for territory and setting for interaction between people.

Some of activity pattern can be described as the result of some process habitation; they are in fact purposive actions. A person will scrutinize the environment for, Louis Khan, terms available for achieving his goal. There are two useful units for analysis of human spatial behavior.

- Activity system - primarily concerned with the organization of the sequence of the activities taking place in a setting.
- Behavior setting - with the relationship between the setting and a recurring pattern of behavior.

1.2.3 Environment Qualities

Environment qualities that to be fitted for the need of occupants, which are classified not only needs but also the manner in which they are satisfied. A design can provide potential environment quality permitting possibilities for specific activity patterns and hinder other within a physical setting.

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> *"The architectural environment functions in three ways; it maintains physiological states necessary to sustain behavior; it provides the necessary behavior settings; it supports psychological states through the use of symbols"*
>
> (John Lang 1974,p184)

The complexity of human needs and the process that people follow to satisfy them have some very important implications to design. Because of the complexity and diversity of needs, rehabilitation design must go beyond solutions of the so – called physiological and task needs and provide for more complex social and psychological needs. Both needs and the manner in which they are satisfied is the product of the person and the society of which the person is a member.

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An environment quality and maintains physical and emotional states necessary for user need satisfaction, fulfilling symbolic and aesthetic functions. Thus, a designed environment generates a certain ' state ' in the human mind. The atmosphere that creates this mental state can be described as the ' quality ' of that physical setting.

Satisfying the functional and aesthetic needs of a diverse set of people is extremely difficult and the assumption that the environment can be planned as a closed system that is frozen at the time of design conception is erroneous. Users change with time, new behavioral performances develop, new activity patterns are introduced... to be successful, the environment must be conceived as being in a constant state of adoption to permit the maximum freedom of choice of desired behavioral patterns and to order the setting to support these patterns; it must also have the potential for the expression of the personal identity of future users as well as current ones.

A more effective environment can be planned if obstructions to their performance, such as the poor location of critical materials and information, noise and interference, poor lighting and ventilation are identified and designed out of activity pattern. This identification involves viewing their environment as a system of interrelated activity sites in which task and social behaviors take place within an organizational context. These behaviors are supported by the socio-physical environment created by the environments own spatial configuration, arrangement of furniture and equipments, environmental ambience and symbolic properties. To be completely effective, the physical image of the rehabilitation center should be enabling the user to identify with the organization and view it as being sympathetic to their needs.

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1.2.4 Humane Qualities

In their own lives, people have humane quality when they are most intense, most happy most whole hearted. This comes about when they allow the forces they

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experience to run freely in them, to fly past each other when they are able to allow their forces to escape the locked- in conflict, which oppresses them.

This freedom, this limpidity occurs in people most easily when they are in hand environment whose language helps in such a way to let their forces loose.

1.3 Designing for Human Behavior

Human behavior can be considered to be goal directed attempt by and organism to satisfy the needs that are perceived and cognitively organized. The purpose of behavior has been accepted as its significant determinant effecting not only person's activities but also his perceptions and mental processes.

Everybody is a participant in ongoing behavioral systems, defined by the individual psychological capabilities, his personality, the psycho group in which he is a member and his environment. Behavior is directed towards satisfying needs. Needs are different from person to person as well as to situation to situation. Ones needs are depend on individual preferences, socio cultural differences and environment he lives.

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One of the most important aspects, which influence human behavior, is culture. Culture clears distinguishes human from animals. Animal behavior is based strictly instinct. But human, in their trail by error to satisfy their urges have created culture, with its tremendous variations from society.

Culture can be divided material and non material parts. Non material consists on perceptions, ideas, rituals, habits etc and material consists of artifacts, manufactured objects, dwellings and other buildings, roads etc.

These two, material and non material must co exist for culture to live. The culture of one society differs from another non material wise. But these changes are extremely

complex because of sub cultures may be from a group of people belonging to a same culture may try to identify with a similar set of values.

1.3.1 Humane Quality in the Environment

Mans needs an ideal environment for his behavior pattern in order to interpret with the activities, for the best comfort of the user, in an environment, which is alive healthy self creative human beings feel more comfortable. In an environment, which is unholy and self-destroying, people cannot be alive. They will inevitably themselves be self destroying and miserable.

Most men are not fully true to their own inner nature. Infect, for many people, the effort to become true to themselves is the central problem of life. At the human level of complexity, there is a distinction between systems, which are true to their inner nature –

and those, which are not. Not all of us are equal lay true to our own inner nature, or equally whole. And exactly the same is true in those larger systems out side us, which we call our environment. Not all the parts of the environment are equally real, equally whole. Indeed this subtle and complex freedom from inner contradictions is just the very quality, which makes things 'humane'

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The complex relationship between the built environment and human behavior confounds both the designer who creates it and the behavioral scientist who studies it since both deterministic view that behavior is completely controlled by the lay out of the physical environment and the free will position that behavior exists without reference to the physical setting have been equally reputed.

The environment does so by acting in an instrumental fashion providing the facilities and space for the users to achieve goals in a meditation role, interceding with the user and causing them to adapt their behavior to the setting and in a symbolic mode

providing a series of massages that convey information about appropriate form of the behavior.

The physical setting functions in three ways to support behavior. First provides the physical element required to sustain the physical status necessary to satisfy his or her needs. The physical setting can be conceived as the man made container of behavior, which acts as the filter between people and natural environment.

Second, the physical environment goes beyond containment to provide physical facilities and special arrangements that aid specific activity pattern and hinder others. Part of this function is capability of the built environment to facilitate the formation of social grouping to ease communication and movement and to provide desired level privacy. The variables of these functions are the dimensional and geometrical properties of the setting and the spatial relationship between spaces.

The final functional aspect of the built environment is that it generates and maintains mental and emotional status necessary for need satisfaction. The culture and the sub culture, socio economic position and other personal problems relevant to the design should be taken into consideration.

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Apart from these factors, architect should a position to grasp the patterns of behavior of the user by analyzing and observing carefully their social behavior. So the architects' belief system on designing should also be adjusted with the changing attitudes and values of the society.

1.3.2 Intimate Experience Of Built Environment.

"To grasp space to know how to see it is the key to understanding of architecture"

(Alexander, 1979, p29)

In the process of grasping the vital relation in his environment man began to have a space concept. The space brought meaning and order in to man world of events and actions.

Architecture has basically the molding of spaces. It means the dividing small spaces from the larger environmental spaces. Furthermore, these small spaces can be divided in to a hierarchy of territories, which affect the management of spaces is based and second interns of the way in which the arrangement of space and space defining elements affect the manner in which people interact in the space.

> *"All nature is based on two things; there are bodies and there is emptiness, in which bodies have their place, in which they move"*
>
> (Lucretis. 1971, p10)

When the bodies take the form of the architecture the empty space becomes the architectural space. In other words the utilitarian space is created collectively with satisfaction of aesthetics, functions and techniques. Buildings that are beauty to the observer and well composed according to acceptable rules provide aesthetic satisfaction. A technically satisfactory building will be structurally sound, adequately durable and require low maintenance. And a functionally satisfactory building provides an appropriate physical and psychological setting for a given human activity.

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CHAPTER 02 – DRUG ADDICTS AND THE REHABILITATION PROCESS

A person with some problem, discomfort or inability, it could be a teenager experiencing his first romantic rejection or it may be a man in his prime wondering why is not happy with his life or it could be any one in any age in between. This person tries drugs or alcohol. The drugs appear to solve the problem. He feels better, because he now seems better able to deal with life, the drugs become valuable for him. The person gradually becomes addicted to his drug of choice. He is then trapped. Whatever the problem he was initially trying to solve by using drugs fades from memory. At this point all he can think about is getting and using drugs. He losses the ability to control his usage, he is now a drug addict.

2.1 Drugs and Human Behavior

Drugs ingested orally, although there is a growing trend in Europe towards females placing drugs soaked material in reproductive areas, thus bypassing more of the body's natural defenses against intoxication.

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Alcohol is typically used for the effects of relaxation and suppressed inhibition.

Behavior can be considered to be a goal directed attempt by an organism to satisfy needs that are perceived and cognitively organized. The oppressiveness of behavior has long been accepted by most psychologists as its significant determinant, affecting not only person's activities but also his perception, mental processes and ultimate objectives.



Fig 07
The experience.....?

In addition to the mental stress created by his unethical behavior, the addicts' body will have adapted to the presence of the drugs. This is when the newly created addict begins t o experience drug cravings. He will experience an overwhelming obsession with getting and using drugs, and will do any thing to avoid the pain of withdrawing from them. This person seeks drugs both for the reward of the pleasure that give him, and also to avoid the mental and physical horrors of withdrawal. At this point the addict is stuck in a vicious downward spiral. He faces the problem of finding money to buy drugs so attempt to appear normal to his friends, family and employer. By now the drug addiction causes his personality to change.

2.1.1 How does drug used and how does it affects

Alcohol affects users by depressing the central nervous system. When consumption of alcohol exceeds the ability of the liver to detoxify ETOH, higher centers of the brain are the first affected, followed by the brain stem. These results in euphoria, relaxation, suppressed inhibition and impaired motor skills. Overdoses can be fatal. Alcohol takes effect slowly depending upon a variety of factors including metabolism and the amount of food present in the digestive system. Intoxication can last several hours beyond the point of consumption.



Fig 08
one moments pleasure.

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Alcoholism develops gradually over time, and can become an overriding factor in the addict's life. Tolerance develops very quickly, as the liver produces excess microtonal enzymes which detoxify the drug. As a result more alcohol needs to



Fig 09
To relaxation....

be ingested for the same effect, which can lead to frequent blackouts or memory lapses, and finally an inability to stop drinking. As it is legal to use alcohol, many users aren't aware of a problem until they are full-blown alcoholics and hit "rock bottom."

2.1.2 How does someone get addicted

Addiction is a chronic, relapsing disease, characterized by compulsive drug-seeking and drug use and by neurochemical and molecular changes in the brain.

Prolonged use of alcohol can lead to memory and concentration problems, motivational syndrome (lack of motivation and follow-through), paranoia, sexual dysfunction, and possible mental illness (although that point is heavily debated). Physical damage includes cirrhosis of the liver

2.1.3 What are the Symptoms of Withdrawal

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- Craving for alcohol and/or other drugs
- Convulsions
- Moodiness
- Irritability and acute anxiety
- Nausea and vomiting

2.2 Social implications of drug addicts

Due to far – reaching changes in the consciousness of the drug addict a powerful back ward pull in to the self created inside him. A pull that drives him away from the world and cocoons him in to isolation is the ultimate result of being a drug addict. This self expel of the rehabilitated person from the society will be



Fig 10
Image of the society to be changed....

more aggravated by the social reaction on him as a cast away or a human being of a lesser degree.

2.2.1 Negative social identity

It is not only the self isolation of the drug addict that makes his life worse. Whatever the person may think of him, he is given a negative identity by the society and much of his social life is a struggle against this imposed image. The world does not think about the drug addiction as some thing which could be overcome but some thing confined to less fortunate others. A recovered person may enter the field of vision of a non addicted counterpart but he may easily fail to be registered in the latter's mind. This leads the recovered person to look at the help and make the drugs his companion again for his life.



Fig 11
Addict & the RECOVERED...

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2.2.2 Social isolation

Social relations of drug addicts and non drug addicts are tense, awkward and problematic. This is not simply because of the result of ineptitude, bias, stupidity and so forth even though they also do play a part. Even the best intentioned people have difficulty in anticipating the reactions of the drug addicts, for interpretation are warped by the impairment. Ultimate result is the social isolation; for the addicts partly due to his negative attitude' towards his past experience through the lowered self esteem and partly due to the conscious or unconscious expulsion from the world.



Fig 12
In need of a friendly hand

2.3 Psychological Implications on Human Life

The addict will attempt to withhold the fact of his drug use, from his friends and family. He will begin to suffer the effects of his dishonesty and guilt. He may become withdrawn and difficult to reason with, he may behave strangely. The more he uses drugs, the more guilt he will feel and more depressed he will become. He will sacrifice his personal integrity, his relationships with friends and family, his job, his savings and any thing else he may have an attempt to get more drugs. This continuous process causes a series of psychological implications to the drug addict.



Fig 13
Suffering...

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2.3.1 Psychological damage

With the continuous use of drugs a person gets his mind damaged too. He or she will not be the person he used to be and will face the society in a different stance. The person will enter the social arena with a skewed perspective, his ways of thinking about him and about the society and objectives of the external world may become profoundly transformed.

2.3.2 Depression

Depression has been described as feeling awful and not knowing why. Sadness, by comparison, is feeling bad, but understanding why, and so it passes. The major symptoms of depression are as follows:

I) Anaerobia or an inability to experience pleasure from things which most people obtain pleasure.

Ii) Eating disturbance – Eating too much, too little, too frequently or infrequently, anorexia or bulimia.

Iii) Sleeping disturbance – Lying awake for more than fifteen minutes, waking up more than once per night, etc.



Fig 14
Suffering...

iv) Decreased Energy

v) Psychomotor retardation or agitation – The world or your thoughts seem speeded up or slowed down.

Vi) Difficulties concentrating or thinking.

Vii) Feelings of guilt or worthlessness.

Vii) Thoughts of suicide – Or attempts, or wishing you would not wake up the next day.

Ix) Paranoia, delusions or hallucinations.

2.3.3 Loss of self esteem

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one will aquiver a stigma or a spoiled identity for himself; of all the psychological syndromes associated with the drug addiction, the most pervasive and the most destructive is a radical loss of self esteem. This will consequently result in a greater degradation of personality that will prevent him confront the society as he did earlier.

2.3.4 Anger

Another major component of the subjective life of the drug addict is anger. The anger among drug addicts take several forms, the main being an existential anger, a pervasive bitterness at ones fate, a Horace and futile cry of rage against fortune, a sentiment fuelled by the self hate generated by conscious shame and guilt. And another is a situational one, a reaction to frustration or what is perceived as poor treatment. When such person struggle to walk and when he cannot move his body as in the way he wants, precipitating an angry out burst.

2.3.5 Phobia

A drug addict with uncooperative limbs and faulty or damaged senses will easily over come by feeling of being trapped and immobile in his own body resulting a phobic panic. Hence the phobia is another integral part of the psychological disaster of the drug addict.

2.4 Rehabilitating Drug Addicts

'Rehabilitation' has up to date been a rather controversial issue. Despite of the wide spread belief that 'Rehabilitation' is a good thing and it ought to be systematically introduced in to all health services, it has become to be increasingly criticized by even the very people who are most supposed to be benefited from its practice, addicted people.



Fig. 15
Choosing the correct rehab is crucial to recovery

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2.4.1 Controversies in concept of rehabilitation

In spite of many attempts to define basic terms in the field, such as rehabilitation, drug addicts' etc. not yet satisfactory agreement has been reached. Related to the difficulty in defining terms is the difficulty in identifying the appropriate or basic discipline that should support rehabilitation practice. This is mainly there is confusion and disagreement about which discipline should be dominant in influencing the character of rehabilitation or even if medicine an appropriate base from which to develop rehabilitation service.



Fig.16
To understand...to share....

From the beginning unanswered or vaguely answered questions like how can the rehabilitation team work more effectively and harmoniously, who should chair or coordinate the team which profession should have the final say in any decisions about an individual rehabilitation process and who should have the final legal responsibility for the patient, how can the rivalry between different professional workers, about who does what to the patient, be sorted out, are to date haunting the discipline of rehabilitation.

Since the idea of rehabilitation was first introduced the term has been applied to a specialized practices in two quite separate services – medical services and vocational, or employment services. The question is what is the different between medical and vocational rehabilitation and what unites these services under the same name. Weather it is making the society fit for rehabilitated people or fitting the rehabilitated people in to the society.

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2.4.2 Rehabilitation medicine

Medicine is basically concerned with curing illness and injury and helping the person to be as normal as possible. Cravings and obsessions for drugs are, in part, biochemical in nature. Long term drug abuse can leave residual amount of drugs locked in the fatty tissue. These drug residues or metabolites of the drugs are major causes of the cravings, which make it impossible for the addict to guilt.



Fig. 17
Support .....

Long term use of addictive drugs can cause an accumulation of drug residues and metabolites in the body. These residues can remain in the body for years, causing drug and alcohol cravings and drug induced depression. So necessary medical treatments are given and that permanently

removes these residues, resulting in an individual who is free of the harmful physical effects.

2.4.3 Social awareness in rehabilitation

Social awareness is very important because it influence people to see drug addicts as raising social and not as just a personal problem. The need for multi disciplinary terms demanded a more holistic approach towards the personal and social problems faced by drug addicted people.



Fig. 18
Danger...

2.4.4 Different approaches in rehabilitation

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The duration of a rehabilitation process least from three weeks onwards, depending on the nature of the cause, period of addiction, addicts educated background or intellectual abilities the degree of addicts' intention to get rid of drugs, the age and even the family background may cause to vary this period. There are three basic sections of treatment for the rehabilitation process.



Fig. 19
Not difficult.....

Basically there are five types of rehabilitation methods available in the world. In any center; any of these methods or a combination of these methods could be practiced as the rehabilitation process.

- Bio physical intervention

  This method is used as a treatment method as well as a "replace prevention" method and / or a "complementary method".

- pharmacological intervention

  Using medicine mainly applied on the long term drug addicts. For example Methadone, L-alpha astinadol, L-alpha acetyl and Naltratone used to treat heroine addicts.

- psychological intervention

  Based on behavioral principals. Corrects the reason for the drug addiction which is taken as correct by the addict; Maladaptive learning.

- therapeutic community

  Works as a group, all members play a respective role by them selves in the group. Help each other, responsible for each other, each individual to be a good model to the others.

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- traditional healing

  Most of the countries have their own traditional treatment methods. These are low in cost and the social respect is high, scientists have proved that these methods also help the drug addict to recover similar to new methods.

In our Sri Lankan context these methods are combined and used under three basic categories.

- Physical detoxification – long term use of addictive drugs can cause an accumulation of drug residues and metabolites in the body. These residues can remain in the body for years, causing drug and alcohol cravings and drug induced depression. So an intensive sauna regiment of detoxification that

permanently removes these residues, resulting in an individual who is free of the harmful physical effects.

- Life skills – many people do not realize that some of the most common abilities and skills which they use everyday are not instinctual but are learned. These are all areas in which drug addicts have been found to be deficient. These are not instinctive abilities. They require training and practice to perfect. It gives heavy emphasis to life skills training.

- Therapeutic procedure – there are a number of therapeutic procedures unique to this problem. These therapies are designed to free a person from the guilt, remorse and regret of past action and to restore the self control that inevitably sacrificed when a person becomes addicted to drugs.

2.4.5 Community based rehabilitation

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Community based rehabilitation promotes awareness and responsibility for rehabilitation in the community. The addicted person, the family and the community members are called upon to take an active part in the process of rehabilitation.



Fig. 20
Together....

This came in to being when the 'institutes' failed to achieve their goal. These institutes have been the long term and obvious response of the society towards drug addiction, out of charitable medical and individual concerns. Classic and isolated institutes with facilities more or less oriented for the easiness and comfort the inhabitants, look after them, away from the society and in isolation.

With the time this has been proved to be extremely expensive and totally ineffective too. Not only they were able to cater for a less number of inhabitants but also the inhabitants found it difficult, cut off their own contexts.

In the community based rehabilitation a local supervisor is recruited from the community and trained; the supervisor then trains the family of the addicted in basic rehabilitation supported by the community. It's expected that the entire community family, neighbors, health service, social workers, local authorities, employers etc all play their part in prevention, rehabilitation and integration.

2.5 Public Attendance as a Curing Factor

A person who is addicted to dangerous drugs and isolated and abandoned from the society may feel anger or jealousy of the society, this may cause him not to recover but as soon as possible he will addict to drugs again. Apart from the general society and in a rehabilitation centre might make him to a depression in mind. In addition to family members and other loved ones, general public with the sense of love and affection, to spend some time with him and show him that they care.

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Providing opportunities for them to interact with the society in community activities, games etc. makes way to uplift their mentality and show them that the life is there without drugs any more. This may have certain limitations but this mass scale public attention and interaction is a real catalyst in the complex process of rehabilitation. The doubt is whether it is being manipulated and exploited in the correct way to get the maximum benefit out of it since the existing faulty build environment acts as a hindrance to many good things.

2.5.1 Exposure to the society

This promotes more comprehensive approach within small and clearly defined communities such as villages, which accept the responsibility for drug addiction in their own community. The community has the responsibility to identify the magnitude of the problem out of the facts such as, how many drug addicts are there, what different addictions are there, what are the addicted age groups, what are the likely causes are and what services are needed ....etc.

The community can then develop strategies which include prevention, awareness, integration, rehabilitation and service provision and implement them for the betterment of the drug addicted in the society with the assistance obtaining from all relevant parties.

Even at the rehabilitation centers, visitors or the community can be allowed to merge with the recovering inhabitants, in their day to day activities. So then the gap between both parties will be closed and more intimate person to person communication is developed. An opportunity for both parties to get together and engage in small and casual activities such as games, gardening or even sit together for a cup of tea will give an unavailable moral boost to the recovering inhabitant rather than observing from distance.

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Exposure the drug addict to the society and the society exposure to the drug addict both have got benefits on both parties. The ultimate output will be of nun drug addicted society.

2.5.2 Drug addict; still a hero

The obvious fact that to be stressed is that, what the rehabilitated person wants is not sympathy or charity but the respect and adoration, another chance for him to perform in the society. Correct recognition and appreciation for their values. What really should have happened is not to make him feel helpless and innocent in front of the society but

give him a friendly hand for him to stand on his own feet without the help of dangerous drugs.

As a person come across the rehabilitation process, he gains a lot of courage, psychological power together with new ideas and new vision to the life. When the society does not appreciate him as a member all what he gained through the process will be in wane. Still this understanding cannot be correctly applied in the practice since the existing built environment would not allow it to happen. If this understanding was not interpreted through the architectural design approach, understanding of all the other parties will be in wane and the ultimate sufferer will be the rehabilitated person.



Fig.21
Life a head...

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CHAPTER 03 – BUILT ENVIRONMENT OF THE REHABILITATION CENTER AND ITS IMPACTS ON THE INHABITANTS.

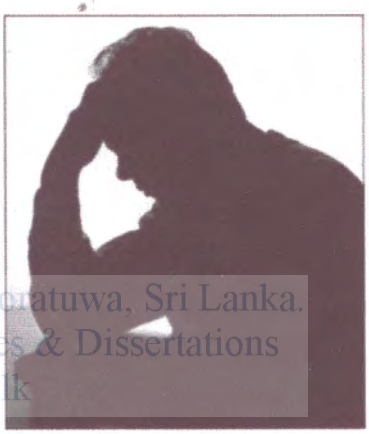
3.1 Rehabilitation centre adaptive modes

The rehabilitation center is a situation of deprivation and degradation, and therefore presents extraordinary adaptive problems. So many studies of rehabilitation center behavior have approached the task of explaining the convict social organization by posing the hypothetical question – how do convicts adapt to the rehabilitation centre?

Two adaptive styles were recognized;

1) An individual style - withdrawal or isolation.

2) A collective style - participation in a convict social system which through its solidarity, regulation of activities, distribution of goods and prestige and apparent opposition to the world of the administration, helps the person to withstand the pain of being in a rehabilitation centre.



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Fig. 22
As he enters the rehabilitation center, he faces the problem of adapting to this new environment

3.1.1 Behavior in the rehabilitation center

Study of the rehabilitation behavior divided observable behavior in to simple categories; aggressive; isolated passive (sitting, sleeping) isolated active (exercising alone) social (playing games, talking), traffic (movement)

These examples suggest that unless we are imprisoning people to sleep and watch TV, we must begin to ask how the rehabilitation center building, together with its programmers, can elicit more active, social, and involved responses.

It appeared in many of the places visited that the movement was unduly restricted and that the restrictions were a function of physical as much as programmatic considerations. The movement between cellblock, corridor and other rooms, for example, frequently prevented by a locked door, which is locked largely because the door is there and the lock is there.

> *We did see a unit in which the doors were left unlocked and nothing seemed to happen except that the tension was clearly diminished.*
>
> (Glibert, 1971, p8)

The physical environment of the rehabilitation centre also contributes to safety. Not only is the housing configuration to be considered, but also the visibility of intimate areas for staff surveillance as well as access to stress reducing activities and visitation. Most of the suicides and accidents take place while the inmates are in isolation.

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This issue focuses on the degree of isolation that may be experienced by an individual in a single unit and the opportunity for him to act without observation either by staff or other inmates. It should be noted that feeling of isolation may be more prevalent in older single cell units, where long rows of cells face blank walls. Newer single cells that face a common area or a common room may not produce as extreme sense of isolation.

3.1.2 Stress in rehabilitation centre

Normally being in a rehabilitation centre is not considered to be at all suitable for character building. In fact quite often the result of being in the rehabilitation center could well be the desertion of the personality of the individual. Quite apart from the stigma attached to this, even the process and



fig. 23
Stress he suffers visible through his

formalities associated with the admission and even the subsequent life.

The impact of release is often dramatic. After months of anticipation, planning and dreaming the felon leaves the confined, routines, slow paced setting off the rehabilitation centre and steps in to the streets as a citizen. The problems of the first weeks are usually staggering and sometimes insurmountable. Becoming accustomed to the out side world, coping with parole, finding a good job – perhaps finding any job – and getting started towards a gratifying life style are at least difficult.

It must be realized that the imposition of a sentence of being in a rehabilitation centre is a major shock in the life of an individual. It makes a break in the career of any individual. The very process of admission to a rehabilitation centre degrades the individual immorally, physically and mentally. The programmed in the centre should attempt to reduce the impact of the shock that the offender is suffering and lift him up at least to the normal level acceptable to society before his discharge from the rehabilitation centre. The plan for rehabilitation is therefore expected to serve a dual purpose, namely to minimize the evil effects of being in the rehab which necessarily follow from the very organization of the center, and also help to cure the person from the shortcomings that made him a drug addicted.



Fig. 24
The shock....

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Stress in rehabilitation centers comes from many sources, including uncertainty about the future and exposure to the danger, as well as from aspects of the housing environment such as crowding and lack of privacy. The effects of stress include elevated blood pressure, more frequent illnesses, increase in sick call rates, as well as greater anger and violence.

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Privacy is commonly defined as the ability to control ones immediate surrounding and to regulate ones interpersonal contacts. To do this one must be able to control physical visual and auditory separation. This does not imply isolation but rather solitude, intimacy, anonymity, or reserve. At a given time, an individual may want more or less interaction, depending on situation and cultural background. The manipulation of distance or barriers in the environment is only one mechanism for achieving privacy, but in a rehabilitation center it is a critical one. A barred cell provides physical separation with little visual or auditory isolation, in a dormitory, none of these separations is possible.

3.1.3 Rehabilitation centre image

The special environment that is often home to addicts from various backgrounds and with different needs is referred to as a drug rehabilitation center. This is where the processes of diagnosis, detoxification, treatment, recovery, counseling and on-going treatment programs take place in order to provide the addict with the best possible chances of making a successful and permanent recovery from drug and alcohol addiction.



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People respond in complex ways to the physical appearance of a place – its size, shape, color, materials, signs and symbols. All these aspects add up to the total image the rehabilitation centre presents, the reaction to which will depend on a persons past experience and reason for being there. The image allows us to recognize what type of a place it is and sets up expectations for what will happen there and how wee may be treated.



Fig. 25
Rehabilitation center should not be another prison for the inhabitants.

The building then serves as a medium of communication between its owners, designers and users.

It is the job of the drug rehabilitation center to provide the best treatment to meet the needs of the patient and ensure that treatment is complete, successful and provides the best chances for the patient to make a full and permanent recovery. The environment and atmosphere of a drug rehabilitation center is relaxing and supportive so the full focus of treatment and recovery is uninterrupted. Drug rehab in these environments of specialist support and care provide the best chances of making a good recovery with less risk of replace

Most good drug rehabilitation centers will offer counseling throughout the course of the patients stay at the center. This will involve talking about the patient's current situation and triggers that may cause the patient to use drugs. Social circumstances are often very influential in these cases.

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3.2 Space and the drug addicts

Nobody ever started using drugs with the intention of becoming a drug addict. Addiction is a disease. It does not mean that the person is immoral or weak willed. This cunning disease will strike without prejudice – young and old, rich and poor, educated and illiterate. Managing an addiction in any form takes hard work, long hours, and total dedication. Unfortunately, the drug that was once used for pleasure has betrayed the user. Leaving in its path a trail of destruction so intense, the only way not to feel its wrath is to keep using and numb the feelings of loss, pain, anger, shame, guilt, dereliction.

The behavioral impact of habitual use is generally devastating. Life becomes virtually unmanageable. Rarely are addicts able to hold a job. They are apathetic, indifferent to consequences, and unable to sustain personal relationships. For many, the inability to honestly earn enough to meet their drug needs leads to crime. For the overwhelming

majority, compulsive use prompts behavior that is self-destructive and irresponsible, often antisocial, and characteristically indifferent to the injury, pain, or loss it causes others.

Without the proper help addicts seldom have success attempting to stay drug free. The insanity of using drugs in any form is trying repeatedly to control the disease of addiction. Addicts cannot simply stop from doing the same things over and over trying to regain the reins over a life that has swung so completely out of control.

3.2.1 Potential spaces

A person will select what ever information is appropriate to his needs and will remain relatively unaware of irrelevant features of the external world. Then he will recognize this information to achieve his goals. If an environment does not offer the potential for achieving his goals, a person can recognize it, he can move to a new environment or he can learn new behavioral responses.

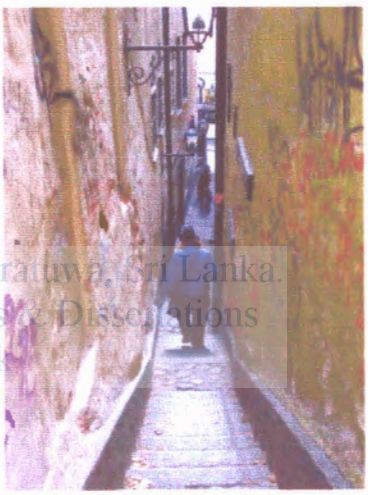


Fig. 26
High dense areas with fewer infrastructures are the best places for drug distribution.

Similarly when an individual is faced with a new situation in which his established behavioral responses are inadequate, he may exercise the same options. Mans cognitive abilities to learn and give meaning to environmental experiences allow him greater control in realizing needs.

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3.2.1.1 Isolation

When an individual is in a new environment which is not familiar to him, when he is in isolation with no one to share his feelings drugs could come for his sake very easily. The crowd who doesn't get much love and affection which they need from their community and loved ones attract to these socially abandoned communities.



Fig. 27
Unknown world .....

3.2.1.2 Exploration

When an individual get explode to un wanted communities, such as drug distributing agents its really hard to get away from them. First attempt will be to experience or to explore what it is but as the time pass by he will eventually get addicted.



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Fig. 28
The young exploring his own world with no proper guidance will le caught.

3.2.2 Space as a Human Need

There are certain factors which evoke a particular architecture and some factors which modify or stimulate the resultant built form. These evoking factors can be called as generators and those are physical context, activity pattern, purpose and the user. Some buildings may symbolize predominantly a single primary generator, where as in some situations more than one generator is apparent. Other modifying or stimulant factors are climate, geography, materials, construction and technology which can be termed as modifiers.

Out of those two variables, generators are more crucial due to the fact that it creates the mould which shapes the environment and the humans within it. Except user other generators are comparably easy to deal with, because nature of those can be identified without much of difficulty. But the complex nature of the human characteristics makes it difficult to deal with user oriented architecture, which needs an extensive study and understanding

It is well known that, from the day of civilization, people have got involved in the modification of there environments in such a way to accommodate their activities and to seek protection from bad weather and wild animals. Most people if asked would probably say that architecture began as rudimentary shelter. After all the first buildings were dwellings and people need shelter to service. The early shelters, however had very limited purpose; to protect people and their activities and possession from supernatural powers to create a humanized adobe.

There is a set of basic needs, which must be satisfied for the survival of human being. In any shelter as one of these basic needs, affects them physically as much as psychologically. The rudimentary purpose of shelter is thus to make, enclosed space, space that is well defined as a location, as a protected entity, as a possible place to live. This space has indeed numerous functions ranging from purely physically needs to deep-seated

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> *"The environment cannot be considered as merely a container of human activity, but also an integral part of a pattern of behavior"*
>
> (John Lang; 1974; p 83)

The architectural purpose being the definition of the spatial enclose, when these are handsomely defined by means of architecture it helps to create an architectural space which gives the free action to man and beings to feel a wider and deeper inner relationship between the space and him.

3.2.3 Characteristics of the Defined Space

Architecture is more than satisfying purely functional requirements of a building program. Fundamentally, the physical manifestation of architecture accommodates human activity. The arrangement and the organization of the elements of interior space will determine how architecture might promote endeavors, elicit responses and communicating meaning. These elements of inner space are presented, therefore not as ends in themselves, but as means to solve a problem in response to conditions of function, purpose and inner environment that is architectural.

3.2.3.1 Volume

> *A plane extended (in a direction other than its intrinsic direction) becomes a volume.*
>
> *Conceptually, a volume has three dimensions; length, width and depth.*
>
> (Ching, 1979, p44)

Volume can be considered as the physical static manifestation of the architectural space. The size and shape of the volume and its combination with other volumes will contribute significantly the quality of architectural space.

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Fig.29
In a large volume psychologically
We feel we are too small.

> *"The shape of space can affect the type of the activity that can occur separately or simultaneously within the space. Deferent spaces provide qualities that reinforce the formation of behavioral territories"*
>
> (James Snyder and Antonym Catenese, 1979; p141)

Volume is not determined by utilitarian area and the height requirement only; it has to fulfill the psychological expectations of the user.

"even an individual performing a sedentary occupation say reading a book has an emotional need for more volume around him than physically necessary"

(Pramar V.A, 1973; p16)

In the case of rehabilitation the volume requirement changes from place to place with the rehabilitation process space requirement. For example in a situation of an individual counseling the affective volume is different from the group counseling, lecturing as well as sleeping or from dining.

For individual counseling the required volume should be sufficient for two persons to sit and talk comfortably but not more than that. If individual counseling takes place in a huge volume the inhabitant may not be able to open out is inner self or to grasp what the counselor says because the extraordinary volume makes him uncomfortable. For group counseling the volume may be much larger for the members of the group to move free without giving a tight feeling as they are trapped or in a prison and should not be too large that they feel they are really small. In these misguiding volumes the required activity may not take place up to a sufficient degree.

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Finally the architectural space is experienced as a whole. Thus, volume plays a significant role in giving this overall impression to the user.

3.2.3.2 Scale

"Scale refers to how we perceive the size of a building element or space relative to other forms. Visually measuring the size of an element, we tend to use other elements of known size in their context as measuring devices"

(Ching, 1979; p326)

In the normal way we may assume it to be regulated by human scale, namely, the size of the average human figure and the object, which in size are associated with it. There fore the scale can be considered the relationship between the human scale and the

scale of the space (physical space) and relates with past experience and it is determined by precedent (associative scale) and as psychological feeling. (Effective scale)



Fig. 30
Sense of scale

> *'We can, however, measure a space whose width is such that we can reach out and touch its wall. Similarly we can measure its height if we can reach out and touch the ceiling plane overhead once we can no longer do these things, we must rely on other visual rather than tactical clues to give us a sense of the scale of the space"*
>
> (Ching, 1979, p328)

Such elements as furnishing – a table, sofa, window or a doorway, not only help to judge the size of a space but also give it a human scale or feeling.

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> *"Scale as the proper relation of the several parts to one another and to the whole in point of size, which is practically the definition which we have made of proportion"*
>
> (Belcher, 1974, p93)

Proportions refers to the mathematical relationship among the real dimensions of a form or a space, and it can be also be describes as, volumetric relationship of the space referring to the length, height, breadth, described as proportion. In strictly architectural sense, a proportion represents a geometrical concept, which can be seen as the result of a comparison of physical dimensions. According to the function of space its proportion is changed. Scale and proportion are interconnected and simultaneously changeable aspects.

3.2.3.3 Colour

Colours constitute variety of properties which architects could make use of, they evoke variety of human emotions and there fore affect on human behavior and decision making. In achieving the primary function of architecture that is to create appropriate quality in the architectural space.



Fig. 31
Colours make the life alive

Colours for instance proved to have temperatures - cool and warm colours, and smells – fresh and enervative, weight – heavy and light, and even related to sounds - loud and soft. Warm colours; long wave length colours (reddish) are seen as aggressive and advancing colours. Cool colours with short wave lengths; colours from blue to violet, consider as receding or passive colours.

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Laboratory experiments show that red and warm colours ranges decidedly stimulate the nervous system, and blood pressure rises, respiratory rate and heart beat speed up. Blue, green; cool colours has the opposite effect. Colour yellow stimulates the intellect, and on this basis it has it has been prescribed as a suitable colour for concentration.

In this basis, for rehabilitation center interiors should be considered carefully and the colour scheme should be selected to support the rehabilitation process which takes place particular place. Interiors in a cool colour range which gives calm and heeling environment is much more appreciated for a rehabilitation center building for drug addicts; because their psychological need is towards for much more concentration.

Massage given by colour varies with the context of the colour is defined. But despite of all the fact remains that colour does have an effect on our emotional responses which cannot be afforded to ignore.

3.2.3.4 Lighting

Lighting is one of the factors of environmental comfort and environmental quality in interior space. It can be used to make festive atmosphere or sober mood, according to the distribution and the intensity of light. There are basically two types of lighting in architecture; natural and artificial. By the falling in to surfaces, light enlivens the surface and articulate their textures.



Fig. 32

Morning sun rays penetrating through the greenery.

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The perception of the architectural space is relatively constant within a certain level of illumination or brightness of the light. The qualitative aspects of light initiate the expression of space. the quantity of light can be mentioned as secondary aspect for example the same space lit by the natural light in the day time completely different from the artificially lit space in the night.

> *"The quantity and quality of light available in any setting lends structure to our experience and has a strong effect on human emotions, communication and behavior."*
>
> (John Lang; 1974; p 83)

The emotional aspect of lighting can be cheering, boring, pleasing, exciting, tranquil, depressing, and cozy, inviting and so on, which is expression of deeper feelings, a conclusion possibly gained subconsciously after being for sometime.

The progression of spaces is the appropriate manipulation of lighting conditions. Comparison of the lighting condition of space equals of the comparable difference of the atmosphere. The light has enormous ability to life to the dead, rectify immovable object. In architectural designs one creates imaginary boundaries of the space by using light.

Lighting effects bring out various responses in the user as aesthetic responses, emotional responses and also give impression of spaciousness, impression of drama and excitement, impression of perceptual clarity, impression of individuality, impression of privacy and security.



Fig. 33
Inside and out side ....link

3.2.3.5 Indoor Climate

People exposed to different conditions to feel comfort and establish "comfort zones" or range of temperature with in the defined spaces. But there is no ideal temperature for any group of people. Individuals vary greatly in physical characteristics, temperaments and adaptability.

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Generally, indoor climate can be varying from space to space according to the functions. The public or common spaces are more open, there fore more ventilated with fresh air and cool atmosphere. The private spaces are more covered; there are limited openings for privacy and crates a warm atmosphere. In a rehabilitation center the individual counseling areas, dormitories can be considered as private areas which should be created a warm atmosphere and also these spaces must be provided with much of natural ventilation; for the inhabitants to be comfortable for the function. Natural lighting and ventilation is required as much as possible for the indoor climate to be in sufficient comfort condition.

3.3 Empowering the drug addicts

With negative feelings resulted form his past experiences, which draw him back form the mundane world, no attempt will be successful to make him independent and productive again. He has to be convinced about what has happened to him as reality. He has to be made understood the best possible thing for him is to face the reality and try and become an independent person as much as possible.

An empowerment process in the mind of the drug addict where he is made a man who is more or less open to change than a closed entity of his own, assertive for being aggressive, proactive for being reactive, self accountable and self directed instead of blame others and directed by others. Who uses feelings instead of over whelmed by them, who learns form mistakes and not defeated by them. Who confronts instead of avoid, who lives in the present neither in the past nor the future. After all, making a person with high self-esteem and realistic thinking out of the drug addict, such an empower person, with positive attitude even if he was a drug addict and recovered in the life rather than a able bodied counterpart without these qualities. This understanding is the key to successful rehabilitation center for drug addicts.

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3.3.1 Built Environment of Empowerment

This is where a correct type of built environment can immensely support him to overcome his difficult state of mind. It is where he lives and will be in full contact right throughout. The built environment as it always does on everybody, has a profound effect on the drug addict too. A built environment that helps to evade his over whelming loneliness and subdue his miserable feelings resulting from the past experiences of his life. A built environment that does not cut off, but reveal him the

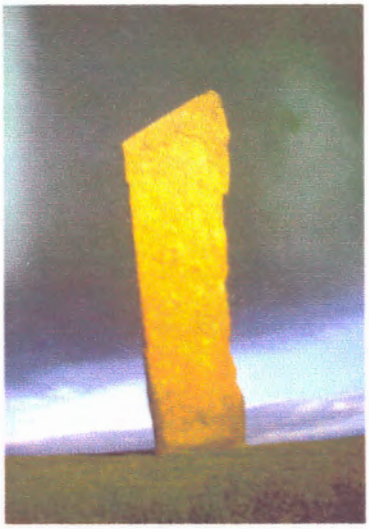


Fig. 34
Confident .....

hustle and bustle of the out side world and keep up his pulse with that of the rest of the world.

A built Environment which has the potential to convince him that he is still a part of this world. A built environment that prevents him withdrawing in to his own cocoon that keeps him in touch with the mundane world.

A built environment that extends in to the out side world, that blends it in to the nature where the inhabitants even immobilized, may find oneness with himself and the outside world where the dynamic and moving nature of it is generously revealed to the drug addict. It is during this period that, the correct spatial qualities enhanced by the environmental stimulus will have a more soothing effect on him than at any other time of the life.

3.3.2 Built Environment as a Heeling Source

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simple and day to day things are confronts in mundane environment like a stray cloud in the sky, a tree top soaked in the evening sun, gentle sound of the falling water, sudden shower over a dusty loan, honey sucker singing in the rising sun etc, will not create such a soothing and calming state of mind in any body else rather than a isolated lonely person. Within his limited world, this kind of simple stimulus will have a profound curative effect on him and it will make him forget his pains of the great loss to his life. It will fill his mind in soothing feelings and make him crave for this charming world once again.

> *"Improvements to view out in hospitals have been found to reduce post operative recovery times and need for pain killing drugs"*
>
> (Wyon David, 1984, p196)

A sense of place will embrace the inhabitants with his immediate environment. a longing to where he is, will help him to drive an existential foothold once again in life.

Beauty is there everywhere in the world. Only the observer should be in the correct temperament. One who is immobilized and trapped in a sick bed would see an enormous beauty in



Fig. 35

minor ever things, which he would have never noticed as a normal person he was. When the natural environment have such an effect on sick and sick in mind why we deny it for one of the most deserving human being, the drug addicts who is again beginning to start his life anew.



Fig. 36
Merging the nature with the interior.

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The natural world, the context is there out side. What is necessary is the right kind of integration and amalgamation of the available stimulus with the built environment. It is not attempting some thing drastic, just reveal the outside world, live and dynamic, changing from moment to moment, to the drug addict, who is the primary user of the centre, who is supposed to be rehabilitated while being in it. Provide what ever the available stimulus for himself to nourish his mind. This is where the positive intervention of the architect must take place.

To be healing, a place must be harmonious, bringing changes as an organic development so that new buildings seem not to be imposed alliances but inevitably belong where they are. They must respond to the surroundings and be responsible, seeking to minimize pollution caused by their materials. But places and buildings must be more than that; they must be nourishing to the human being.

3. Built Environment as a Link between Drug Addicts and the Outer World

Necessarily the built environment should be created through an architectural analysis and interpretation where the drug addict is treated as the primary user of the built environment and exposing him back to the world as the objective of the exercise. Then only an informed approach will take place from the very beginning, from the site selection itself. A selection of site, which is rich of natural beauty and other stimuli of life, is far more important, in order to create necessary special qualities for the inhabitants. It is further important to articulate the build environment in such a way that those stimuli are adequately revealed to the inhabitant to generate essential longing and attachment with the place.

Our surroundings are potentially the most powerful art form we experience in lives. Weather they will bring illness or healing will depend upon all of us whose decisions and actions shape human environment

(Day, Christopher, place of the soul, 1994, p24)

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Fig. 37
Expectation .....

3.4.1 Society and the Drug Addicts

In every human society there are certain individuals who do not confirm to the generally accepted norms of behavior. Violation of generally accepted norms which form a large part of the law of the land, constitute criminal behavior. These individuals may resort to criminal behavior for a variety of reasons. It has not yet been established with any degree of certainty why some people resort to criminal behavior. All that can be definitely said that the problem of drugs is universal. It is physically impossible for every country to put all its addicts in a rehabilitation centre forever. Nearly addict sentenced to rehabilitation centre eventually returns to the society.

Therefore it is in the best interest of the society to see that adequate action taken to reform and rehabilitate them, if this is not done these addicts will return from the rehabilitation centre and continue to commit drugs, there by endangering the society as a whole. Since the interests of society are best served by the rehabilitation of its offenders, it is necessary that society in general should take an active interest in the process of rehabilitation.

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In most countries today society takes an interest in the addict only at the time of an offence is committed or perhaps at the time of the trial. At the time an offence is detected or committed, if it is a repulsive or heinous crime society's attitude towards the offender is one of hostility and the general feeling is that he should be heavily punished. Once the offender s convicted and sentenced, society seems to loose interest in what happens to the offender thereafter.

3.4.2 The Relationship between Behavior and the Environment

> *"The word behavior is beginning to be placed in its proper perspective by architects.....*
>
> (John Lang; 1974; p 11)

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.....Architecture is the three dimensional expression of human behavior"

(John Lang; 1974; p 24)

Recent design characteristics; positive inmates and staff attitudes were definitely achieved by the normalized environment. Both inmates and staff clearly perceive their environment to be more attractive and less institutional than in traditional facilities. Inmates were more active, felt there was less violence and vandalism and had more favorable attitudes towards the institution.

Design techniques for achieving more normal environment include using natural light and offering views; the use of bright, stimulating colors, textured materials, such as wood, tile, brick and carpet; limiting the size and the volume of the spaces; and providing special variety. These methods are combined with other details, such as doors in place of grill gates, non institutional furniture. They result in facilities that are secure, yet humane in appearance.

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Elements that impart 'human scale' or a normalized physical environment, these include the use of bright colors, graphics or materials such as brick and wood where appropriate. Large, undifferentiated spaces avoided; areas are tailored to specific users.

Living and activity areas, for example, are arranged so that they may be observed easily from a central point rather than encircling them with guard walks. Facilities can accommodate inmate movement without constant escort.

"We adapt to the world by changing our behavior, the focus of our attention, or by changing our mental image of the world."

(John Lang; 1974; p 171)

CHAPTER 04 - IDENTIFICATION OF BUILT FABRIC AND ITS IMPACTS ON DRUG ADDICTS.

Behavior pattern of people change with culture. Some of the behavior principals are common to any drug addict person while some behavior principals change according to the cultural existence in the society.

Establishing a clear sense of direction about which an architect hopes in achieving in designing a rehabilitation center for drug addicts, involves identifying the behavioral pattern of the drug addict and the required rehabilitation process as well as the appropriate expressive quality that they need to enhance.

This dissertation responsiveness of the built environment in the process of rehabilitation with special reference to drug addicts will be studied through three selected different cases of Sri Lankan examples, in three different types, three different locations and three different provinces.

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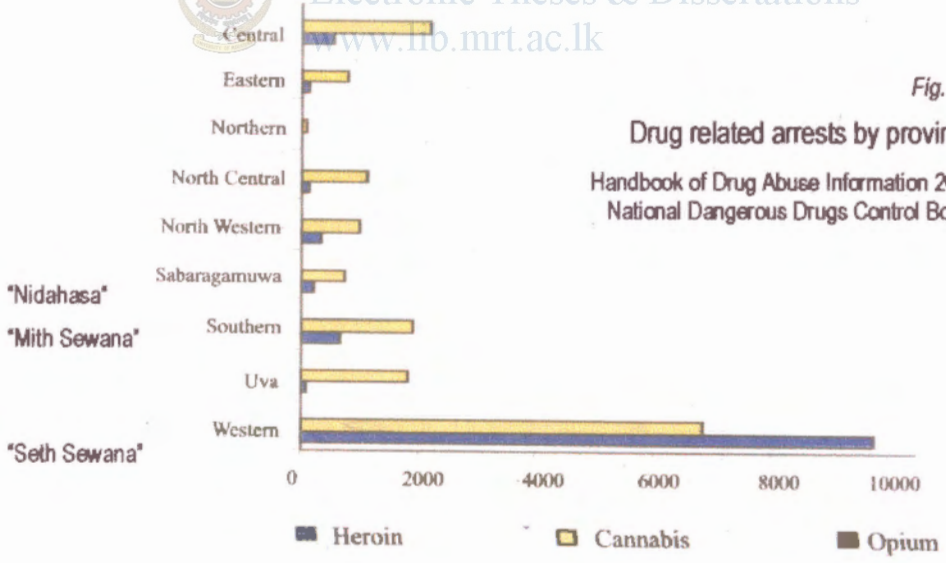


Fig. 38

Drug related arrests by province

Handbook of Drug Abuse Information 2006
National Dangerous Drugs Control Board

According to the Handbook of Drug Abuse Information 2006 published by the National Dangerous drugs Control Board; at the present there are more than 25 rehabilitation centres registered under the Authority of the Director General of Health Services (DGHS). Most of these are run by private institutions and a very few entirely by the government. Except few buildings most of these drug rehabilitation centres are non professional designed buildings. When a person donates a land or a building to these organizations they convert the building to a rehabilitation centre by modifying it with minimum requirements.

In most cases when a house is donated, the house is converted to an office, dormitory and other utility areas not considering the rehabilitation process space needs or the inhabitants' psychological requirements.

Except for these converted buildings there are some buildings purposely built for the function of rehabilitating drug addicts. Some of these buildings are designed by professionals while some of them by non professionals. Before selecting case study examples several rehabilitation centres were visited and three of them selected for the analysing covering various types of architectural solutions used for the process of rehabilitating drug addicts.

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Case study 01 - "Seth Sewana", No:173/2, Shanthi Mawatha, Koswattha, Thalangama.

Case study 02 - "Nidahasa", Hikgas Hena, Kuruvita.

Case study 03 - "Mith Sewana", Unawatuna, Galle.

Ideas of the inhabitants were collected by talking to them and giving a questionnaire for them to express their ideas freely on the built environment which they occupy. Most of the inhabitants had past experience of several other rehabilitation centres and therefore they could compare each other as they experienced.

QUESTIONNAIRE

Name of the rehabilitation

.....

Address and the contact number of the rehabilitation

.....

Details about the inhabitant

- Age.....Religion.....
- Education level.....
- Occupation.....
- Residential area

  .....
- Reason for the drug addiction

  .....
- Duration for the drug addiction

  .....
- Have you been in a rehabilitation center before? Yes / No

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Place / places inhabited	duration	treatment method	reason for leaving that place

1.....

2.....

3.....

4.....

- Have you been here before yes / no

  .....
- Did you feel different when you come here

  .....
- Did you feel good when you enter this building

  .....

- Did you feel like stopping at any particular place in this building

.....

- Where do you like to spend time in this building
  Inside.....
  Out side.....

- What do you feel about the colors of this building
  ok / no idea / pleasant / too dark / too light / need to change

.....

- What do you feel about the way this building is illuminated
  ok / no idea / pleasant / too dark / too light / need to change

.....

- What do you feel about the heights of this building
  ok / no idea / comfortable / too high / too tight

.....

- What do you feel about the surrounding garden and views of the building
  ok / no idea / pleasant / too dark / too light / need to change

.....

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- What are the activities that you like to do during the day in the rehabilitation center

.....

- Suggestions about the rehabilitation center

No need of change / no idea / pleasant / too open or tight / too light or dark / need to change

.....

.....

To explore architectural expression of these buildings support the rehabilitation process of drug addicts, there should be a proper frame work to analyse the expressive architecture of these buildings.

Architectural frame work for analysis.

Forms of Non Built



.Fig. 38
The southern California rehab – "By the sea"

Considered on the factors external to the built form. The selection of the site; appropriateness to the particular function and appropriateness to the user requirements. Though it's not physically expressed, the emotional satisfaction gained through being within the requirement, environment will enhance the quality of living environment.



.Fig. 39
Macro context of the southern California rehab – "By the sea"

The location of the building within the site and its relationship with the immediate surrounding; influence the quality which may be used to enhance the appropriate expression to the inhabitants.



Fig. 40

The context is another important aspect when considering the rehabilitation of drug addicts. The relationship between the user and the context of the built environment has to be very vital issue for providing meaning full living environment. Except the orientation of the building in relation to the existing built environment; the nature could also be considered under this topic.



Fig. 41
Surroundings at rehabilitation centre Colorado – "Cross road"



Fig. 42
Surroundings at rehabilitation centre Colorado – "Cross road"

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Form of Built

Entrance



Fig. 43
Surroundings at rehabilitation centre Colorado – "Cross road"

Entrance is considered as one of the major and important elements of any building when expression is considered. The entrance could be defined as the spaces that extend from the point of entry to the premises up to the porch and entry lobby.



Fig. 44
Surroundings at rehabilitation centre Colorado – "Cross road"

Thus it becomes an important element when considering as a transition space from the outer environment to the inner environment of the building. It is an intermediate space which is capable of conditioning the human mind fit in to the subsequent environment which is entered. The transition of the human mind will be governed by the expressive qualities of the entrance.

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Fig. 45
views of the rehabilitation centre at Florida – "Orchid"

The expressive qualities of the entrance influence a potential entrant scientifically so that one may be given an impression of the subsequent environment before and at the point of entry thus that he could be conformable within the particular environment. Therefore each and every architectural element of the entrance would help to enrich the overall composition of the building while functioning as an individual meaningful element.



Fig. 46
Entrance lobby of the rehabilitation centre at Florida – "Orchid"

.Fig. 47
Entrance of the rehabilitation centre at Malibu, California – "Vision"



Plan Form

"Although the plan form of a building or a house is not visually seen, the expression of a building acquires is greatly contributed by same, as its sensed or felt by the perceiver and which therefore helps to create feelings in human mind."

(Cing, D.K.F; 1979; p205)

In a building or a building complex there are a number of spaces laid out according to the activity happening within the building or building complex. These spaces are inter related and compose in a plan in such a way that suit the user requirements and make him comfortable.

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The quality of expressiveness of each space is different from the other according to the activity happening within the space. This is the result of particular users' behavioral pattern.



Fig. 48
Entrance lobby of the rehabilitation centre at Malibu, California – "Vision"





Fig. 49
Outer gathering spaces at rehabilitation centre Colorado – "Cross road"



Fig. 50
Main living of the rehabilitation centre at Malibu, California – "Vision"



Fig. 51
Entrance lobby of the southern California rehab – "By the sea"

Three Dimensional Compositions

Every space is three dimensional, which is its major characteristic. Architectural spaces are special kind of spaces with specific expressive attributes. These specific expressive attributes of external and internal spaces modulate the volumetric shape of building and the relationship of volumetric shape which make form.

The balance achieved by composing these volumes by considering the spread and the height of the building. This could be in a manner to create meaning full expression to the appropriate space in relation to the functional requirement as well as the psychological requirement of the user.



Fig. 52
Dining space of the southern California rehab – "By the sea"



Fig. 53
Main gathering space of the southern California rehab – "By the sea"

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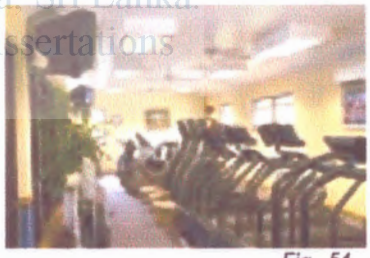


Fig. 54
Gymnasium of the southern California rehab – "By the sea"

Colours and Lighting

Colours also produce certain feelings to intensify the required expression; therefore it becomes part of architectural language and helps to handle each element of any built form according to the appropriate language.

Colour should receive much consideration as it has the potential to affect people emotionally. The use of appropriate colours in elements of buildings as well as internal spaces always

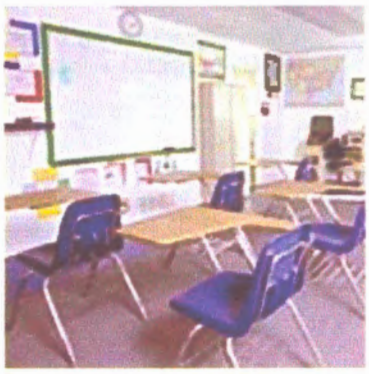


Fig. 55
Study area of the rehabilitation centre at Malibu, California – "Vision"

vitally important as this space always communicate with the user and to adjust them to behave in a certain way.

Lighting methods are also important to consider when analyzing the quality of a building. Lighting is capable of creating various environmental qualities in a space which shall greatly affect the mood and behavior of the user.



Fig. 56



Fig. 57



Fig. 59

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Fig. 58
Interior views of the rehabilitation centre at Malibu, California – "Vision"



Fig. 60



Fig. 61
Interior views of the rehabilitation centre at Florida – "Orchid"

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CASE STUDY - ONE

4.1 "SETH SEWANA",

No: 173/2, SHANTHI MAWATHA, KOSWATTHA, THALANGAMA.

4.1.1 Back Ground

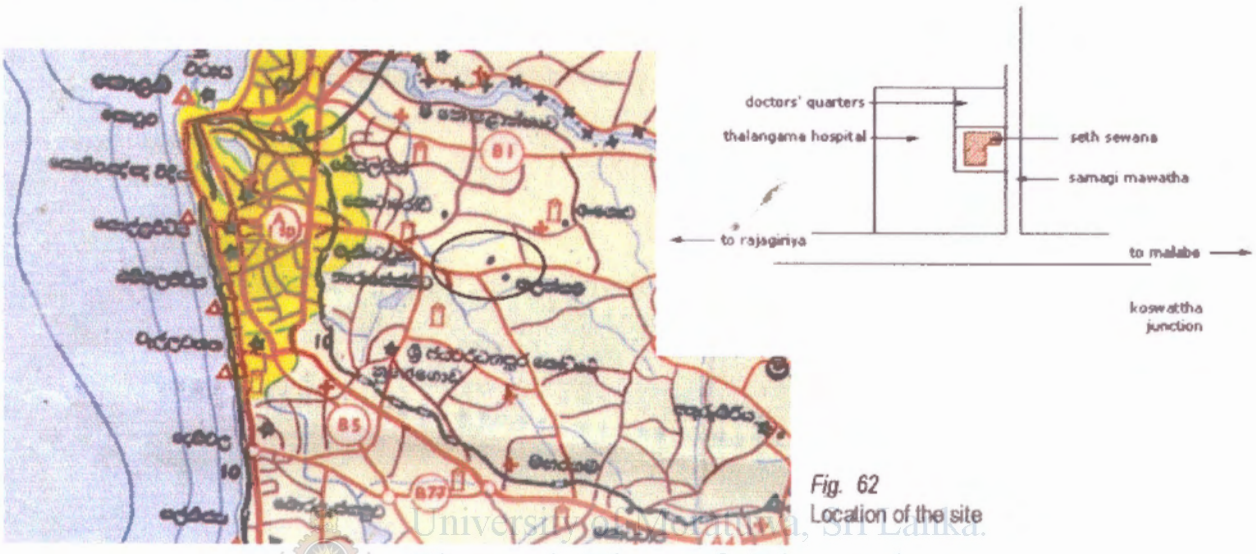


Fig. 62
Location of the site

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The "Seth sewana" rehabilitation center is situated in the Western province, Colombo district, few meters away from the Koswattha junction in the same premises of the Koswattha base Hospital, by the Samagi Mawatha.

"Seth Sewana" functions under the National Dangerous Drugs Control Board (NDDCB). Residential treatments are available for the drug addicts and certain programmers for their families.

The treatment method they practice is psychological intervention. This is of two categories

- Behavioral principal
- Maladaptive learning

The maximum number this center could house is 50 inhabitants. At the present this number is reduced up to 35 due to new regulations. Residential treatments from this center are available only for 21 days or for one month.

4.1.1.1 Management Hierarchy

Manager

Counselor

Assistant counselor (four assistant counselors)

PTRA (15 PTRAs – male)
Patient Treatment Rehabilitation Assistant

Clerk, Driver, Labor

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4.1.1.2 Functional Hierarchy

Usually the day begins at 5.30 am in the center.

5.30 Generally day begins
5.30 – 6.00 self cleaning
6.00 – 6.15 religious activities
6.15 – 3.30 morning tea
6.30 – 7.00 exercise
7.00 – 8.30 cleaning
8.30 – 9.00 break first
9.00 – 9.15 interval
9.15 – 9.45 morning meet
9.45 – 10.00 tea
10.00 – 11.15 individual / group counseling
11.15 – 12.00 educational programme

12.00 – 12.30 interval
12.30 – 1.00 lunch
1.00 – 2.00 individual / group counseling
2.00 – 3.00 entertaining programme
3.00 – 3.15 tea
3.15 – 4.30 reding
4.30 – 5.30 indoor games
5.30 – 6.15 self cleaning
6.15 – 6.30 interval
6.30 – 7.00 silence period
7.00 – 8.00 evening meet
8.00 – 8.30 dinner
8.30 – 9.45 TV / Radio
9.45 – 10.00 self cleaning
10.00 - end of the day



Fig. 63
View of the building

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4.1.2 Forms of Non Built

Selected site is surrounded by the Thalangama Hospital by two sides, one side by the doctors' quarters and the other from the Samagi Mawatha which connects with the Malabe – Rajagiriya road. A tight urban site of 60 perch land extent surrounded by a busy physical context; a context which is hard for some one to concentrate. But the easy accessibility from the main road and the near by location of the health services is emphasized.



Fig. 64
The rehab from Samagi Mawatha

The surrounding context of this particular area is primarily high dense residential area and along the main road there could be identified a commercial development.



Fig. 65
Fore court
Entrance from samagi mawatha.

Management does not allow the inmates to go out or the neighbors to come in, and there is no activity happening outside the premises regarding the rehabilitation of the drug addicts. This particular setting out results more or less a prison effect; within the boundaries of the premises. This cause a negative attitude towards the inmates.



Fig. 66
Entrance to the building and
The front façade.

4.1.3 Forms of Built

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4.1.3.1 Entrance

The entrance to the premises from the Samagi Mawatha does not give any kind of inviting quality to the visitor, nor the sense of arrival felt.

The entrance to the building creates an appearance that eliminates the fear for entry and a shrill to go in. beyond this gloomy entrance the three story high court yard seemed to be swallowed the entrance.

Entrance lobby and the waiting area located on the right hand side is also a gloomy space which does not convey to the human scale. It does not create any environment for a person to sit and relax.



Fig. 67
The only liveness to the entrance.

The row of locked doors of the counseling rooms of the ground floor and the iron grills of the upper floors which could be seen through the court yard express a feeling of a prison; an existence of a hidden world



Fig. 68
Fore court as the car park

4.1.3.2 Plan Form

Coming through the Iron Gate from the samagi mawatha, entering to the fore court which is a rubble paved and shaded to a certain extent by a mango tree does not express any sense of arrival to the visitor. There is no expression of inviting in the deserted entry environment; the three storied high façade just stands in front of the face.



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Fig. 69
Abandoned link with the Hospital

The entrance of the building is a gloomy and non inviting and fearful experience as early described.

Ground floor serves as the administrative floor which includes office rooms, staff rooms as well as individual counseling areas.



Fig. 70
Front facade

The main feature of this building is the central courtyard. This emphasizes the introverted quality of the process as well as the inhabitants.

In the ground floor the entrance lobby is located on the right hand side; which is also a gloomy and lifeless space with the reception and few chairs arranged in a line along the faded blank wall.



Fig. 71
Elevation to the samagi mawatha

Individual counseling rooms arranged around the courtyard of the ground floor. Though these individual counseling rooms arranged around the court yard; they does not have any other response to the court yard or does not get any other benefit , even to get light or ventilation or any visual connection to the counseling room.



Fig. 72
Entrance to the out patients area.

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The only stair way to the upper floor is located by the reception in a dark corner of the lobby. This stair case is protected by an iron gate which is always kept locked. This emphasizes the feeling of a prison rather than a rehabilitation center, or a correctional building.

TV lobby is a mezzanine level in between first and second floors. This space is blessed with natural day light; but unfortunately this space occupied only during the night time. This is also another isolated space through out the day time.



Fig. 73
The building from the main entrance.

The second floor consists of therapy areas including group counseling areas, group activity areas, family counseling areas, staff rooms and other utility areas.



Fig. 74
Entrance to the building

At the present most of this group counseling areas are abandoned and used as store rooms because they are also represent jail cells.

Third is the accommodation floor for both inhabitants as well as for the staff members; arranged in a manner of a dormitory for male and female separately. The female ward is abandoned and the male ward is usually occupied by 20 – 35 inhabitants.



Fig. 75
Security point at the entrance.

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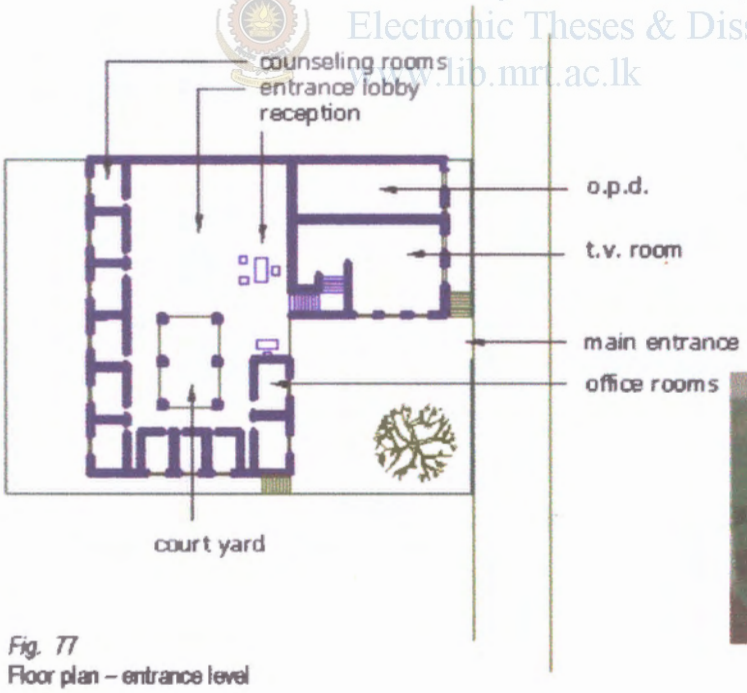


Fig. 77
Floor plan – entrance level



Fig. 76
The court yard

4.1.3.2 Three Dimensional Composition.

The outer appearance seen from the Samagi mawatha conveys an institutional quality rather rehabilitation center or any correctional building type.



Fig. 78
Counseling rooms opened to the Court yard.

Repeated window type through out the whole complex with iron frames and iron grill work emphasize this quality and conveys rather monotonous appearance.



Large volumes of corridors, lobbies are in isolation. They do not give any feeling of the human scale. Sense of belonging ness is lost through out the whole complex.

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Fig. 79
Upper floor openings to the court yard

Individual counseling spaces are rather cells not rooms. In these rooms the door is kept closed and this conveys the feeling not privacy but as the person is trapped in this tight space.

This does not make any appropriate environment for counseling, for somebody to express his or her true feelings, problems or to grasp what the counselor express. This does not create any healing environment to the inhabitants in any sense.



Fig. 80
Isolated verandahs of the ground floor

4.1.3.2 Colours and Lighting.

All the counseling rooms and the office rooms open to the corridor which goes around the courtyard. Only the corridor and the large lobby get light from this court yard. The rooms get light from through the window openings on the exterior wall.



Fig. 81
Gloomy entrance lobby.

The huge lobby area gets light only through this central court yard and it's not sufficient so the lobby space is kept gloomy and does not give any sense of arrival or does not create a pleasant feeling in the visitors mind.



Fig. 82
Entrance stair way to

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In the upper floors also this situation continues; getting light from the court yard and through the exterior wall openings; partitioning the interior cuts down the lighting which penetrates through these two elements. So most of the spaces kept isolated without being occupied.

The whole building is colour washed with "Samara" and the interior walls have discoloured without having proper maintenance.

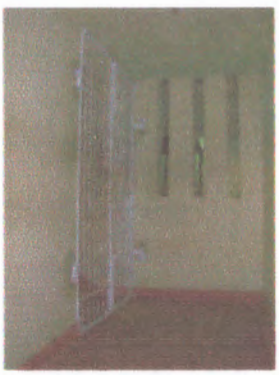


Fig 83
Iron gates at the stair case

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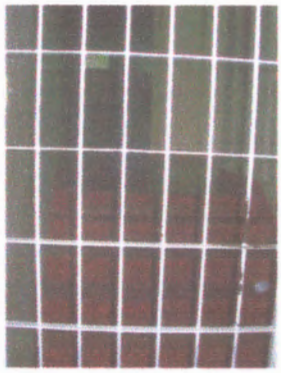


Fig. 84
Iron grill gates in the centre
Gives an image of a prison.



Fig. 85
Window openings used to get light
From the exterior wall

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Fig. 86
Managers' room



Fig. 87
The counseling
room



Fig. 88
Office rooms

CASE STUDY - TWO

4.2 "NIDAHASA", HIKGAS HENA, KURUVITA.

4.2.1 Back ground



Fig. 89
Location of the site

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The "Nidahasa" rehabilitation center is situated in the Sabaragamuwa province, Rathnapura district, 10 km away from Rathnapura town and 2km from Kuruvita and in a remote village called Hikgas hena, few meters away from Hikgas hena junction.

This rehabilitation center is orientated around a strong functional hierarchy and as above mentioned categorized under functional responsive rehabilitation centers. This center performs a well developed timetable through out the rehabilitation process and all the activities and treatments are orientated around this functional hierarchy.

This selected rehabilitation building is a donation to Kuppiyawatthe Bodhananda thero who is the lead person; director of this rehabilitation method and who introduces this system to Sri Lanka. And there are changes done to this residential building to suit as rehabilitation center for the drug addicts. This was started in 1986 and through Sarvodaya drug addicts were attended to this center. At the beginning these inhabitants were kept as prisoners but later on this community based rehabilitation method developed with the involvement of Kuppiyawatthe Bodhananda thero.

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At the moment there are 35 inhabitants in this center and this number varies very frequently because inhabitants are transferred to other units under the same process due to their addiction type or by the type of required other needs. This number includes all the members in the house unit including coordinator on duty, chief, expeditor, shingle, department head, team leader and the general member. Except the director Kuppiyawatthe Bodhananda thero all the others are rehabilitated addicts. All acts as one family with respect to each other, understanding and helping each other.

4. 2.1.1 Management Hierarchy

Director - Kuppiyawatthe Bodhananda thero

Unit manager	(there are several units of this system in sri lanka in different settings for example, Niwahanaat Wataraka, Sisilasa at Meegoda, Nisansala at Gampaha)
Re entry Pre re entry	(there is opportunity for those who wants to enter the system again and work on behalf of the center to help drug addicts to recover)
Coordinator on duty	(has the responsibility on all the duties performing in the rehabilitation center)
Chief	(helps the coordinator on his duty)
Expeditor	(the person who directs the general member to work and check if it goes correct)
Shingle	(person who is responsible for security functions within the center)

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Department leader	(there are six departments in a center. Namely,communication, environmental, home management, kitchen and office work. Departments will be changed in every two weeks so every member will perform all the duties as an inhabitant)
Team leader	(helps the department leader in his duty)
General member	(any addict who enters the rehabilitation center, they will be in any stage of addiction)

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4. 2.1.2 Functional Hierarchy

All the members including Unit manager and the General member should go through the general time table of the rehabilitation center. Up to 21 days or 30 days is the sick period, at this stage any person needs to be protected and he needs love and affection more than any one else because now he is struggling to avoid drugs. As the time passes within about six months an inhabitant gets home leave where he gets a period to think back.

Usually the day begins at 5.30 am in the center.

5.00 All the elders from shingle to coordinator on duty start work

5.30 general day begins for the family.

5.45 "common cleaning" begins this is aimed at concentrating mind exercise.

6.00 morning tea

6.10 religious activities

6.45 department duties. Communication, environmental, home management, kitchen and office work

7.30 break first

8.00 morning meet

9.30 department meetings

10.00 work report presentation

10.15 tea time

10.20 silence period, a little time period for them to prepare for the next programme, as well as to look in to their own lives.

10.30 educational programmers including meditation, yoga etc

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12.30 lunch

1.30 educational programmers, discussions, music, arts, drama etc there are five separate themes for the five week days.

3.00 tea time

3.10 games

5.30 self cleaning

5.45 tea time

6.00 religious activities this includes meditation and lectures.

7.00 family meeting this includes entertaining programmers.

9.00 dinner

9.40 commitment



Fig. 90
Front façade covered with greenery

10.00 end of the day for the family but the elders will have a discussion regarding the day and the schedule for the next day.

Usually every body should be at the place 5minite before each programme starts. This makes inhabitants life busy and makes them to help each other as well as to concentrate what he is doing.



Fig. 91
Shingle point

4.2.2 Form of non Built

The "Nidahasa" rehabilitation center is situated in a residential area surrounded by a residential neighborhood. Boundary is demarcated by two roads on two sides, a play ground on south and a residential building from the west.

The premise is covered with a thickly grown plantation which covers the building from the outer world and gives the inhabitants the feeling of privacy, security and the sense of belongingness. Front and rear gardens are the most functional spaces for the recovering inhabitants. Where they do gardening, playing, discussions as well as group activities.

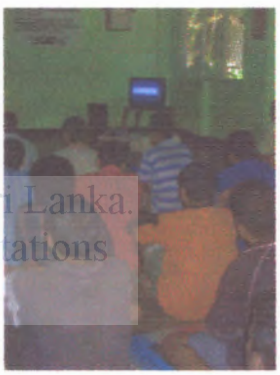


Fig. 92
Multifunctional hall at "Nivahana"

In the corner of the front garden there is the summer hut which they have built for them selves by them. This is the best place for most of the inhabitants to spend their time.

With the lower scale roof height, seating arrangements which emphasize interaction and communication makes this space more in humane qualities.



Fig. 93
Inhabitants at "Nivahana"

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With the location of the center it gains a lot of social interaction, through the adjoining roads this center links with the existing world without isolating. The play ground which is used by the youth of the village gives inhabitants to realize the life without drugs. In certain instances these inhabitants involve in social activities and more closely with the village temple.



Fig. 94
Secondary entrance

But through the building it self does not express any inviting or any communicating quality to the rest of the world.

4.2.3 Form of Built

4.2.3.1 Plan Form

The "Nidahasa" rehabilitation center is located in one acre land in a remote area. Consists of the main rehabilitating building, supportive secondary building which is used to house sick inhabitants in certain instances and as a visitors place and the summer house which is built by them; for them.

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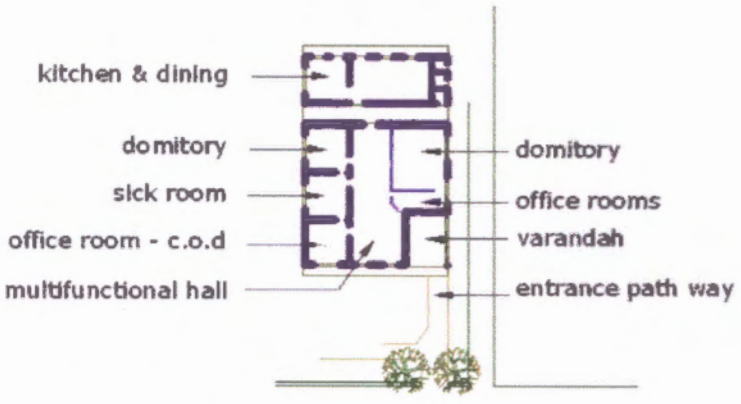


Fig. 95
Floor plan

The main building was a three bed room house with living kitchen and dining facilities. They have converted it to a rehabilitation center. At the moment there is a unit manager's office which has a direct contact with the new members' dormitory. General office has direct link with the other dormitory. This is created by partitioning the large living space. Living space is used as a multifunctional space.



Fig. 96
Building hidden within the greenery.

The formal entrance to the center at the main road expresses some discipline. The high boundary wall and the gate totally cut the whole landscape from the road taking no attention of the people passing through this center. And the thickly grown vegetation in the front garden covering the building express an idea of introverted space within the institution as no building is clearly visible from the entrance. These contradictory expressive qualities invite only the selected group of people in to the center.

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Fig. 97
Blending with the nature

Paved paths, pots placed along the pathways give an inviting quality to the person who enters from the main entrance. When comes closer to tunnel of shady trees exposed to the front verandah. Thickly grown vegetation comes right up to the building; this shades the building and gives a homely intimate experience to the inhabitants.



Fig. 98
Drinking water in the garden

The layout of the buildings expresses the individuality giving some identification to each building there is no structural link used in between buildings. But the extensively use of landscape throughout the layout linked all the spaces together into an exciting living environment.



Fig. 99
Entrance to the main building.

The main space used for lectures, discussions, for a religious activity is the living space. This acts as a multifunctional space.
Painted in a pink colour walls, red cement cut and polished floor gives a warm appearance to the interior.

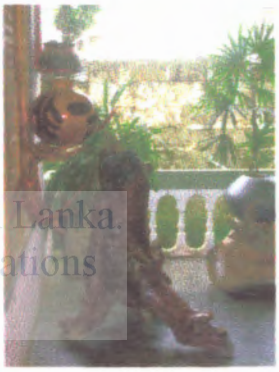


Fig. 100
Front verandah

Living space is partitioned to create a new dormitory unit and a new office space. This has cut down the natural lighting which comes through the large windows and makes the main living space gloomy and artificial lighting is require even in the day time activities.

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Front room of the house is used as the office room and the other two rooms as dormitories for the inhabitants. This office room has the direct link with the sick room where the new comers occupy. This link is really essential because they need a lot of caring and affection by the elders.



Fig. 101
Counseling table in the common room

The front verandah with thickly grown vegetation coming right up to the boundary gives an intimate and homely feeling to the inhabitants. With the white coloured walls,

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cement cut and polished floors in black colour and with a lot of day light this space is full in an inviting quality.

With the sculptures and pots which they have done by them selves, they have converted this space in to their own place. With these ornaments and the vegetation the height of the building is cut down and has taken to a lower scale where the sense of belongingness is felt. This is the place where inhabitants love to spend their time except the summer hut.



Fig. 102
First sight....

As a person enters from the main door the place which is used for religious activities is visible. White coloured Buddha statue in red back ground and with the dark orange painted walls is the first sight of the person who enters the building.

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This place is light up with a ceiling mounted spot light, because of the poor lighting quality of the interior. Though there are two large windows are on either sides of the statue they do not admit much light because of the thick plantation.

4.2.3.2 Three Dimensional Composition

Individual counseling takes place right at the Buddha statue. This is the place where all discussions, seminars, group activities take place. For someone to express his inner feelings to someone the space should be a private space with a good level of lighting for them to see each other and to here each other without the attention of the rest of the world.



Fig. 103
Counseling table

The counseling table is in a large volume, which is opened up to a large area. This is minimized by placing plants and sculptures and covering and cutting down the large volume to a lesser degree. But still it's not in a satisfied situation because still the inhabitants feel that they are in a stage where every body's eyes are towards him.

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Group activities and the group counseling takes place in the multifunctional apace. This is a narrow strip like space in between the dormitories. This space functions for a formal lecture but not for interacting activities. Most probably they do not use this space and go for out door spaces because this narrow space does not function.



Fig. 104
Dormitory of the inhabitants

Dormitories with bunk beds are over crowed, this situation creates stress among inhabitants and leads to less privacy. There are less or no personalized spaces or sense of privacy. This over crowed dormitories are a good example that there is not enough space requirements for the inhabitants in the center.

4.2.3.3 Colors and Lighting

The only lighting source for the main living room / multifunctional hall is the front windows. These windows are covered with the thick plantation and cuts down the light which comes in to the building. This requires artificial lighting even at the day time.



Fig. 105
Summer hut

The space which is used for counseling is also does not get sufficient amount of light. In this situation the gloomy interior does not support to see each other clearly. For the counseling to be successful, and a person to open out himself to somebody who he could trust the clear image of special experience is essential.

Living space is partitioned to create a new dormitory unit and a new office space. This has cut down the natural lighting which comes through the large windows and makes the main living space gloomy and artificial lighting is require even in the day time activities. This is the space which is used as the multifunctional space.

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Dark pink and orange coloured interiors support this gloominess of the interior. Aged old curtains in green colour, pink walls with faded colours makes the interior unpleasant for the inhabitants.



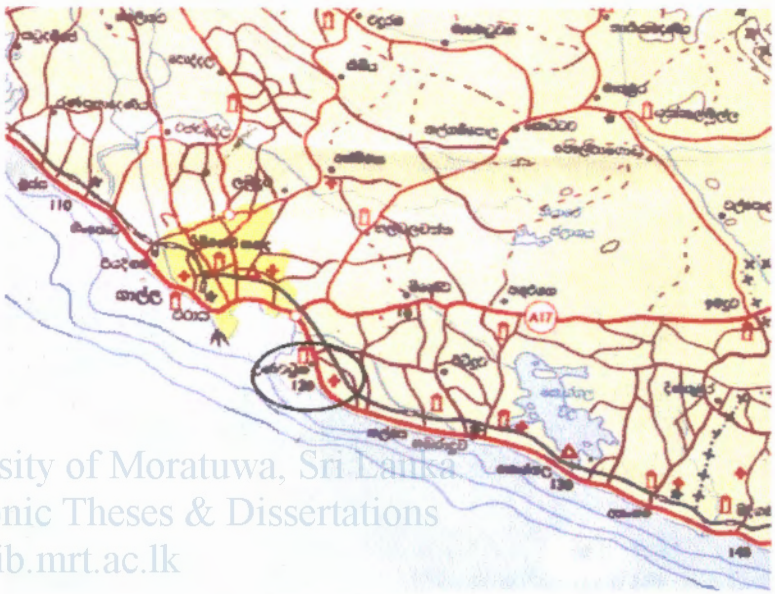
Fig. 106
Living with the nature

CASE STUDY - THREE

4.3 "MITH SEWANA", UNAWATUNA, GALLE.

4.3.1 Back Ground

The "Mith sewana" rehabilitation center is situated in the Southern province, Galle district, few meters away from the Unawatuna junction in the same premises of the Unawatuna Psychiatric Hospital, by the Galle - Matara main road.



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Fig..107
Location of the site

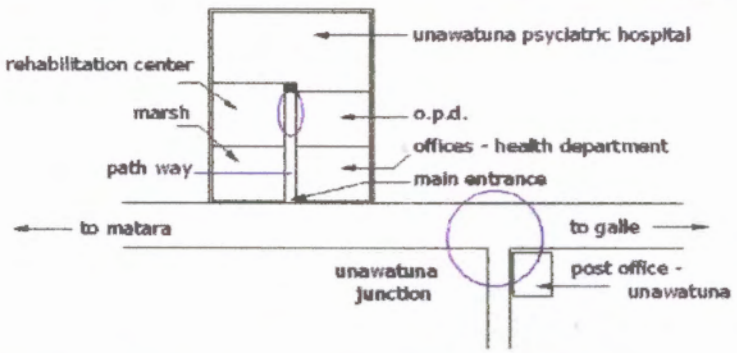


Fig..108
View of the hospital premises



"Mith Sewana" is one of the branches which function under the National Dangerous Drugs Control Board (NDDCB). Residential treatments and community based treatments are available for the drug addicts and their families. No single type of therapy is appropriate for all drug dependents so different types of treatment acceptable to the Government are practiced.



Fig. 109
Boundary wall of the hospital

- The therapies of re examining the past experience
- Rational emotional therapy
- Role play therapy
- Reversal therapy
- Life skill therapy
- Motivational therapy
- Psycho analysis
- Affect therapy
- Self esteem building therapy
- Self confidence building therapy



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Fig. 110
Entrance to the hospital site

The maximum number this center could house is 25 inhabitants. This varies normally from 10 up to 30. Residential treatments from this center are available only for 21 days or for one month, but the rehabilitation program goes on until one year.



Fig. 111
Path way.....

4.3.1.1 Management Hierarchy

Manager

Counselor

Assistant counselor (three assistant counselors)

PTRA (15 PTRAs – 8 male and 7 female)

Patient Treatment Rehabilitation Assistant

Clerk, Driver, Labor



Fig. 112
Rehab from the main entrance through the buffer zone.

4.3.1.2 Functional Hierarchy

Usually the day begins at 5.30 am in the center.

5.30		Generally day begins
5.30 –	6.00	self cleaning
6.00 –	6.15	meditation
6.15 –	3.30	morning tea
6.30 –	7.00	exercise
7.00 –	8.30	cleaning
8.30 –	9.00	break first
9.00 –	9.15	interval
9.15 –	9.45	morning meet
9.45 –	10.00	tea
10.00 –	11.15	individual / group counseling
11.15 –	12.00	educational programme
12.00 –	12.30	interval
12.30 –	1.00	lunch
1.00 –	2.00	indoor games
2.00 –	3.00	entertaining programme

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Fig. 113
Temple trees along the path



Fig. 114
The main entrance to the rehab.

3.00 – 3.15 tea

3.15 – 4.30 gardening

4.30 – 5.30 out door games

5.30 – 6.15 self cleaning

6.15 – 6.30 interval

6.30 – 7.00 silence period

7.00 – 8.00 evening meet

8.00 – 8.30 dinner

8.30 – 9.45 TV / Radio

9.45 – 10.00 self cleaning

10.00 - end of the day



Fig. 115
Administrative building

4.3.2 Forms of non Built

Site located at the busy Galle – Matara main road, combined with the Unawatuna psychiatry hospital. This particular location emphasizes easy accessibility from the main road.

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Fig. 116
Entrance to the main building

Location of the building is away from the main road so this selected site gives the feeling as it's located in an interior of a remote village. Calm and quite environment gives an expression of the quality which is suitable for meditation.

Thickly grown temple trees with full of white flowers bind the whole complex together; expressing a discipline in the environment.



Fig. 117
The reception

The surrounding context of this particular area is primarily low density residential area but along the Galle – Matara

main road can be identified as high dense commercial development.

As there is no activity happening in the out side of the premises and as the management does not allow the inmates to go out or the villages to come in. every day they meet the same group of people for their social interaction. This causes a negative attitude of the expression for the society as well as to the inhabitants.



Fig. 118
Entrance lobby

4.3.3 Forms Of Built

4.3.3.1 The Entrance

After passing about 100m from Unawatuna Junction to the Matara, the main entrance to the hospital premises is located. The hospital premise is demarcated by a boundary wall and the entrance gate way is placed with a security hut.

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Fig. 119
Main building and the garden

Private road is laid in between main gate of the rehabilitation center and the busy main road is an intermediate space before entering to the building complex.

This intermediate space acts as an effective transitional space where a visitor can behave his mood before entering in to the completely different environment from where he has passed through.



Fig. 120
Blending with the nature

Walking along the private road towards the Unawatuna Hospital, "Mith Sewana" is located on the left with a high boundary wall and a huge gate, through which only a little opening gives a little glimpse of the internal world. This gives an expression that the building welcomes only a special group of people.



Fig. 121
Corridors connecting main spaces

Entrance lobby is enhanced by two shady trees. This gives the quality of the entrance lobby as well as the sense of arrival. But the entrance at the road does not give any sign of such building; this express that there is no visitors they expect, other than the people who are purposely coming to the "Mith Sewana".

As entering through the gate; entering in to the entrance court covered with shady trees and the glimpse of main space, colonnaded corridors, forest far away in the back ground expresses the inviting quality at the entrance where could well come any body who has already passed the main entrance.



Fig. 122
Group activity space

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4.3.3.2 Plan Form.

The layout of the rehabilitation center clearly express the idea of the on going rehabilitation process.

Main space is the family counseling space, which is more or less a double height space with an extra ordinary roof structure and of octagonal plan form, where every body in the room could be communicated and interacted very easily.

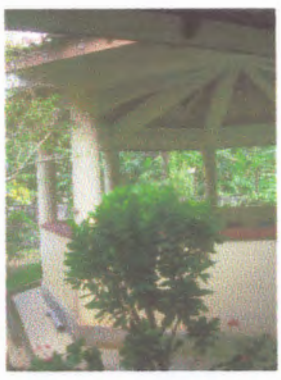


Fig. 123
Openness.....

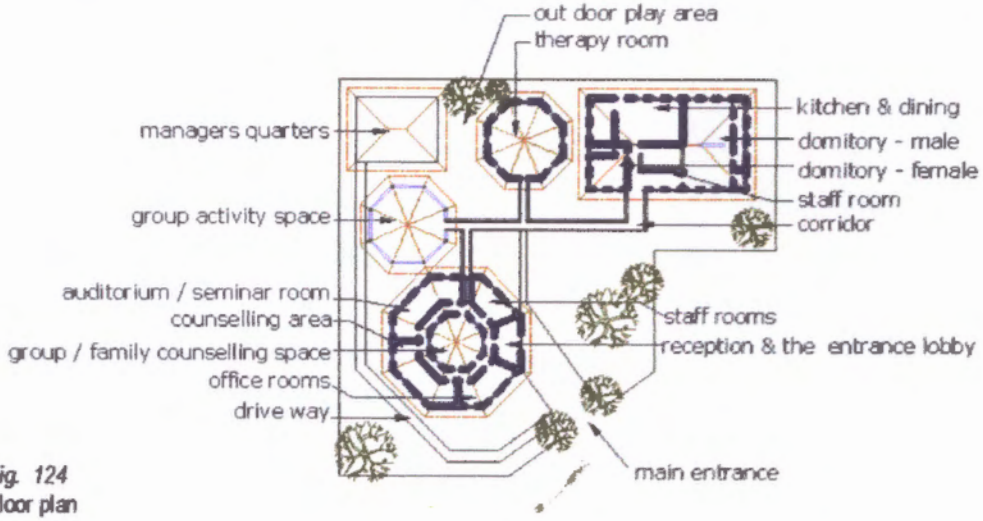


Fig. 124
Floor plan

Around this main space individual counseling areas located facing the verandah going around the main space. Office rooms, auditorium / seminar room. Staff rooms are also located in this main building and this act as the main administrative building.

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This is the prominent building in the whole complex which brings discipline, order and obey ness to the others.



Fig. 125
Living with the nature

Other buildings connect with this building through a colonnaded corridor. Connecting all by corridors; express the formality and the discipline of the activity happening within the complex.

Space for group activities is also an octagon in plan form with the same roof structure but in a rather small scale. Colonnaded space contained with a half wall and is open to the environment.



Fig. 126
Continuity

This open pavilion type space emphasizes a pause, with the scale, plan form as well as the lighting levels.

The other important space is the therapy room which is also octagonal in plan form, same roof structure but with enclosing walls with window openings.

Connecting corridor of the therapy room and the dormitory unit is widened and used as an indoor game area.



Fig. 127
Roof structure and the windows on top of the wall

Dormitory unit consists of male and female dormitories, bath rooms, kitchen, dining room and the staff room which has a direct link with those two dormitories by introducing glass to the separating walls.

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Garden is a healing place with a lot of greenery and the building is opened to the nature through large openings and corridors. The concept is clearly express in the building scale and the layout which enhance the hierarchy of spaces.



Fig. 128
Trellis work of the main space.

Building is spread out in the site and it harmonizes with the existing greenery which is an essential feature of the rehabilitation process of the drug addicts.



Fig. 129
Family counseling area.

4.3.3.3 Three Dimensional Composition.

The open type of layout not affected the personality or the privacy at their life. People behave freely within this complex. This happens because behavioral pattern of drug addicts are more or less similar to each other.



Fig. 130
To the therapy room

Corridors connecting spaces and the wide corridor in between therapy room and the dormitory are the place where most of the activities take place.

Corridor roof coming down to the human height, canopy of the shady trees which continues the space of the corridor effectively invite the inhabitants in to the out door living; together with the nature.

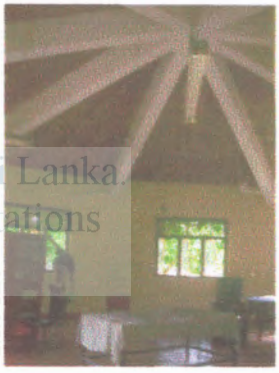


Fig. 131
Therapy room

Family counseling space is a double height space with a conical roof supported with a concrete beam structure. This large volume clearly identifies the main space of the building complex even from the far distance. This scale brings the discipline, order and obey ness to the whole complex.

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Sloping ceiling helps to relax the occupants mind and the window at the top of the wall penetrates day light in to the timber ceiling and this creates a cheerful feeling. The trellis work of the eye level connects inside with the out side as well as giving individuality to the person who occupies the space.



Fig. 132
Widened corridors

The massive height of the building with the un familiar form, rigidity gives an alien expression but proceeding in to the building complex this quality is reduced due to scaled down buildings, open corridors specially by the harmony with the nature.



Fig. 133
Counseling area

Group activity space with the same roof form in reduced scale becomes a very comfortable and intimate space for the inhabitants. Lowered roof, openness to the nature through half walls gives the sense of belongings.

Therapy room also consists the same plan form as well as the roof form of the group activity space. But introducing walls and windows openings to it; the space have become more private in feeling. This helps to concentrate their minds to the on going process.
Visual links of the architectural spaces combined whole environment together as one unit. This type of quality helps to create a friendly atmosphere within the living environment.



Fig. 134
Seminar room

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4.3.3.4 Colours and Lighting

Use of pleasant colours in the whole complex adds more life in to the built environment which also helps the drug addict to concentrate their minds and makes a cheerful environment.



Fig. 135
Seminar room

Only white and light yellowish colours are used for walls of the whole complex. Even though this gives some monotones effect being lack of changes in visual pattern

of colours, the way it harmonizes with the nature of the greenery gives more exciting environment to the inhabitants.



Fig. 136
Out door playing area

Natural lighting is maximally used through out the whole complex and this helps to uplift the psychological state of the inhabitants.

Windows of the family counseling space which are located on top of the wall penetrate day light in to the timber sloping ceiling and this creates a cheerful picture on the occupants mind and helps to concentrate their minds.



All counseling areas, therapy room, dormitories facilitated with natural lighting through large windows and trellis work.

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Fig. 137
Entrance to the male dormitory.
Used glass strips to the door to have visual connection with the interior



Fig. 138
Separating wall of the dormitory and the staff room with visual connection.



Fig. 139
Interior view of the dormitory



Fig. 140
Dormitory is facilitated with natural light and ventilation.

CONCLUSION

The drug addicted person is somebody who has lost a great deal of things in life; he has denied of the conceptual links once he had with the outside world, he has lost his orientation in the mundane world. He has the problem of reorientation his lost life. For such a person, the sense of place is of great importance. A sense of place, a longing, a bond, a two way communication with him and with where he is, is what is capable of reorientation his life.

It's the correct intervention of the architect that makes potential places rather than mere spaces. Without his enlightened participation in creating the appropriate spatial quality, no knowledge of other relevant professions will be in much use for the process of rehabilitation of the drug addicts.

Rehabilitation of a drug addict depends upon social forces economic forces and physical forces. Out of these three, physical forces are more influential in the aspect of architecture.

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Architectural intervention in this case should be so strong and intensive that the traditional approach of looking at the center, as another hospital or a prison should be crumble and interpretation of the drug addict as a sick and dangerous, should be vehemently denied. A radical approach that entirely changes the existing sterile environment in the center and make it a much more homely and intimate place, still dynamic in quality and more adventure prone, for the inhabitants; who denies all odds against him and face the life with more courage, should be the intervention of the architect.

New concept has been practiced in western countries in treating the rehabilitation center more humane to the inhabitants. They have located rehabilitation centers in attractive and pleasant environments with the nature. In addition to that they were facilitated with furniture, finishers, lighting etc. they try to evade the evils of

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imprisonment and make the rehabilitation environment more humane to the inhabitants and a friendly appearance is given. Therefore the building itself has become a good neighbor to the society. So the rehabilitated person can make close connections with the society without being getting discarded.

The built environment of most of the current rehabilitation centers pay no human atmosphere for the rehabilitation process according to the case studies done. The authorities say that they are implementing programmes to rehabilitate them. But being in a stressful environment can make no advance. This is proved by the answers from the interviewed inmates.

Most of the inmates at "Seth Sewana" said that said that the environment that they live is just like a prison, due to the poor hygiene, insufficient spaces for activities, overcrowding and gloomy atmosphere has always make their thinking more negative; so they try to escape as far as possible. Most of inhabitants at "Mith Sewana" and "Nidahasa" had experienced the "Seth Sewana" even for few days in their drug addicted life. This proves that the impact of the built environment on the rehabilitation procedure together.

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Non of the case studies discussed are perfect examples where the built environment is created exactly in respond to the rehabilitation process. But the analysis of these three examples helps to understand the relationship between the rehabilitation process and the built environment. This relationship was achieved up to a certain extent at "Meth Sewana" where a lot of freedom is felt and a friendly environment is created engaging with the nature.

For the process of rehabilitation the environment should not be monotonous for the inhabitants' entire rehabilitation time period. If any process is done it should be felt to the inhabitant and he should feel he is in a process of reforming. At "Seth Sewana"

they have changed the rehabilitation process with the time to a more humane and psychological approach yet they have not considered the appropriate built environment for the process. Therefore this rigid inner environment should rearrange in a more human way.

One enters the rehabilitation center as a drug addict and set free as a well skilled, with a new vision of life, reformed socially accepted good person from the rehabilitation centre. Further insist of this study clearly proves that the built environment can make a sound contribution for the process of rehabilitating drug addicts.

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