

HEMAYETPUR PSYCHIATRIC CENTER PABNA, BANGLADESH

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SEMINAR II

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Abstract

Environment strongly influences the psychological and physiological state of human being. Over the past one century, there has been growing recognition towards the impact of psychiatric hospital environment and architectural contribution to its theory has been made. But the conventional treatment procedure and the only government mental hospital that we have in Hemayetpur, Pabna, not only lacks the basic requirements and proper environment that is vital for the patients, but also the environment acts a catalyst for the degradation of the mental condition of the patients, whereas there is a fair chance of reversing this situation and provide the patients with the proper treatment that they require for a better life. The project attempts to explore the possibilities to turn the entire 'Hemayetpur mental hospital compound' into a properly designed complex along with sufficient mental health facilities for the patients.

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Chapter 1:

Background of the project

1.1 Project brief:

Project: Pabna Psychiatric Center (Redefining Mental Hospital)

Project location: Hemayetpur, Pabna.

Client: Government

Funding body

1.2 Project Introduction

Health care as a humanitarian activity, as a component of human rights protection and as an essential element of poverty alleviation must include mental health in its activity. Even though about 1 core 50 lacks people in Bangladesh (about 10% of the population) are now suffering from mental illnesses, the rate is believed to increase in near future. But in a developing country likes ours this sensitive issue have often ignored or taken as a matter of joke. The society we live in often thinks that having a psychologically disturbed member is like having a stigma on them and in most of the cases the mental asylum is used as the 'dumping zone' for the patient, the family is not even interested to take them back even after the recovery for so called social issues. Proper facility regarding providing them with the proper environment, treatment and rehabilitate them is a crucial need.

According to National Mental Health Survey in 2003-2005 about 16.05% of the adult population in the country is suffering from mental disorders. In the country with a population of about 130 million, there are about 700 beds in the government hospitals for mental patients. As a result a very small portion of patients get to receive treatment from the government facilities in Bangladesh. The only hospital that provides mental treatment is in Hemayetpur but the complex

houses only about 400 patients, far fewer than would be crammed into other hospitals in a nation with limited resources for public health. What is apparent is that a caring group of staff finds itself in a position giving far from ideal care simply because they cannot cope. In general, though the physiological aspects of therapy is something the hospital can partially cope with, the other aspects of treatment of mental patients, involving social and environmental support, and rehabilitation are beyond scope. The treatment at the hospital, therefore, in the words of the doctors "is guaranteed to fail".

The idea is to create such a space where people will get mental health care facility, an institution to rehabilitate psychologically challenged people, a center for learning more about and offering training and educational facilities for the families having such kind of members so that they can nourish them. Different kind of psychic patients demand different sort of spaces and environment, so the aim is to provide them with suitable spaces as per to their demands. The idea is to designing a 'space' for them rather than creating a prison. Creating a scope to nourish the other creative sides of the psychologically challenged people so that they are not termed as 'burden' in the society.

The present work looks at the architecture for psychiatric treatment.

We are convinced that architecture has great influence on people, and that people influence architecture as well. There has been an attempt to find the interaction between planned architecture, built space, and people who actually use them.

This relationship is of great importance, especially in the field of psychiatry. A mentally disturbed person perceives his environment differently than a 'so called' healthy person. If the space that surrounds us can effect our perception, our sense of well being and our mood, what is then the ideal environment for a mentally ill person? An attempt to find out the specific needs that the mentally ill require from their architectural environment. In different times patients are particularly sensitive to their environment, which can contribute to their well being. The architecture even have an influence on the healing process of the mentally ill. It is a worthy challenge to design a building that meets the needs of these people who are not even considered as a part of the society.

Additionally the relationship between mental illness and society has been tried to explore. The handling of mentally ill people has changed considerably over time, which is also expressed in architecture. A strong stigmatisation against the mentally ill still exists. The possibility of architecture, acting as a catalyst, to bring in change in this cliché mindset of ours is also something that has drawn the attention, whether architecture can contribute to the fight against prejudice and stigma.

Since the entire process demands significant knowledge in the field of psychiatry, the first step is to clarify the basics and to get an overview of the topic. This includes, for example, the definition of what distinguishes an ill person from a healthy person and under which circumstances someone can become ill. This theme is discussed in chapter three. The influence of architecture on the healing process and the current image of psychiatry will also be touched. The case studies from chapter four will be there to compare different kinds of psychiatric facilities.

Through this, opening up the large field of psychiatry, with the focus on architecture, using the knowledge to develop a sound architectural design project is the main objective.

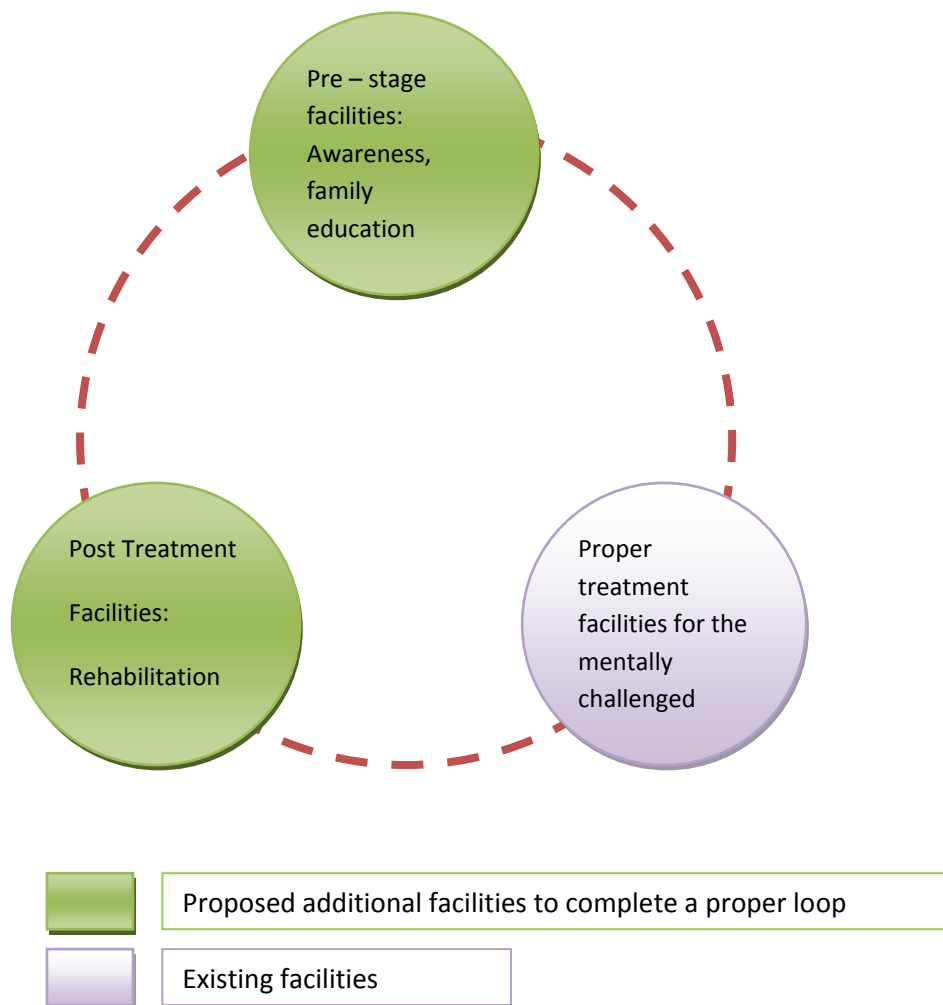
1.3 Aims and Objective of the Project

It is an intention for implication of architecture for human behavior and therapy by design. The project will serve as a mental health institute with self-sustaining facilities that cure mental illness completely and help the patient to rehabilitate in the community and be self-sufficient. The aim is to create facilities for the mentally disturbed individual to a complete recovery state and also serve the community with basic health facilities while creating awareness about mental illness.

Mental health is the mostly untouched social and architectural field in our country even though the severity is getting worse day by day. Since the surrounding environment and spaces have a strong influence in human behavior and how he reacts, exploring this idea to contribute to the ideology of this one of the mostly ignorant fields is the objective of this project.

1.4 Given Programme

- Administration
- Outpatient Department
- Inpatient department
- Rehabilitation facilities
- Services



source: ishika 2014.

Existing loop: that does not offer proper segregation of patients, no rehabilitation and no training to get back to normal life and cope with it. So ultimately, no matter how efficient the medical treatment is the patients, most of the time, experiences post traumatic stress disorder which triggers the mental illness again, so the total process goes in vein.

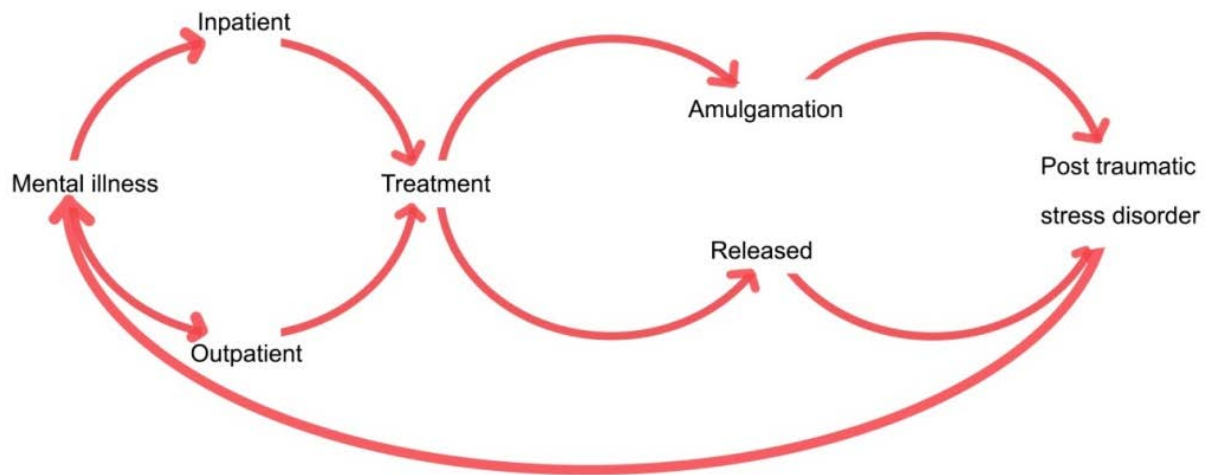


fig: existing loop

source: ishika 2014.

Whereas proper proposed loop can provide them with proper facilities and enhance the possibility to cope with the world and cure them.

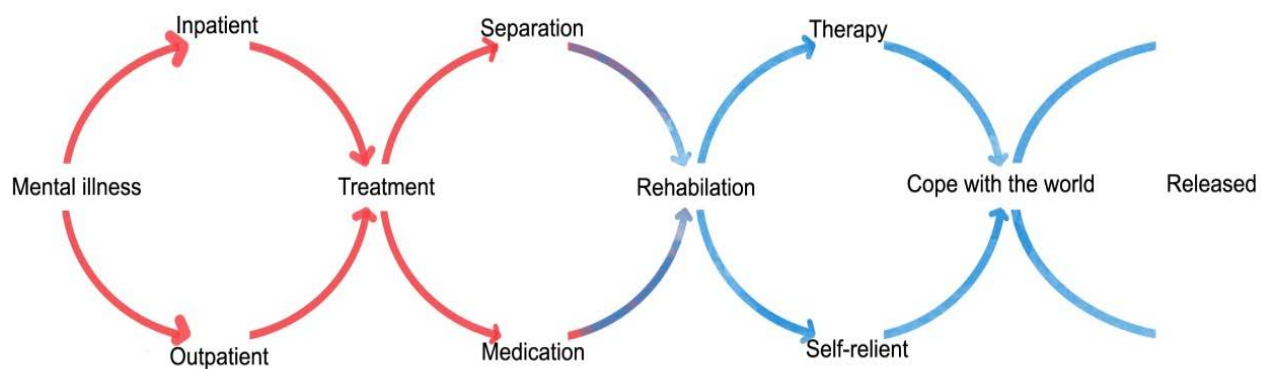


fig: proposed loop

source: ishika 2014.

Chapter 02:


Site Appraisal


2.1 Site Location: Hemayetpur Pabna



site location, source: GoogleEarthMap

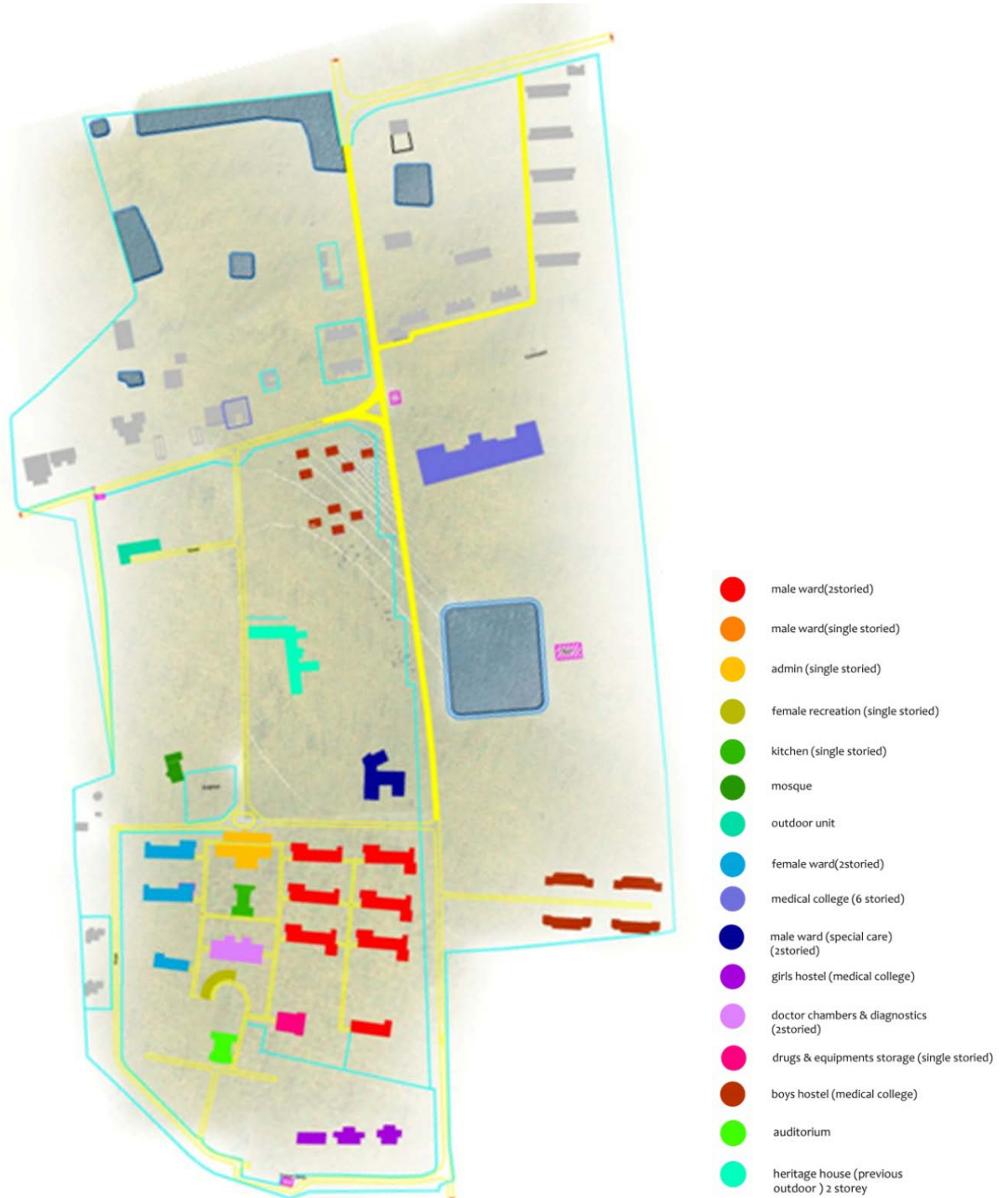


 Area for the mental hospital

 Area for the medical college

site location, source: GoogleEarthMap

2.1 Site and surroundings



Existing structures and facilities



Solid and void



Accessibility



Green and waterbody



Wind



Sun path



Site area

2.2 Existing structures and facilities

Site and Surroundings:

2.2.1 Site area	Total area
	78.5 acre
	Occupied by existing building
	17.5 acre
	Left unproductive
	61 acre

2.2.2 Existing Condition

Total number of buildings	9 buildings (two storey)
Existing wards	Male wards- 18 nos
	Female wards- 9 nos
	Over active patients: 10-12 people in per ward
Disability consideration	Non existent
Facilities	No dinning space
Medical space facilities	No space variation

Mental health guidance facilities (once offered)

Outdoor games

Movies

Surroundings

Most of the space is

occupied by Pabna Medical College



Panorama of Pabna mental hospital compound



Panorama of Pabna mental hospital compound



Bird eye view of Pabna mental hospital compound (source: wikipedia)



Bird eye view of the heritage building with hospital compound (source: wikipedia)



Panorama of the patient units



Patients unit



Pabna medical hospital



the abandoned hindu jamindar house (heritage) in the hospital compound

2.3 Environmental consideration

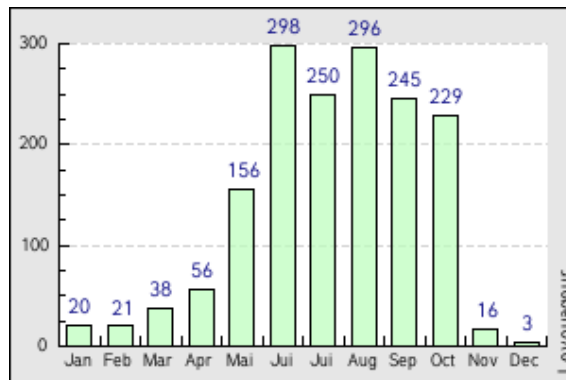
2.3.1 Natural Physical Features

Pabna District (RAJSHAHI division) with an area of 2371.50 sq km, is bounded by NATORE and SIRAJGANJ districts on the north, RAJBARI and KUSHTIA districts on the south, MANIKGANJ and SIRAJGANJ districts on the east, GANGES river and Kushtia district on the west.

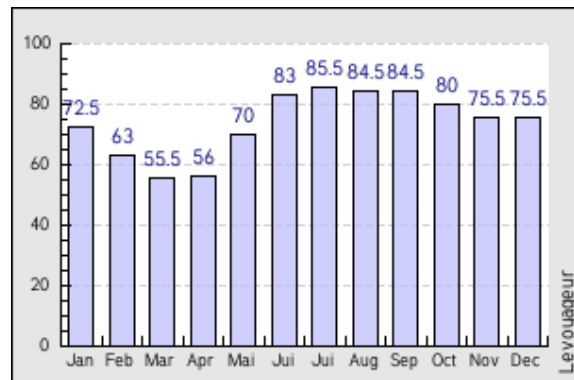
Characteristically the soil of the district is divided into four, viz flood plains of the Ganges, Karatoya, Jamuna and Barind Tract. Main rivers are Ganges, Ichamati, Gumani and Hurasagar.

2.3.2 Annual Rain Fall

The average annual rainfall is 1603 mm



Rainfall in mm

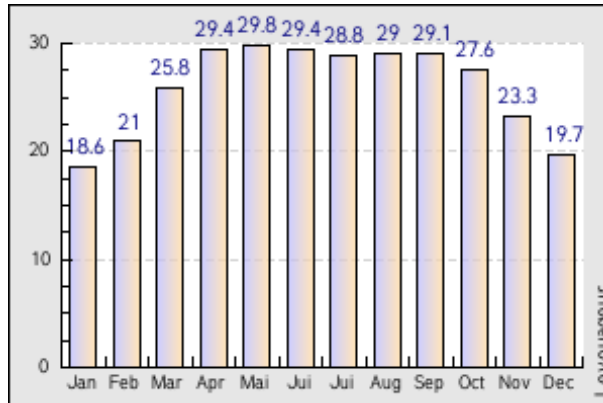


Humidity

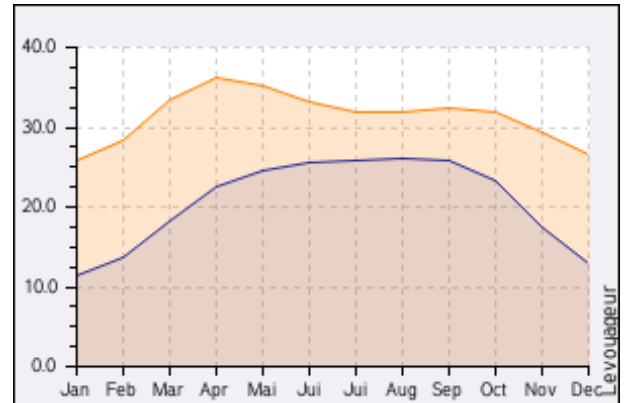
(source <http://www.levoyageur.net>)

2.3.2 Temperature

The temperatures mentioned hereafter are expressed in degrees Celsius and represent the monthly averages observed over a great number of years. The warmest month of the year is May with an average temperature of 29.9 °C. In January, the average temperature is 18.4 °C. It is the lowest average temperature of the whole year.



Average temperature



Minimum and maximum temperature

(source <http://www.levoyageur.net>)

2.3.3 Applicable building code

Function category: Category D (Healthcare)

Entry Road width: 9m

Site area 12acre

Maximum ground coverage 50%

Chapter 3:

Literature Review

3.1 Mental Health:

Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood.

Over the course of your life, if you experience mental health problems, your thinking, mood, and behavior could be affected. Many factors contribute to mental health problems, including:

- Biological factors, such as genes or brain chemistry
- Life experiences, such as trauma or abuse
- Family history of mental health problems

(Source: MentalHealth.gov)

3.2 Mental disorders:

Mental illnesses are serious disorders which can affect your thinking, mood, and behavior. There are many causes of mental disorders. Your genes and family history may play a role. Your life experiences, such as stress or a history of abuse, may also matter. Biological factors can also be part of the cause. Mental disorders are common, but treatments are available.

Psychotherapy and psychiatric medication are two major treatment options as are social interventions, peers support and self-help. In some cases, there may be involuntary detention and involuntary treatment where legislation allows. Stigma and discrimination add to the sufferings associated with the disorders and have led to various movements campaign for change. The field of Global Mental Health has emerged, which have been defined as ‘the area of study, research and practice that places a priority on improving mental health and achieving equity for mental health for people all around the world.’

3.3 Mental Disorders and Perspective of Bangladesh:

Mental illness is probably the most misunderstood and abused illness. At one time it was an illness that no one would dare talk about. The stigma was so strong it was looked upon as a crime. Patients would be “put away” not necessarily to be treated, but to shield them from the

public. It was an illness to be ashamed of, cursed with, and brought upon by the patients themselves. It was looked upon as anti social behavior, poor upbringing or simply a damning disease. A patient of the late Neuropsychiatrist Abraham Low, founder of Recovery International (RI) and the Recovery Method (a group-based, peer-led cognitive behavioral training program), asked: "Why should there be a distinction between people who are sick above the neck and those sick below the neck." (pg.76 "My Dear Ones") Even though they all knew the answer, it was society who did not .

Even though the overall idea about mental health and psychic disorders is changing, in Bangladesh, the idea is still vogue. This is the most untouched sensitive sector which is largely neglected, unexplored, underserved and under financed. Most often, the mental illness are attributed to supernatural causes and character flaws by the most of the people in our country.

The mentally ill, the emotionally disturbed and those with severe personality disorders bear not only the anguish of their suffering but also the additional burden of society's indifference and ignorance. In spite of falling victim to false beliefs and deeply rooted misconception, the issue of mental health features very low on our government's agenda, and almost not at all on society's list of priorities. In terms of government, Bangladesh undoubtedly subscribes to the democratic principles. However, its provisions for its mentally ill fall short for putting the principles into practice.

The isolation of the mentally ill, the emotionally disturbed, that exists within society. Integrating rehabilitation into community treatment is a necessity that cannot be further ignored.

3.4 Prevailing Mental Disorders in the Country:

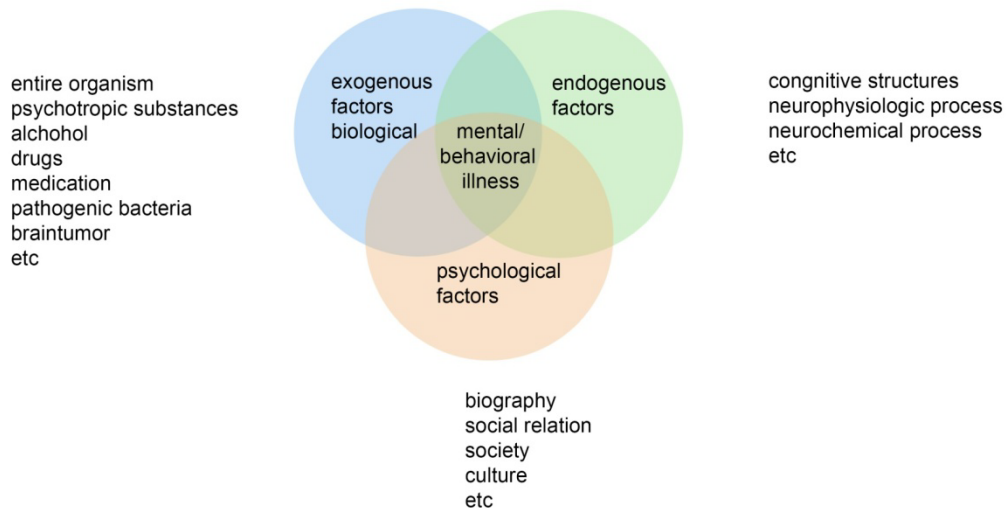
- **Anxiety Disorder** Anxiety or fear that interferes with normal functioning may be classified as an anxiety disorder.
- **Mood Disorder** Two groups of mood disorders are broadly recognized. Depressions and maniacs.
- **Schizophrenia** A category used for individuals showing aspects of both schizophrenia and affecting disorders.
- **Developmental disorders** Initially occur in childhood
- **Disruptive Behavior** Disruptive behavior disorder involves consistent patterns of behaviors that break the rule.
- **Substance Abuse Disorder** The use of drugs (legal or illegal), when it persists despite significant problems related to the use, may be defined as a mental disorder termed substance dependence or substance abuse disorders.

- **Delusional Disorder** Delusional disorder is characterized by the presence of recurrent, persistent, non bizarre delusions.
- **Sexual Disorder** Gender identity disorder and sexual arousal to objects, individuals or situations that are considered abnormal or harmful to the person or other.
- **Eating Disorder** Involves disproportionate concern in matters of food and weight.
- **Sleep Disorder** A **sleep disorder**, or somniphobia, is a medical disorder of the sleep patterns of a person or animal. Some sleep disorders are serious enough to interfere with normal physical, mental, social and emotional functioning.
- **Impulse Control Disorder** is a class of psychiatric disorders characterized by impulsivity – failure to resist a temptation, urge or impulse that may harm oneself or others. Many psychiatric disorders feature impulsivity, including substance-related disorders, attention deficit hyperactivity disorder, antisocial personality disorder, borderline personality disorder, conduct disorder, schizophrenia and mood disorders.
- **Dissociative Identity Disorder (DID)** is a mental disorder on the dissociative spectrum characterized by at least two distinct and relatively enduring identities or dissociated personality states that alternately control a person's behavior, and is accompanied by memory impairment for important information not explained by ordinary forgetfulness. These symptoms are not accounted for by substance abuse, seizures, other medical conditions, not by imaginative play in children.
- **Organic Mental Disorder** also known as organic brain syndrome or chronic organic brain syndrome is a form of decreased mental function due to a medical or physical disease, rather than a psychiatric illness. This differs from dementia.

3.5 Causes of Mental Disorder

Although the exact reasons for mental illnesses is not known, it is becoming clear through research that many of these conditions are caused by a combination of biological, psychological and environmental factors.

Factors in developing mental illness



source, ishika 2014

3.5.1 Biological Factors

Biological factors consist of anything physical that can cause adverse effects on a person's mental health. This includes genetics, prenatal damage, infections, exposure to toxins, brain defects or injuries, chemical imbalances, and substance abuse. Many professionals believe that the sole cause of mental disorders is based upon the biology of the brain and the nervous system.

- **Genetics (heredity):** Mental illnesses sometimes run in families, suggesting that people who have a family member with a mental illness may be somewhat more likely to develop one by them. Susceptibility is passed on in families through genes. Experts believe many mental illnesses are linked to abnormalities in many genes rather than just one or a few and that how these genes interact with the environment is unique for every person (even identical twins). That is why a person inherits a susceptibility to a mental illness and doesn't necessarily develop the illness. Mental illness itself occurs from the interaction of multiple genes and other factors -- such as stress, abuse, or a traumatic event -- which can influence, or trigger, an illness in a person who has an inherited susceptibility to it.

- **Infections:** Certain infections have been linked to brain damage and the development of mental illness or the worsening of its symptoms. For example, a condition known as pediatric autoimmune neuropsychiatric disorder (PANDA) associated with the Streptococcus bacteria has been linked to the development of obsessive-compulsive disorder and other mental illnesses in children.
- **Brain defects or injury:** Defects in or injury to certain areas of the brain has also been linked to some mental illnesses.
- **Prenatal damage:** Some evidence suggests that a disruption of early fetal brain development or trauma that occurs at the time of birth -- for example, loss of oxygen to the brain -- may be a factor in the development of certain conditions, such as autism.
- **Substance abuse:** Long-term substance abuse, in particular, has been linked to anxiety, depression, and paranoia.
- **Other factors:** Poor nutrition and exposure to toxins, such as lead, may play a role in the development of mental illnesses.

3.5.2 Psychological Factors

Psychological factors that may contribute to mental illness include:

- Severe psychological trauma suffered as a child, such as emotional, physical, or sexual abuse
- An important early loss, such as the loss of a parent
- Neglect
- Poor ability to relate to others

3.5.3 Environmental Factors

Certain stressors can trigger an illness in a person who is susceptible to mental illness. These stressors include:

- Death or divorce
- A dysfunctional family life
- Feelings of inadequacy, low self-esteem, anxiety, anger, or loneliness
- Changing jobs or schools
- Social or cultural expectations (For example, a society that associates beauty with thinness can be a factor in the development of eating disorders.)
- Substance abuse by the person or the person's parents

3.6.1 Historic Development of Mental Treatment

The history of psychiatry focuses on the handling of mental illness over the course of the ages. It aims to establish the scientific, social and medical point of view in this complex matter. The domain can be structured in three epochs. From antiquity to the end of the 18th century we can talk about history of madness. History of psychiatry in the strict sense begins with the Enlightenment in the 18th century, when efforts to systematically care for the mental ill began. Since the end of the 19th century psychiatry has become an academic science.

Here, in this chapter, the outline of the development and the evolution of the architecture for mental illness will be tried to set up. We will look at the ideologies and views that have motivated and justified the specific architectural form, but address the medical and scientific point of view just where it is necessary for the understanding of the development. This allows keeping the historical overview brief and focusing on the most important incidents.

3.6.2 Middle Ages

In the early middle ages psychological issues are seen within a theological and moral framework. Medieval society believes that individuals have free will and are responsible for their actions but that illness (including mental illness) comes from sin and results in punishment from God or possession by the devil. In this line of argument mental illness is seen as either the result of sin or as a test of faith and religious activity becomes a frequently used cure. Monasteries start to play an important role in the caretaking of poor people's illness, but many mentally ill live nevertheless with the family and are treated home.



1. Urban implementation of the Ospedale degli Innocenti in the city of Florence, 15th century
2. The arcades function as an element of transition between public and private space

The social position that lunatics occupy in medieval society is hard to identify. On one side there is a certain degree of understanding towards the suffering that the mentally ill beings, on the other hand a process of social regulation are gradually developed. Everybody that is abnormal contained, marginalized and excluded.

A certain number of mentally unstable the dangerous ones, are locked up in prisons. This confinement is seen as necessary to be able to maintain the public order. There is a certain fear that the dangerous lunatics could harm the community, and that their madness could somehow spread. Prisons and other places of isolated confinement are the most common solutions that medieval society has to deal with aggressive, mentally unsound people.

3.6.3 From the Renaissance to the French Revolution

The renaissance hospital is a place where the different activities are combined: religious rites, assistance, care trade and artistic work. Those many functions make the hospital a small city within the city. The architects put in place a variety of different elements to visualize and reinforce the public character of those buildings. Arcades, loggias, porticos, cloister, patios and courtyards, create transition zones between the streets, the squares and the hospitals. In case of the famous Ospedale degli Innocenti built in 1429 by Brunelleschi, the arcades are not only elements of transition, but they also generate and regulate the urban space; the square of Santissima Annunziata.

When talking about those hospitals and their important role in the urban fabric of Florence, one could get the impression that the society of the Renaissance era took very good care of their weak members. But when reading Martin Luther's precise description of the hospitals in Florence, it becomes clear that this kind of treatment and the social acceptance were limited to a very small number of people: The lesser fortunate face another reality.

In the 16th century, though the increasing urbanization and the accompanied deletion process the number of unattended mentally ill grows. The straying mob is now composed of vagabonds, prostitutes, unemployed, criminals, retards and epileptic. The royal powers of the old Europe tried for more than two centuries in vain to reduce the number of vagabonds. The General Hospitals never had any medical function, but they were a place of confinement and of forced work for poor, the vagabonds and the mentally ill. Despite the rough handling of insane in the middle Ages and the Renaissance, their belonging to human society was undisputed

‘ In Florence the hospitals are built like royal buildings: there is very good food and drinks for everyone, the servants are very diligent, the doctors are very knowing, the liens and clothes are very clean and the beds are painted. Immediately upon arrival at the hospital the patient is undressed and all his clothes are honestly, in presence of a notary, put on deposit. The patient is dressed in a white blouse and put in a nice painted bed with sheets of pure silk. Just afterwards two doctors are conducted and later the servants bring to eat and drink in proper glasses, all boiled, and served during unknown days the poor and return home afterwards. I saw in Florence with how much care the hospitals are maintained!’

. But in the age of absolutism, madmen were banned from the streets and thus also banned from the public consciousness. And Muriel Laharie points out, when writing about the ‘fool’s towers’:



‘their locations symbolize a no man’s land both geographically and socially. Placed between the civilized and the savaged word, on the boundary between the reassuring organization of the city and the insecurity of the surroundings forest.’

During the age of the Enlightenment the mentally ill begin to be seen as a sick human being who are suffering from an illness and have the right to

be treated, rather than beastly creatures.

Critics on the living conditions in the houses of correction grow with the philanthropic movement and the mentally ill are considered to be victims of this general confinement who ought to be separated from criminals.

3.6.4 The End of the 18th Century-

The Moral Treatment

Early reflections on the relationship between architecture and caretaking of the mentally ill dates back to the late 18th century. The surgeon J.R. Tenon proclaims in this circular of 1785 that *‘ in contrary to the hospital buildings which are for the other sick only auxiliary means, the hospital for the fools have themselves a function of cure. The fool should not be the peevish during his treatment and during maintained moments he would be able to leave his loge, browse the gallery, go on a promenade and do an exercise that dissipates and that nature commands him’.*

These kinds of reflections mark the emergence of asylums, a place dedicated to treat the mentally ill and it is only logical that it is in this period, for the first time, that a 'therapeutic value' is assigned to architecture. In the same way that social values will change over time, opinions on the therapeutic values will also change, but the discussion on that matter between architects and alienists, respectively psychiatrists, has to this day never fallen silent.

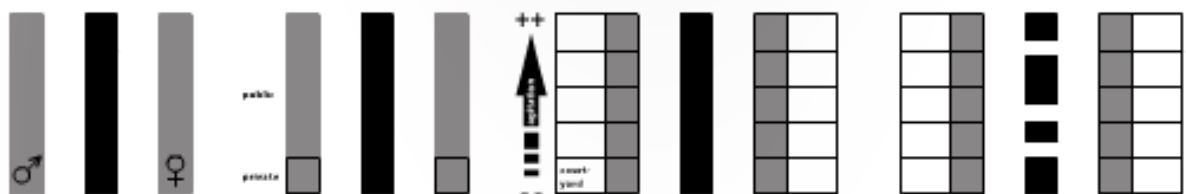
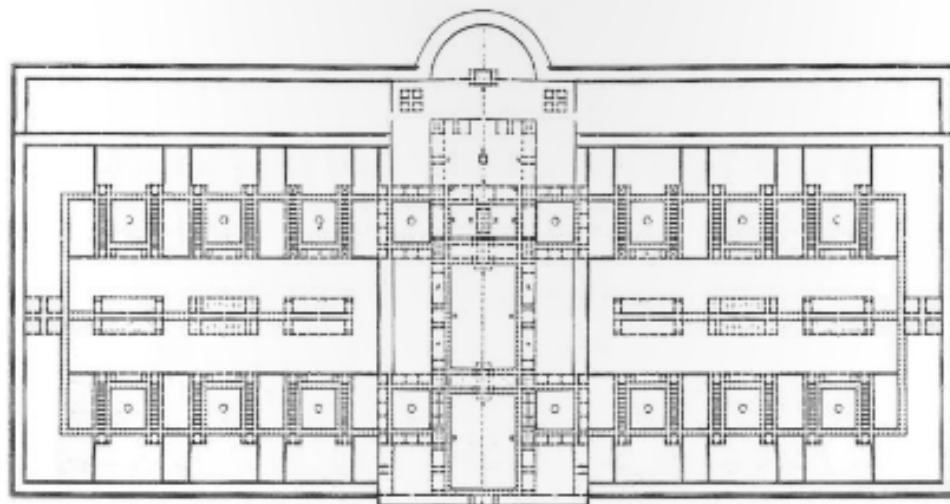
The moral treatment recognizes that madness is not a simple loss of mind, but a disorder of the mind. This implies that within each patient's mind reason is to be found and to be worked with the reasonable part of the mind is to be used to cure and eliminate delirious part.

The buildings for the mentally ill have thus evolved from simple prisons, with the only goal to shut away the dangerous, to asylums, dedicated exclusively to the mentally unstable and capable of providing some kind of therapy.

3.7.1 The 19th Century – Construction of the Mental Asylums

The creation of asylums is based on two assumptions: isolation, which establishes therapeutic procedure the removal of the patient from his environment and the moral treatment, which gives the alienist the power to exercise his influence over the disturbed minds.

Since the first reflections on building specifically for the mentally ill, many theoretical works were published and often the ill were moved out of prison. Nevertheless, the living conditions of the mentally ill have hardly changed. Jean Etienne Dominique Esquirol, favorite student of Phillippe Pinel, transforms the asylums into a therapeutic community where doctors and patients live together. He believes that patients need to be separated from the outside world in order to establish a calming distance from the distractions that caused their disease. The asylums should be built outside of the city on a slope, to benefit from the purity of air and water and to allow the mentally ill access to nature, which was suppose to have a therapeutic influence in itself. Beyond those aspects which were beneficial to the patients, there were also other important factors involved: the land price was cheaper away from the centers and it successfully removed unwanted patients from the city and thus from the society. After visiting a number of asylums he handed over a report that includes precise instructions on how an asylum ought to be set up and accompanies it with a model plan on which the architect Hyppolyte Lebas elaborates with his own indication.



Typical zoning and formation of mental asylums back in that time.

The model plan consists of two symmetrical parts: the right for the men and the left for the women, separated by administration building. Each part includes two sets of three living quarters arranged in both sides of three service buildings. The quarters are U shaped, organized around a courtyard and limited to a single story. Esquirol conducted many reflections on the limitation to one story quarters and explains in 1838: *'Buildings where the insane are housed on the first, second or third floor offer numerous and serious drawbacks. [...] windows must be barred in all the quarters to prevent escape and suicide; and staircases must be barricaded. [...] Asylums whose buildings are constructed on the ground floor have innumerable benefits. [...] Galleries may stay open; the insane are less homely and can go outside as they wish....'*

This composition allows for not only the separating of the sexes into two distinct parts, but also for the patients to be divided accordingly to their social status. A distinction is made between the quite the quite, the semi-agitated and the agitated to which the epileptics are added. The quiet are place next to the private patients, and garden, which allows patients to get fresh air and move around, without disturbing the patients with other degrees of agitation. The different services are also arranged hierarchically. The administration is located on the south end, while

the chapel, the chapel, the kitchen, the laundry, the boiler room and the morgue are situated towards the north.

The combination of those three elements- a powerful formula, a critical appraisal and proposed organization of the asylum make Esquirol a valuable reference, both for the alienists as for the architects.

Although the principle of Esquirol's plan has been applied on various asylums, the final outcomes are often very different from the original ideal. Most often the living quarters were extended on several floors to obtain more usable space for patients and to implement the projects on a smaller plot.

In the architecture of madness C. Yanni points out the reorganization of society into sane and insane was represented by the very existence of those large scale structured and that architecture performed a kind of cultural work through these buildings by making such categories obvious. The construction of a colossal asylum would communicate a division between those inside the walls (insane) and those outside (probably, but not necessarily sane).

3.8 The Early 20th Century- Decline of the Asylum

By the early 1900s the once popular asylum has lost its prestige. Due to the remote geographical location, a cosmos of its own development where the asylum director is the manager of a big establishment, rather a medical researcher. Patients are hardly able to leave the asylum, and as a result the buildings are overcrowded.

The idea of taking care of the mentally ill outside of big institutions and thus avoiding a too long separation from their environment first became popular in the 1920's. the belief is that if treating inside the asylum is not working, perhaps treatment outside would. one of the first institutions that offered an 'open space' was the hospital Henri-Rousselle in Paris.

3.9 Deinstitutionalization

The policy of deinstitutionalization begins after World War II. The basic concept is to loosen up the interwoven and tight relationship between psychiatric treatment and the big institutions and to enable treatment not in an isolated environment but close to the patient. Obviously, the new antidepressant and antipsychotic drugs, which are introduced to the market in the 1950s, have a great influence on this development since they allow reducing the sometimes heavy symptoms

and make patients' treatment within society possible. The drugs help shorten the average stay in the hospital, but since most places are lacking after-treatment and rehabilitation, many patients return to the clinic. The process is critically named the revolving door-effect. It is now apparent that for too long the psychiatrists concentrated only on stationary and ambulance treatment, but that there is a need for intermediate structures like day-hospitals, which establish an interface between the inpatient and outpatient.

3.10 Hospital villages in France, a Short Intermezzo

In 1960 the French proposed to modernise the old hospitals by building hospital villages. This type of institution is presented as the ideal hospital. They ask for proximity to a major city, no walls, no fence, maximum two floors, no more than three to six hundred beds and a village square functioning as the social center, surrounded by medical and administrative buildings. In short, the aim is to mimic society fitted for the mentally ill. Instead of going into town and drinking coffee, the patients go to the social centre of the hospital, the hospital village has its own church, and instead of going to work, the patients participate in occupational therapy. Barely realized, the hospital village is already considered out-of-date. This type of institution is in reality just another declination of the 19th century asylum, bearing the same problem of segregation due to its distance from the society.

3.11 Intermediate structures

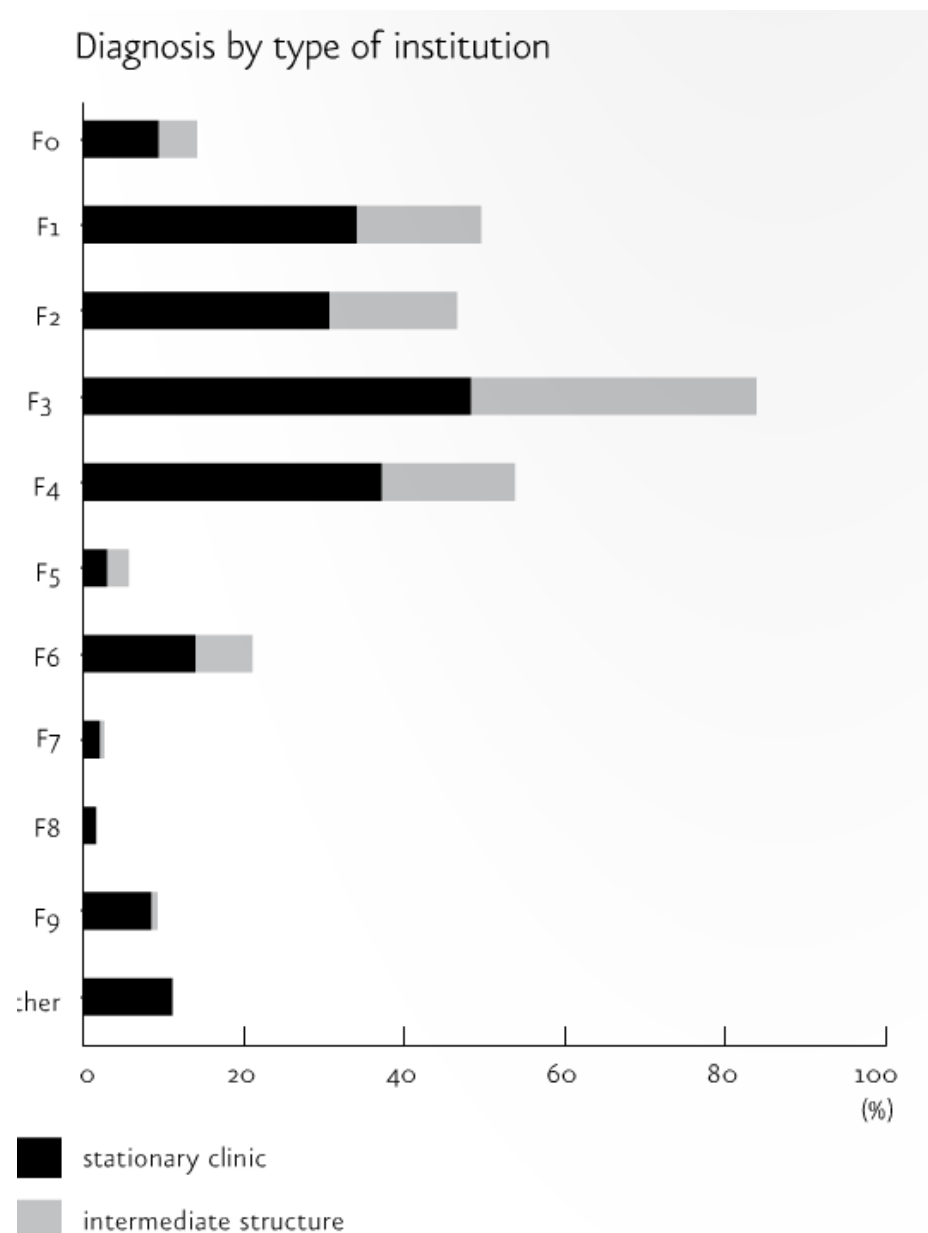
Intermediate structures are used where ambulant care is not enough and stationary treatment is not necessary, or not necessary anymore. It can also offer an alternative to hospitalisation. All over the world different intermediate structures exist with different ideas behind them.

The 'clubhouse concept' which has its beginnings in the United States in 1984, is modelled after the Gentlemen's Club of New York and the concept is very simple: if healthy, wealthy people benefit from oasis in the city, a place to get away from both home and business, why should recovering mental patients do differently? The aim is to see mentally ill and to make him see himself as a person rather than a patient, and to separate his personality from the disease. The clubhouse is not a treatment centre and hence there are no nurses and no doctors. But it provides daily activities that prepare people with mental illness to work and live independently, and it offers a place to go during the day. The concept mandates that the clubhouse is never the same district as the mentally ill's apartment and therefore the first step towards an independent life is to leave home every morning, to cross the city and to gather new impressions.

After a short period of absolute refusal to send patients to mental clinics, psychiatry has realised that it cannot treat the mentally ill adequately without the use of hospital. The new clinic type is the urban hospital. It is located in the centre of the city and hence in the centre of community. The urban hospital

is not a place of life long confinement, but it is exclusively used in cases of acute crisis, where use of intermediate structures is not enough.

So if taken at the look at the statistic a proper diagram can be created to get a clear idea about the rate of different kind of mentally ill patients.



- F0: Organic, including sympatic, meantal disorder (e.g. Alzheimer)
- F1: Mental and behavioural disorders due to use of psychoactive substances
- F2: Schizophrenia and delusional disorder
- F3: Mood/ affective disorders (depression)
- F4: Neurotic, stress and smatoform disorders (obsessive-compulsive disorder, phobias)
- F5: Behavioural syndroms associated with physiological disturbances and physical factors
- F6: Disorders of personality and behaviour in adult persons. (eg. pyromania, schizoid or paranoiya)
- F7: Mental retardation
- F8: Disorders of psychological development
- F9: Behavioural and emotional disorders with onset usually occurring in childhood and adolenscence
- In addition a group of 'unscepcified mental disorders'

3.12. Architecture and Psychiatry

Description of a bad experience in a psychiatric hospital written in 1954"

'Once inside the door of the hospital the patient is usually taken from an entrance hall to a records department where a member of the stuff will examine his documents. After this he will be escorted down long corridors where he will see number of patients sitting or walking aimlessly, perhaps exhibiting gross evidence of desocialisation and eccentricity.

He will see many beds all alike and the absence of their furnishing, the walls of a dull, uniform institution of buff or brown, and the windows small, high, barred and often dirty. There will be evidence of locks, and he will hear the keys of his attendants. The ward will have a stale smell and often provide evidence of the inadequacy of the sanitary arrangements.

Within a crowd of such patients there will be no opportunity to form friendships with a small group or to feel any drive to identify himself with those around him.'

This quotation is more than fifty years old and the conditions in clinics have greatly changed since (just as the scientific field of psychiatry has changed). But even though the conditions described are not comparable to current standards, many people still seem to have this picture in mind when they think of psychiatric facilities.

Here the impact that architecture has on the institution's users and the factors that deserve profound consideration when planning a psychiatric facility.

3.12.1 Architecture and the Image of Psychiatry

As it is shown in chapter 2, every psychiatric institution takes a bilateral position on the treatment of the mentally ill: toward society on the outside and toward the patients on the inside. The first part discusses the position regarding society can be architecturally translated and points out the potential consequences.

Most people do not know the life inside a psychiatric clinic and opinions are based upon rumors. The psychiatric hospital is generally associated with negative attributes, while a somatic hospital also produces positive experiences, such as birth of new life. For those who know neither (ex) patients nor the stuffs, the building in its physical appearance needs to stand in as the only reliable representation of the psychiatric treatment apparatus (47). Movies, especially, often transmit exaggerated image of the clinic's conditions. Filmmakers like to use old prejudices and describe psychiatric institutions as prison like complexes with wide white corridors where patients are detained rather than healed. Even if the practices have evolved, there is still the image of exclusion and imprisonment reflected by the walls, behind which we don't really know what happens. Architecture is thus an important mediator, which transmits the proper and current conditions of psychiatry instructions to society.

The decision to no longer build psychiatric clinics outside urbanized areas, but in the center of society, constitutes an important step in reducing the stigmatization. At the same time this decision produces new risks, since patients are sometimes exposed to straight gazes. The constant balancing act between the individual and society illustrates the institution's bilateral position and is by far not the only one. Should the clinic transmit a hotel like atmosphere where patients feel at home. or should it rather have a hospital like atmosphere where patients realize that they are in a clinic. (48) and thus in a state of acute crisis. Should contact with society be actively encouraged or should the architecture provide spaces where the patients can retreat, where he feels protected. And in the same logic, there is also the question of whether psychiatric structures should exist in an ostentatious way, or on the contrary, blend in with their environment and be as nondescript as possible. A facade that expresses the psychiatric function of a building makes the intuition exist socially. But this same facade can also increase stigmatization, since it allows people to identify the nature of the institution from a far.

When new psychiatric facilities being planned, it is common to find hostility among neighbors who justify their opposition by technical, regulatory or esthetical arguments. They consider it

difficult to openly display their hostility toward a population that is, in their eyes, in trouble, dangerous or disturbing. The architecture is thus a pretext for people's fears of the patients, and the architect finds himself caught between a client who needs the structure and the local population, who are skeptical about the psychiatric facility. History has shown that those projects that offer an additional value to the local population have greater chance of gaining the approval of the community where they are built. In the best case, the structures can offer activities and public services to the locals, consequently building a bridge between the two worlds that have not gotten to know each other. (50).

In an effort to combat stigmatization, some psychiatric structures have changed their name to 'intervention centre' or 'psychiatric care' instead of psychiatric hospital. This camouflage can have an impact in two directions: on the one hand, these other terms can be used to make the structure invisible to society. This act worsens the stigmatization, since it conveys the impression of self accusation and shame. On the other hand, the term might be used for a structure where the aim is to treat the client as a person rather than a patient. Schott and Tolle state that:

'Traditionally and in the literal sense the word patient means: suffering, being passive. The modern psychiatry in contrast invites as much activity as possible from the patient: he should help himself and his fellow patients as far as possible.' (51)

As previously mentioned, the institution's position on the handling of the mentally ill is also transmitted toward the patients and employees on the structure's inside. To underline the horizontality of the patient-caregiver relationship, the administration at the day care center Adamant have consciously decided to renounce the use of a break room reserved exclusively for the staff members. The goal is to create casual interactions. It was thus the responsible person's decision that the caregivers and the patients use the same coffee machine and the same microwave; their coffee and food is the same. Furthermore, their observations have shown that if an exclusive break room exists, the team members use it a lot more than necessary. (53) There are thus many details, like the example just mentioned, the existence of isolation rooms or where the patients can lock his room, which illustrate the institution's position toward the inside. It is believed that architecture can convey the natural existence of psychiatric structures within our society by considering the environment and seeking a dialogue with the local population. Architecture should manifest in a subtle manner the presence of psychiatric facilities, while providing a positive image at the same time. Spaces can tear down prejudices, where encounters between patients and population occur naturally, without being forced. It also helps when psychiatric facilities reveal something of themselves. A transparent institution (not only in the physical sense), transmit a different image to the outside than a sealed off building. It

is thought that there are only advantages to be found if the structure offers activities and services open both to the public and to the patients.

3.13 Healing Environment

There are factors that can contribute to the healing environment, as well as those which should be avoided. The following topics are constructed for the healthcare sector in general, but may very well be applied outside this branch for preventive purposes. According to the motto 'what heals the sick is also good for the healthy' and many factors relating to the construction of psychiatric care facilities are also valid for residential construction.

After an overview of the general principles that contribute to a healing environment, the components specific to psychiatry will be presented.

What is healing environment?

According to Jain Mallkin in the Architecture of Hospitals, (54) the term 'healing environment' describes a physical setting and organizational culture that are psychologically supportive, with the overall goal of reducing stress in order to help patients and families cope with illness, hospitalization and sometimes loss.

But what should this setting look like? It is found in many books descriptions and recommendations on how to create such settings, but they were often vague. Since it is difficult to put into words that a healing atmosphere should look and feel like, statements on such environments often seem dull, leading the reader to think that those recommendations are simple part of common sense.

Despite these vague recommendations, some scientific approaches, like evidence based design (EBD) do exist to analyze healing environments. EBD is a field of study that emphasizes the importance of using credible data in order to influence the design process. The approach has become popular in healthcare architecture in an effort to improve the patients and staffs well being (55).

According to EBD (56) several environmental measures allow a better patients and staffs outcome. While for the patients, it is important to reduce pain and depression, the reduction of stress is important for all engaged parties: staff, patients and family. Scientific studies have shown that the exposure to high levels of daylight and to nature can significantly alleviate pain and depression. Other research suggests that real or simulated views of nature can produce restoration from psychological stress in a short amount of time. Stress is also clearly reduced when a setup is provided this allows for good sleep and a low noise level. This can be achieved

through single bedrooms and building with high acoustic performances Single bedrooms are not simply more comfortable for the patients, but they are also perceived to be less stressful for both family and staff members than the ones containing several beds.

It is interesting to note that having carpets instead of vinyl for floors in patients seen to increase average length of stay.

The important role of gardens and parks in hospitals (57)

For patients, visitors or members of the staff, spending long hours in a hospital can be stressful experience. Nearby access to a rural landscape or a garden can enhance people's ability to deal with stress, and thus potentially improve health outcomes.

As we have already seen in chapter one, greenery, sunlight and fresh air were regarded as essential components of the healing process during the nineteenth century. But with the asylum's loss of prestige, the therapeutic value of access to nature disappeared from the mental hospitals in the turn of the twentieth century and some years later also from general hospitals. Air conditioning replaced natural ventilation, outdoor terrace and balconies disappeared, nature succumbed to cars and parking lots and indoor setting designed for efficiency were often institutional and stressful for patients visitors and staffs. Significant research in 1980's and 1990's helped to support the belief that views of or time in nature have a positive influence on health outcomes. It was shown that gardens were important because they represented in many aspects a complete contrast to the experience of being inside a hospital: domestic versus institutional scale; natural versus man made; rich sensory experience versus limited sensory detail; varied, organic shaped versus predominance of straight lines; places to be alone versus few places offering privacy; fresh air versus controlled air.

In the last ten to twenty years, efforts have been made to reintegrate greenery and nature into healthcare buildings, but too often these good intentions never see their day (or only in an atrophied way), due to tight budget.

Above mentioned positive effects are given greater if patients staffs and visitors do not only have a view and access to small green patches but rather if they can profit from veritable parks and gardens. They provide a setting where physical, horticultural and other therapies can be conducted. Their setup also offers a needed retreat from the stress of work for the staff. The green creates a relaxed setting for patient-visitor interaction away from the hospital interior.

3.14 Architecture for Psychiatric treatment

In the preceding section we the conditions that are needed for a healing environment was covered, here the focus is on psychiatry and it's specific needs.

Promoting encounters

In contrast to somatic hospitals, psychiatric facilities can only rely in a limited way on technical support in the healing process. (58). The relationship between the staffs and patients goes beyond the simple accompaniment during a treatment period,(59) and interactions (mainly between therapists and patients, but also with visitor s and other patients) constitutes an important part of the available 'healing tools'. The mentally ill, especially people suffering from depression and similar psychoses, often retreat and encapsulate themselves in their shell. It is thus important to bring those people into contact with others.

In a regular hospital. the patient lays down during his recovery, generally passive in his bed. Encounters with members of the staff do not have the same importance as in psychiatric facilities. On the contrary, in order to be as efficient as possible, the circulation setup in a general hospital focuses on preventing encounters.(60) The biggest difference between a general hospital and a psychiatry facility can therefore be found in the quality of the spaces that allow interactions between the involved parties.

If, as a case study, the acute day care center in Zurich is taken: unlike that building, treatment rooms should not feature a long and narrow corridor without day light and with the only function to allow to get from point A to point B. It should instead be a place to hand out, where informal encounters are possible.

B. Laudat (61) suggests, that a new handling for the management of square meter ought to be invented to assign surfaces more wisely. This means that spaces which are not linked to specific functions and that are usually called hallways or circulation area, should be given more importance, since all these spaces are essential for practicing psychiatry.

Feeling of security in a psychiatric clinic

Due to the patient's situation of acute crisis and the new and unknown environment of a psychiatric hospital, the feeling of security is often not present. But this feeling of safety and security, well being is the first prerequisite for the re-establishment of the patient's normal relations with his environment. (62) Insecurity engenders anxiety, which is the cause of much disturbed behavior.

How can we create an environment that improves feeling of security?

A recommendation of the WHO on psychiatric services and architecture (63) from 1959 says that familiarity with places and persons increases the patients sense of security. In those parts of the hospitals which are used for sleeping, meals and rest, it is important that the architectural environment conveys harmony of proportions and colors, and that appropriate materials are used. Natural wood, wool and leather are acceptable materials in all cultures. These are materials that people like to touch as well as to see. A thick skin like the facade of the CPNVD from the case studies, can appear protective. But it can also produce fear and be perceived as too repellent and too institutional.

Particular care must be taken to help the patient in time and space. (64) A simple building layout with obvious travel paths and clear signage, so that visitors and patients do not need to ask for help, support the feeling of security. Openings and access to plants that change with seasons as well as the availability of clocks, provide decoration and information as part of the daily activities and allow for orientation in time.

Protecting the patient from himself

The security issue in psychiatric facilities is very important and often contradictory to other needs of the patient. (65) Some important questions to consider include:

How to respect the privacy of a patient in his room if it is necessary to keep an eye on him?

How to allow him to communicate with the exterior, to benefit from the city although the window has to be locked?

Those questions show how difficult it often is in psychiatry to give a clear answer. In the end each hospital management must decide which of the factors are more important to them than others.

In intermediate structures security is still an issue, but to a lesser extent than stationary clinics. Since the patient visits the intermediate structure independently, one can assume that he does not harbor immediate suicidal thoughts.

Privacy in psychiatric clinics

In stationary clinics, privacy is an important issue in order to keep a patient's dignity, since he lives in the hospital and spends every minute of his days and nights in it. He should have as much visual and acoustical privacy as possible, and he should also be in control of it. (66) This can be achieved through single bedrooms, with the possibility to close the door when desired or by offering several types of common spaces. It is also important to create spaces where private family meetings can take place, while assuring a high level of acoustic isolation. But as

discussed before, the need for privacy often contradicts others essential needs, such as supervision and intensive care and makes this matter another delicate tightrope walk.

In intermediate structures, privacy is much less an issue since patients have the responsibility to return to where they live. Patients that frequent intermediate structures are usually in a different treatment phase than the ones in stationary clinics. The intermediate structures consequently devote a lot of their efforts to encouraging interaction and the re-socialization. (67)

Promoting choices/patient's sense of competence

Due to circumstance, an admission into a psychiatric clinic is never easy. Every person has the need, to a certain extent, to organize his everyday life himself. Even though some of the patients are relieved that they can delegate the responsibility, personal freedom is severely limited in stationary clinics. Adults, who are used to having their lives under control and to being autonomous, come into a system which every detail of their daily routine is prescribed; patients become completely dependent. In regards to total institutions, Erving Goffman notes that:

'Total institutions disrupt or defile precisely those actions that in civil society have the role of attesting to the actor and those in his presence that he has some command over his world- that he is a person with <adult> self-determination, autonomy and freedom of action. A failure to retain this kind of adult executive competency or at least the symbols of it, can produce in the inmate the terror of feeling radically demoted in the age-grading system.'

It is thus very important to provide each patient with the opportunity to control his immediate environment as much as possible. This may include: lighting level, type of music, seating options and also the possibility to have access to kitchen facilities where snacks or meals can be prepared by the patient. A patient's sense of competence is encouraged, when spaces are easy to find and to use without asking for help.(69)

Flexibility

Psychiatric facilities and treatment ideologies are subject to quick and frequent changes. Practices have evolved considerably in the last decades and the options for patients have to be adapted constantly. (70) Therapy rooms, in particular have to be built in a flexible and multipurpose way. This allows not only for different activities in the same spaces but also prevents unnecessarily quick obsolescence. The clinic La Metairie is a good example: the institution from the middle of the nineteenth century is a listed building and changes almost not

possible. In the case study it is explained how management is aware of the organizational problems linked to the outdated layout, but very limited options for architectural modification.

Domains

Ambient features

Ambient features include attention to lighting, air quality, and noise. For lighting, soft, indirect, and pervasive or full-spectrum lighting are generally recommended. Spotlight-type recessed lighting should be used sparingly and carefully placed, so as not to focus directly on individuals. Ample natural daylight has been recommended by many authors and is highly valued by patients. Sunlight in patient rooms can promote recovery of psychiatric patients with severe depression. Also, good air quality—with fresh air, good ventilation, and neutral odors—is recommended, as it can facilitate recovery. In addition, highly reverberant spaces should be avoided.

Architectural features

Architectural features are the relatively permanent aspects of the hospital environment, which include the physical plan, layout, size, and shape of the units. Single or nondormitory-style patient rooms enhance privacy and autonomy and, in some cases, may promote participation in treatment activities. Private visiting areas increase privacy and intimacy.

Numerous authors have identified multiple windows with views of nature as a valuable design feature. Views of nature can reduce psychological distress and recovery time and enhance staff functioning and job satisfaction. Large, low windows may improve sensory abilities and reduce delirium and paranoia. Laminated safety glass in group rooms can open up the interior and provide a visual connection to the outside. Outdoor gardens and other elements of nature can serve as "positive distractions." Exposure to nature reduces stress and fatigue and may facilitate recovery. Furthermore, access to nature has been identified by consumers as a priority design factor in general health care environments.

Long, echoic corridors are discouraged by environmental psychologists because of perceptual distortions experienced by some psychiatric patients. Incorporating spatial flexibility into the design process (for example, installing flexible dividers for larger areas) allows for maximal use of available space. The proximity of seclusion rooms to nursing stations should be carefully considered. Close proximity may promote safety but may raise concerns over disruption, whereas greater distance may reduce environmental disruption but decrease staff responsiveness and available staffing resources. In the VA Palo Alto design process, a balance

was achieved by locating seclusion rooms near and within sight of nursing stations but outside of main patient corridors and activity areas.

The presence of a staff lounge, garden, or similar congregate space can improve morale and job satisfaction and encourage professional communication. Space for incorporating new technology as it develops should be included in the architectural design. Unit design should encourage family participation and group activities by, for example, having sufficient group meeting space.

Interior design features

Interior design features are the less permanent aspects of the hospital environment. Planning for interior design should take into account the unit's symbolic meaning or the set of messages that the environment sends to its users. For example, having a clearly identifiable reception area and a method of greeting patients and visitors reflects customer service values and patient centeredness. Especially important in this regard is that interior design reinforces treatment goals and positive expectations of patients and staff. Davis and colleagues (3) describe the "physical ethos of the ward" as a "latent message" of expectations for improvement. An empirical investigation examining the effects of remodeling of two psychiatric wards found that remodeling improved patient satisfaction, self-image, and behavior, as well as staff mood and punctuality (4).

Furnishings. One of the most consistent recommendations in the body of literature on psychiatric hospital design is the importance of reducing the institutional feel of the facility and incorporating a homelike environment whenever possible. This type of atmosphere has been associated with enhanced emotional and intellectual well-being and improved patient behavior. Medical staff have also been noted to prefer noninstitutional environments.

Familiarity. Patient rooms should have a familiar tone. Research reveals that people prefer familiar rooms over decorative or stylish rooms. Upholstered furniture should be included whenever feasible. Although furniture can be used as a weapon and should not be easy to lift or throw, it should not be too heavy to allow for easy movement. Flexible design for interchanging pieces and resistance to damage are also important. Artwork (soothing, not exciting) is recommended. Images of nature can reduce anxiety. Some authors have suggested installing carpeting to enhance comfort and appearance, although this must be balanced against the likelihood of soiling. Above all, the decision to install carpeting should be made in consultation with nursing and housekeeping staff.

Color. Several authors have suggested incorporating color in the interior design. Studies of wall color choice have yielded inconsistent results. However, there are some fairly consistent general

recommendations. First, monochromatic, bland color schemes and fashionable or trendy palettes or pastels should be avoided. Brighter colors may be preferred for patients with depression and some older adults, but they could be overstimulating for highly agitated patients. Second, warm blue tones often have a soothing or sedating effect, presumably because of their shorter wavelengths, and they may be particularly suitable for the calmest areas. Using closely related colors of the same value and intensity also has been reported to have a calming effect. Third, blue-green colors can have a negative effect on mood for patients with depression and less energy. And finally, seclusion room walls should be a "calm, but definitive color, not white or gray" (5).

Other interior design considerations. Unit design must accommodate the competing goals of stimulating patients who are withdrawn and depressed without overstimulating patients who are manic and agitated, while simultaneously fostering a sense of optimism about hospitalization.

Different functional areas may be differentiated through color, lighting, carpeting, wall graphics, and furnishings.

Inclusion of natural plants has been recommended by several authors and has been found to be preferred by staff. Devlin (6) found that the addition of plants was the feature rated most positively overall in his investigation of the redesign of multiple psychiatric units.

To promote safety, shatterproof windows, breakaway curtain rods, tamper-proof electrical outlets, stainless-steel mirrors, and lockable water taps are recommended. Avoiding the construction of blind corners is also recommended. Furthermore, natural wood veneer has been used to soften the look of doors, hallway rails, and nursing stations. Finally, several authors recommend against having highly polished floors or other reflecting surfaces because of glare.

Social features

Patients should have the ability to control their level of social contact. Designing spaces where patients can retreat, including spaces where they can form social relationships, is recommended. Areas prone to overcrowding should be avoided. Privacy may increase environmental satisfaction and place attachment. Day rooms should be open and flexible and encourage interaction with staff, while also allowing for personal autonomy. There is some evidence that small-group circular arrangement of furniture may promote socialization.

Specific issues

Open versus closed nursing stations. Open nursing stations have been recommended by several sources. Edwards and Hults (7) found significant positive psychological, behavioral, and

social effects after the removal of glass partitions from psychiatric unit nursing stations at a VA hospital. Patient requests of nurses at nursing stations were dramatically reduced, as were negative beliefs of patients. Improvements in ward milieu and patient-staff communication were also noted. Closed nursing stations, which were more typical before the development of psychoactive drugs, often convey an image of staff inaccessibility and are not welcoming to patients and visitors.

Available reports of experiences with open nursing stations do not support concerns of patient abuse of increased access to nurses, although additional empirical research on this issue is needed. Contiguous, secure space, closed to patients, is recommended to maintain confidentiality of patient records.

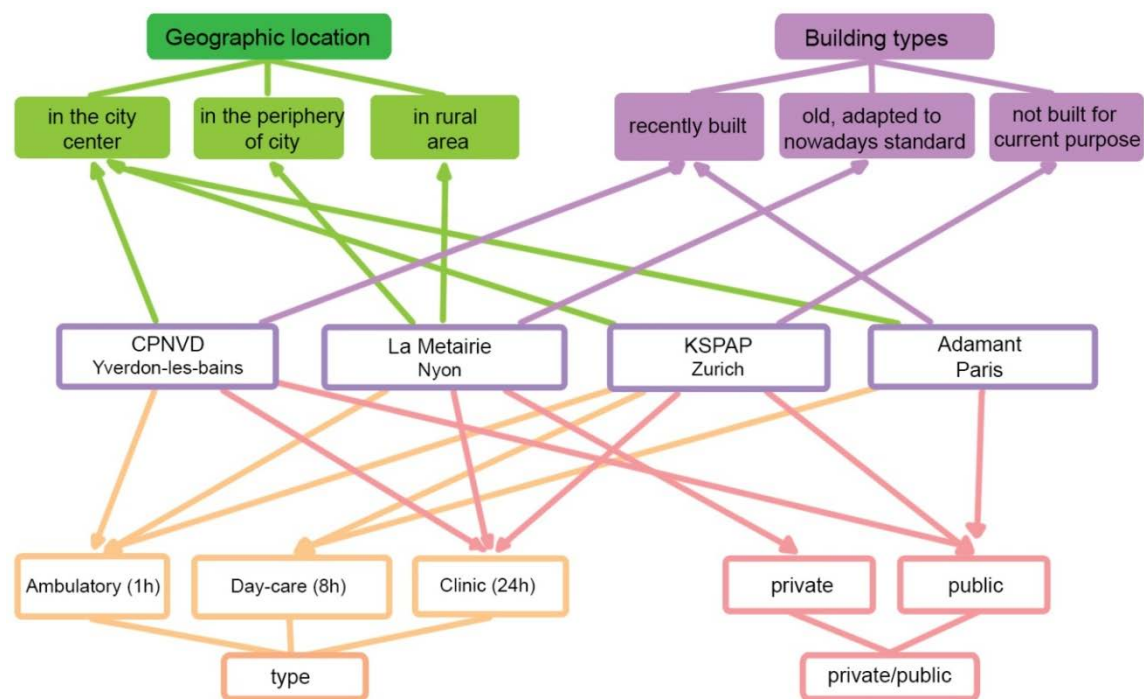
Special considerations with older patients. There are unique issues and recommendations for designing facilities for older psychiatric patients, which were incorporated into the design of a geropsychiatric unit at the VA Palo Alto. Because of the decline in selective attention in late life and reduced stimulation among many older patients, it is especially important that moderate environmental stimulation be provided to older adults in careful balance. Glare and noise are particularly aggravating environmental factors, especially for those with sensory or cognitive impairment. Moreover, high levels of illumination are needed for older patients, particularly those with dementia. Low levels of light not only decrease visibility but can also promote agitation. In a study examining the effects of intra-institutional relocation on older long-term care residents, residents identified brighter lights as positive changes (8).

Pictures of familiar images and eras and a familiar dining experience can stimulate memory and enhance meaning and adjustment among older patients. Opportunities for exercise or other physical activity may also enhance personal well-being and provide energy outlets to reduce negative behaviors associated with dementia.

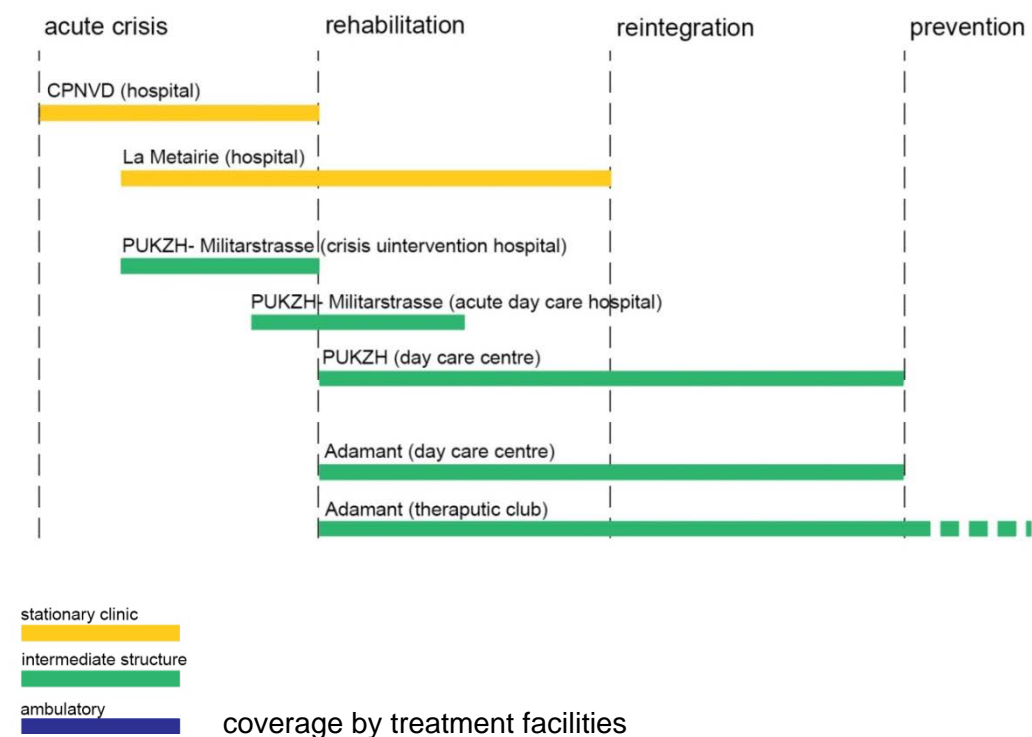
Furthermore, shorter corridors are easier for older patients to navigate and limit reverberation. Sufficient visual cues can promote orientation and reduce wandering. Suicide-proof (enclosed bottom) handrails and grab bars throughout the facility are particularly needed with older patients to promote balance and mobility. In addition, chairs (and commodes) should have sufficient height and arm length as well as adequate back support in order to facilitate balance when rising. It is also important that bathrooms be large enough to accommodate wheelchairs and care attendants. Finally, increasing the visibility of toilets may reduce incontinence among older patients with cognitive impairment.

Chapter 4:

Case Study



Criteria of selection of case studies



As the theoretical part has shown that there are large differences in psychiatric institutions. The structures' ranges in coverage of the healing stages, as well as their philosophies in translating their missions, vary greatly. There are very few who deny that an institution cannot cover the full range of the healing process but where should the cut be made and how can the different stages be distinguished is a big challenge. What kind of relationship is maintained with the society? What are the psychiatric facilities needs now and are they transposed? These are the common questions that is aimed to be answered from this case study chapter from an architectural perspective.

Four psychiatric facilities have been discussed here as case study and compared with each other to filter out the best possible way to design a psychiatric center. These four psychiatric facilities: two stationary and two psychiatric day care clinics, have different value, missions, implementations' of their visions, the degree of integration with the society and their construction year. The diversity makes a comparison particularly interesting.

The Center De Psychiatrie du Nord Vaudois (CPNVD) in Yverdon-les-Bains was inaugurated in 2005. It is one of the first stationary psychiatric clinics in Switzerland that seeks a strong integration in the urban structure of a city.

La Metairie, a private stationary clinic in Nyon was opened in 1860s and is today the last remaining psychiatric clinic in the French spoken part of Switzerland.

Die Klinik fur Psychiatric and Allegemeinpsychiatrie ZH West (KSPAP) lays in the center of Zurich. It consists of an acute unit, a crisis intervention unit and a rehabilitation unit that are autonomous but share the same therapy rooms to profit from synergies. The institution is located in a former office building.

Adamant, the day care hospital, is located on a barge on the river Seine in the heart of Paris. It is part of the big psychiatric hospital Esquirol.



CPNVD overview of location

CPNVD site plan and access

4.1 General Information

CPNVD

Offer

Stationary hospital ambulatory

Philosophy

Let the patient feel that he is in a hospital, where he gets professional treatment and which he has to leave as soon as his condition allows him to.

Systemic approach: emphasis on integration of patient's environment in therapy

Technical data

Construction: 2003

Admission hours: stationary clinic 7/7 days- 24/24, ambulatory 5/7 days- 8/24

Floor surface: approx. 7200 sqm

Capacity: 56 beds (3X14 beds adult psychiatry, 14 beds geriatric psychiatry)

Average length of stay: 17 days

More

Units are not separated by disorders, except geriatric unit

Patients are under occupied during the day. Many linger around watch TV and are bored.



La Metairie, overview of location

La Metairie, site plan

La Metairie

Offer

Private stationary clinic for private and semi-private insured patients

Ambulatory, covered by basic health assurance

Philosophy

Providing psychiatric care with high hotelier standard

Emphasis on the patient's autonomy

Technical data

Construction: 18600 (listed building)

Admission hours: stationary clinic 7/7 days- 24/24, ambulatory 5/7 days- 8/24

Floor surface: approx. 3000 sqm (only main building)

Capacity: 35 beds in 2 units (only main building)

Average length of stay: 28 days (varies strongly: one patient is there since 30 years)

More

It's not well accessible by means of public transport but since its clinics are rather wealthy, they arrive usually by car or taxi.

Units are not separated by psychosis (except addiction disorders)



KSPAP, overview of location

KSPAP, site plan

KSPAP

Offer

Provides three units for three different states of health: crisis intervention, acute day-care clinic and rehabilitation clinic

Philosophy

To provide services for as many as possible, the patient comes only according to a previously defined plan of therapeutic activities

Technical data

In current premises since: 1983

Admission hours: crisis intervention 7/7 days- 24/24, acute day care clinic 7/7 days- 23/24 on working days, 4.5/24 on week

Clinic for rehabilitation: 5/7 days 8/24 h

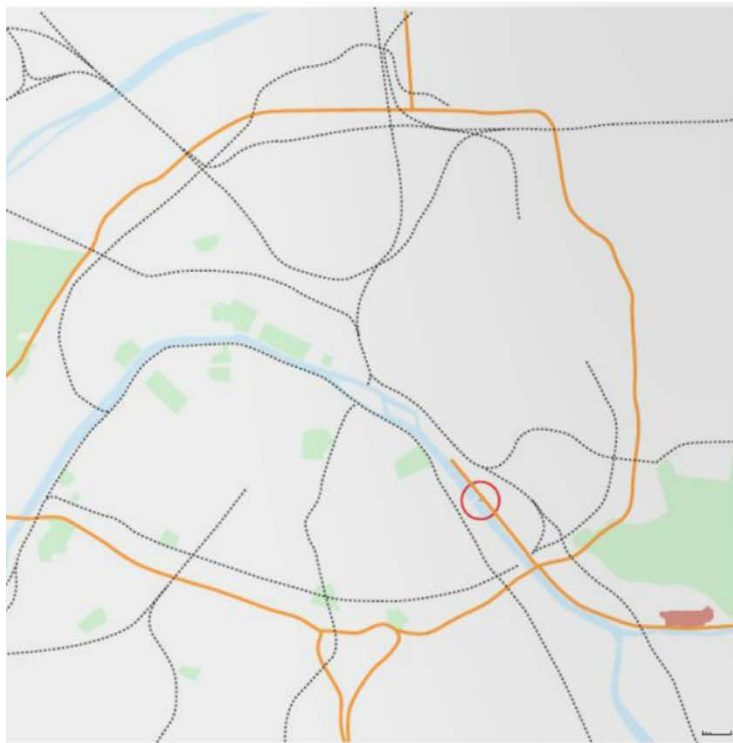
Floor surface: approx. 2500 sqm

Average length of stay: 6 days in crisis intervention, 3-9 months in acute day care clinic or rehabilitation clinic

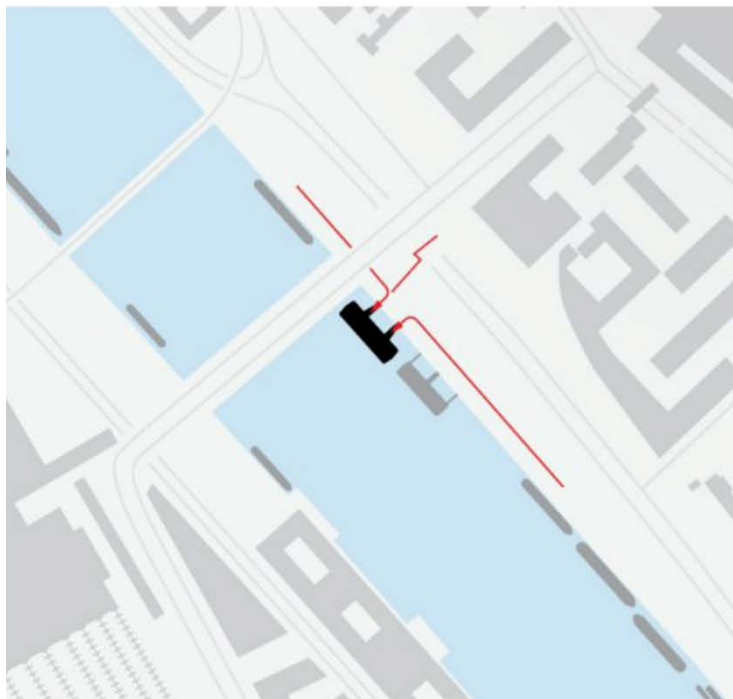
More

The institution works only with patients that come voluntarily and collaborate

New concept of day care hospital that provides also a small number of beds for a stay of maximum six nights. This can be an alternative to stationary care in some cases and provides a continuous treatment



Adamant, overview of location



Adamant, site plan

Adamant

Offer

Combination of a day care center and a therapeutic club

Philosophy

Provide informal therapy in a comfortable environment

Technical data

Running since: 2010

Admission hours: 5/7 days- 8/24 h+

Average length of stay: 2 weeks- 15years

Floor surface: approx. 600 sqm


Capacity: 120 persons per day

More

Bar is managed by the therapeutic club.

Belongs to Hospital Esquirol of Paris. Employees work in several facilities on different days to promote continuous care by same staff and exchange knowledge.



 public accessible space

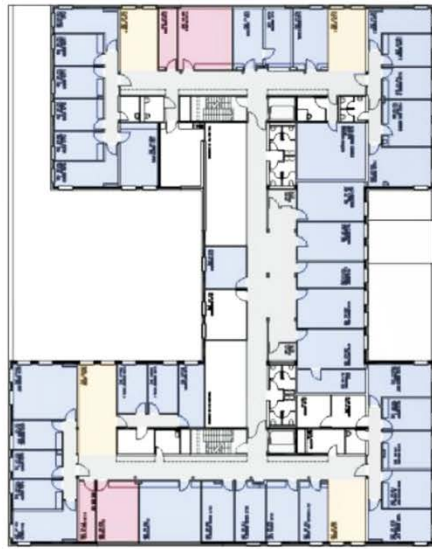
Access

CPNDV

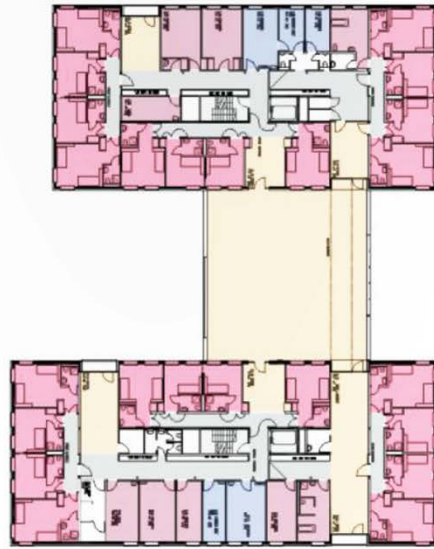
The freestanding building is situated on a plot that is accessible from three sides. There are four entrances: the main entrance via the forecourt, the access for emergencies which is directly reachable from the road, the access to the ambulatory which is located on the north western side and the delivery on the south-east. The employees have an additional entrance through the parking garage.

When approaching the building, the expressive character and the form are distinguishable from a far. The main entrance's access is not head on; one has to go along the smaller part of the two wings. The forecourt is the patient-visitors meeting space, which reveals at the last moment when u approach. Since a green open space beside the plot keeps the clinic separated from the neighboring plot, outsiders are kept in a distance. The lateral access maintains the intimacy and visibility is only possible over the green area.

The red colored concrete walls and the red floor penetrate the building's interior and form a fluid transition from the outside in the inside. This makes the entrance hall appear as an exterior space. They tried to prevent a sudden threshold, while still preserving the patient's privacy. Inside the building, the foyer has on either side of the main entrance double height areas equipped with sofas and allow patients-visitors to sit and talk. There's a wall located in the axis of the entrance that separates the public part from the internal areas and also houses the reception not making it over imposing but visible. Through the foyer one can reach the restaurant which is public.

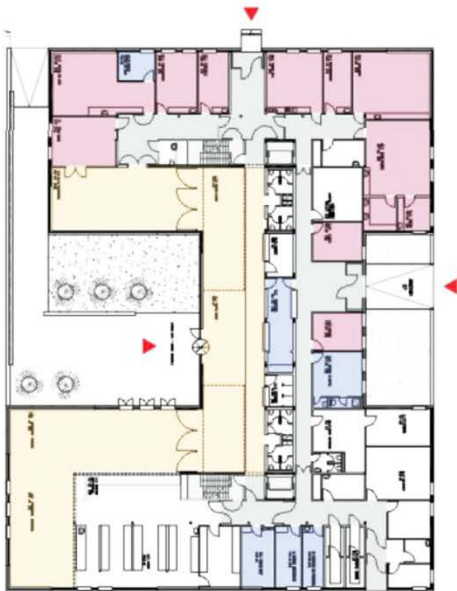


1st floor

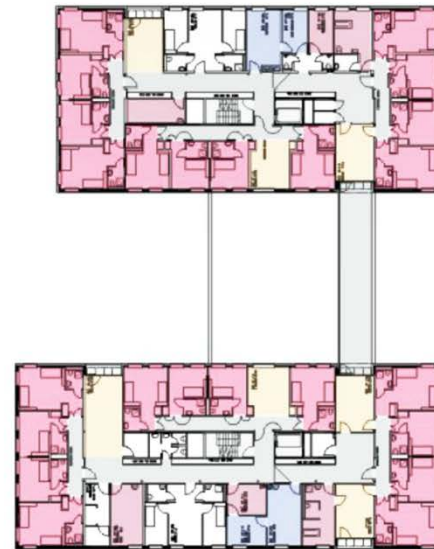


3rd floor

- common space
- room for therapeutic
- office
- patient room
- horizontal circulation
- vertical circulation
- entrance



2

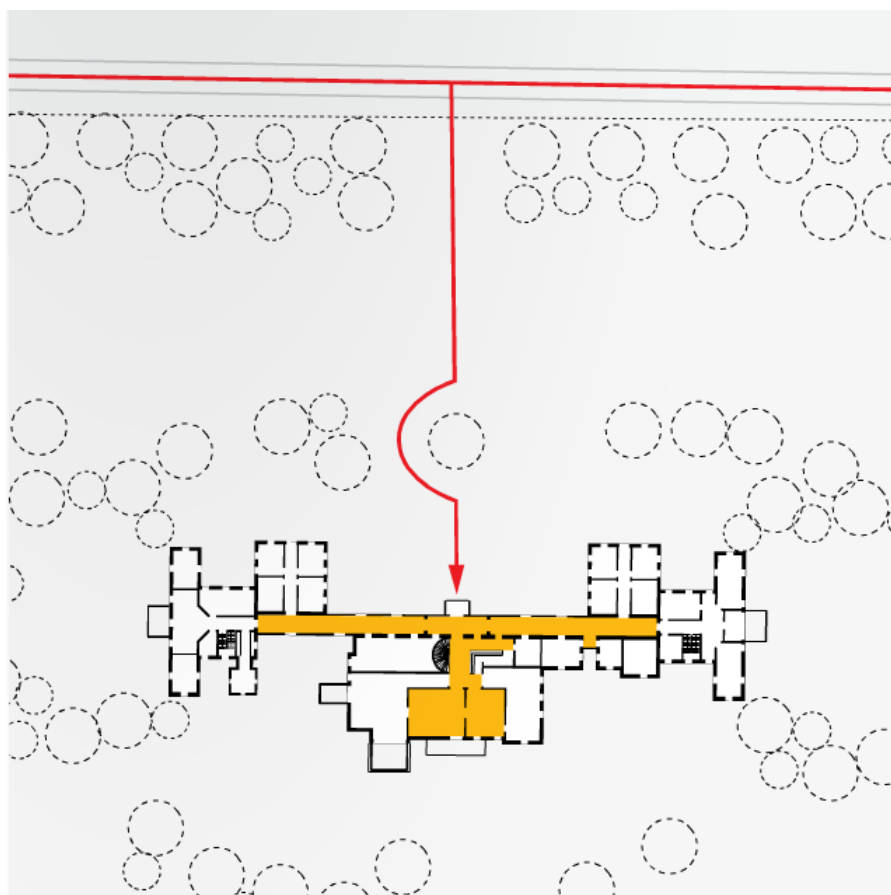



2



images of CPNDV

(source <http://www.francoishuguenin.com>)

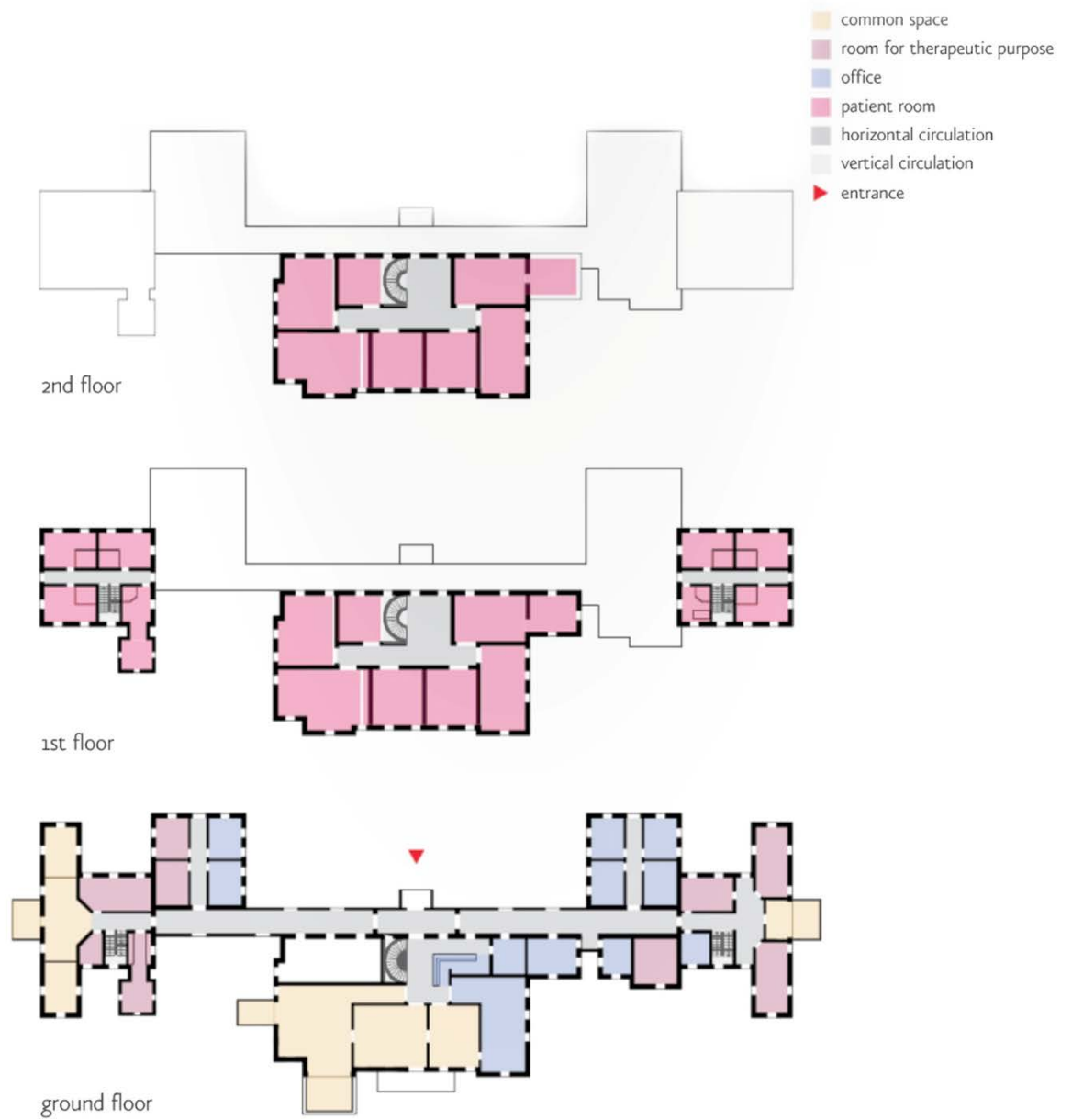


 public accessible space

La Metairie

The building is situated on a large plot, which is fenced in by trees that block the view of the clinic. Only after entering the plot does the building becomes visible.

The entire layout has a symmetrical touch and the large trees stands exactly in the axis of the entrance and hides the view. Inside the building one has the feeling of absolute freedom of movement as different direction of the building is available. On either side of the vestibule long corridors furnishing with chairs and sofas leads to the units. The vestibule having the reception is the security node of the building and it is also the main node of the strictly symmetrical clinic.






images of La Metairie

(source <http://www.francoishuguenin.com>)

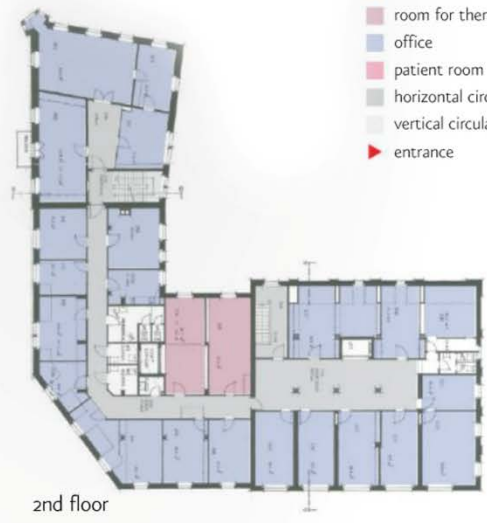


 public accessible space

KSPAP

A former office building was converted to the day care center which is surrounded by restaurants, dwellings and tertiary education institutes. The main entrance is very discrete and it opens into a dark room. From there one corridor leads to the entrance room of the cafeteria and another leads to the staircase that guides to the upper floors housing the consultation and therapy rooms. The administration is located between the cafeteria and the staircase where it is hidden behind the doorframe.

There is no entrance hall establishing a relationship to the outside and which would also promote casual encounters and provide a place for an undisturbed conversation. The connection between today's entrance area and the cafeteria was added later

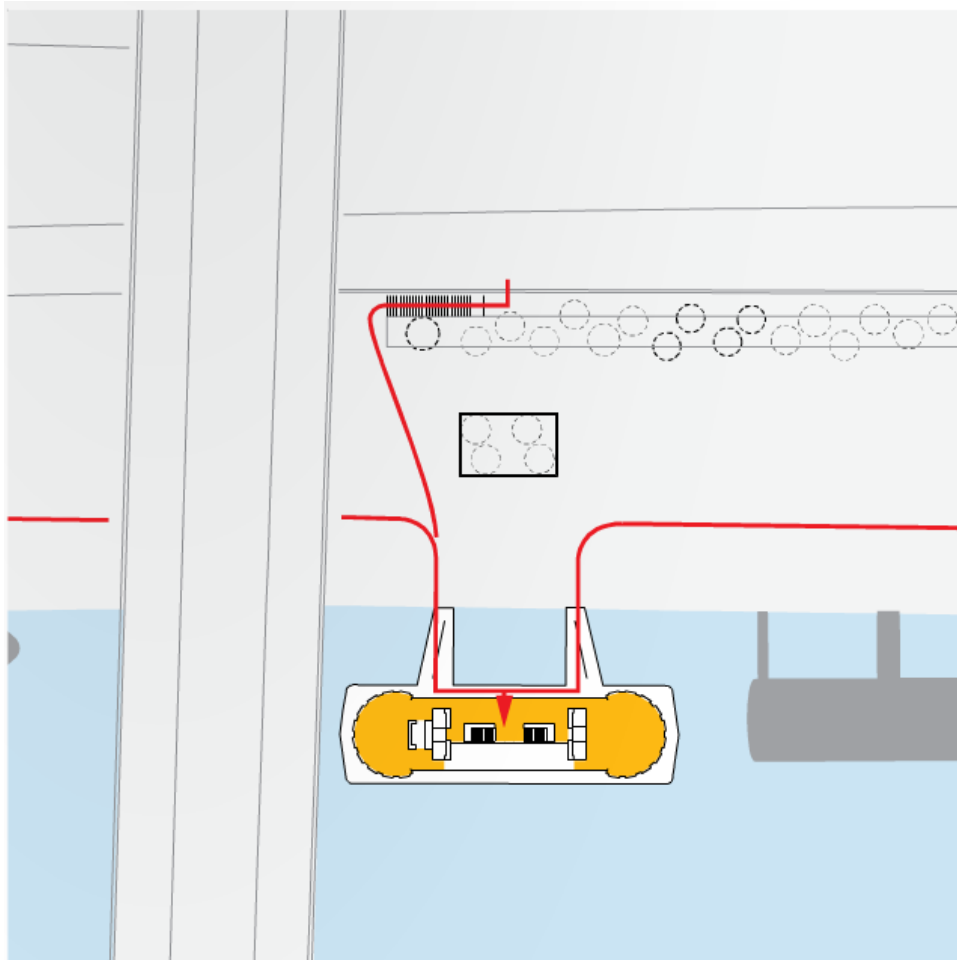



- common space
- room for therapeutic purpose
- office
- patient room
- horizontal circulation
- vertical circulation
- entrance



images of KSPAP

(source <http://www.francoishuguenin.com>)

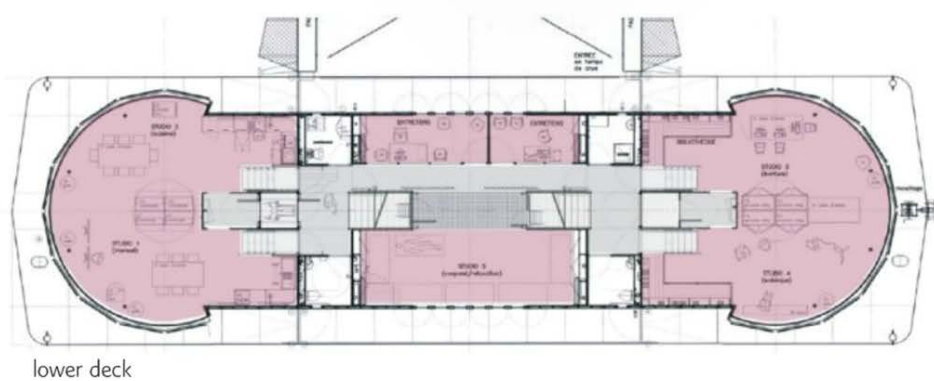
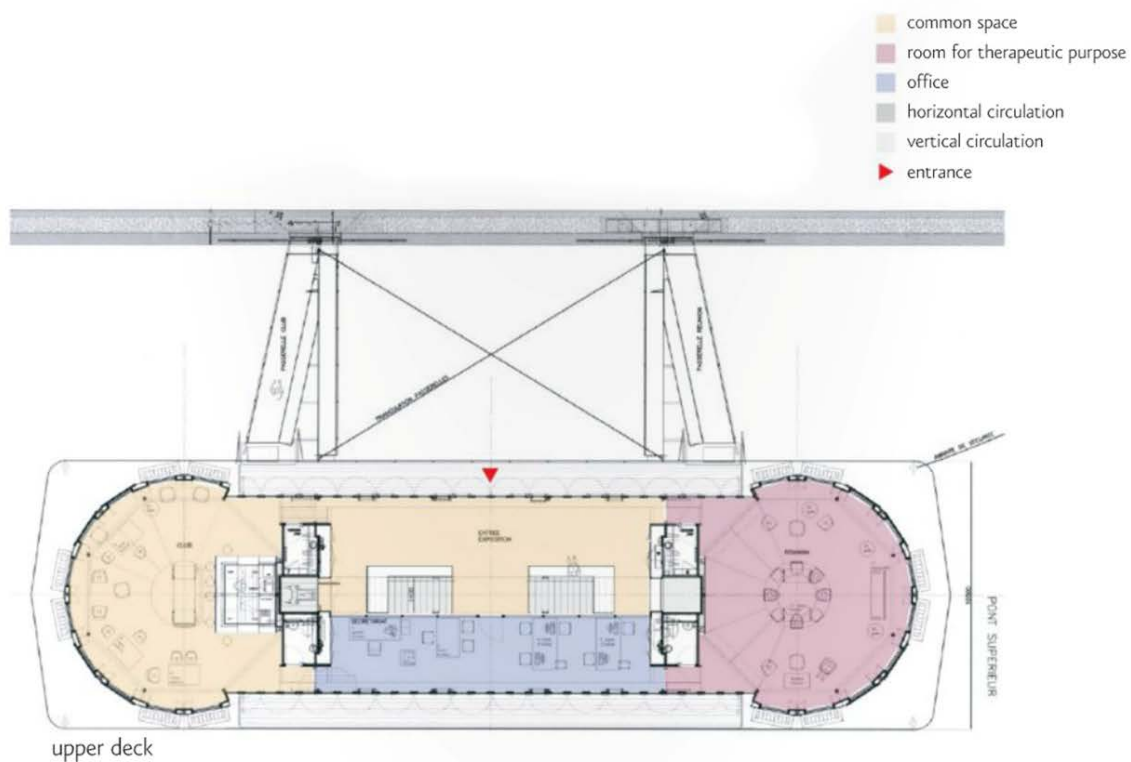


 public accessible space

Adamant

Adamant is a houseboat and the access is via the riverbank and the landings. On arrival the visitor will pass by an outdoor area where the patients and the staff sit, smoke and talk. When passing through the many doors into the arrival areas one faces the administration directly, but unlike other case studies there are no receptions. Glazing with integrated blinds separates the entrance from the administration part which have a filtered view of the desks and of the river Seine.

The entrance area, which is in the centre of the institution, has several functions and leads into the large circular rooms at either end of the ship. Among the two flights of staircases, one leads to the lower deck or reach to the administration. The place is furnished with built in furniture.





images of Adamant

(source <http://www.francoishuguenin.com>)

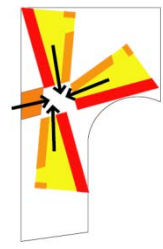
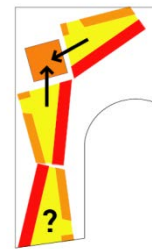
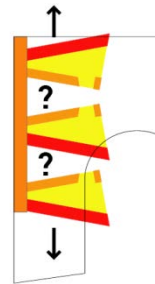
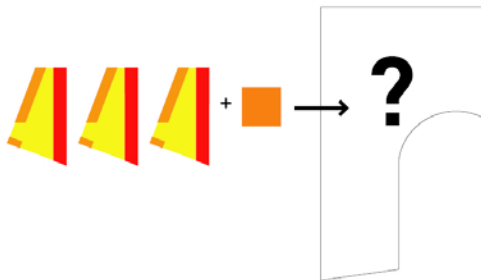
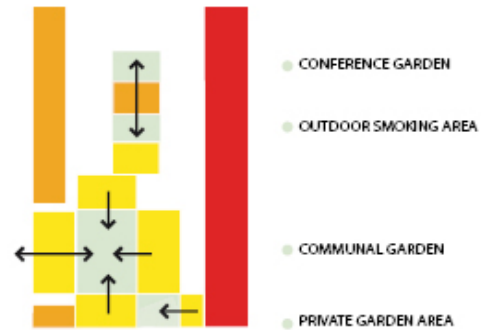
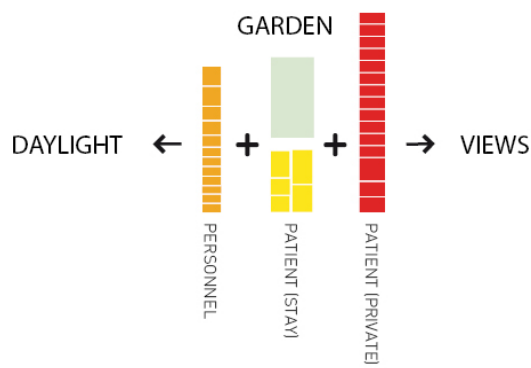
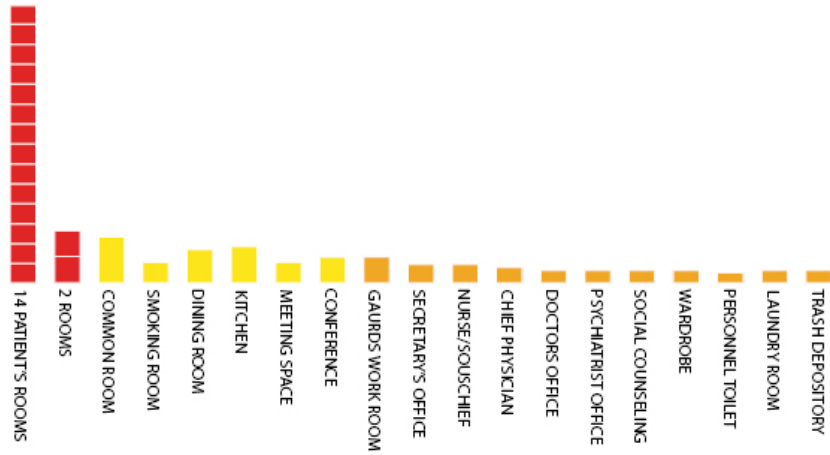
4.3 Psychiatric Hospital in Helsingor

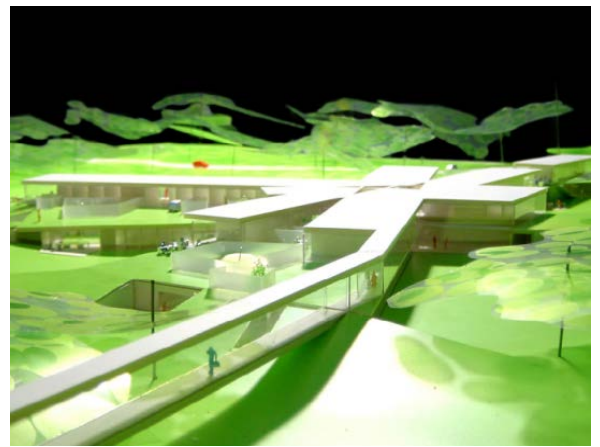
A Hamlet-like paradox In the research for Ellsinore Psychiatric Clinic, not only did we make intensive analysis of the program and need of the client. We interviewed the daily users of the clinic: Staff, patients and relatives. The different input from this research did not give any clear answers as to what the clinic should be like. Rather they pointed out several conflicting qualities and ambiguities that we brought into the project by transforming them into a Hamlet-like paradox of the program, and we have designed a project that simultaneously strives “to be AND not to be” a psychiatric hospital. Contextual disguising Grounding Ellsinore Psychiatric Clinic on 2 different levels makes the building literally grow into the green and hilly landscape. Half hidden in nature the clinic thus avoids spoiling the view from the existing somatic hospital and at the same time provides its users with a multitude of experiences of the lake and woods. The roof construction of the building is another key element in the clinic’s contextual disguise. At places where the building is half rooted underground the green lawn slips over the roof, this way making the clinic a natural environment for the cure of mental illness. To be AND not to be ... To many psychiatric patients a safe and calm environment is crucial to their well-being. Surroundings, that reminds them of their illness, cause instability and the feeling of being insecure. Besides, to meet the requirements of modern psychiatric treatment, an architectural redefinition of the traditional hospital typology was necessary. In the design concept for Ellsinore Psychiatric Clinic we have avoided all clinical stereotypes: the traditional hospital hallway without windows and rooms on both sides; artificial easy-cleaning materials like plastic paint, linoleum floors or ceilings made of gypsum, etc. All materials have their natural surfaces. Cast floors in concrete or lively colours and walls made of glass, wood and concrete. Functionally the hospital is tailor-made to modern psychiatric treatment and therapy. Experientially the hospital appears as anything but a hospital. Decentralized/centralized The psychiatric hospital is organized as to give the best conditions for health care. Effectively and rationally minimizing walking distance, and at the same time providing individual sections with a maximum of autonomy and intimate spaces where the users can feel themselves almost at home. Freedom/control Part of the hospital contains observed treatment areas where patients for the good of self protection and their surroundings will have limited freedom to move, though without feeling claustrophobically trapped. Openness/closure The day-and-night sections are spatially open, both offering an overall view to the staff and careful not to make the patients feel themselves observed or under surveillance. Privacy/sociability The psychiatric hospital offers rooms for socializing and spontaneous meetings between people and at the same time opportunities for seclusion and contemplation. Programming Functionally the psychiatric clinic is organized into 2 main programs: a program for living and a program for treatment. The two parts consist of many different and individual functions that nevertheless must work together. First we carefully designed each program and

then transformed them into an integrated, but differential whole. By using a clover structure in organizing the residential program we managed to orient each patient's room toward its own part of the landscape - two sets of rooms facing the lake, and one set of rooms facing the surrounding hills. That way the intimate living program has been folded into the landscape being on a level with the lake. Between the functions emerges a new collective space that is embraced by offices and bed units, and populated by small patios. The public treatment program on the other hand is placed on a level with the existing hospital and is organized as 5 individual pavilions, combined into a snowflake structure by the central space. Day sections, out-patient's clinic and department of district psychiatry gather around the arrival areas. The individual units contain offices and treatment rooms to one side and waiting areas to the other side. All parts of the building are fused at one single point, right above the center of the clover structure. The galleries of the treatment program propagate as a snowflake crystal in all directions and in varying lengths according to the size of the individual units. One of the galleries breaks off as a bridge to the existing hospital and becomes a flexible structure for expansion due to future development and needs.



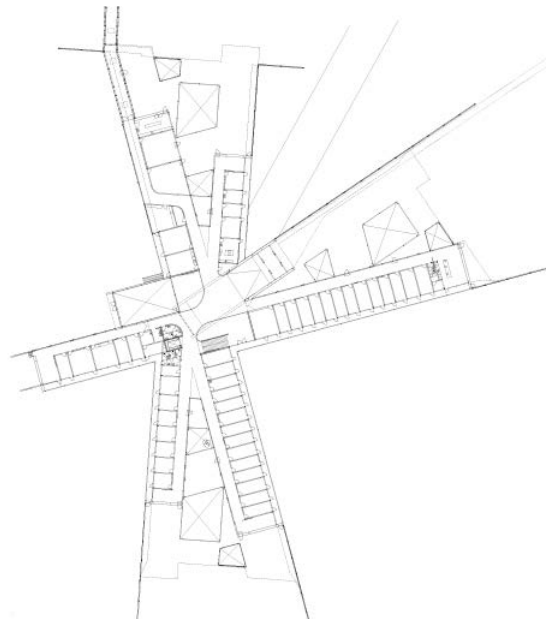
3x





Psychiatric Hospital in Helsingør

(source: wikipedia)



Floor Plans of Psychiatric Hospital in Helsingør

Findings

A must consideration

- ☐ Maximum 50 – 90 beds probably right
- ☐ People at the entrance point– almost a necessity
- ☐ Courtyards– vehicles for good solutions
- ☐ Maximum two storey buildings for inpatients – preferably 1
- ☐ Direct access for patients to the outside
- ☐ Built-in – non-visible security
- ☐ Natural light and ventilation
- ☐ Separation and segregation
- ☐ No blind spot
- ☐ Breathing spaces
- ☐ Minimum restraint, chain free approach

Finding

For betterment

- Maintain a public flow (controlled)
- Extracurricular activity
- Psycho education
- Awareness
- Self confidence
- Self reliant

Chapter 5:

Programme and Development

4.1 Main Programme

- Out patients
- Diagnostic department
- In patient
- Rehabilitation Facility
 - :- Dormitory
 - :- Multipurpose hall
 - :- Activity rooms (singing, dancing, painting, instrument etc)
 - :- Training area (ie: handloom: practiced in pabna, some of the existing patients are good with it)
 - :- Counseling area
 - :- Meditation and relaxation area.
 - :- Library
- Administration
- General Supported Services

Additional Design Proposals:

Converting the historic Jamindal House into an exhibition space for exhibiting the arts and crafts of the mentally challenged patients.

Since every day 30-40 visitors, not having any relationship with the patients, comes to the mental hospital out of curiosity and just to watch the lunatics! and made fun of them. To create a sense of respect towards the mentally challenged people among the mass people who are visiting the hospital every single day, I here decided to convert the heritage house into an exhibition space so that the creativity of the patients can be exhibited and the visitors pay visit to see those only and thus maintain a public flow on the site since it has been said before that a normal flow of crowd is also necessary for the patients to cope with the outside world. This will also evoke the sense of self actualization and self respect among the patients and also people will learn to appreciate them and show some respect.

Out Patient Department

Function	Quantity	Area(sqft)	Total area (sqft)
Reception, Lobby	1	3000	3000
Security room	1	100	100
Visitor's room	1	500	500
Wash room (m/f)	4	240	240
Gift shop	1	120	120
Pharmacy	1	100	100
Doctor's chamber	5	150	1500
Counseling chamber	8	168	1344

Diagnostic Department

Function	Quantity	Area(sqft)	Total area (sqft)
Waiting area	1	300	300
Laboratory	3	200	600
MRI	1	300	300
Pathology	1	150	160
Store	1	30	30
Toilet	2	25	50
CT scan	1	300	300
Control room	1	100	100
Equipment store	1	100	100
EEG	1	150	150
ECG	1	100	100
Ultrasound room	1	150	150
Radiology	1	200	200
Radiologist's room	1	100	100
Record room	1	150	150
Total			9020

Admin Department

Function	Quantity	Area(sqft)	Total area (sqft)
Reception, Lobby	1	3000	3000
Conference Room	1	100	100
General open office For 6	1	500	500
Wash room (m/f)	4	240	240
Executive office	1	120	120
Accounts office for 3	1	200	200
Chairman	1	225	225
Managing director	1	200	200
PA	1	80	80
Kitchenette	1	30	30

Inpatient Unit (Male)

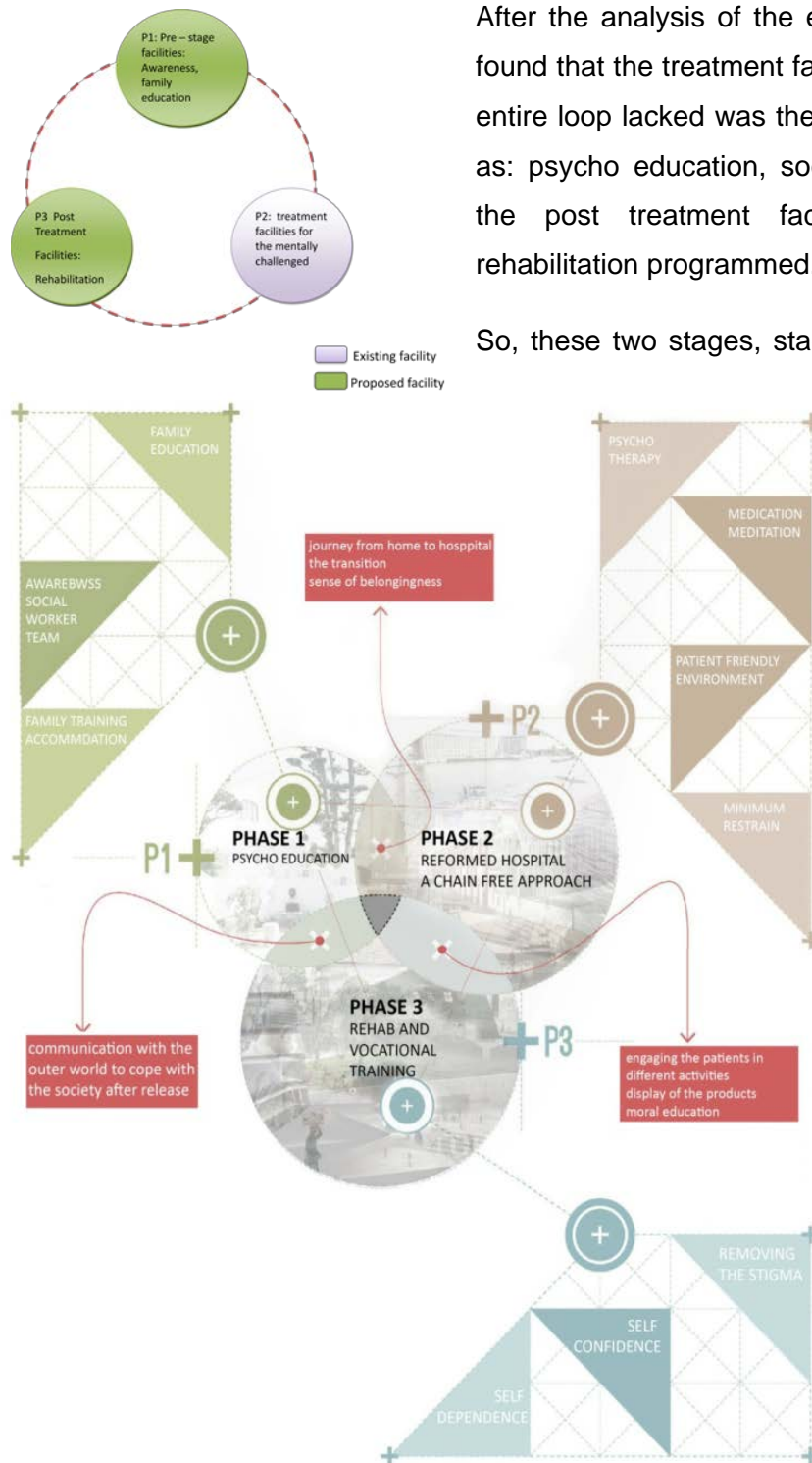
Function	Quantity	Area(sqft)	Total area (sqft)
Waiting area	1	300	300
Visitation and meeting	3	200	600
Nurses cabin	2	150	300
Nurse resting area	1	150	160
Lounge	1	500	30
Restraining room	2	156	312
Gym	1	1000	1000
Indoor games	1	1600	1600
Activity room	1	1700	1700
Kitchen	1	700	700
Dinning space	1	2000	200
Surveillance room	1	150	150
Washroom/shower	3/2		250
Individual Cabin	120	190 (with balcony)	22800
Record room	1	150	150
Laundry	1	120	120
Medical supply storage	1	100	100

Inpatient Unit (Female)

Function	Quantity	Area(sqft)	Total area (sqft)
Waiting area	1	300	300
Visitation and meeting	3	200	600
Nurses cabin	2	150	300
Nurse resting area	1	150	160
Lounge	1	500	30
Restraining room	2	156	312
Gym	1	1000	1000
Indoor games	1	1600	1600
Activity room	1	1700	1700
Kitchen	1	700	700
Dinning space	1	2000	200
Surveillance room	1	150	150
Washroom/shower	3/2		250
Individual Cabin	120	190 (with balcony)	22800
Record room	1	150	150
Laundry	1	120	120
Medical supply storage	1	100	100

Chapter 6 :

Design Development



After the analysis of the entire structure and the site it was found that the treatment facilities were there already what the entire loop lacked was the pre-stage facilities, stage 1, such as: psycho education, social awareness, family issues and the post treatment facilities, stage 3, such as the rehabilitation programmed.

So, these two stages, stage 1 and stage 3, were integrated

with the existing stage two and a proper loop for the treatment was tried to retrieve. These three stages had their own set of programmes to meet the demand of the user of that particular stage. The entire process is a chain free approach assuring that the patients are directed through a complete and proper treatment loop and help them to cope with the outer world properly and be self reliant and self confident. Phase one will help to remove the social prejudice and stigma related to the mental illness and create social awareness, phase 2 assures a proper and environment friendly space for the patients and phase three helps the

cured patients to be self confident and self reliant once they are released.

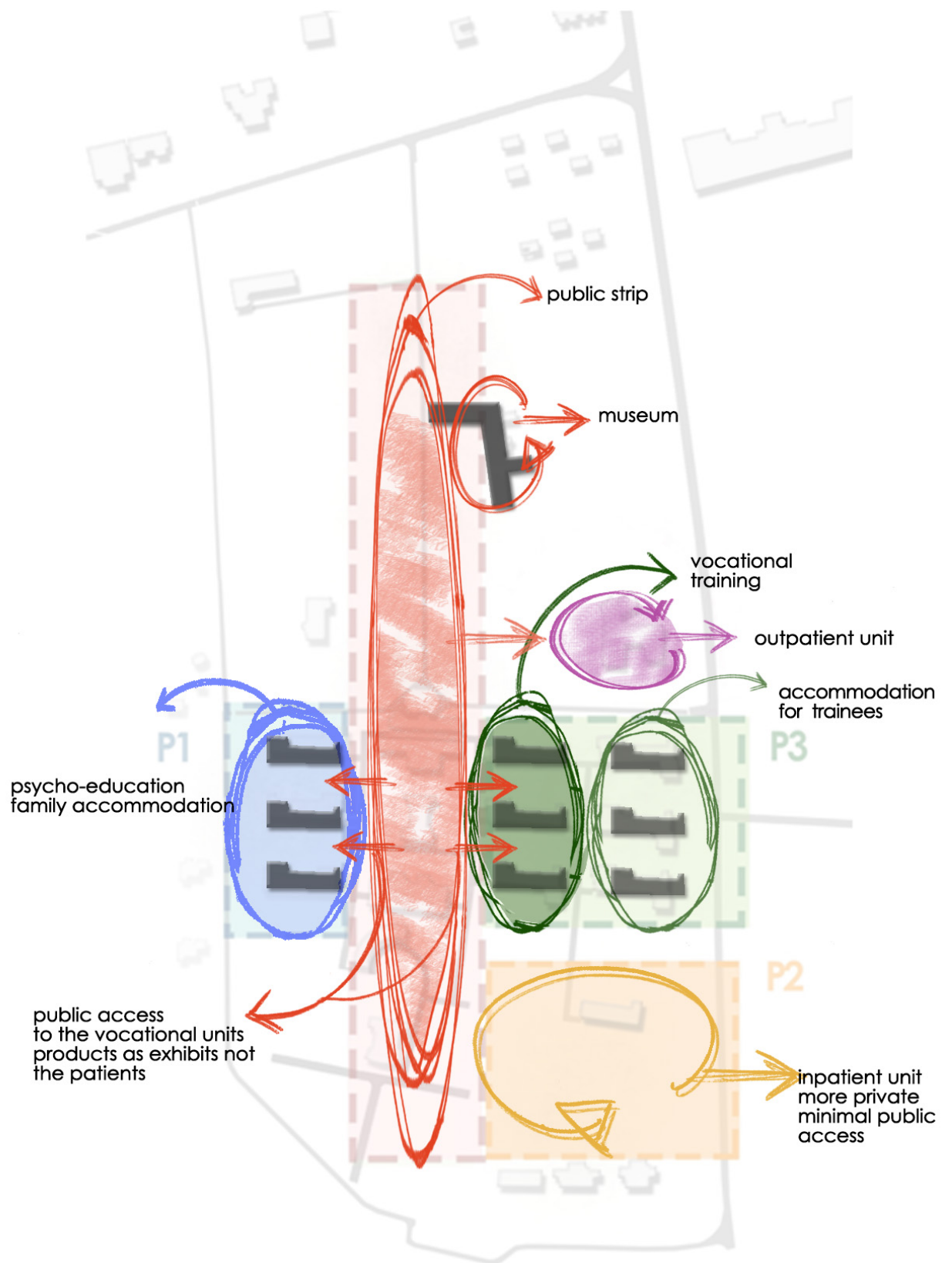
fig: proposed functional loop. source: ishika 2014

Development of Zoning



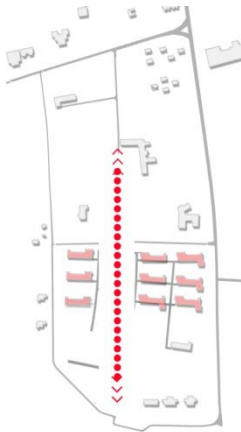
fig: proposed zoning of the three stages of functional loop

source: ishika2014

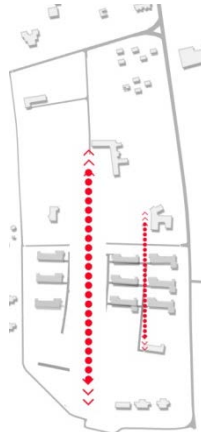


patient units. source: ishika2014

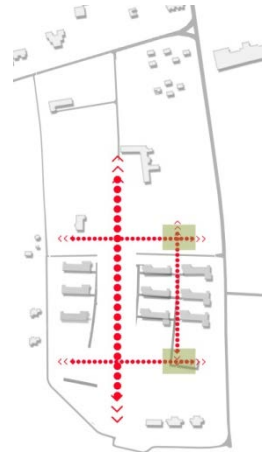
Concept Formation



the public axis



parallel axis through
vocational cluster



intersecting vertical and
horizontal axis forming courts



courtyard approach
to form the inpatient unit



male and female cluster having a big court in between as
buffer zone. Main axis serving as pedestrian access.

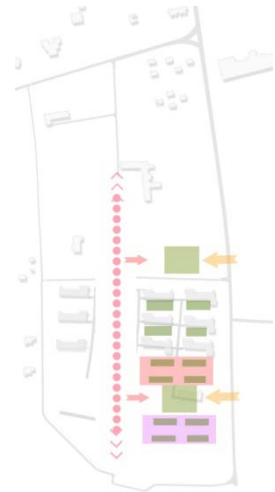




fig: internal community integration and communication with the nature outside through courtyards

source: ishika 2014

Internal court yard serving as the natural breathing space and sensory garden another one serving as the activity courtyard. The living units are arranged in north south orientation around the courtyard assuring the maximum use of natural ventilation and giving the sense on belongingness to a community inner wards and giving the chance to blend with the nature when directed to outer wards.

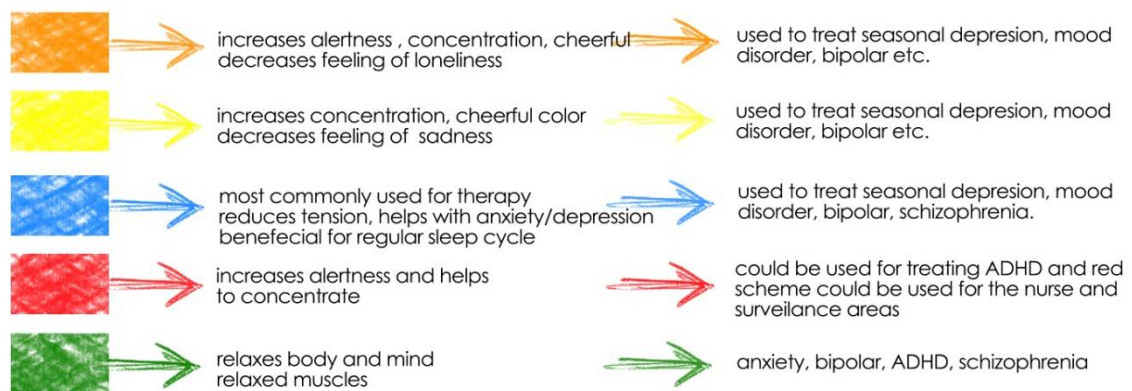


fig: use of colors for threatment

source: ishika2014

Studies have shown that use of colors is a very effective and passive way to treat the mental illness. Colors have the power to have a remarkable impact on human mind and mood. These are the set of colors that are used for the color therapy for mentally ill patients.

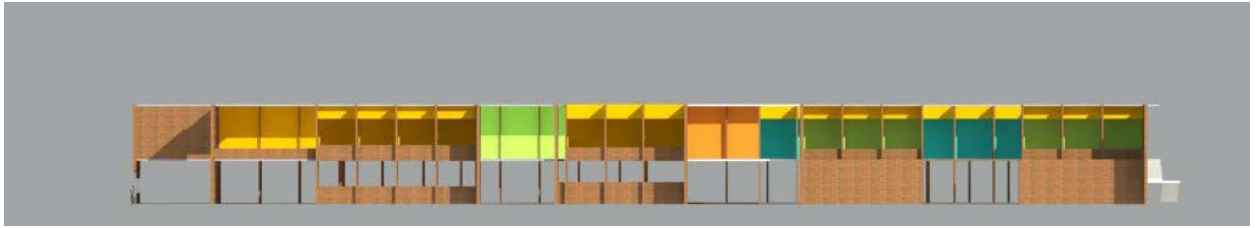


fig: conceptual elevation. source: ishika 2014

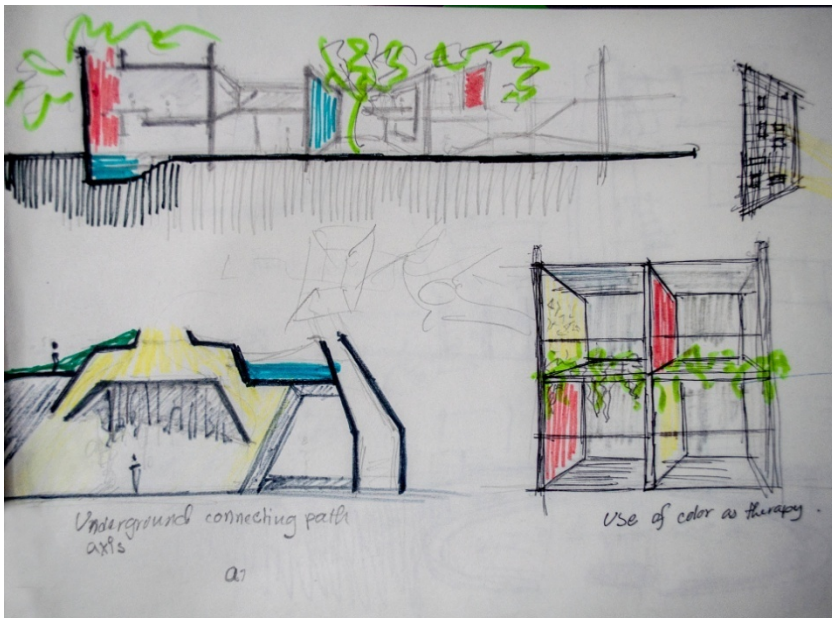
Use of colorful draperies in the rooms as shading device and also to mark the location of the allocation of different patients. The colors are used as a therapy for the mental illness.



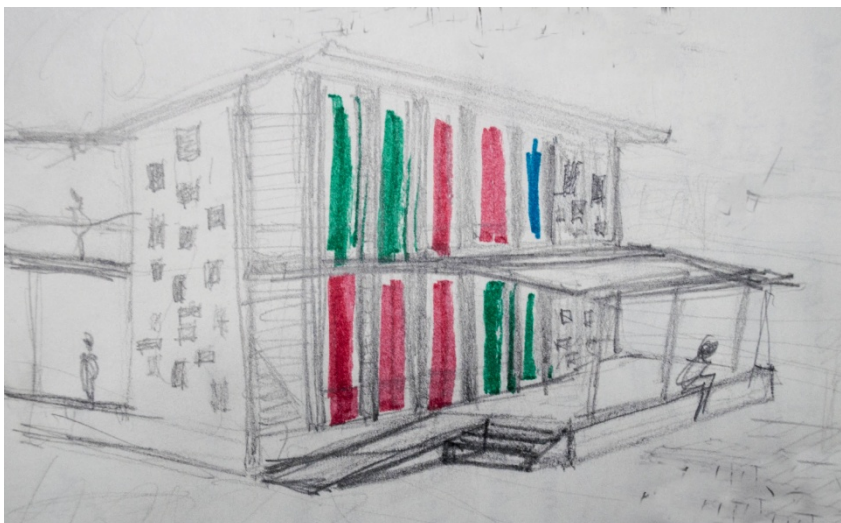
fig: conceptual render of rooftop with sensory garden and pocket spaces acting as group discussion areas.



sensory court

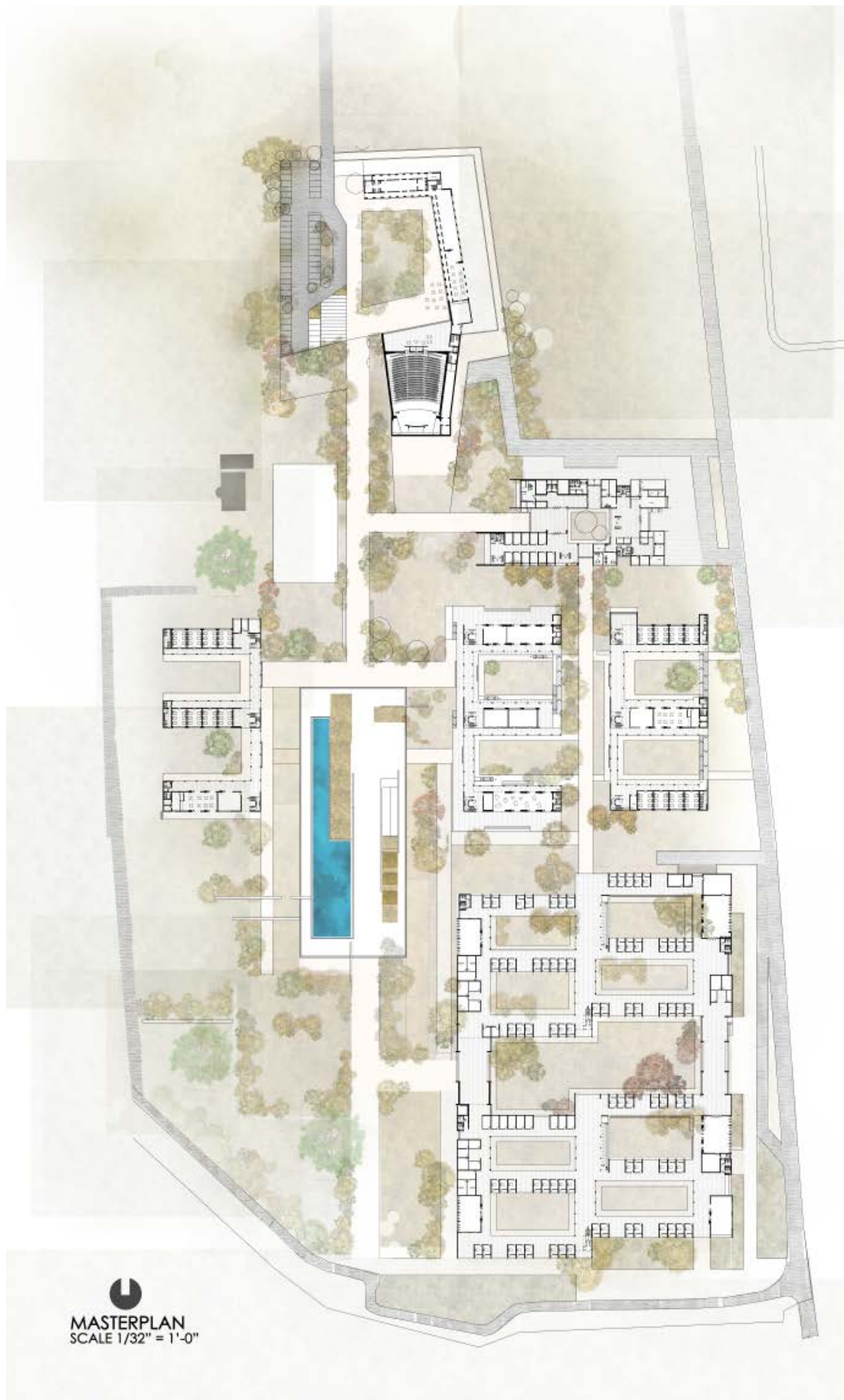


conceptual spaces



conceptual elevation of

adaptive reuse- craft court...

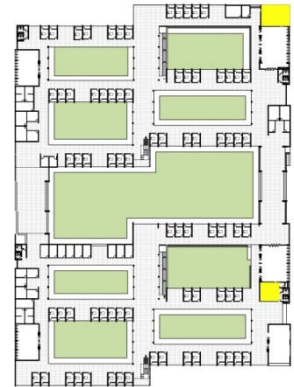




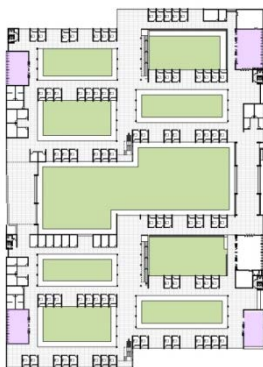
accessibility



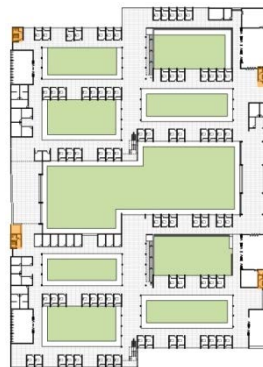
vertical circulation



kitchen



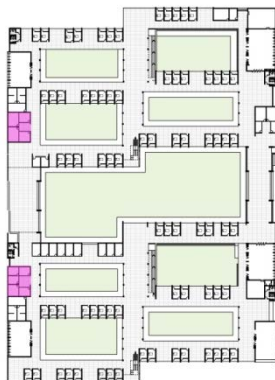
activity rooms



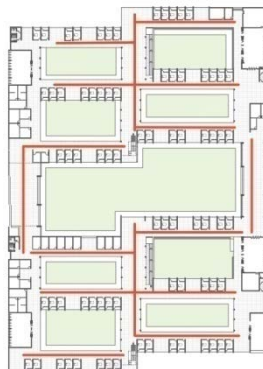
services



restraining room



family visit areas



circulation

fig: inpatient clusters

source: ishika2014

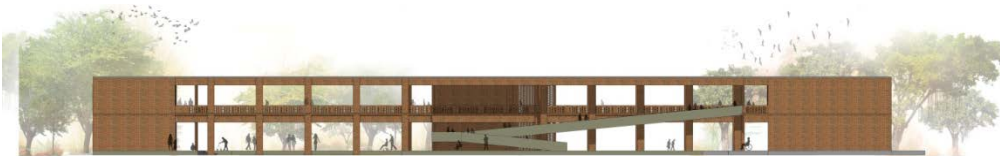


east elevation, inpatient unit





south elevation, vocational training unit



east elevation, vocational training unit



short section, vocational training unit



fig: living court with vegetable gardens (adaptive reuse) , source: ishika2014



fig: vocational training areas (adaptive reuse) source: ishika2014



fig: public spaces. source: ishika2014



fig: art and craft court. source: ishika2014

Model photograph

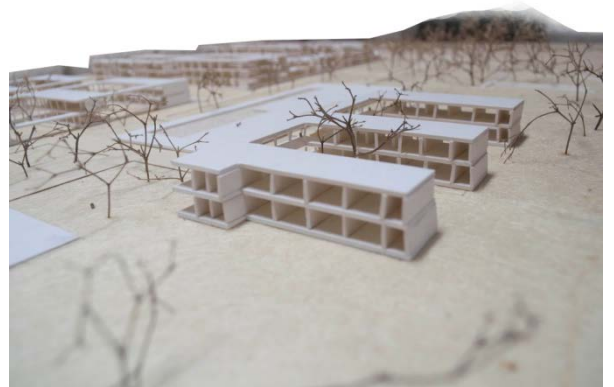
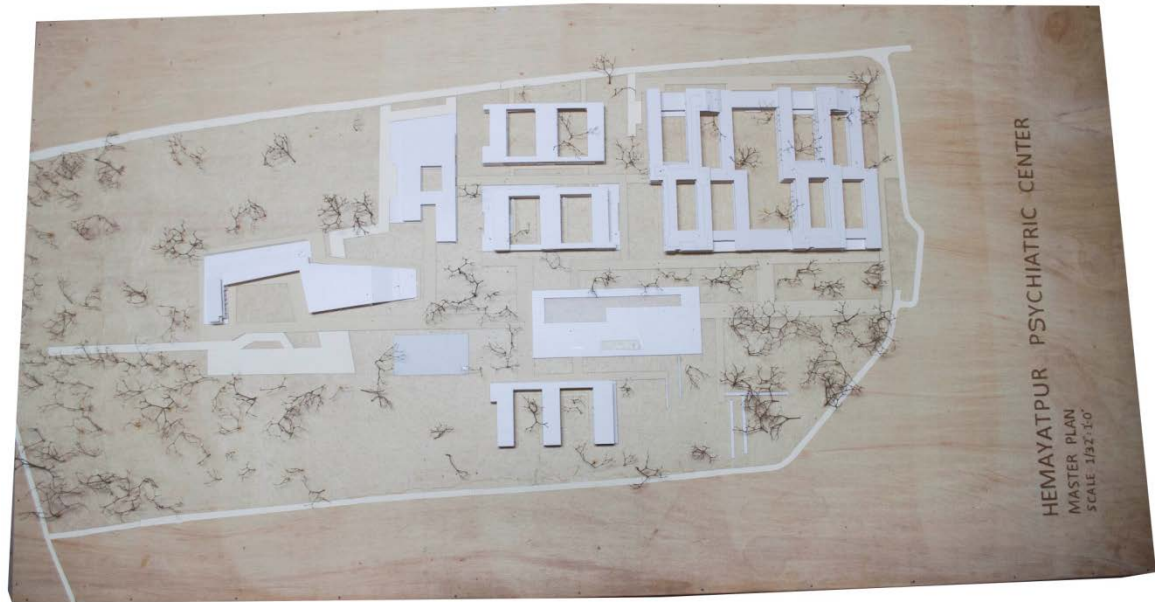




fig: model photographs

source: ishika2014

Conclusion

The idea is to create a space for the psychologically challenged people rather than creating a prison. The idea was also to apply and amalgamate the two different sites of the treatment as in the traditional treatment and the moral treatment. The traditional cases are followed for the patients that have been followed so far is somewhat brutal and the idea of chaining and torturing the patients are somewhat not ethical. Since a large number of the total population is suffering from the psychological illness, this is the time to look at this matter from a new window and open our minds towards the new horizon and explore new means and ways of treatment and offering them such spaces that helps with the healing process. However, a project of such importance and complexity need to be researched and analyzed for a much longer period of time for finding out the best possible solution along with detailed information and needed pin point systematic observations.

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