DUTCH AND AMERICAN MENTAL HEALTH HOSPITALS IN THE RECONSTRUCTION YEARS (1945 - 1970)

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ABSTRACT

This research has focused on the similarities and differences in the relevant socio-cultural influences and the organization of characteristic mental healthcare facilities for the Netherlands and the United States in the period from 1945 to 1970. Starting with the socio-cultural changes from this period for the Netherlands and the United States, it can be stated that the Second World War had a major influence on the way in which the mentally ill were looked upon by society in both countries. This has ultimately resulted in a general deinstitutionalization in the mental healthcare in the Western developed countries, where the care for the mentally ill shifted from the institution towards the community. Furthermore global medicinal developments resulted in new psychotropic drugs that improved the manageability of patients. This made it possible to develop new socio-therapies that focussed on creating social connections for patients as a form of group therapy. New psychotropic drugs also made it possible to transition from distinguishing mental patients in manageability to a distinction in treatment methods. In both countries it was tried to normalize mental illness in society and to implement the newly developed treatment methods in the organization of mental care. This implementation was clearly visible in both countries in the form of indoor and outdoor space for group therapy and additional sports facilities. In the Netherlands, the socialization of the mentally ill was attempted by bringing the institution and society closer together and by representing 'normal' society as well as possible. In the United States, this was attempted by leaving the institute completely behind and having the mental care of patients taken care of by their communities in the form of Community Mental Health Centres. In both cases, the healthcare facilities are based on a particular community with different needs. This makes it difficult to identify universal mental care architecture for both countries. That is why the focus is on the organization of and influences on psychiatric healthcare institutions and the differences in this between the countries.

PREFACE

In front of you lies the thesis on the development of the architecture of mental hospitals in the Netherlands compared to that of the United States in the period from 1945 to 1970. Although both countries were severely mentally affected by the Second World War, they had played different roles during the war. This made it very interesting to research how the two countries developed their mental healthcare in the period of the reconstruction and the new welfare. Besides, it was very insightful to analyse how these socio-cultural changes and the differences between the countries were translated in the physical manifestation of the mental health hospitals and centres. An attempt was made to find relevant case studies in order to be able to make a good architectural comparison between both countries, but because the mental health facilities were so different from each other and case studies for the Community Mental Health Centers were difficult to find, it was hard to focus on typical architectural aspects like facade designs or style influences. Therefore, the comparison of the Netherlands and the United States is focussed more on the functional organization of the mental health facilities and the socio-cultural aspects that influenced them.

CONTENT

INTRODUCTION

Objects of study
In this thesis the main subject is the typology of mental health hospitals. The focus will be on the time period 1945 – 1970, because there have been a lot of changes in ideas and believes for the mental healthcare in this period. There were similar and different ideas on this subject in the different parts of the world. So in this research the changes in the Dutch typology of mental health hospitals will be compared to the changes in the American typology.

Interpretive Ideas
Therefore the main research question in this thesis is: **How has the Dutch typology of the mental health hospitals changed in the period of 1945 – 1970 compared to the American typology?** In order to answer this question, the major social-cultural changes in the period 1945 – 1970 for the Netherlands and for the United States will be investigated. This will show the prevailing ideas and changes in mental health care in these countries at that time. Then the way the Dutch and American architecture responded to these social-cultural changes will be investigated. This will show the similarities and differences in the two countries. The Second World War has caused a lot of social-cultural changes in different parts of the world. The referenced sources suggest indeed that there is a slight difference in the way mental health has been revolutionized in the Netherlands/Europe and in the USA. In the Netherlands, the focus was on rebuilding and freedom which has led to the rise of Modernism in architecture. In the USA, the focus wasn't on rebuilding, but there were a lot of soldiers with PTSD and mental healthcare was being deinstitutionalized, due to abuse of the patients by the system being exposed.

Academic context
It is noteworthy to mention that this subject has been examined intensively, but most sources focus on one particular country or part of the world. Mens (2003) published an extensive research about the architecture of mental hospitals in the Netherlands from 1750 to 2000 for example. Fakhoury & Priebe (2007), Rochefort (1984) and Scherl & Macht (1979) have done research on the deinstitutionalization and the 'Third Psychiatric Revolution' in the USA in the 20th century. Furthermore Connellan et al. (2013) have done research on the effects of architecture of mental health hospitals on the patients and Morrall & Hazelton (2000) have investigated the typology of the Asylum as an architectural and philosophical building of modernism. In this thesis the history and prevailing ideas of the Netherlands and the United States in the period 1945 – 1970 on mental health architecture will be compared and linked to the different social-cultural changes in these countries in this period.

Methodology
This research is a comparative historical research. Social-cultural history of the Netherlands and the United States will play a crucial role in this research. As it is the foundation and background of the changes that manifested themselves in the typology of mental hospitals in these countries. Next this thesis will focus more on the architectural history of mental hospitals. Therefore casestudies in the Netherlands and the United States will be used to explain and show the architectural changes in the typology of mental health hospitals.

Thesis structure
The thesis starts by investigating major social-cultural changes in the period 1945 – 1970 for the Netherlands, followed by the translation of these changes into the Dutch mental health architecture. Then the same two steps will be taken for the US and the American mental health architecture. Afterwards the similarities and differences in the Dutch and American typology of mental health hospitals will be explained by linking them to the social-cultural changes of the countries in the period 1945 – 1970.

CHAPTER 1

SOCIAL-CULTURAL CHANGES IN THE NETHERLANDS (1945 - 1970)

Introduction
In order to answer the main research question, it is necessary to first look into the major social-cultural changes that occurred in the period 1945-1970. In this chapter the changes that have had an influence on the Dutch mental health hospitals are explored. In the second half of the 20th century there have been certain social tendencies that have changed the way people looked at psychiatry in the Netherlands. First of all the Second World War and its aftermath and secondly the rise of modernism in the Netherlands. Innovations in controlling the natural environment lead to a breakthrough in rational planning techniques. The ultimate goal was a makable society, where modernism would be the rational translation of all the scientific and social innovations. So in general there was a socialization of mental healthcare in the Netherlands. This started in 1947 when the mental healthcare was transferred from the poor relief to the regular healthcare. From 1950 health insurance funds reimbursed admission to a psychiatric hospital equally as for a normal hospital. But since the duration of psychiatric hospitalization was mostly much longer, people eventually still had to appeal to the poor relief. Only in 1967 this was changed when the General Law on Special Medical Expenses was initiated (Nederlandse Overheid, 2014).

The Second World War and its aftermath
The main conclusion that could be drawn for the cause of the devastating destruction World War II has brought upon the Netherlands and the rest of Europe, was that everything was caused by humans and not a natural disaster. So could the human mind even be called healthy anymore? This philosophy was very much present and it was generally agreed on that the nature of this destruction was mental (Mens, 2003). The cause of these mental issues was sought in the disrupted relationship between individual and society. When a totalitarian dictatorship manages to get the individual so disconnected from its social context, it is possible to create an army of will-less followers. So it is not surprising that after World War II there was a big movement to improve peoples mental health and the moral decay from the war. The goal was an ordered and transparent society, where every individual was integrated in the right place, which coincided with the modernization of the Netherlands. This asked for an almost total reconstruction of society.

Modernizing the Netherlands and new mental problems
Modernism has always been a form of rationalizing and ordering and was present in the Netherlands throughout the 20th century. It started in the 1920s in an experimental and avant-garde way, relapsed after 1930 and came back strongly after 1950 (De Keizer, 2004). It coincides very evidently with the goal of creating an ordered society, partly in order to deal with the mental problems caused by World War II. However this modernization movement went at such a rapid pace, that it came with new difficulties adapting to this new society that resulted in new mental problems (Mens, 2003). Planning, disintegration of functions and transparency were the characteristic terms for this wave of modernization. This entailed a major role for the government in controlling and ordering. Liberation and control were also the guidelines for the physical transformation of city and country and were seen as a form of social emancipation. This ensured that social security, employment, affordable, good housing, an expanded and accessible educational system, holidays and leisure time had to be provided for everyone. The house was the foundation for a new neighbourhood idea. This idea was aimed at enabling citizens to develop individually. In this way an attempt was made to prevent a mass of will-less followers, which was seen as one of the cultural causes of the catastrophes of the Second World War. This neighbourhood idea providing houses and facilities 'from cradle to grave' was one of the most striking examples of the combination of control and liberation.

In the 1960s unconstrained growth was the characteristic term for the Netherlands. There was wealth for everyone, an abundance of leisure time and the centre of urbanization shifted from the city to the suburbs. New neighbourhoods were built with the prevailing neighbourhood idea, discussed previously. A new suburban culture emerged that caused crowds everywhere, which resulted in many mental problems. The rise of high-rise buildings, the modernization and focus on the individual caused feelings of dis-belonging, mental

pressure, stress, boredom and addictions to escape these problems (Mens, 2003). The main problem with modernization was that it had lost sight of the natural, basic human aspects of existing. Cities had become machines that were oblivious to a natural, human existence. The public spaces served less and less as social gatherings and the streets and squares were mainly used for commuting. The disappearance of the attractiveness of the public domain caused by the over-organisation, meant that people had less and less social contacts, which are crucial for the mental health of a person and for the proper functioning of society.

The psychological revolution

Following the modernization wave of liberation, control and the focus on the individual, more and more initiatives were made in the 1960's to reduce the barrier between institution and society and to normalize the psychiatry (Mens, 2003). This is noticeable by the increase in outpatient facilities and day treatment in this period. But the most noticeable impulse was the 'psychological revolution' that made the whole society aware of the importance of psychology in daily life. This rise of psychological methods as general applications marked the advance of the 'social model'; a model that focussed on individual healthcare, both inside and outside the institutions.

Restoring the relation between the individual and society as a central theme after the war also lead to new therapy methods in- and outside institutions. New sociotherapies were developed that focussed on creating social groups for patients as a form of group therapy. Leading these new group therapies was not necessarily the task of a psychiatrist, but rather that of therapists. Talking to patients was the key ingredient in the developing psychotherapy. Beside this talk-focussed method a wide variety of therapies developed where 'doing' and exercise were the main focus. These methods were also aimed at creating social connections.

New psychotropic drugs

The introduction of these new therapies where initially haltered by a large amount of uncontrollable and raging patients (Mens, 2003). New psychotropic drugs were developed in the 1960's to calm down these patients and to make them and their mental illnesses more manageable. This advanced the transition from a distinction in manageability, which was the prevalent way of distinguishing mental patients, to a distinction in treatment methods tremendously. From this point on physical transformations of psychiatric hospitals were noticeable. All these innovations weren't revolutionary for the time, but were rather a shift in perspective in the mental healthcare, which was more and more being integrated in the regular healthcare (Mens, 2003).

Conclusion

To conclude this chapter it is clear that the Netherlands has undergone a lot of social-cultural changes in the period 1945 - 1970 that have had their influence on the way people with mental problems were treated and on the role of psychology in the psychiatry. World War II was a disaster caused by humans and disrupted the relation between the individual and society. So in the period after the war there was a strong focus on repairing this relation and the moral decay caused by the war. The goal was an ordered society, with a focus on the individual, which coincided with the modernization movement of the Netherlands. Ordering, rationalizing and planning were the characteristic terms for this wave of modernization. Liberation and control were the guidelines for the physical transformation of city and country, which resulted in a new 'neighbourhood idea' in which everyone was able to develop individually. But this modernization and focus on the individual entailed new mental problems: feelings of dis-belonging, mental pressure, stress, boredom and addictions to escape these problems. The main problem with modernization was that it had lost sight of the natural, basic human aspects of existing. To be able to reconnect the individual with society more and more initiatives were made in the 1960's to reduce the barrier between institution and society, to normalize the psychiatry and to develop psychology as an independent form of therapy in daily life. This resulted in the advance of the 'social model'; a model that focussed on individual healthcare, both inside and outside the institutions. Furthermore new sociotherapies were developed that focussed on creating social connections for patients as a form of group therapy. New psychotropic drugs made it possible to transition from distinguishing mental patients in manageability to a distinction in treatment methods. From this point on physical transformations of psychiatric hospitals were noticeable.

CHAPTER 2

DUTCH MENTAL HEALTH ARCHITECTURE (1945 - 1970)

Introduction.
Now that the social-cultural changes that occurred in the Netherlands in the second half of the 20th century are clear, it is possible to look at the mental health architecture of that time and see what changes it has undergone and how the social-cultural changes have translated itself in the mental health architecture.

Reconstruction
Starting in 1945 a lot of Dutch mental health hospitals had suffered damage or were destroyed during the Second World War, just like many other buildings and infrastructures. Initially there weren't many plans for new construction of mental hospitals, the focus was rather on rebuilding the damaged and destroyed facilities. The new constructions that did occur in this period were extensions of existing hospitals in the form of new clinics or pavilions. This entailed that the psychological revolution and the new treatment methods that were described in the last chapter, initially weren't translated into the architecture. This was also true for the rise of the International Style in architecture in the post-war period (Mens, 2003). However, what was characteristic for the architecture of this early reconstruction period, is a sober brick architecture, which was sometimes combined with concrete elements by influences of modernism in architecture. A good example of the sober brick architecture is the reconstruction of the mental hospital 'Sint Anna' in Venray. Figure 1 and 2 show the destruction and reconstruction of the St. Bernard pavilion of the St. Anna mental hospital.

Fig. 1: Destruction St. Bernard pavilion (NIOD Beeldbank, 1945)


Fig. 2: Reconstruction St. Bernard pavilion (Hallo Venray, n.d.)

An example of a reconstruction that utilized the combination of authentic brick and modernist concrete is the reconstruction of Bloemendaal in The Hague. Figure 3 shows a drawing of the new main building of the hospital. This is an example of the 'shake-hands'-architecture that arose from the combination of traditional and modernist movements (Mens, 2003).

In the first years after the war there were mostly reconstructions and some extensions, where modernism showed its influences on the existing. In these extensions, the new treatment methods were gradually integrated into the psychiatric hospital.

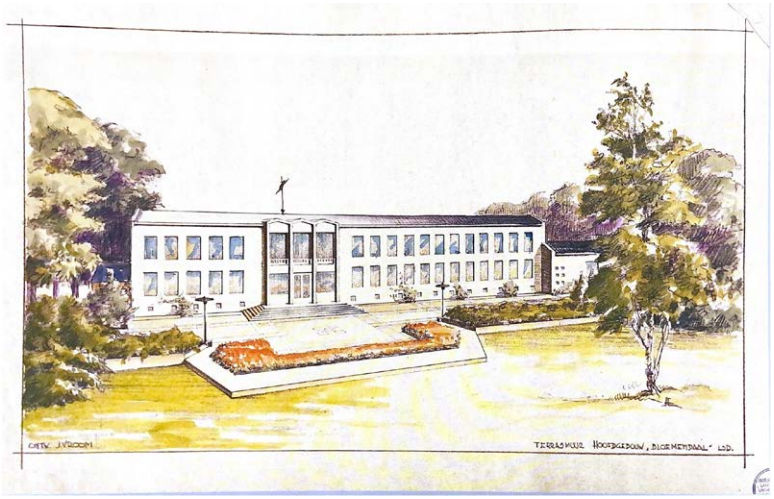
Fig. 3: Drawing of new main building Bloemendaal (Mens, 2003)

Some pavilions were set up as workshops for various creative therapies where 'doing' was the central theme. These were mostly occupational therapy workshops where, for example, wood and metalworking could be practiced. These initiatives are exemplary for how attempts were made to conform psychiatric patients to society.

Pioneer in the socialization of psychiatric patients was the experiment of 'social housing' for psychiatric patients in Wolfheze, Gelderland (fig. 4). These were ordinary social rental homes, as was customary in the reconstruction period, but for small groups of patients. In this way an attempt was made to create an environment that was as normal as possible for them. This concept is parallel to the new 'neighbourhood idea' that prevailed in Dutch society. Around 1970, the idea of social housing for psychiatric patients and mentally handicapped spread throughout the Netherlands as a form of outpatient mental care (Mens, 2003).

Fig. 4: Photo of the social housing experiment in Wolfheze (Mens, 2003)

Towards the 1960's and 1970's there were some new construction projects for psychiatric hospitals. These projects express how the psychological revolution and new treatment methods of this period were translated into the architecture of psychiatric hospitals. Therefore, three newly built psychiatric institutions from this period will be examined to see what elements are characteristic of the architecture of psychiatric hospitals from this period. The projects are: the Sinai Centre in Amersfoort, Vijverdal in Maastricht and De Viersprong in Halsteren.

The Sinai Centre - Amersfoort

The Sinai Centre in Amersfoort was designed by Leon Waterman in the late 1950s. This psychiatric hospital was designed for the Jewish community and served to replace the Apeldoornsche Bosch, which was virtually empty after the deportation of all patients during the Second World War. The building was designed in the modernist style and the design followed the developments in psychiatry of the period. For example, the pavilion type was not used here, which was a common typology for (psychiatric) hospitals in the 19th century (Allegaert et al., 2004). This type can also be found in the reconstructions and extensions of the then existing psychiatric institutions; such as the reconstructions of the various pavilions of the Sint Anna psychiatric hospital,

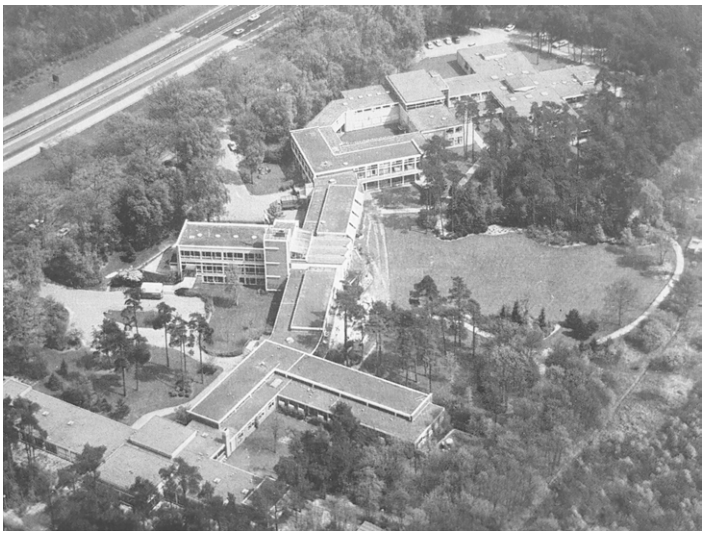

Fig. 5: Aerial view of the Sinai Center (Mens, 2003)

as discussed previously. However, for the Sinai Center the T-shape was used, which was a common shape for many hospitals of this time (Mens, 2003). The T-shape was used for the various therapy rooms and other necessary supporting functions. At both ends of the T the living quarters for the patients were situated, with the left wing designated for the men and the right wing designated for the women. In figure 6 the different functions in the Sinai Center are visualized.

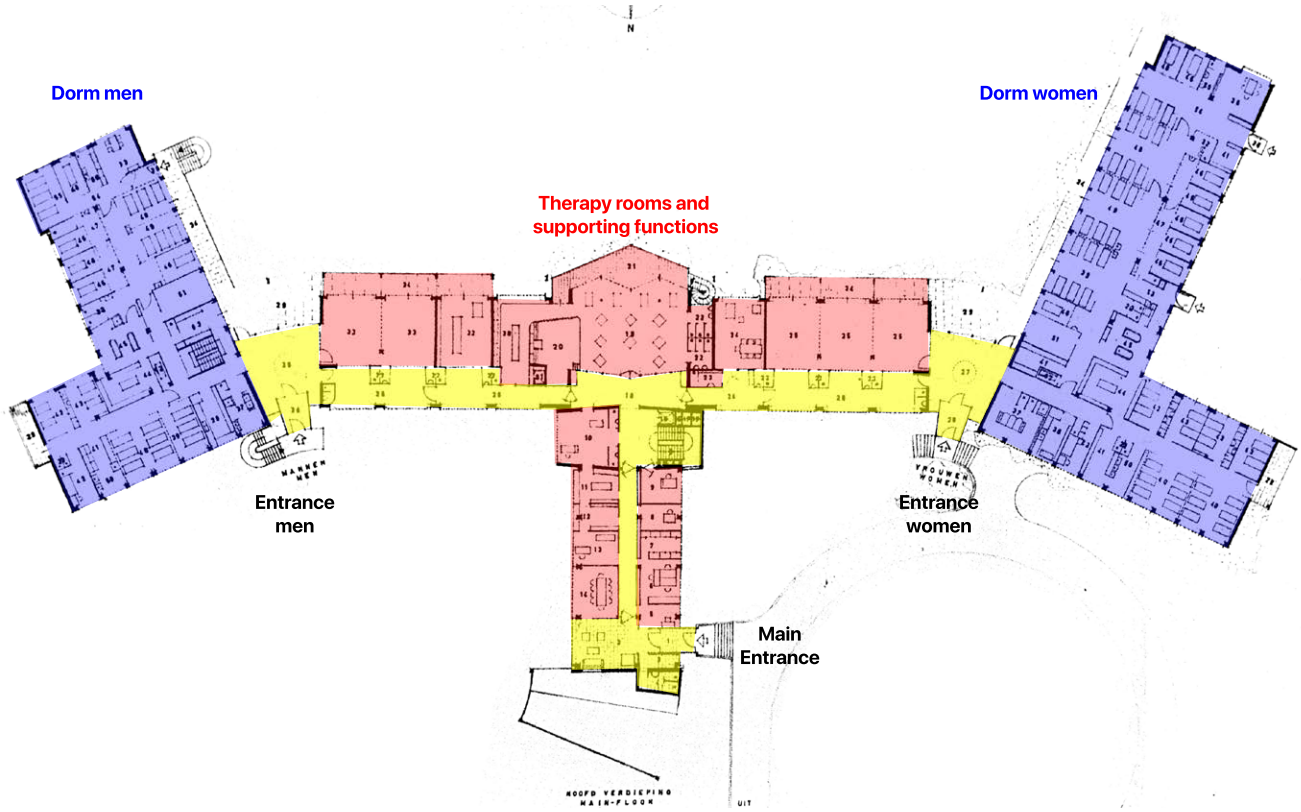

Fig. 6: Functional analysis of the Sinai Center (based on floor plan from Mens, 2003)

Vijverdal - Maastricht

A striking example of the normalization of mental illness and of bringing the psychiatric institution and society closer together is the regional psycho-medical centre Vijverdal in Maastricht. In 1968 the architectural firm Swinkels and Salemans was commissioned for this project. It was supposed to be a psychiatric institution for people from the city. So contrary to the nineteenth-century believe that psychiatric institutions should be built far from the city and in nature, the architecture of Vijverdal had to have an urban character and be realized close to the city of Maastricht in order to create a recognizable context for the patients, a context which most closely resembled their known living environment.

Another way in which this project tried to reduce the barrier between the individual and society was by allowing the institute to function as a learning environment, whereby the individual patient learned to adapt his or her social behaviour to his immediate living environment. That is why the institute also had to be bound to society and function as an open social community for the patients.

The client wanted to give the institution the appearance of a normal hospital. The rise of high-rise buildings for regular hospitals was already underway in Europe before World War II and continued after the war (de Wit & Lammens, 2011). This was made possible by the many technological improvements in the 1930s and 1940s. Ventilation systems and disinfection methods ensured that air hygiene was assured, making the pavilion type less and less attractive to hospitals (de Wit & Lammens, 2011). Besides, pavilions are relatively costly, because of their little intensive use of land.

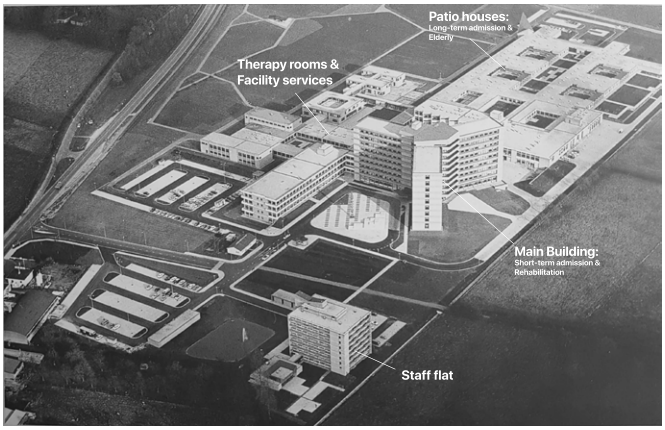

Fig. 7: Aerial view Vijverdal (Mens, 2003)

So because the architect wanted to create an urban living environment and the client wanted the appearance of an regular hospital, it was very obvious to opt for a high-rise building for Vijverdal. The design ultimately consisted of a combination of connected high-rise and low-rise buildings, in which the high-rise was used for short-term admission and rehabilitation, while the low-rise was used for long-term admission, therapy rooms and facility services. In figure 7 an aerial view of the complex shows the different functions of the institution. The high-rise is arranged in such a way that each floor has a different degree of independence. In addition, each floor consists of three small groups of patients with a communal dining room and a central room that served as a sort of village square. In figure 8 this is visualized in one of the floor plans of the high-rise building. This is also an example of the rise of group therapy in mental health care, as described in the previous chapter.

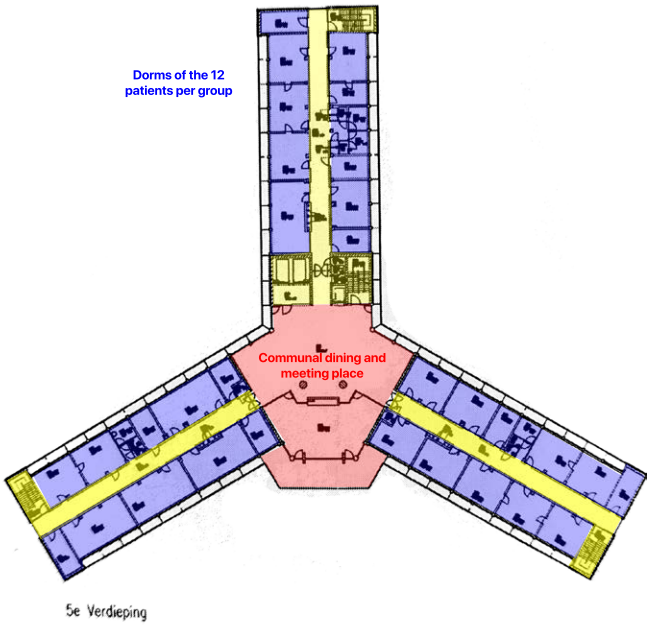

Fig. 8: Functional analysis of the main building of Vijverdal (based on a floor plan from Mens, 2003)

The high-rise is connected to the low-rise on the ground floor. Here a central meeting centre is situated where patients can freely meet each other. In addition, there is a theatre next to it that is intended not only for the patients, but also for the residents of the surrounding area. This is an even stronger attempt to normalize mental illness and psychiatry in society. The therapy rooms are also located on the ground floor. Here the newly developed treatment therapies, such as occupational therapy and creative therapy, are practiced. These new therapies resulted in the integration of sports halls and swimming pools in mental hospitals, as has been realized at Vijverdal. The idea of the pavilions has not been completely abandoned at Vijverdal. The long-term admission department on the ground floor consists of pavilions that enclose a patio. However, these were not separate pavilions, such as at the Sint Anna hospital, for example, but rather connected by wide hallways. With this an attempt was made to create patio homes for small groups of patients, so that they would live in a recognizable social environment and could participate in a form of group therapy.

However, not all ambitions were ultimately realized. The complex was built just outside Maastricht, where very little had been built yet, in spite of the extension plans for the area. As a result, there wasn't an urban context with high-rise buildings at all, but rather a rural context with meadows. In addition, Vijverdal would not accommodate the amount of patients they had in mind. As a result, part of the hospital remained largely unoccupied. Nevertheless, Vijverdal is a good example of how attempts were made to incorporate the socio-cultural changes and developments in psychiatry in the new psychiatric hospitals. In this case the ideas about how to incorporate them into architecture might have been too visionary.

De Viersprong - Halsteren

In the 1970s more efforts were made towards the normalization of psychotherapy. Pioneer in architecture for this movement was Onno Greiner, who was commissioned in 1966 to draw up an expansion plan for the psychiatric hospital Vrederust in order to be able to practice psychotherapy. This resulted in the expansion of the psychotherapeutic centre De Viersprong in Halsteren, which previously consisted only of a former villa, but which soon became too small for the amount of patients they had to accommodate and the rise of new treatment methods, such as exercise therapy. The extension consisted of an outpatient clinic, a building for exercise therapy and a youth ward with its own residential building (fig. 9) and therapy building.

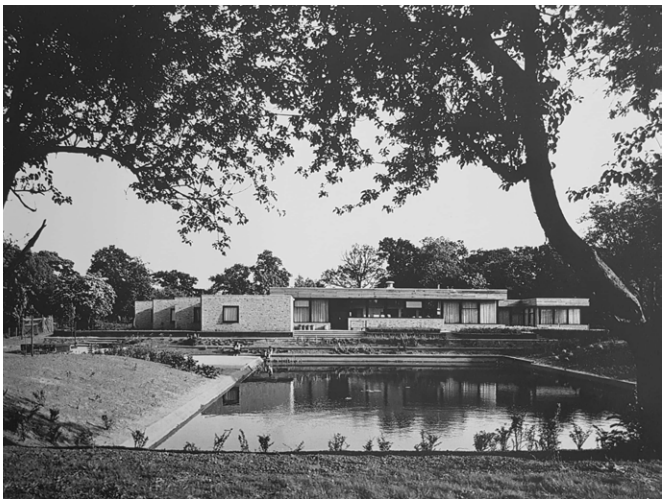

Fig. 9: New residential building for the youth at De Viersprong (Mens, 2003)

In figure 10 the situation of the entire complex of De Viersprong is shown. The buildings should function as autonomous units within a small village, making it immediately reminiscent of the pavilion type layout. Revolutionary to Greiner's design for psychiatric hospital architecture, is the simplicity in the shape and configuration of the buildings. The horizontality, sleek façades and unobtrusiveness ensure that the buildings blend into its natural environment. All this meant that Greiner's design for the psychotherapeutic community was seen as architecturally equal to that of 'normal' society. The psychotherapeutic community can be seen as 'the social model' in mental care, as a result of which the architecture that fits perfectly with this community can be seen as a translation of this sociocultural phenomenon of 'the social model' in mental health care. Greiner's pioneering work resulted in the continuation in architecture of new forms of housing of modest size where patients can feel safe.

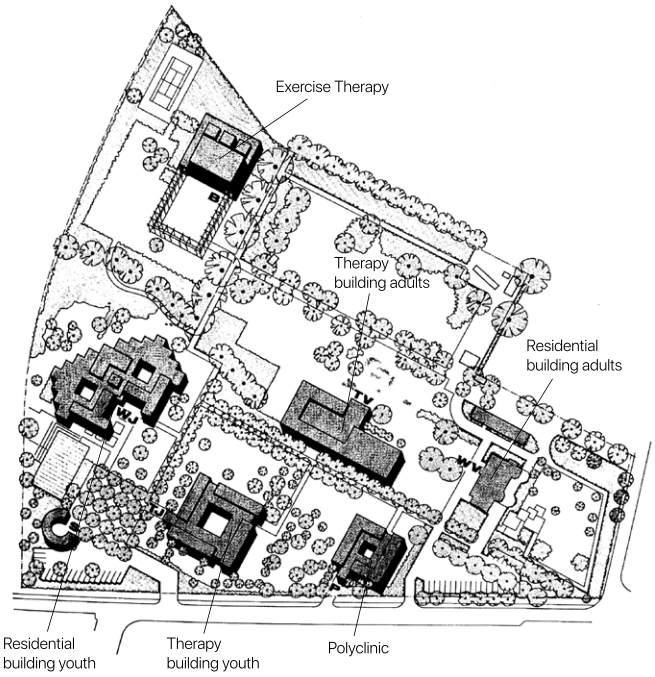

Fig. 10: Situation buildings De Viersprong (Mens, 2003)

Conclusion

In conclusion, it can be said that the socio-cultural changes of the period 1945-1970 in the Netherlands have been visibly translated into the Dutch architecture of psychiatric hospitals. Just after the war, the Netherlands was fully engaged in rebuilding the country. As a result, the focus in mental health care, as with many other sectors, was on the reconstruction of the existing facilities. This has meant that the psychological revolution and the newly developed treatment methods were not immediately visible in practice. Characteristic of the architecture of this time is the use of brick, which was often the original material of the dilapidated buildings. In addition, modernism had its influence by combining brick and concrete elements. Pioneer in the socialization of psychiatric patients was the experiment of 'social housing' for psychiatric patients in Wolfheze, which could be seen as a translation of the new neighbourhood idea that was prevalent in society.

By the 1960s and 1970s, the first new construction projects for psychiatric hospitals began. In these projects a lot of effort was made to integrate the new treatment methods and to translate the increasing role of psychology in architecture. In some projects, inspiration has been drawn from regular health care. For example, the pavilion type is often abandoned for the organization of mental care. In the Sinai Center, a T-shaped organization was chosen and the design of Vijverdal adopted the trend in healthcare of high-rise buildings in order to relate to the patients, who mostly came from the city. Besides multiple efforts were made for the normalization of mental illness and for bringing the psychiatric institution and society closer together. This was mostly achieved by representing normal society as closely as possible for the patients or by integrating functions that were usable by patients and non-patients, such as the theatre in Vijverdal designed for both patients and people from outside the facility. Group therapy was also a common theme or goal for the new projects. Communal spaces were created in order to stimulate the patients to have social contacts and to give a feeling of community within the institutions.

In the 1970s more efforts were made towards the normalization of psychotherapy. The simplicity and modesty in Greiner's design for De Viersprong is characteristic for the prevailing ideas in these years. Greiner's design for the psychotherapeutic community was seen as architecturally equal to that of 'normal' society. The psychotherapeutic community can be seen as 'the social model' in mental care, as a result of which the architecture that fits perfectly with this community can be seen as a translation of this sociocultural phenomenon of 'the social model' in mental health care.

CHAPTER 3

SOCIAL-CULTURAL CHANGES IN THE UNITED STATES OF AMERICA (1945 - 1970)

Introduction
In order to understand how the American mental health architecture has changed in the period 1945 - 1970, it is necessary to look at the social-cultural changes that occurred in the USA in this time period, just like how it was done for the Netherlands earlier in this research. The difference in social-cultural changes between the two countries can be an important reason for differences in the development of the mental health architecture.

Deinstitutionalization
In general hygiene and living conditions in the established asylums worsened during the first half of the 20th century due to overcrowding, reduced fundings for asylums and famine caused by the First and Second World War (Fakhoury & Priebe, 2007). Besides there was an increase in reports of ill treatment of patients during this time. These trends of the early 20th century resulted in a general downsizing of asylums in Westerns industrialised countries and a development of alternative mental health care based in the community during the second half of the 20th century (Fakhoury & Priebe, 2007). This shift in mental care in the Western industrialized world is often referred to as 'deinstitutionalization' and was also prevalent in the Netherlands as discussed earlier.

To better understand the deinstitutionalization in the USA and the reasons that lead to this development, the social-cultural changes that occurred in the USA during the second half of the 20th century are investigated. According to Rochefort (1984) there arose a new image of the mentally ill in the decades after the Second World War. There were a number of social, scientific and intellectual developments in this period that helped change the perceptions on the problem of mental illness.

First of all the Second World War showed that mental illness was very prevalent in the USA. Nearly 40 percent of all rejections to the army and about 37 percent of all personnel leaving the army were on neurological or psychiatric grounds (Rochefort, 1984). This disclosure made people realize the severity of mental problems in the American war effort and made people think about the presence of mental problems in civilian society as well. This resulted in the implementation of new psychiatric treatment methods in- and outside the army, most notably the rise of group therapy, which was also visible in the development of treatment methods in the Netherlands. Furthermore the large amount of mental patients caused by World War II had lessened the prevalent stigma in the American society on emotional breakdown, especially under men. So the Second World War has shown the American society the scale of the problem of mental illness, the value of new treatment methods and that mental problems could afflict anyone. Resulting these revelations mental illness became part of the social domain, which made it a responsibility for the Federal government instead of for the state governments and medical profession (Rochefort, 1984).

Besides the Second World War itself, rising amount of criticism on mental hospitals of the post-war period changed the mental health system in the USA. During the 1950's and 1960's multiple investigations and studies were done on the state and conditions of existing mental health hospitals and their individual relation with their patients. They mostly found decayed and substandard conditions and a serious lack of personnel in the institutions. More surprisingly they found that the way the mental hospitals were organized and maintained actually contributed to the problem of mental illness. Rochefort (1984) strikingly summarized this problem as follows:

> *"Mental hospitals as currently organized were making worse the very problems they were intended to remedy."* - Rochefort (1984).

A third influence on the shift in the mental healthcare in the USA was the discovery and development of new psychotropic drugs. This was a similar development as was described in chapter 1 for the social-cultural changes for the Netherlands in the second half of the 20th century. The drugs improved the manageability of the patients which made it possible to improve the individual relations with them and to implement new treatment methods.

A fourth reason for the shift in American mental healthcare of the second half of the 20th century is given by Rochefort (1984). He states that sociological research of that time has shown the role of socioeconomic factors in the problem of mental illness. It resulted in a more empirical relationship between the social status of a person and his/her psychiatric state. This research mostly helped transition the mental healthcare from the hospitals to community based treatments.

Furthermore there was a social movement in the USA after the Second World War that influenced how the general public looked at society and therefore influenced the way treatment of mental patients was looked upon. In the 1960's new legislations were implemented that tried to tackle poverty and criminality among the youth. This resulted from the idea that societal ailments were caused by the collapse of communities by the modern industrialized society of the time (Moynihan, 1970). This strongly encouraged the idea of a solid community feeling where an individual has a sense of identity and belonging to a certain social group. These ideas on social structures and its effects on the emotional well-being of an individual only strengthened the overall shift towards a community based mental healthcare system even further.

The Community Mental Health Centers Act of 1963

All these social, scientific and intellectual developments ultimately resulted in a law by the Federal government that would confirm these developments and change the mental healthcare nationwide. This law is known as 'The Community Mental Health Centers Act of 1963', signed by president J.F. Kennedy, that marked the beginning of an era of community mental healthcare and deinstitutionalization. This law allocated $ 150 million to states to meet the goal of 2000 Community Mental Health Centers - CMHCs - by 1980 (Larson, 2018). This aimed to make most state mental hospitals redundant. Kennedy was also optimistic that the new developed medication in combination with the Community Mental Health Centers program would be sufficient enough to get mental patients back in a useful place in society. On top of this law, other initiatives were made to further empty the state mental hospitals, like Medicare and Medicaid in 1965 (Fuller Torrey, 1998). Medicare made it possible to treat elderly in nursing homes rather than in hospitals and Medicaid made it attractive for states to put mental patients in smaller facilities, since states could only be reimbursed of expanses if patients lived in a facility with less than 16 beds (Larson, 2018).

An early study by Bassuk & Gerson (1978) has shown that these measures have resulted in a decrease of patients in state and county mental hospitals by about two thirds - from approximately 500.000 to 167.000 - and an establishment of around 500 federally funded community mental healthcare centres. A later study by Larson (2018) showed that states were underfunded by the government, which resulted in the construction of merely 754 of the promised 2000 CMHCs by 1980. A study by Fuller Torrey (1998) shows the course of the amount of mentally ill patients in the nation's public psychiatric hospitals from 1950 till 1995. This is shown in figure 11 and confirms the data given by Bassuk & Gerson (1978). What is important to note is that the data shows absolute amounts of patients, while the percentage of the total population of the US doesn't stay the same. Where the 558.239 patients from 1955 represent 0.340 percent of the total population - 164 million -, the 71.619 patients in 1994 represent 0.027% of the total population - 260 million - (Fuller Torrey, 1998). If in 1994 the same percentage of people would be institutionalized as in 1955 the amount of patients would be around 884.000, which means that the deinstitutionalization is responsible for a decrease from 884.000 to 71.619 mentally ill patients in the nation's public psychiatric hospitals.

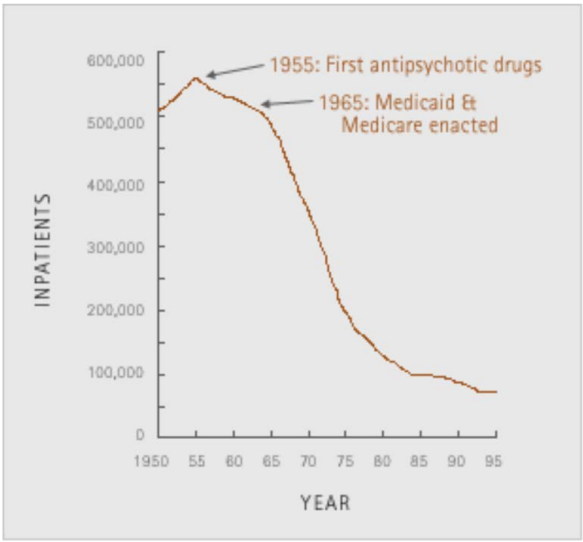

Fig. 11: Course of the amount of mentally ill patients in American public psychiatric hospitals from 1950 till 1995. (Fuller Torrey, 1998)

Some state governments weren't invested enough for a good implementation of the community mental health programs for political or money reasons, which meant that in a lot of states the deinstitutionalization continued without proper care and support for the patients afterwards. With the amount of mentally ill patients released from American psychiatric hospitals and the lack of care and support, it is not surprising that many of the mentally ill patients became homeless or ended up in jail in the USA (Fakhoury & Priebe, 2007).

Multiple studies have shown that prison and psychiatric hospital populations were inversely correlated. If one rises, the other decreases (Penrose, 1939, Palermo et al., 1991). With so many mentally ill patients being released in society without proper care, many of them were arrested for some form of misdemeanor after their release. Another reason for the jailing of mental patients was that prisons were merely waiting for psychiatric evaluation, the availability of a psychiatric hospital bed, or transportation to a psychiatric hospital. (Fuller Torrey, 1998), while no charges were even put on them. A third reason for mentally ill people being put in jail, was that families of these people found it the most effective way for getting them the proper care they need. According to Fuller Torrey (1998), the most direct way to assess the relationship between the deinstitutionalization and the increase in the amount of mentally ill patients in prisons is to measure the frequency of arrests of former patients. Studies before the start of the deinstitutionalization do not indicate an increased arrest rate for former mental patients compared to the general population, while almost all studies after the start of de-institutionalization show the opposite (Fuller Torrey, 1998). Thus, it seems that for many people with mental illness, prisons increasingly became surrogate psychiatric hospitals in the years following the deinstitutionalization.

Conclusion

The general deinstitutionalization movement that was prevalent throughout the Western industrialized world was also happening in the USA. In the period after the Second World War there arose a new image of the mentally ill in the USA that was based on a number of social, scientific and intellectual developments. Firstly the Second World War had shown the American society how prevalent mental illness was in the country, the scale of the problem of mental illness, the value of new treatment methods and that mental problems could afflict anyone. Secondly investigations and studies on the state and conditions of existing mental health institutions and their individual relations with their patients showed that the institutions were seriously decayed and understaffed. The state of the mental hospitals actually contributed to the problem of mental illness. Thirdly the scientific development of new psychotropic drugs improved the manageability of patients and made it possible to implement new forms of therapy. Fourthly sociological research has shown an empirical relationship between the socioeconomic status and the psychiatric state of an individual. Lastly ideas within society on social structures and its effects on the emotional well-being of an individual strengthened the overall shift towards a community based mental healthcare system even further. All these social, scientific and intellectual developments ultimately resulted in 'The Community Mental Health Centers Act of 1963' that marked the beginning of an era of community mental healthcare and deinstitutionalization. But it also marked the beginning of a mental health crisis, where many of the released patients from institutions, didn't receive the proper care and support they needed when reinstated in society. Lack of Community Mental Health Centres and care for former and new patients led to an increase in the amount of mentally ill people ending up in prison, ultimately leading to prisons increasingly becoming surrogate psychiatric hospitals in the years following the deinstitutionalization.

CHAPTER 4

AMERICAN MENTAL HEALTH ARCHITECTURE (1945 - 1970)

Introdution
Following the socio-cultural changes in the USA in the period 1945-1970, as described in the previous chapter, there are three different kinds of architectural buildings from this period that could be investigated: the former psychiatric hospitals that were mostly used before the deinstitutionalization, the community mental health centres resulting from the deinstitutionalization and the prisons and jails that increasingly became surrogate psychiatric hospitals in the years following the deinstitutionalization. Because former psychiatric hospitals, prisons and jails were mostly built before the start of the deinstitutionalization, they don't accurately show how the socio-cultural changes and changes in mental healthcare were translated into the architecture. Therefore the focus in this chapter will be on the newly constructed Community Mental Health Centres, also known as CMHCs, which only really gained momentum after the introduction of the national law 'The Community Mental Health Centers Act of 1963'. So this study will examine the architecture of these centres from this period onwards. Besides the architecture before this would be focussed on the existing mental health facilities rather than the characteristic Community Mental Health Centres.

Community Mental Health Centres
In 1967 the American Society of Planning Officials published a report on the Community Mental Health Centres. The report discusses the law that led to the centres and the ideas behind it. In addition, it emphasizes the role of planning and outlines appropriate planning and zoning considerations (American Society of Planning Officials, 1967). The planning and zoning considerations are crucial for the development and construction of these community centres and therefore have a considerable effect on its architecture.

Goals and services
The American Society of Planning Officials (1967) describes the goals and services of the CMHCs as follows: the centres as envisioned by 'The Community Mental Health Centers Act of 1963' is a program of mental health services under a unified health system with the following objectives:
1. Offering a varied and comprehensive range of services close to patients' homes.
2. Offering these services to all people in the community, regardless of their ability to pay.
3. Enabling a patient to easily transition from one type of service to another as their needs change (continuity of care).
4. Strengthening community resources for the prevention of mental illness.

Although the centres would be having different characteristics, based on the needs of their community, the following essential services were defined (American Society of Planning Officials, 1967):
1. In-patient services.
2. Out-patient services.
3. Partial hospitalization, such as day or night care.
4. Emergency services provided 24 hours a day.
5. Consultation and educational services available to community agencies and professional personnel.

The following services were seen as optional for the centres:
6. Diagnostic services.
7. Rehabilitation services including educational and vocational programs.
8. Pre-care and after care including foster homes and half-way houses.
9. Training.
10. Research and evaluation.

All these services were not necessarily provided by one single agency nor were they necessarily facilitated in one building. But if more than one agency was responsible for these services, they had to be able to guarantee the continuity of care for the patients. Construction of facilities to house one or more of the services would be partially funded by the federal government. The federal grant covered between one-third and two-thirds

of construction costs, depending on the per capita income of the state. These funds could be used for the construction of new buildings or for the purchase, expansion, and alteration of existing buildings (American Society of Planning Officials, 1967).

Planning a CMHC

For the development of community mental health centres, a change in attitude towards the mentally ill was necessary. Therefore, it was necessary to locate the centres in the heart of a community rather than far from it. This development could also be seen in that of Dutch society. Planners had a critical role in spreading the concept of community-based care and in devising planning and zoning criteria, consistent with the characteristics and location requirements of community mental health centres. Urban planners were increasingly asked for help with this.

The planning for a CMHC started with identifying the 'relative need' in a community. This involved balancing the anticipated rate of mental illness against the already available mental health resources in the community. Besides, identifying the current trends in mental health care was important for planning a CMHC. The following trends needed to be analysed and its implications for the mental health field needed to be considered:

1. Trends in the attitude of the general public towards the field of mental healthcare.
2. Trends in therapeutic approaches and treatment methods.
3. Trends in the availability, utilization and training of manpower.
4. Trends in the financing of psychiatric healthcare services.
5. Trends in physical installations and accessibility of services to patients.
6. Trends in information, communication, and data processing techniques, as well as the coordination of mental healthcare services with other health, welfare, education, and correctional services.

Location

If a community did not have proper mental healthcare facilities and it was found necessary to build a new community mental health centre for this community, there were some criteria for the construction site of this centre. First, the site itself had to be large enough to contain facilities suitable for the current needs and to allow for future expansion. Second, the site's location should reflect the goals of the community mental health centre. One of the goals is to provide the right treatment while allowing the patient to live and stay in their community. Therefore the site of the centre should be close to a respective residential zone and easily accessible for patients and their families. Besides the centre should also be easily accessible by public transport and private cars, because it was necessary for the centre to also give mental health care to people who couldn't afford it otherwise. Another criteria for the location of the centre was that it should be in the mainstream of daily activities in order for it to be accepted in a community, for example shopping centres or commercial streets. This was also important for the staff working in the centres, since they mostly had this occupation as a part-time job. So it was beneficial for them if the centres were close to their main job. Close proximity of a CMHC to a general hospital which provided mental healthcare was not a necessity, but gave advantages for the continuity of care for the patients.

Zoning

Since a CMHC is a series of services and not a building or even a definable group of buildings, zoning plans should cover the constituent parts rather than the centre as such. Flexibility was of the utmost importance to adapt zoning plans to whatever shape the centre may take. And yet it had to provide zoning protection to both the centre and the community (American Society of Planning Officials, 1967). This has resulted in a couple of basic principles for zoning regulations:

1. The zoning regulation should not distinguish between psychiatric and other health services.
2. General hospitals should not be prohibited from providing outpatient psychiatric services as an additional function.
3. Community mental health centres must be legally permitted in districts of medical centres.

Standards for Mental Health Facilities

In general, the same standards applied to mental health facilities as to regular health facilities. But in some areas, mental health facilities were unique. Patients often spent more time at such facilities than at regular clinics. Therefore, the location of the CMHC had to be large enough to provide certain services that were not required for a medical clinic. These included amenities like landscaped gardens for individual or group therapy sessions, an area for sports or a swimming pool (American Society of Planning Officials, 1967). These are translations of the newly developed treatment methods of this time and can also be found in the architecture of the Dutch

mental hospitals. Another difference is that the CMHCs had a higher requirement of parking spaces than a regular health facility, due to the utilization of part-time employees, the presence of group therapy sessions and the fact that some professionals at these CMHCs worked in bigger teams. A relatively new feature in a CMHC was the half-way house or foster home. These facilities usually provided treatment for six or fewer patients and were intended as an intermediate step between the psychiatric hospital and the community. The half-way houses were typically designed to help the patient reintegrate into the community after hospitalization. He/she lived there while looking for work and until he/she found an own apartment. It was primarily intended to provide additional safety for the patients. This way of living is comparable to assisted living or with student housing, where common amenities, like the kitchen or bathroom, are shared.

KMD Architects is an architectural firm that has focused and specialized in translating the goals set by the Kennedy Administration's Community Mental Health Act of 1963 into architecture. After the introduction of this law, the founders of KMD Architects, together with two psychiatrists, started researching the implementation of these goals. The research results have been incorporated in the book 'Planning, Programming and Design for the Community Mental Health Center'. The research was funded and published by the National Institute of Health (NIH). It created a new way to approach the design and planning of behavioural health facilities. The creation of integrated open space, which varied in plan and cross-section, was an important aspect. In addition, creating an outdoor space for the patients without endangering safety was another important aspect. The architecture of the building itself could have a positive therapeutic effect on the psychiatric well-being of patients (KMD Architects, 2020). Facilities designed from 1963 until 1980 by KMD Architects emphasized long patient stays within an environment contributory to behaviour amendment and rehabilitation. Their first translation of these premises was the design of the Marin General Mental Health Centre in the 1960's (figure 12). Here the open space in both plan and section of the buildings interior is clearly visible.

Fig. 12: Interior of the Marin General Mental Health Centre by KMD Architects. (KMD Architects, 2020)

Conclusion

Community Mental Health Centres (CMHCs) were the characteristic building types for the American mental healthcare in the post-war period. The Community Mental Health Centers Act of 1963 established national goals and guidelines to manage the transition from institutional mental healthcare to a community based system. The 1967 report of the American Society of Planning Officials shows the goals, services and critical role of planning and zoning regulations in the establishment of the CMHCs. The centres were seen as a program of mental health services under a unified health system. These services were not necessarily provided by one single agency nor were they necessarily facilitated in one building. Every community has its own needs and therefore required different facilities in their CMHC. This makes it hard to define a common building or building ensemble for a CMHC. Nevertheless, there are some common services, rules and regulations that are applicable to every centre. The CMHC is a combination of daily in- and outpatient care, mostly provided by a collaboration of an existing hospital and additional facilities or clinics to be able to provide continuity of care for the patients. Because communities are different from each other, it was important to study certain trends in the community if planning a CMHC in it. If a mental health centre was deemed necessary for a community, there were some criteria for the construction site of this centre. First, the site itself had to be large enough to contain facilities suitable for the current needs and to allow for future expansion. Second, the site's location should reflect the goals of the community mental health centre. These centres needed to be located in the heart of a community, close to a residential district and a hospital, in order to normalize mental healthcare in daily life, be able to provide mental healthcare for everyone and to make it convenient for patients, their families and personnel to reach the facilities. Shopping centres or commercial streets were often chosen as locations for a CMHC. For zoning plans it was of the utmost importance to adapt to whatever shape the centre may take. And yet it had to provide zoning protection to both the centre and the community. Therefore zoning regulations were adapted to generalize mental and general healthcare more. Facilities of a CMHC had some unique standards compared to regular health facilities. The site was generally bigger to be able to facilitate amenities like landscaped gardens for individual or group therapy sessions, areas for sports, swimming pools and bigger parking lots. A characteristic and new function for a CMHC was the half-way house or foster home. These facilities usually provided long-stay housing and treatment for six or fewer patients. They were intended and designed to help the patient reintegrate into the community after hospitalization.

KMD Architects is an architectural firm that has focused and specialized in translating the goals set by the Kennedy Administration's Community Mental Health Act of 1963 into architecture. The creation of integrated open space, which varied in plan and cross-section, was an important aspect. In addition, creating an outdoor space for the patients without endangering safety was another important aspect.

CONCLUSION

How has the Dutch typology of the mental health hospitals changed in the period of 1945 – 1970 compared to the American typology?

Returning to the main question of this history thesis, it is clear that there are actually differences in the development of the architecture of mental hospitals between the Netherlands and the United States in the period from 1945 to 1970. This research has focused on the differences in the relevant socio-cultural influences and the organization of characteristic facilities. Starting with the socio-cultural changes from this period for the Netherlands and the United States, it can be stated that the Second World War had a major influence on the way in which the mentally ill were looked upon by society in both countries. This has ultimately resulted in a general deinstitutionalization in the mental healthcare in the Western developed countries, where the care for the mentally ill shifted from the institution towards the community. Furthermore global medicinal developments resulted in new psychotropic drugs that improved the manageability of a lot of patients. This made it possible to develop new socio-therapies that focussed on creating social connections for patients as a form of group therapy. New psychotropic drugs also made it possible to transition from distinguishing mental patients in manageability to a distinction in treatment methods.

The Netherlands was part of the battlefield of the Second World War, which caused a lot of physical and mental damage to society. Moreover World War II was seen as a disaster caused by humans and had disrupted the relation between the individual and society. So in the period after the war there was a strong focus on repairing this relation and the moral decay caused by the war. The goal was an ordered society, with a focus on the individual, which coincided with the modernization movement. Ordering, rationalizing and planning were the characteristic terms for this wave of modernization. In the Netherlands liberation and control were the guidelines for the physical transformation of city and country, which resulted in a new 'neighbourhood idea' in which everyone was able to develop individually. To be able to reconnect the individual with society more and more initiatives were made in the 1960's to reduce the barrier between institution and society, to normalize the psychiatry and to develop psychology as an independent form of therapy in daily life. For the Netherlands this resulted in the advance of the 'social model'; a model that focussed on individual healthcare, both inside and outside the institutions. This could be seen as the form of deinstitutionalization in the Netherlands.

The United States wasn't part of the battlefield of the Second World War, but had a major role in the war effort of the allies. In the post-war period there arose a new image of the mentally ill in the USA that was based on a number of social, scientific and intellectual developments. One of the most important developments is that the Second World War had shown the American society how prevalent mental illness was in the country, the scale of the problem of mental illness, the value of new treatment methods and that mental problems could afflict anyone. Another crucial development was that investigations and studies on the state and conditions of existing American mental health institutions and their individual relations with their patients showed that the institutions were seriously decayed, overcrowded and understaffed. The state of the mental hospitals actually contributed to the problem of mental illness. These social, scientific and intellectual developments together with the general deinstitutionalization in the Western developed countries ultimately resulted in 'The Community Mental Health Centers Act of 1963' that marked the beginning of an era of community mental healthcare and deinstitutionalization for the USA. But it also marked the beginning of a mental health crisis, where many of the released patients from the overcrowded institutions, didn't receive the proper care and support they needed when reinstated in society. Lack of Community Mental Health Centres and care for former and new patients led to an increase in the amount of mentally ill people ending up in prison, ultimately leading to prisons increasingly becoming surrogate psychiatric hospitals in the years following the deinstitutionalization.

The main difference in how the architecture of mental healthcare in both countries developed in the period from 1945 to 1970 is in the way in which the socio-cultural developments in the country have been responded to.

In the Netherlands, shortly after the Second World War, the focus was on the reconstruction of the country. This was also the case for psychiatric hospitals, as a result of which mainly existing psychiatric institutions were restored. In the 1960s and 70's more and more attempts were made to implement the socialization of the mentally ill and the newly developed treatment methods in the organization of psychiatric hospitals and clinics. This has mainly resulted in attempts to represent the 'normal' society in psychiatric institutions as well as possible. This took on all kinds of forms because the patients for whom the care facility was set up were used to certain living environments, which were not the same for everyone. This gave Vijverdal, which was aimed at patients from the city of Maastricht, a completely different look and organization than the social houses in the village of Wolfheze, whereby patients were placed in houses that looked very much like normal terraced houses, which were common in the village. But also the implementation of public functions for patients as well as for people from outside was an attempt to bring the institute and society closer together. Another visible development in the organization of Dutch psychiatric institutions was the implementation of the newly developed treatment methods. Common areas were designed to allow patients to interact as a form of group therapy and to give patients the feeling of belonging to a particular community. In addition, facilities were set up to be able to practice treatment methods in which exercise and doing were central. These were mostly sports facilities that were part of the psychiatric hospital.

In the United States, the deinstitutionalization was driven by the federal government through the introduction of The Community Mental Health Centers Act of 1963. The plan was to establish 2000 Community Mental Health Centers (CMHCs) across the country. This made the CMHC the characteristic building type for postwar American mental healthcare. The Community Mental Health Centers Act of 1963 established national goals and guidelines to manage the transition from institutional mental healthcare to a community based system. The centres were seen as a program of mental health services under a unified health system. These services were not necessarily provided by one single agency nor were they necessarily facilitated in one building. Every community has its own needs and therefore require different facilities in their CMHC. This makes it hard to define a common building or building ensemble for a CMHC. Nevertheless, there are some common services, rules and regulations that are applicable to every centre. The CMHC is a combination of day-long in- and outpatient care mostly provided by a collaboration of an existing hospital and additional facilities or clinics to be able to provide continuity of care for the patients. These centres needed to be located in the heart of a community, close to a residential district and a hospital, in order to normalize mental healthcare in daily life, be able to provide mental healthcare for everyone and to make it convenient for patients, their families and personnel to reach the facilities. Shopping centres or commercial streets were often chosen as locations for a CMHC. Facilities of a CMHC had some unique standards compared to regular health facilities. The site was generally bigger to be able to facilitate amenities like landscaped gardens for individual or group therapy sessions, areas for sports, swimming pools and bigger parking lots. A characteristic and new function for a CMHC was the half-way house or foster home. These facilities usually provided long-stay housing and treatment for six or fewer patients and were intended and designed to help the patient reintegrate into the community after hospitalization. The creation of integrated open space, which varied in plan and cross-section, was an important aspect. In addition, creating an outdoor space for the patients without endangering safety was another important aspect of a CMHC.

So in both countries it was tried to normalize mental illness in society and to implement the newly developed treatment methods in the organization of mental care. This implementation was clearly visible in both countries in the form of indoor and outdoor space for group therapy and additional sports facilities. In the Netherlands, the socialization of the mentally ill was attempted by bringing the institution and society closer together and by representing 'normal' society as well as possible. In the United States, this was attempted by leaving the institute completely behind and having the mental care of patients taken care of by their communities in the form of Community Mental Health Centres. In both cases, the healthcare facilities are based on a particular community with different needs. This makes it difficult to identify universal mental care architecture for both countries. That is why the focus in this thesis was laid on the organization of and influences on psychiatric healthcare institutions and the differences in this between the countries.

ANNOTATED BIBLIOGRAPHY

(I) A brief summary of the topic addressed and a discussion about the question and argument presented (note that they may not be explicitly spelled out, which will require close reading).
(II) The evidence presented to support the argument.
(III) A comparative conversation (if / how they relate to your other sources).
(IV) An explanation about how is this article relevant to your research. Make sure that you cite the book, article, or document using the appropriate style.

Mens, N. (2003). De Architectuur Van Het Psychiatrisch Ziekenhuis (1st ed.). Van Duuren Media. :
(I): Illustrates the development of the Dutch mental healthcare architecture from 1750 to 2000. The period from 1945-1970: a period with a lot of social-cultural changes in society due to the second world war. Rationalization, order, management and control were the characteristic terms for Modernism in the 1940's and 50's in the Netherlands. This has also translated itself into the architecture and urban planning.
(II): The book uses former research on the Netherlands in the period 1945 – 1970. This includes the social-cultural changes, psychiatry and mental health in general, and the urban development and rebuild of the Netherlands. Besides, casestudies of Dutch mental hospitals from this period are used to illustrate their argument.
(III): The results from this source can be compared with those of the changes in America (Fakhoury & Priebe, 2007, Rochefort, 1984, Scherl & Macht, 1979) and in the world in general (Connellan et al., 2013, Morrall & Hazelton, 2000).
(IV): This book can mostly help answer subquestion 1 and 2: What were the major social-cultural changes in the period 1945 – 1970 for the Netherlands? And: how has the Dutch mental health architecture responded to the social-cultural changes?

Fakhoury, W., & Priebe, S. (2007). Deinstitutionalization and reinstitutionalization: major changes in the provision of mental healthcare. Psychiatry, 6(8), 313–316. :
(I): Describes the history of mental hospitals in the Western industrialized countries particularly and focusses on the changes made in the 20th century. The deinstitutionalization and the replacment of asylums with community mental health service began around the 1930's. Besides it describes the shortcomings and criticism the deinstitutionalization movement had gotten.
(II): This source has used former research about deinstitutionalization made by the authors themselves and by authors from over the world. This includes sources about deinstitutionalization in England, Germany, North and South America and Hong Kong.
(III): The phenomenon of deinstitutionalization can play a critical role in the social-cultural changes described in other sources. Maybe deinstitutionalization has taken place in the Netherlands (Mens, 2003) or other parts of the world (Connellan et al., 2013, Morrall & Hazelton, 2000) as well.
(IV): Deinstitutionalization can be a result of social-cultural changes and can be the cause of changes made in the typology of mental hospitals in the period 1945 – 1970. So this source can play a role in all the subquestions.

Rochefort, D. A. (1984). Origins of the "Third Psychiatric Revolution": The Community Mental Health Centers Act of 1963. Journal of Health Politics, Policy and Law, 9(1), 1–30.
(I): This article focusses mostly on the background and development of the American 'Community Mental Health Centers Act of 1963'. It explores the changing views on the nature of the problem of mental illness that caused the foundation for the act.
(II): This article mainly uses sources on the development of the care of mental illness in the United States and focusses on the period after the deinstitutionalization.
(III): Where Fakhoury & Priebe (2007) mainly focus on the deinstitutionalization of the 1930's, Rochefort (1984) mainly focusses on the period after that, where community mental health service was the norm.
(IV): This article can mainly help with subquestion 3 & 4, because it focusses on America and the 'Community Mental Health Centers Act of 1963'.

Scherl, D. J., & Macht, L. B. (1979). Deinstitutionalization in the Absence of Consensus. Psychiatric Services, 30(9), 599–604. :
(I): This article describes the reasons for the growing polarization about deinstitutionalization in the 1960's in the United States. Deinstitutionalization should focus the broader problem of improving the people with chronic illness, regardless of its cause or time of emergence.
(II): This research mainly uses sources on the development of the care of mental illness in the United States and focusses on the period during and after the deinstitutionalization.
(III): This source compliments the research of Rochefort very well. It also focusses on the United States, but this article addresses the period of deinstitutionalization as well as the period afterwards.
(IV): This article can mainly help with subquestion 3 & 4, since its focus is on the United States.

Connellan, K., Gaardboe, M., Riggs, D., Due, C., Reinschmidt, A., & Mustillo, L. (2013). Stressed Spaces: Mental Health and Architecture. HERD: Health Environments Research & Design Journal, 6(4), 127–168. :
(I): This research answers the question: 'How does the intersection of mental health care and architecture contribute to positive mental health outcomes?'. Its objective is to present a comprehensive review of the research literature on the effects of the architectural designs of mental health facilities on the users. It concludes that therapeutic design has a positive effect on patient and staff well-being and client length of stay.
(II): This research has used a lot of former inquiries across health and architecture in the period 2000 – 2012 in order to gather enough data to identify recurring themes and numerical data.
(III): This source can be used as a general method of comparing the casestudies of the articles on Dutch (Mens, 2003) and American (Rochefort, 1984, Scherl & Macht, 1979) mental hospitals.
(IV): This source can be used as a guideline to judge or review the changes made in the Dutch and American typology of mental hospitals. Are these designs based on similar evidence to improve the wellbeing of the users or has other reasoning been used.

Morrall, P., & Hazelton, M. (2000). Architecture signifying social control: The restoration of asylumdom in mental health care? Australian and New Zealand Journal of Mental Health Nursing, 9(2), 89–96. :
(I): This article focusses on the typology of the asylum as an architectural and philosophical building of modernism and as a display of power and control by the state. "The building of hundreds of asylums in such countries as the UK, Australia and New Zealand was a display of 'the power to expel' by the State and psychiatry" (Morrall & Hazelton, 2000). It focusses on the period before the deinstitutionalization in the early 20th century as well as the reinstitutionalization in the late 20th century.
(II): This research mostly used articles published in the United Kingdom and Australia.
(III): This article sees the asylum as an architectural and philosophical building of modernism, which can be linked to the social-cultural changes in the Netherlands (Mens, 2003) and the United states (Fakhoury, 2007, Rochefort, 1984, Scherl & Macht, 1979).
(IV): This source can mostly be used for subquestion 1 and 3, where the social-cultural changes in the period of 1945 – 1970 are inquired. It could substantiate why the deinstitutionalization happened or why there was much critique on it.

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