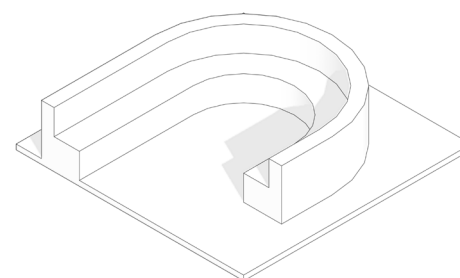
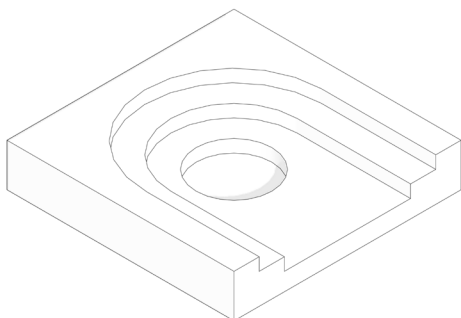
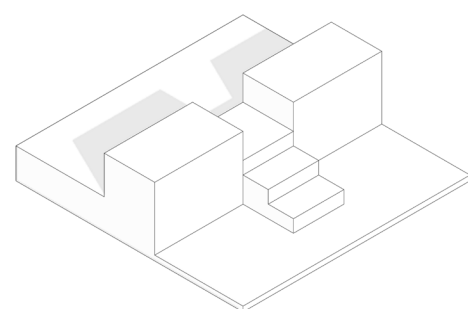
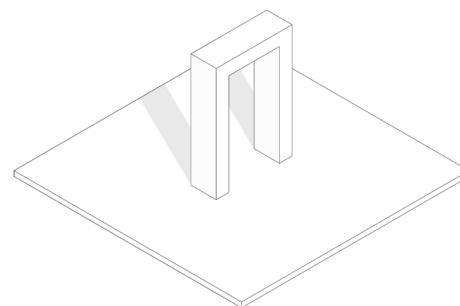
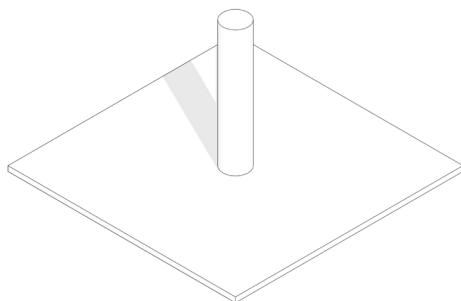
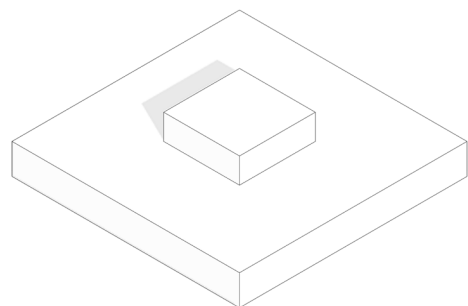
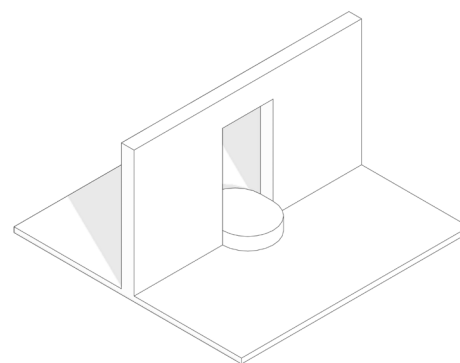
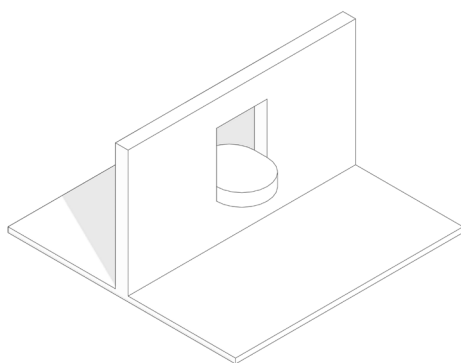
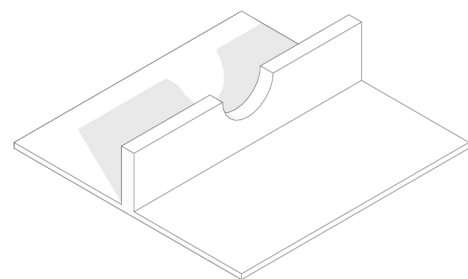


BOUWNDARY



EXPERIENCE



OF SPACE

Alberto Merisio

Focal point

Column

Gateway

Narrow

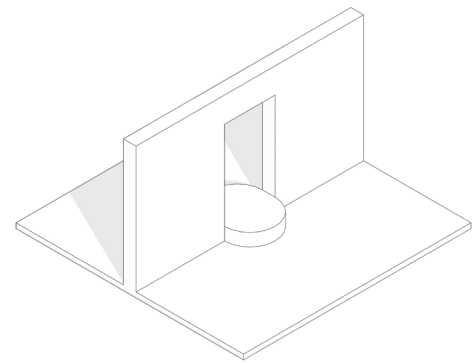
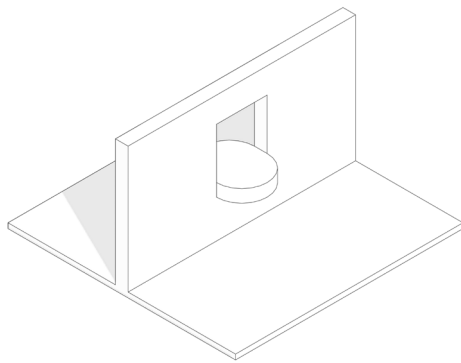
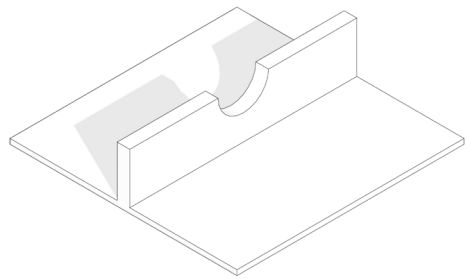
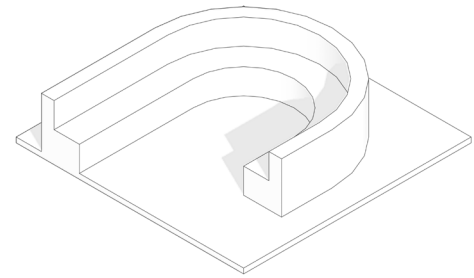
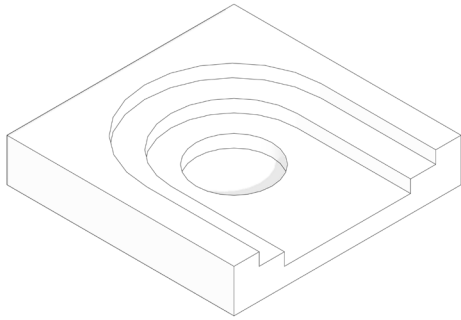
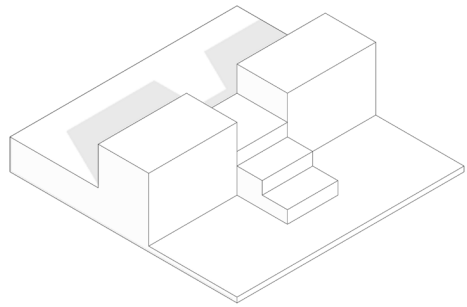
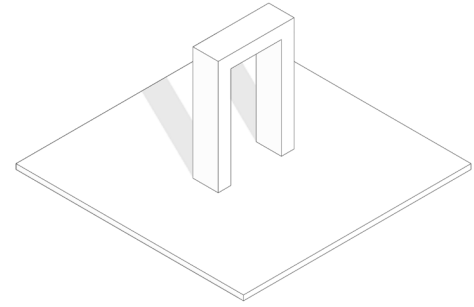
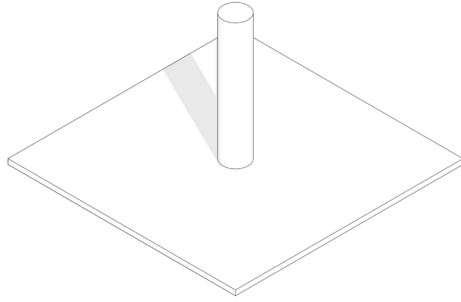
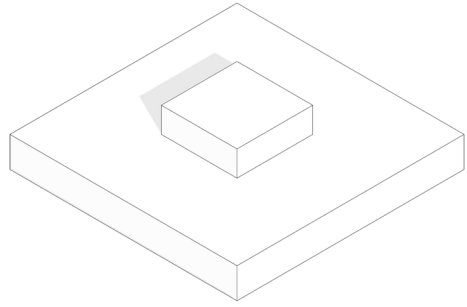
High place

Enclave

Edge

Opening

In-between



BOUWNDARY

OF SPACE

EXPERIENCE

AR2A011

Architectural History Thesis

Q3 2021/2022

Delft University of Technology
Faculty of Architecture
and the Built Environment

Msc in 'Architecture, Urbanism
and Building Sciences'

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INTRODUCTION

Aldo van Eyck defined the space as “*the experience of it*”. Through this sentence, as simple as it is fantastic¹, van Eyck focuses on the relationship that binds man to the space that surrounds him. Something from which no one can escape. A relationship that he calls an ‘experience’. What many call an “end-user” is actually a “person” with his or her feelings, weaknesses, etc.

In this direction, Dutch Structuralism has made a great contribution to architecture, both practical and theoretical. Indeed, its major exponents knew well how fundamental it was to combine architectural history with social sciences.

However, very often books and research do not allow these two worlds to dialogue in such depth, although it is now known how fundamental they are to each other.

This thesis then goes back to studying, through historical research, what lies behind some Dutch structuralist works of the second half of the twentieth century. The buildings analyzed are Aldo van Eyck’s Burgerweeshuis, Piet Blom’s Bastille and Herman Hertzberger’s Delftse Montessorischool.

The first chapter offers background information relating to Dutch structuralism and briefly illustrates the three buildings chosen as case studies.

The second chapter deals with the importance of the experience of space. The theme of the ‘city’ and that of the ‘everyday’ are discussed. These themes serve to better understand what lies at the basis of these phenomena as ‘simple’ to imagine as ‘complex’ to study and design. It also deals with the topic of social engineering, a pitfall that, in trying to reconnect the art of building with the rituals of everyday life, must be avoided.

The third and last section of the thesis has been structured in such a way as to create a sort of catalogue that makes the architectural part interact with the social one. First of all, the theme of the ‘Bowndary’ is introduced. To investigate this issue, nine categories have been identified. Each typology is introduced by some pills of anthropology, sociology, biology, and nature. In support of these theories, there are practical examples (chosen from the three structuralist buildings mentioned in the first chapter), accompanied by images, sketches, and archive drawings. Indeed, structuralist architects saw practice and theory as extensions of each other.²

1, 2
Ligtelijn, 1999, p. 8

The catalogue structure has the purpose of making the reading orderly, clear, and concise, without dwelling on topics that are widely discussed in other publications. In this way, anyone who cares not only about issues relating to 'design' but also to its 'humanization', will not only finally find an answer to their questions but will also have a really useful tool to inspire them.

STRUCTURALISM

Structuralism is an ambiguous term that takes on different meanings in different contexts. Indeed, it is not only used in architecture but also in philosophy, linguistics, sociology, anthropology, history, etc.

Structuralism is an intellectual and philosophical movement that was born in the West mainly thanks to the speeches of Levi-Strauss, Marx, and Althusser, who claimed to analyze and explain invariant structures in and constitutive of nature, society, and the human psyche.³ Particularly significant was the volume 'The Elementary Structures of Kinship' written in 1949 by the anthropologist Levi-Strauss. He was the first to use this term in the social sciences, bringing out some key concepts such as human freedom and choice, which until then were either ignored or underestimated. This is an important point, indeed, in the second half of the twentieth century, this connection between structuralism and social sciences returned to the fore in the field of architecture and urban planning. Levi-Strauss himself declared: "*I do not believe that we can still speak of one structuralism. There were a lot of movements that claimed to be structuralist*".⁴

This introduction is crucial. Structuralism cannot be fully understood without first investigating its history in the linguistic, philosophical, and anthropological fields. In 2015, the Het Nieuwe Instituut in Rotterdam set up an exhibition titled 'Structuralism. An Installation in Four Acts'. One space of this exhibition was reserved for a small but very interesting library. This was not a simple library, indeed, it was based on the discovery of a list of readings by the architect Joop Hardy, one of the exponents of Dutch structuralism. In this list, psychoanalysis and anthropology texts abound⁵.

It is only in this way that we can understand the true essence of this movement. The absence of these premises often leads to misunderstanding of even the very definition of structuralism. Regarding this, Herman Hertzberger said that "*the word 'structuralism' is shrouded with many misconceptions, Structuralism has to do with the structure, but that structure is not the core of the matter. Actually, the idea is that structuralism offers freedom of interpretation, adaptation and transformation within, and thanks to a set of rules, acting as a framework*".⁶

3
ScienceDirect, 2010

4
Valena, Avermaete, Vrahliotis, 2011

5
Taylor-Foster, 2015

6
MAT office, 2013

Structuralism, therefore, functions like language. People can use a language in different ways and adapt it according to their needs. Similarly, structuralism provides architects with both a theoretical and practical culture capable of generating a multiplicity of different solutions.

If we are still so interested in this movement today, perhaps it is precisely because of the attention paid to people and their behavior. After all, despite technological progress, human beings don't seem to have changed that much. That's where this sort of perennial contemporaneity of Dutch structuralism comes from.

Dutch structuralism

Structuralism in architecture developed in the second half of the twentieth century. The Congrès International d'Architecture Moderne (CIAM) lit the fuse. These meetings, which were held between 1928 and 1959, periodically brought together the main prominent figures in the field of architecture and urban planning. CIAM participants did not all have the same view. Some had a more scientific approach (Rationalists), others more artistic (for example Le Corbusier). Among these groups, there was also Team 10, within which there were several Dutch architects. It was precisely these members who gave birth to Structuralism, better known precisely as 'Dutch Structuralism'.

"I am a product of Team 10."
cit. Herman Hertzberger ⁷

Dutch structuralism proposed itself as a valid alternative to the rationalism with which the Netherlands was facing post-war reconstruction.

Starting in 1959, a group of architects led by Aldo van Eyck and Jacob Berend Bakema began working on this alternative, or as they preferred to call it, 'Another Idea'. They disseminated their ideas through the 'Forum' magazine. These ideas, which opposed the Athens Charter formulated by the CIAM, formed the theoretical basis on which to develop this movement.⁸

Herman Hertzberger, who joined the magazine immediately after his graduation, put it this way: *"Van Eyck's architecture was not a 'new idea', but 'another idea', in other words looking at the existing one in another way, playing it in another light. This relocates the emphasis to what it is that remains more or less unchanged, so that the variations therein stand out all the more forcefully."*⁹

The seventh issue of 1959 of Forum magazine [1] officially marked the beginning of the movement. The structuralist manifesto, written by the Dutch exponents of Team 10 specifically for the last CIAM conference in Otterlo, was published. It was an attack on the rationalism with which cities were rebuilt after the Second World War. The desire to design spaces in a more 'human' form was manifested. In particular, the structuralists accused the CIAM colleagues of ignoring the past. Instead, they accused the post-modernists of the opposite. Quoting Van Eyck: *"Both then and now, the same mechanical clockwork notion of time prevails, the same awkward posturing vis à vis the past. It is still history 'out' or history 'in'. In the minds of architects this all too often means 'in' and 'out' of Rome, or 'yes' or 'no' to classicism alternating every 30 years or so."*¹⁰

For structuralist architects, the passion for the architecture of the past was part of their way of conceiving modernity.

7
Risselada, Van den Heuvel, 2005

8
Hertzberger, 1991, p. 4

9
Hertzberger, n.d.

10
Ligtelijn, 1999, p. 15

11
van Marissing, 1971, p. 18

12
Ligtelijn, 1999, p. 14

13
Ligtelijn, 1999, p. 11

14
Taylor-Foster, 2015

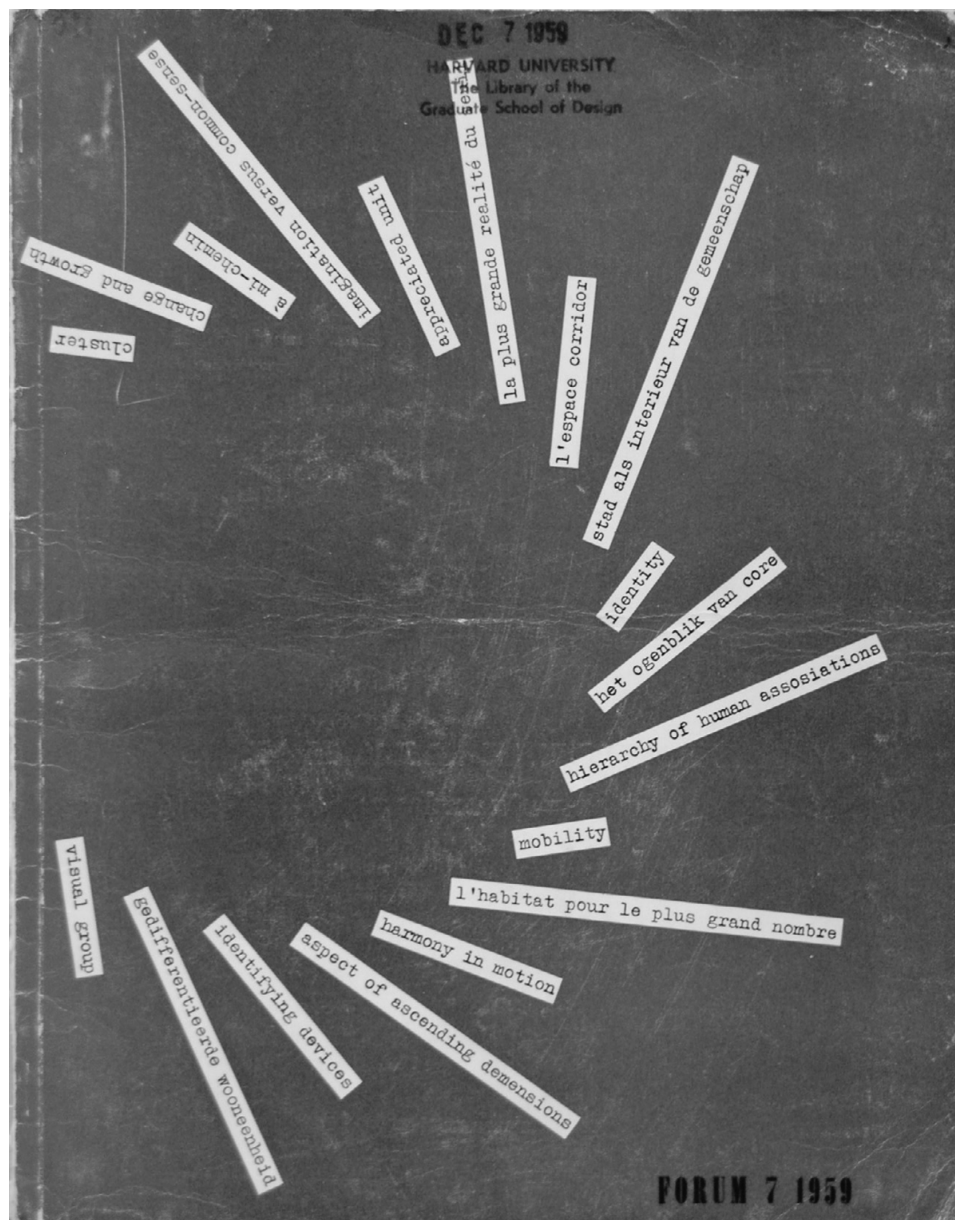
However, van Eyck in an interview underlined how in the Netherlands he had been repeatedly defined as an ‘iconoclast’, which is someone who repudiates the past.¹¹ He replied that if there is anyone who believes in the present of the past, it is him. An annoyed response as if to say: how can I be criticized by those who maintain the misery of the ancient city to destroy its benefits? Only the aesthetic aspect of the ‘past’ is maintained, at the expense of the intrinsic qualities of the historic city, or that wonderful chaos of human behavior. In fact, Dutch structuralism distinguished itself from other movements, especially for the great attention dedicated to people. The so-called ‘end user’ was finally considered as a ‘person’ with a heart, feelings, and needs.¹²

Although van Eyck, like Bakema, never wanted to be associated with a certain movement, a will typical of great architects, we cannot ignore the numerous connections and similarities found between Dutch architects and the architecture of that period. By the way, it was he himself, through his activity as a professor at the Amsterdam Academy of Architecture and at TU Delft, who influenced an entire generation of architects.

His ideas are found not only in his work but also in that of many architects, anthropologists, and historians who have learned from him. It is not surprising that two other important exponents of this movement, Herman Hertzberger, and Piet Blom, were his students. Van Eyck had no problem criticizing famous architects such as Jaap Bakema, of whom he also had great esteem, just as he had no problem praising some young architects. To give an instance, Vincent Ligtelijn, a great friend of van Eyck and author of one of his biography, admitted that it was him who showed him for the first time a building designed by a still unknown Herman Hertzberger. He did the same with Piet Blom, mentioning him quite often in the ‘Forum’ magazine early in his career.¹³

One of the greatest qualities of structuralism was certainly the possibility of obtaining a multiplicity of different solutions from the same language. This therefore allowed to obtain certain compositional freedom. A freedom that in those years was made to practice to future architects already during the academic years. Van Eyck and Joop Hardy taught at the Academy of Architecture in Amsterdam through a method that, using the words of van den Heurel, allowed students to “*fanatically pursue a new approach in architectural design*”.¹⁴

It is therefore interesting to notice how some of the exponents of this movement have managed to develop common ideas through a personal and distinctive character. In the following paragraphs, three buildings will be explored: van Eyck’s Burgerweeshuis, Hertzberger’s Delftse Montessorischool, and Blom’s Bastille.



[1]
Cover of Forum No 7. The Story of
Another Idea.

AUTHOR: Centrale Technische
Dienst / YEAR: 1959 / SOURCE:
Foundation AetA

Burgerweeshuis

15

Ligtelijn, 1999, p. 88

16

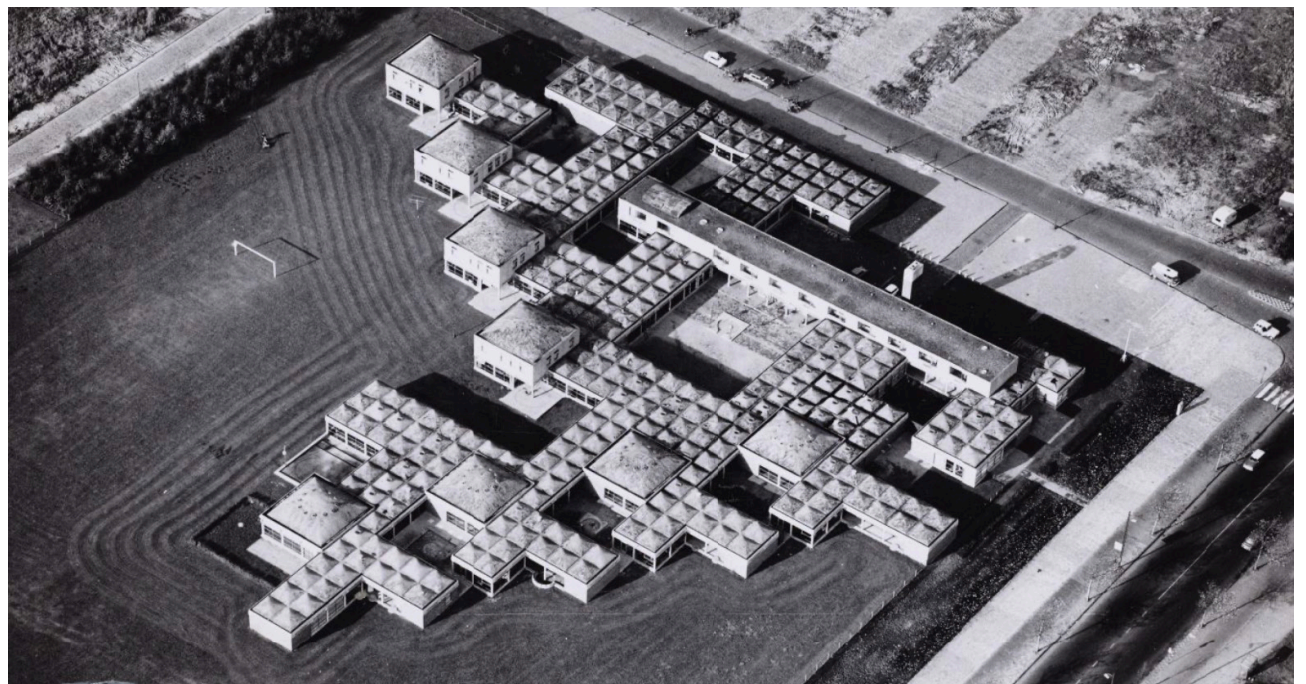
Ligtelijn, 1999, p. 89

The Amsterdam orphanage designed by Aldo van Eyck is the most eloquent result of his theories. He defined it as “*a particular house, as all houses should be*”.¹⁵ The building was conceived as a small city where the connecting areas are ‘streets’. In these spaces, the same materials as the outside were used, so that the behaviors and movements of the children remained as vigorous as that outside. The care for the experience of space is obsessive. Van Eyck designed distorted mirrors to stimulate the imagination, pools of water that become mirrors, and so on. Great attention was also paid to the design of the entrance. Indeed, for orphans, entering and leaving the orphanage is a difficult experience. Van Eyck, therefore, decided to create a large square between the street and the orphanage. This solution was intended to reduce the anxiety that these transitions cause, especially in these children.¹⁶ It is precisely this interweaving of inside and outside, large and small, unity and diversity, that makes this building a masterpiece. Despite van Eyck’s great efforts to try to reconnect the art of building with the rituals of everyday life, the orphanage closed after less than twenty years of activity, even risking being demolished. Herman Hertzberger managed to save the building, which, however, after having hosted the Berlage Institute for a short time, fell into disuse again. Thanks to a restoration that took place between 2015 and 2017, today the orphanage has returned to its ancient splendor and houses the offices of the BPD company.

[2]

Burgerweeshuis.

YEAR: 1970 / SOURCE: Collectie
Stadsarchief Amsterdam





Aldo van Eyck

Aldo van Eyck (16 March 1918 – 14 January 1999) studied in Zurich, where he graduated in 1946, before returning to the Netherlands. From Switzerland, he will bring with him his passion for Le Corbusier's poetics.

In the Netherlands, he began to work during a period of great turmoil, that of post-war reconstruction and the CIAM meetings. He immediately opposed the rationalism that prevailed in the reconstruction of cities. In 'The story of Another Idea' he said that a city is livable only if "*enable all those who live there to know who they are and where they are, so that the protected minds and hearts can warm the houses, streets, and squares*". (Hengeveld, Strauven, Blom 2008, p. 16) He traveled a lot, and he was struck by the African villages, real theatres of human behaviour.

Furthermore, unlike his colleagues at CIAM, Van Eyck showed a great interest in sensory experiences both in his teaching at the Academy of Architecture in Amsterdam and in his writings. For instance, invited people to walk on the water's edge to experience the pleasure of the in-between. A space that is neither sea nor land. (Ligtelijn, 1999, p. 10) Indeed, his poetics led him to use different architectural concepts such as 'place, boundary, and in-between' and qualities such as 'ambiguity, reciprocity, and reversibility'.(Ligtelijn, 1999, p. 14) To sum up, he approached his career in symbiosis with anthropology with the idea of re-humanizing architecture.

Client
Municipality of Amsterdam

Type
Orphanage

Architects
A. van Eyck

Period
1958-1960

Address
IJsbaanpad 3B,
Amsterdam, the Netherlands

Montessori School

17

Ai, Sari, Kahya, 2012

18

Lüchinger, 1987

The Montessori school in Delft is the first in a long line of school buildings designed by Hertzberger. The original plan, built from 1960 to 1966, consisted of a school of only 4 classes. In its final configuration, today's one, the school has 11 classrooms, 2 of which are for the nursery, a staff room, and a small gym. Indeed, the school was built in such a way that it could be extended through its corridor. Hertzberger defines this intermediate space as a 'learning street', as it is not a simple corridor, but also a street, a classroom, and a space for socializing. It crosses the building diagonally and its edges are characterized by the presence of L-shaped classrooms that extend into the corridor, creating nice niches for children. Everything, from chairs to niches, has been designed following the principles of the Montessori educational method. Indeed, according to Maria Montessori, intellectual curiosity, excitement and discovery require a continual interaction between the child and the environment.¹⁹

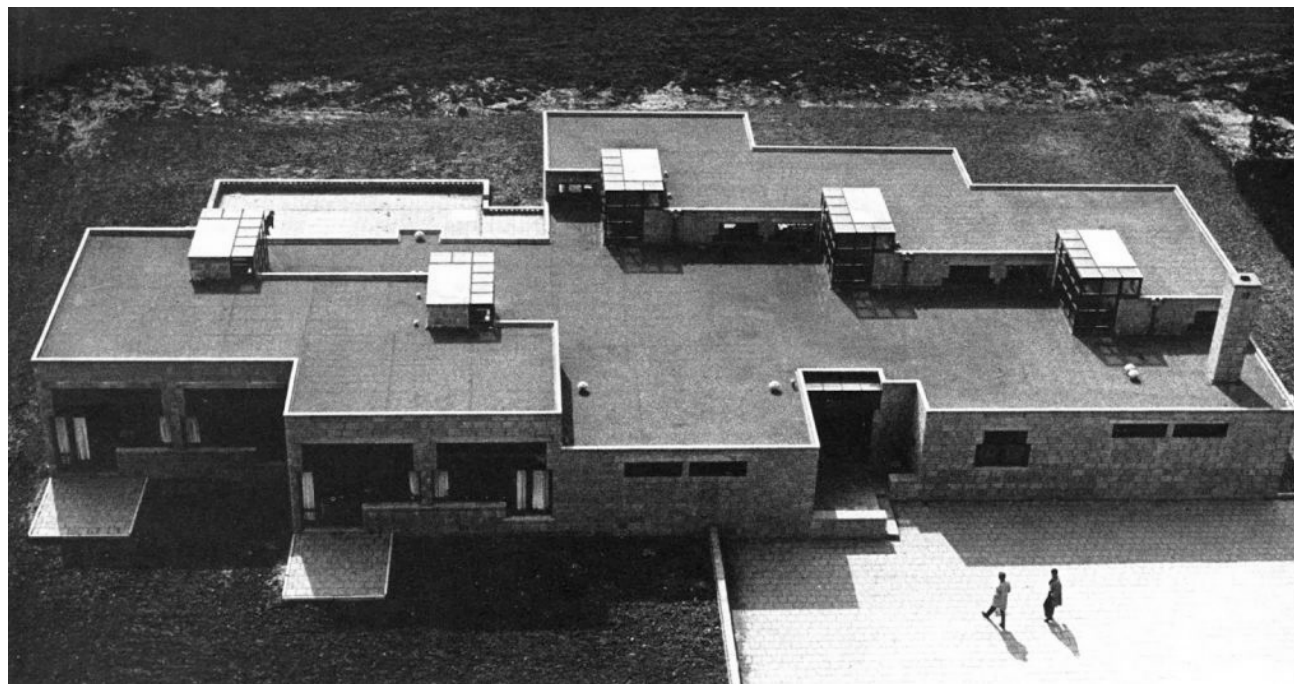
The design of the outdoor space is also interesting. The play area facing the entrance is not a closed courtyard, but an open public space close to the street. This allows the children of the neighborhood to use this space even when the school is closed.²⁰

Having been his first school, Hertzberger has taken care of it throughout his career just as a parent takes care of his child. During the various renovations, he designed new solutions, new furniture, changed the colors, and so on.

[3]

Montessori school.

SOURCE: Lüchinger, 1987





Herman Hertzberger

Herman Hertzberger (6 July 1932) grows up in the fertile ground of Dutch modernism. He was initially inspired by some principles developed by the architect Hendrik Petrus Berlage such as structural rationalism, the functionality of the materials, and the simplicity of the project. Later his architectural culture was enriched by van Eyck's research on African houses and by the anthropological texts of Levi-Strauss. (Hertzberger, 1991, p. 4) His interest in anthropology stemmed from the fact that immediately after graduating he was called by van Eyck to collaborate with the magazine 'Forum'. It was in that environment that Hertzberger enriched his knowledge. Indeed, he worked side by side for several years with the major protagonists of the international architectural scene of the twentieth century. He has traveled extensively throughout his career. Today as in the past, during his travels, he makes sketches and takes notes through the use of a large number of notebooks. (Hertzberger, 1991, p. 10) It is thanks to these trips that Hertzberger at a young age moved away from high-tech architecture to become increasingly interested in public reality and street life. Some of his observations on this issue were then published in a series of books titled 'Lessons in Architecture'. We see the results of these studies not only in some of his publications but also in his buildings. Indeed, for structuralists, the theory is never an end in itself, but a useful tool for designing.

Client

Delftse Montessorischool

Type

Kindergarten and primary school

Architects

H. Hertzberger, M. Kausen, R. Eichhorn

Period

1960-1966

Address

Jacoba van Beierenlaan 166,
Delft, the Netherlands

Bastille

19
Hengeveld, Strauven, Blom 2008,
p. 53

20
Alumni University of Twente, n.d.

In 1964 Piet Blom was commissioned by the University of Twente to design a refectory. The architect designed the building as a fort, without any connection with the outside. That's the reason why is called 'Bastille'.

The building represented a sort of protest towards the client. According to Blom, "*they made no effort whatsoever to choose a good location*".¹⁷

To overcome this problem, he then tried to obtain the complexity of the city inside the building. So, he designed every detail, from the balustrades to the stairs, in such a way that each space complemented the others well. The result was a labyrinth built on 13 different levels.¹⁸ Not only a canteen was built, but also a small theater, a speakers' corner, a disco, a cinema, a bowling alley, and some bars. Thanks to this chaos of spaces and functions, the building became like a small city populated day and night by students and professors. Towards the end of the twentieth century, due to the change in educational and working methods, the building was abandoned.

In 2003, after several years of disuse, the building was finally brought back to life thanks to a renovation carried out by the architect Robert Winkel.

[4]
Bastille.

AUTHOR: Centrale Technische
Dienst / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
BLOMf317 Foto's





Piet Blom

Piet Blom (8 February 1934 – 8 June 1999) gained notoriety while studying at the Amsterdam Academy of Architecture. Indeed, in September 1959, one of his academic projects entitled 'Let the cities be inhabited as villages' was published in Forum magazine. (Hengeveld, Strauven, Blom 2008, p. 7) His project was also used by van Eyck as an example to show in Otterlo, on the occasion of the last CIAM conference, in support of 'The Story of Another Idea'. Van Eyck chose it because it was a source of inspiration for a new approach to design. An alternative to the monotonous fragmentation of post-war reconstruction. Indeed, Blom in his academic project was trying to bring together architecture and urban planning with the aim of creating a new habitat for man. (Forum no. 7, 1959, p. 243)

Although van Eyck was his professor, Piet Blom said that "*van Eyck's courses were conceived in an informal design language*". It is thanks to this freedom of expression that van Eyck's students, such as Piet Blom, were able to develop their architectural thinking free from any method or style.

To conclude, observing Blom's architecture there is a strong use of geometry. A characteristic that, in the Netherlands, the homeland of Berlage and De Stijl, was present in many architects. (Hengeveld, Strauven, Blom 2008, p. 11) His extraordinary drawing ability coupled with his passion for geometry allowed him to create spatialities that for many architects are even difficult to imagine.

Client
University of Twente

Type
Refectory

Architects
P. Blom, R. Blom van Assendelft

Period
1967-1969

Address
De Hems 10,
Enschede, the Netherlands

EXPERIENCE OF SPACE

Today we live in a hyper-connected, hyper-fast, and hyper-scientific world, but also full of problems and contradictions. Indeed, running fast very often causes you to lose your bearings. A typical attitude of today's society is to do something without knowing where you are heading and for what reason. This is also true in the field of architecture.

The geometry of the new objects contradicts the geometry of life. People are no longer at the center of the project. As a result, people no longer recognize themselves in the objects and spaces that surround them, and therefore stop frequenting them. This is a problem of biophilia, or the innate tendency of human beings to seek connections with nature and other forms of life.²¹

This happens because generations of architects have learned an approach to architecture based almost exclusively on abstract design concepts. Although these new architectures can be very photogenic, the experience of standing next to such alienating forms is completely different.²² No attention is paid to people. No sign of experience of space.

The philosopher and writer Giordano Bruno, already in the sixteenth century pronounced the following words: *“If this science, which brings great benefits to man, will not help man to understand himself, it will end up turning against man”*. Moreover, as the art historian Kenneth Clark also argued, *“despite the recent triumphs of science, human beings do not seem to have changed much in the last two thousand years”*. Now more than ever this quote seems so true. As often happens in history, the unforeseen event of the covid-19 pandemic made us rediscover the importance of experiencing the city, its spaces and its people. We therefore still have a lot to learn from history. Indeed, the history of mankind teaches us the importance of appreciating the little things, such as the color of a room, the position of a seat, etc.

This is not a simplistic point of view. Indeed, according to the hierarchical theory of scales that constitute a complex system, the minor scales have a major influence on the larger scales.²³

21
Salingaros, 2015, p. 28

22
Salingaros, Pagliardini, 2009, p. 29

23
Salingaros, 2006, chapter 3

24

Earley, 2001

25

Hengeveld, Strauven, Blom 2008,
p. 15

The American writer Tony Earley in one of his books ²⁴ emphasizes the different perceptions that people can have in the same space, especially during the different phases of their life. For example, underlining how a corridor is able, thanks to its length, to stimulate children to run.

Come to think of it, who never ran down a corridor as a kid? It makes you smile if you think that a simple corridor can be much more interesting than many of the modern spaces designed by spending hours and hours in front of the computer. Using the words of Aldo van Eyck: *“The smart use of pencils will be no help at all. Only the heart will be. And who would still wish to maintain that the imagination is not to be found in the heart?”* ²⁵

These in short are the reasons that led to devote much of this thesis to the experience of space. In the next paragraphs, two short discussions on the theme of the ‘city’ and that of the ‘everyday’ will help to better understand what lies at the basis of our daily attitudes.



◀ [5]
Hallway.

AUTHOR: Machiel Botman / YEAR:
1989 / TITLE: Ijke redu / SOURCE:
<http://machielfotman.com>

Learning from the city

26

Lefebvre, 1996

The city has always been the subject of study by sociologists, philosophers, artists, architects, and urban planners.

27

Cullen, 1971, p. 8

In fact, how can anyone who cares about the well-being of people ignore this magnificent 'chaos'? A 'chaos' made up not only of systematic and necessary activities but also of unscheduled encounters, desires, and dreams^[6].

28

Dottorini, 2008

Henri Lefebvre defined the city as “...*place of desire, permanent disequilibrium, the seat of the dissolution of normality and constraints, the moment of play, and of the unpredictable.*”²⁶

29

Ligtelijn, 1999, p. 89

Among the countless scholars who have been interested in the theme of the city mainly from the point of view of perception, we can name Camillo Sitte, Gordon Cullen, Walter Benjamin and Christopher Alexander.

Camillo Sitte, urban planner and anthropologist, has provided us with a very interesting study of the Italian squares. His texts help to understand those phenomena that unconsciously make us appreciate the spaces of the historic city.

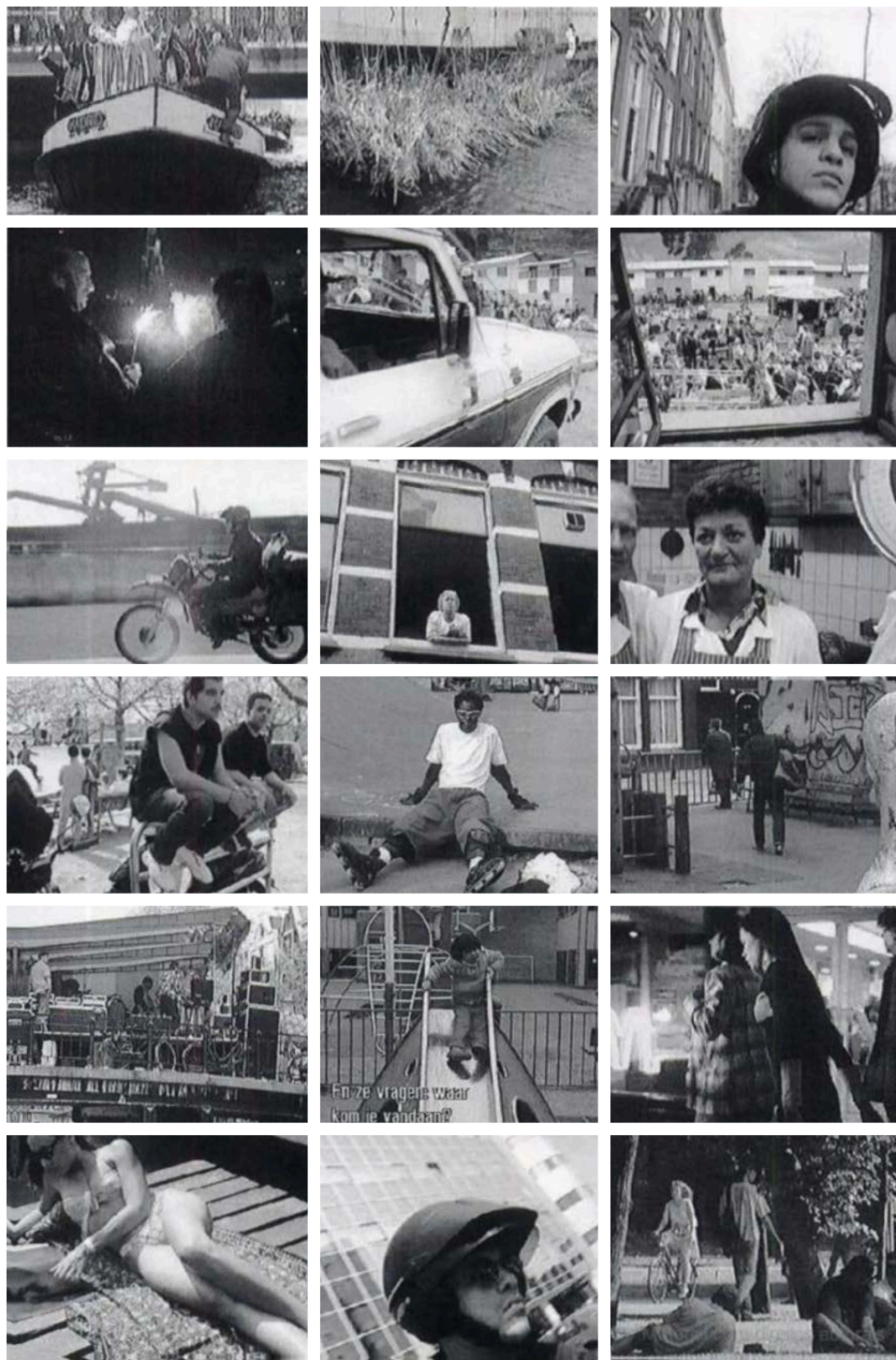
Gordon Cullen, architect and urban planner, coined the term 'townscape' to define the landscape of the city. He described the city as the place where the art of relationship is manifested. An art that cannot be grasped through scientific research, but with sight. Vision is not only useful, it is also capable of evoking our memories and experiences. Indeed, “*it is almost entirely through vision that the environment is apprehended*”.²⁷

The German philosopher Walter Benjamin, between 1925 and 1930 wrote a series of books dedicated to cities, trying to describe their shape through the specificity of his movement. According to him, the city can transform the character of the experience: it intensifies, stultifies, diminishes, fetishizes, and sequesters. Benjamin traveled to various foreign cities to make what he called “*the experience of getting lost in a labyrinth*”.²⁸ He also said that only “*those who have wisely lost themselves in a city can escape from this form of memory destruction which is progress*”.

Last but not least, Christopher Alexander. He is the author of the book 'A Pattern Language', a timeless resource about city patterns. Using the words of the Italian critic Luigi Prestinenza Puglisi, “*his studies on the interrelationships between shapes, patterns, space, and man remain an antidote against aesthetic design*”.

As it can be seen, there are numerous studies dedicated to cities. However, it is difficult to find links between these and the project of a new type of architecture and city. A breakthrough in this direction came thanks to Dutch structuralism. The following words of Aldo van Eyck mark this change:

“*The time has come to conceive of architecture urbanistically and of urbanism architecturally.*”²⁹



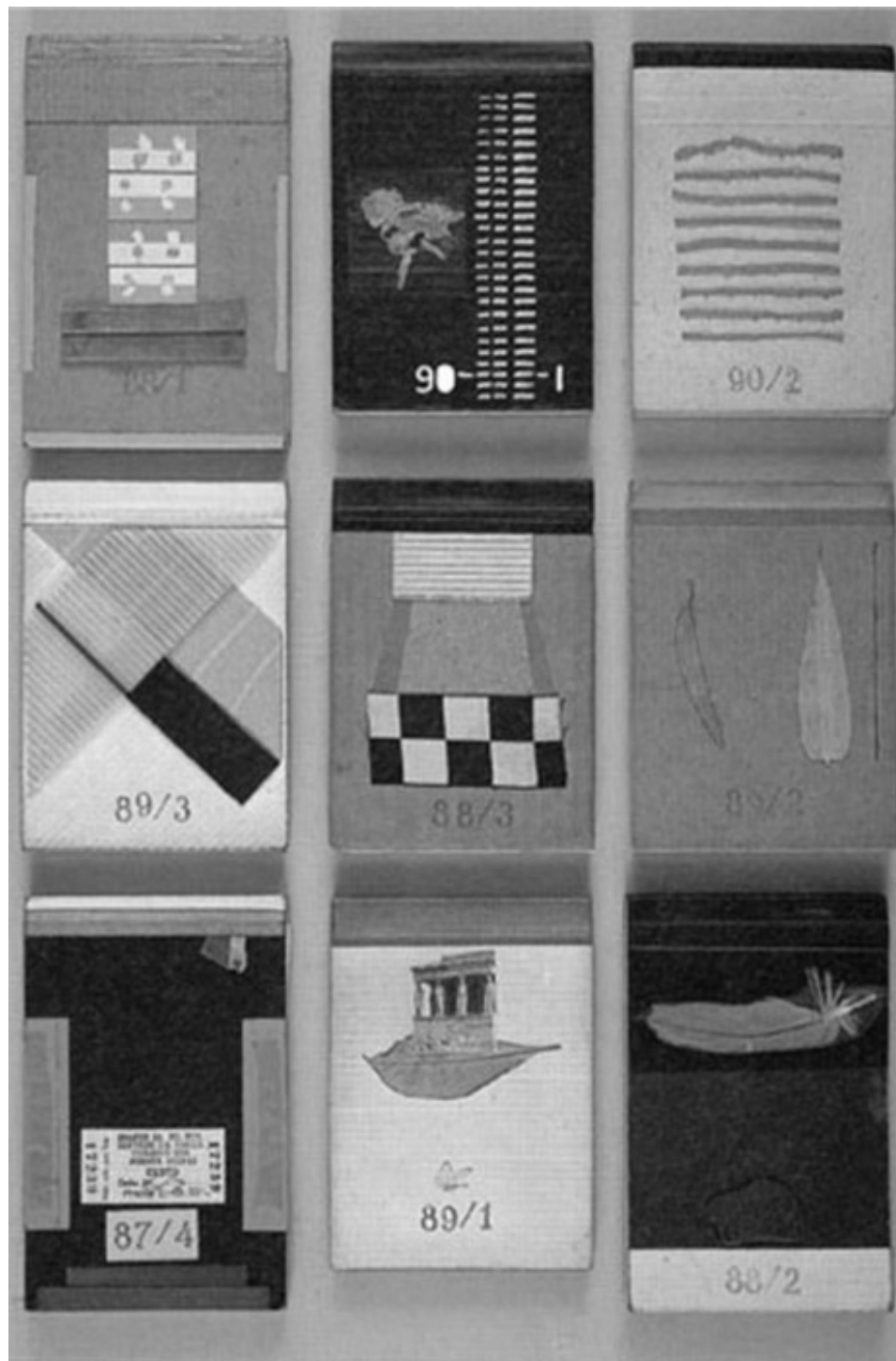
◀ [6]
Frames of everyday life.

AUTHOR: Johan van der Keuken /
YEAR: 1996 / TITLE: Amsterdam
Global Village / SOURCE: Hertzber-
ger, 2000, p. 152-153

Aldo van Eyck, like many others, has always had a great interest in cities, in the historic cities of Western culture as much as the vernacular organizations of archaic cultures.³⁰

However, the change he introduces compared to his colleagues at CIAM lies in considering the traditional city as a precious heritage, a constructed expression of human values. This did not mean replicating historical shapes. Van Eyck has always approached history from a modern point of view. According to him, “*the present must embrace the achievements of the past in order to acquire temporal depth and associative perspective*”.

The symbolic project of this approach is the orphanage in Amsterdam, conceived as a small town. Corridors become ‘streets’, interior lightning becomes ‘street lightning’, and so on. This ‘configurative’ approach to design was also adopted by other leading exponents of Dutch structuralism such as Piet Blom and Herman Hertzberger.



[7]

Herman Hertzberger's notebooks.

AUTHOR: Herman Hertzberger /
 YEAR: 2011 / SOURCE: Commune
 Design. <https://communedesign.tumblr.com/post/8715191796/herman-hertzbergers-sketchbooks>

Escape from the everyday

31, 32

Oxford Languages Dictionary

33, 35

Stevens, 2007, p. 26

34

Amendolagine, 2021

Life is not just rules, school, and work. Our days are interspersed with small or large moments in which we do other things: we eat, rest, play, etc.

The architect's task is also to design spaces for these moments. This paragraph will therefore illustrate the importance of having loopholes from the everyday, that is, from the ordinary and monotony that unfortunately we are surrounded by.

Regarding this, the experience of the game offers interesting ideas for the transformation of everyday spaces into new shapes and experiences.

Indeed, it takes very little to play. Even just a doorbell^[8] and a little imagination. However, these human phenomena are as simple to practice as they are difficult to study and turn into a shape. First of all, it is essential to highlight some definitions:

‘EVERYDAY’

- *The activities and experiences that constitute a person's normal existence.*³¹

The definition is not surprising. Indeed, most of our time is occupied by numerous repetitive activities such as eating, washing hands, etc.

On the contrary, the term ‘play’ is defined as:

‘PLAY’ from Oxford Languages:

- *Engage in activity for enjoyment and recreation rather than a serious or practical purpose.*³²

This definition emphasizes the differences between ‘play’ activities and ‘serious’ ones. In a way, we could say that the term ‘play’ summarizes the concept underlying many other activities, such as resting, lazing, etc. In general, the term ‘play’ means those behaviors that differ from everyday normal, conventional, expected, calculated, and constant. Playing is more related to something unusual, special, and different.³³

Surprisingly, in the definition of ‘play’ given by the Italian journalist Anna Amendolagine, we also find the term ‘bitterness’. Indeed, when “*the game ends, you have to go home, to homework, to work, to normality*”. This is why the game brings both happiness and bitterness.³⁴

These definitions are fundamental, as they allow a better understanding of those logical arguments that can lead architects to a reconsideration of everyday spaces. Using the words of the urban scholar Quentin Stevens, we could use these themes as “*a rhetorical device to focus attention on uses of public spaces which are not practical and other than what the spaces were designed for*”.³⁵

The goal is to reconsider everyday spaces in such a way as to stimulate and facilitate unexpected behaviors [11]. Spaces that act as an escape from the ordinary.



[8]
Some children ring doorbells as a
joke.

AUTHOR: Johan van der Keuken /
YEAR: 1965 / TITLE: Beppie / SOURCE:
Nederlands Instituut voor Beeld
& Geluid. https://www.youtube.com/watch?v=ucGS-fLzC_E

[9]

The Dutch structuralists traveled extensively, including in Italy. For instance, if we look at Hertzberger's notebooks we can find several sketches and notes of Italian squares and streets.

Images 9 and 10 are those of my great uncle Pepi Merisio, an iconic Italian photographer whose images have, over time, established him as the leading author of his kind within the Italian scene of art. His photographs act as a glue between my Italian culture and the Dutch one that is treated in this thesis.

AUTHOR: Bepi Merisio / YEAR: 1983
/ TITLE: Rione Stella, Napoli



The humanization of architecture, to which structuralism aimed, is also achieved through the presence of diversity in normality, change in constancy, and so on. It is through the design of these 'Twin Phenomena' that emotions (like curiosity, surprise, etc.) can be stimulated. These liveable spaces, which today we struggle to conceive, were in the past an integral part of our cities. Indeed, once you could play freely in the street.^[9, 10] Today this is no longer possible.



◀ [10]
AUTHOR: Bepi Merisio / YEAR: 1965
/ TITLE: Piazza Navona, Roma

The pitfall of social engineering

36

Frausto, 2013, p. 1

37

Pagliardini, 2010

38

Strauven, 1998, p. 320

39

De Vries, 2005

Today there are two currents of thought regarding structuralism. On the one hand, some admire it for its social, cultural, and intellectual ambitions. On the other hand, some define it simply as ‘architecture of good intentions.’³⁶ This paragraph focuses on the second one.

Many critics have accused Dutch structuralism of practicing social engineering. There is no worse criticism than this for a movement that had the humanization of architecture at heart. Social engineering is a kind of social utopia, which considers mankind as an accessory of the architect. A parody of real life.³⁷

Those accused of social engineering are therefore reproached for wanting to create an ideal world by following theories that, however, are not reflected in the real world. According to critics, it is precisely in the passage from the idea to its concrete realization that Dutch structuralism made mistakes. The desire for spontaneous architecture is then transformed into a series of situations predetermined by the architect. Here you have to play! Here you have to run! Here you have to chat with your friends! Jacobus Johannes Vriend was one of the major critics of the van Eyck-designed orphanage. Although in his first article from 1960 he emphasized the presence of a poetics of space, in subsequent articles he wrote that “*the architect had stubbornly pressed ahead with his’ will to form ‘at the cost of everyday usability’*.”³⁸

Furthermore, he criticized van Eyck of designing through an idealized image of the human being. Structuralists were also criticized for a large number of functional defects. These defects have also very often affected the possibility of the reuse of buildings^[11, 12]. For example, the Bastille in Enschede stood unused for many years. In 2005, during a debate on the future of the Enschede university campus, Robert Winkel motivated the disuse of the Blom building by saying that “*today students no longer have the time to familiarize themselves with the labyrinth of corridors, stairs and connected spaces*.”³⁹

Instead, the Montessori school in Delft designed by Herman Hertzberger, over the years has required several maintenance interventions due to the danger or poor functionality of some architectural solutions.

However, this thesis focuses on another current of thought, namely the one that appreciates its social, cultural, and intellectual ambitions. If Dutch structuralism is still being studied today, it is because of its obsessive research of ‘new ways of doing’. Indeed, nowadays the role of the architect is changing, and many people are looking for alternative ways of doing architecture.



◀ [11, 12]

The burgerweeshuis when it was still abandoned.

AUTHOR: Erwin Van Amstel / YEAR: 2016 / SOURCE: Failed Architecture. <https://failedarchitecture.com/orphan-city/>

AUTHOR: Marko Milovanovic / YEAR: 2013 / SOURCE: <http://www.markomilovanovic.com/2014/11/amsterdam-orphanage-aldo-van-eyck.html>



BOUWNDARY

‘BOUNDARY’

- *Something that indicates bounds or limits, as a line.*

Borders set limits. And it is through the definition of these limits that space is created. This is mainly because human beings perceive space as an ‘interior’. It is not wrong to say that space exists only if there are people. We, as human beings, are always looking for a space that surrounds us. Space is that territory in which I can define myself as ‘inside’ or ‘outside’, ‘here’ or ‘there’, and which divides ‘me’ from ‘you’, ‘we’ from ‘you’. This is a phenomenon that derives from our evolutionary history. It is a natural act of self-positioning.⁴¹

Boundaries, although they set limits to what people can see, what they can do, and where they can go, they also offer freedom of interpretation.⁴² Indeed, they can also become catalysts for unplanned, creative and transgressive behaviours. To give some examples, a low wall can be used for seating while a disabled ramp can become a track for skaters. These borders, if well designed, create the ideal environment for the development of the many activities that characterize mankind. It is precisely the presence of the unexpected and the unplanned that differentiates what we call ‘humanized architecture’ from ‘social engineering’.

‘BOUW’

- *The art or business of putting up (houses etc.)*

- *(A way of) constructing or putting together*

The term ‘bouwndary’ is a play on words between the Dutch term ‘buow’ and the English one ‘boundary’. Indeed, in the second half of the twentieth century, the theme of the boundary was addressed by some Dutch architects in a way that was as interesting as it was revolutionary for the time. To bring architecture closer to the world of human beings, they returned to observe and study the city. It is precisely from the study of it that in their ‘way of doing architecture’ concepts like those of boundary, perception, experience, etc. emerged. So, if we talk about ‘bouwndary’ we are not talking about a simple boundary, but more precisely we are talking about the Dutch art of building spaces for people.

40

Oxford Languages, n.d.

41

Loidl, Stefan, 2014, p. 48

42

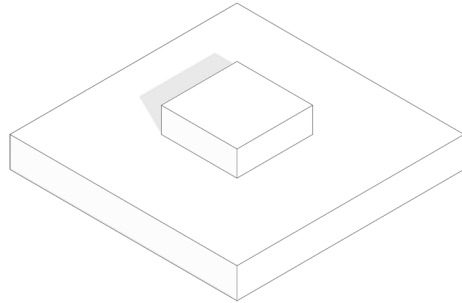
Stevens, 2007, p. 114

Catalogue

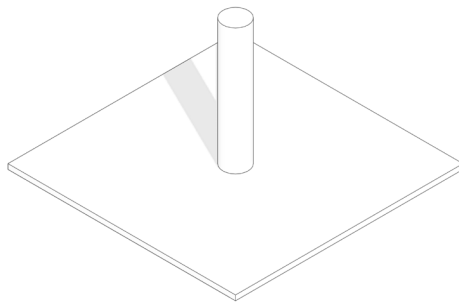
This is the final section of the thesis where theory and design references come together to form a catalogue.

The theoretical part is mainly based on literature that comes from the same authors of the architectural works analyzed. This literature is then accompanied by a series of notions of anthropology, sociology, biology, and nature. The Dutch structuralists were transversal figures, namely, they were also interested in other disciplines beyond architecture. Regarding the design references, they were chosen from the following case studies: Aldo van Eyck's Burgerweeshuis (pp. 18-19), Herman Hertzberger's Delftse Montessorischool (pp. 19-20) and Piet Blom's Bastille (pp. 20-21). The catalogue structure facilitates the reading of a large number of contents (texts, images, drawings, and archive sketches) through a division into nine typologies of 'Bouwndary'.

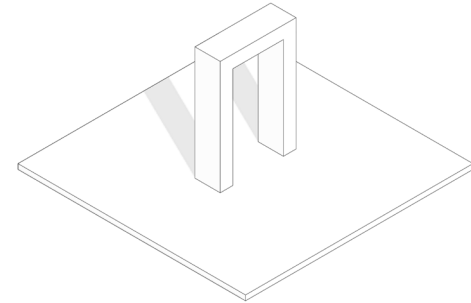
Focal point p. 42



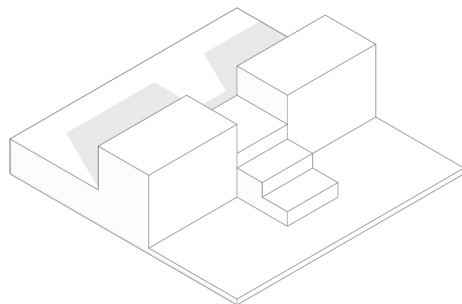
Column p. 48



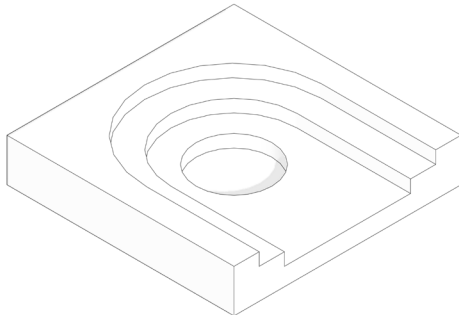
Gateway p. 54



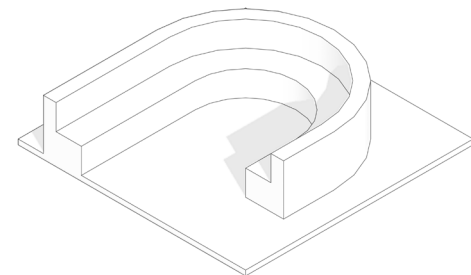
Narrow p. 60



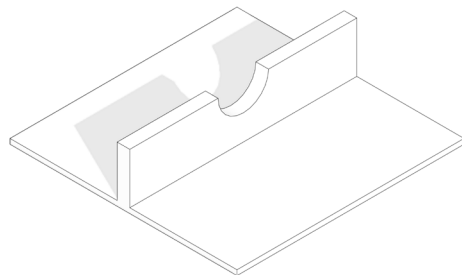
High place p. 68



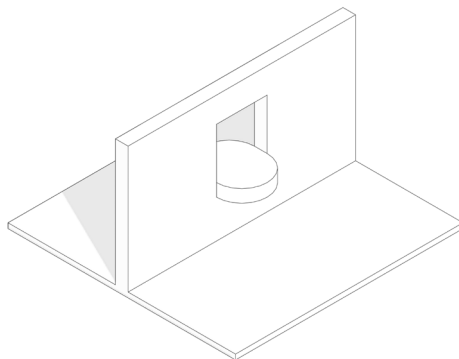
Enclave p. 74



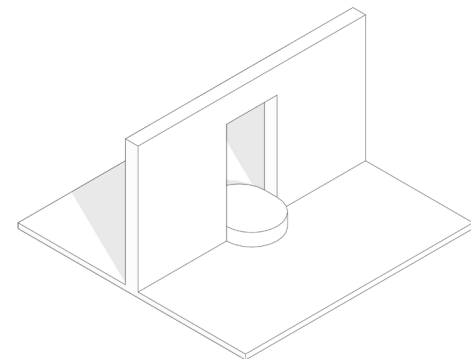
Edge p. 80



Opening p. 88



In-between p. 96



Focal point

43

Loidl, Bernard, 2014, p. 91

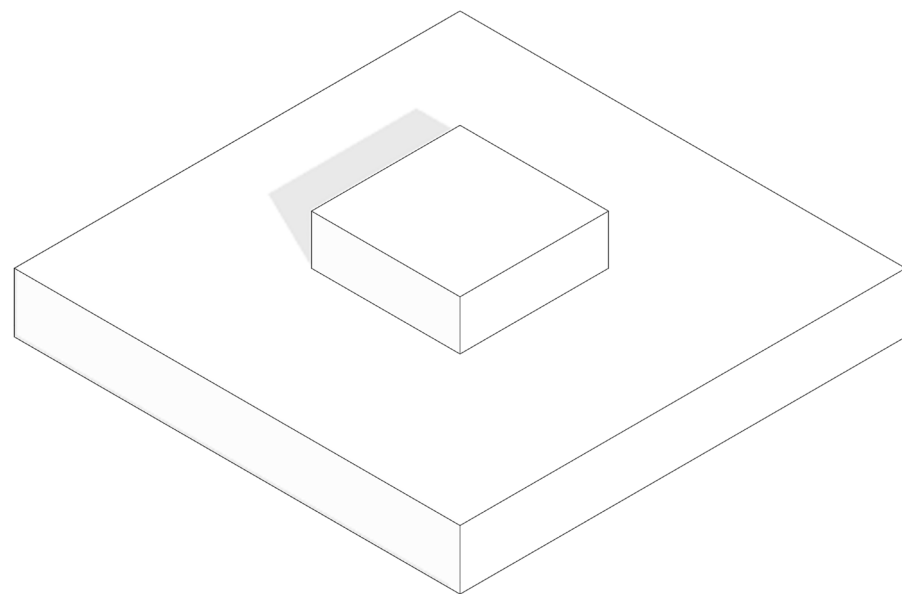
44, 45

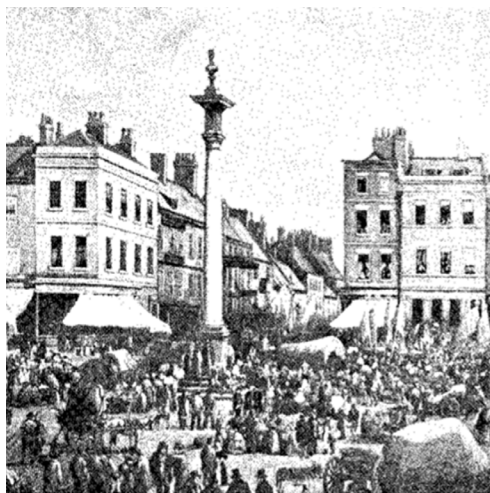
Alexander, 1977, p. 606

46

Cullen, 1971, p. 26

Focal points strengthen, change or create spatial situations. They are “attractors”. Focal points are anchorage and orientation points for our movement, our looks, our behaviour.⁴³ On the contrary, a space without a middle is quite likely to stay empty.⁴⁴ This is because people are always looking for connections with their surroundings. Also, we know that people tend to stay in a position that protects their back. It is for this reason that many people prefer to stay on the edges.⁴⁵ We can easily find focal points in the streets or squares of our cities in the form of fountains, trees, monuments, etc. It is the focal point which crystallises the situation, which confirms with magnificent clarity ‘Stop looking, this is the spot.’⁴⁶





[13]
Focal point.

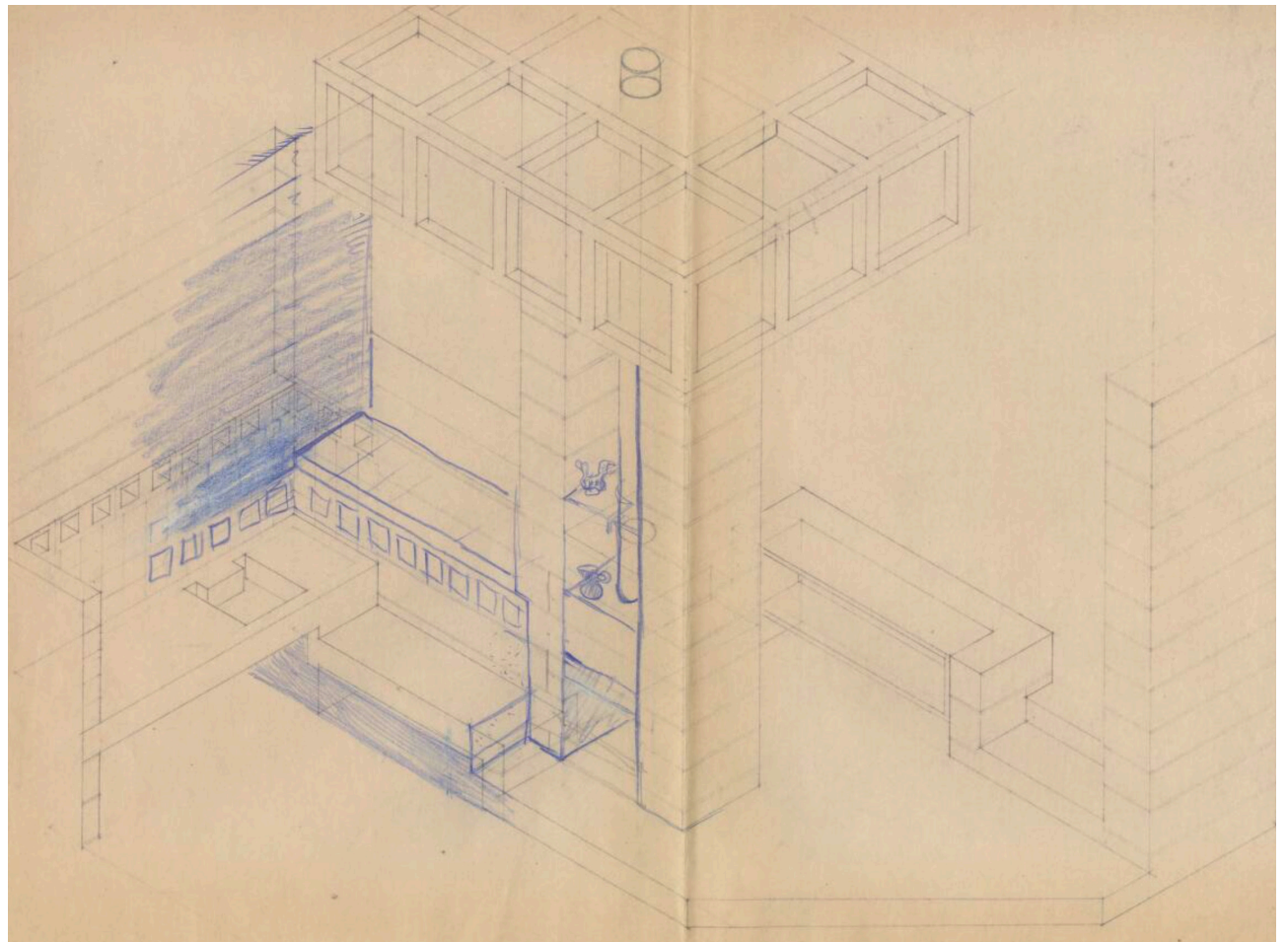
AUTHOR: Gordon Cullen / YEAR:
2013 / SOURCE: Cullen, 1971, p. 26

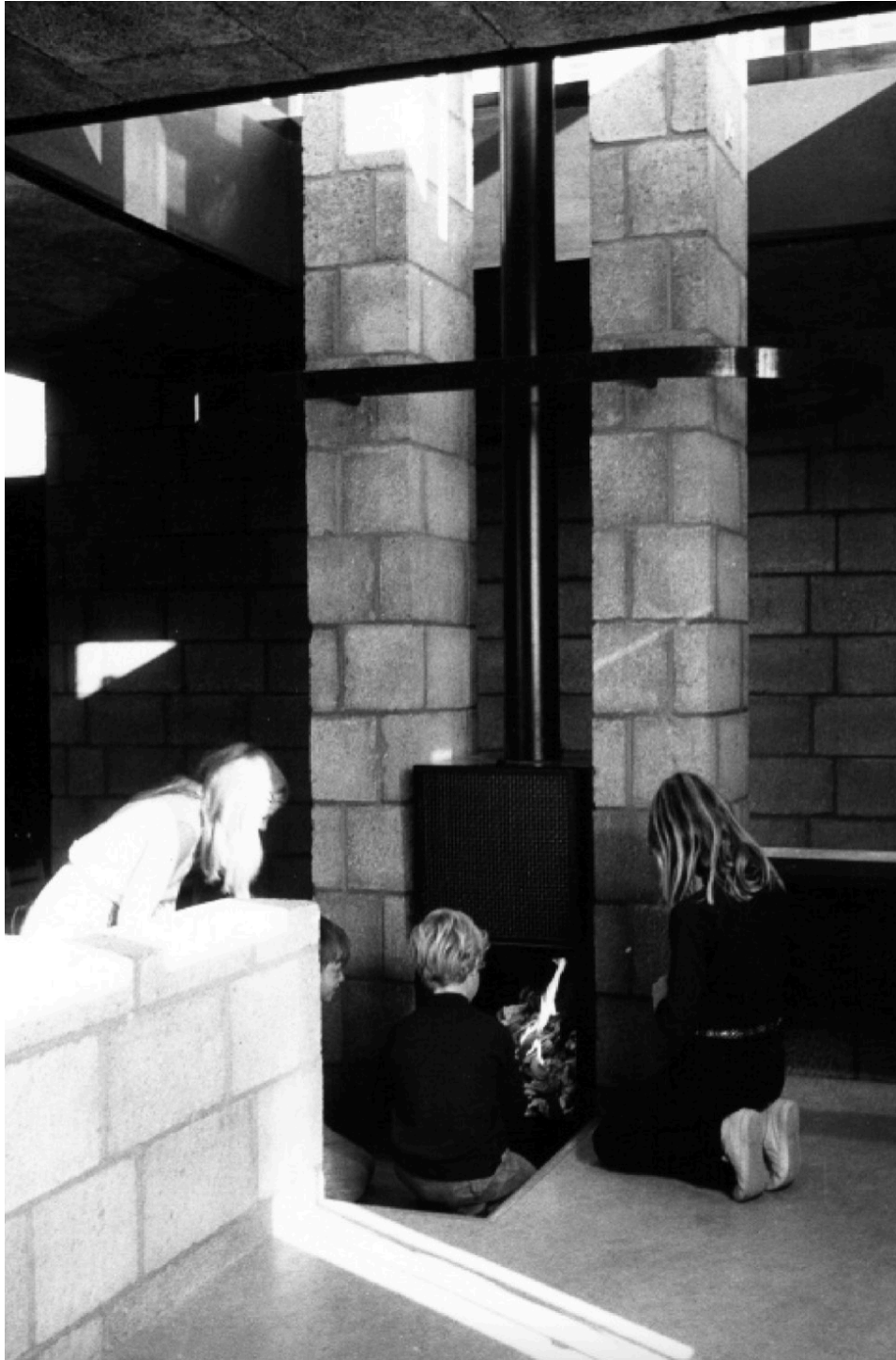
In the Montessori school in Delft this theme is recurring. For example, in the handicraft room, there was what we could define as the focal point par excellence: the fireplace. The fireplace has always symbolized the heart and soul of the house. Indeed, Hertzberger's goal was to make the school like a 'second home'. Children could sit around the fireplace^[14, 15] and carry out some activities together, such as baking clay and cooking bread. Unfortunately, during one of the school renovations, this fireplace was removed for safety reasons. Perhaps today this space is safer, but there is no longer any emotion, adventure, or discovery. The experience of space has been lost.

[14]

Fireplace. Montessori school.

AUTHOR: Herman Hertzberger /
YEAR: 1969 / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
HERT.1 10344493 Uitbreidingen La-
gere Montessorischool, Jacoba van
Beierenlaan 166, Delft, 1968-1970





[15]
Fireplace. Montessori school.

SOURCE: Hertzberger, 2008, p. 91

[16]

Podium block. Montessori school.

SOURCE: Hertzberger, 2008, p. 95



Fortunately, the other focal point of the school remained intact: the podium block. The strength of this simple block is its permanent immobility, through which it stimulates children.⁴⁷ Some walk around it, others sit on it, yet others use it as a stage. Hertzberger in an interview⁴⁸ revealed that the client one time criticized the position of the podium. Hertzberger answered by saying that “it doesn’t always work, but sometimes it does” and had it built. In fact, despite its immobility, it is flexible. “It is flexible in the sense that people will make different associations with it.”⁴⁹ The podium does not tell children what to do, it lets itself be interpreted^[17]. But that’s not all; inside the block, there is also a set of wooden elements that allow children to enlarge the podium making it a bigger stage.

47

Lüchinger, 1987, p. 52-53

48, 49

Hertzberger, 2013

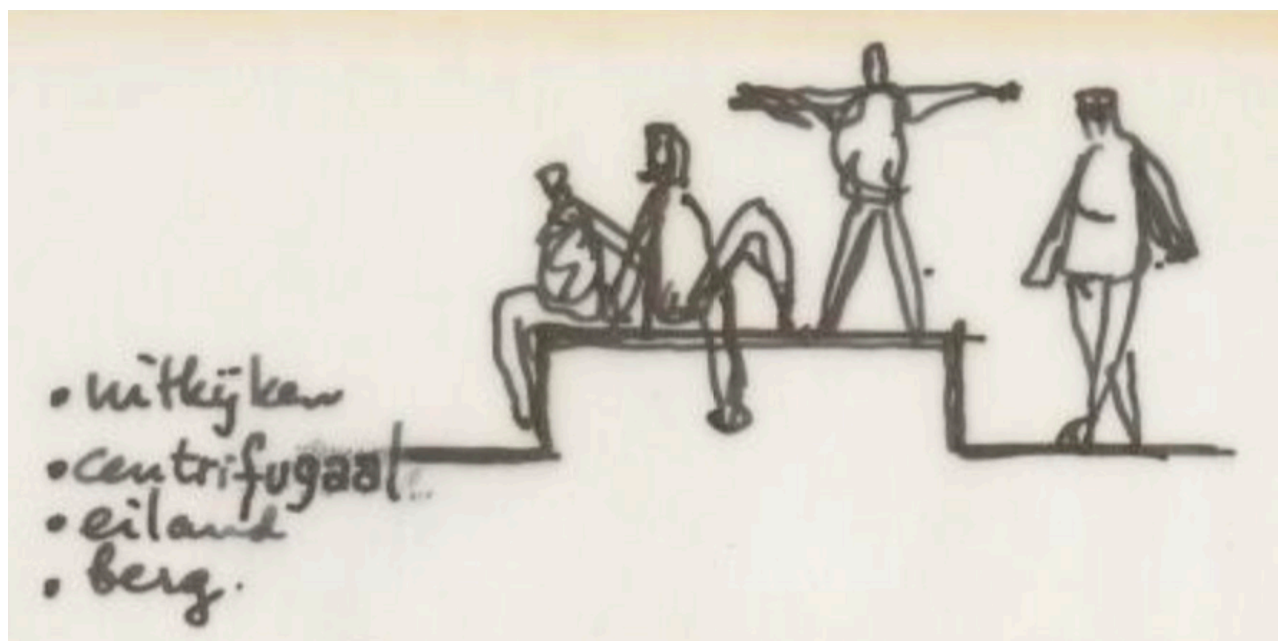
associaties
betekenissen
Symbolen



[17]

In these sketches Hertzberger writes about associations, meanings, symbols (associaties, betekenissen, symbolen). For example, the podium can be perceived as an island (eiland) or a mountain (berg).

AUTHOR: Herman Hertzberger /
YEAR: 1970 / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
HERT.1 10344493 Uitbreidingen La-
gere Montessorischool, Jacoba van
Beierenlaan 166, Delft, 1968-1970

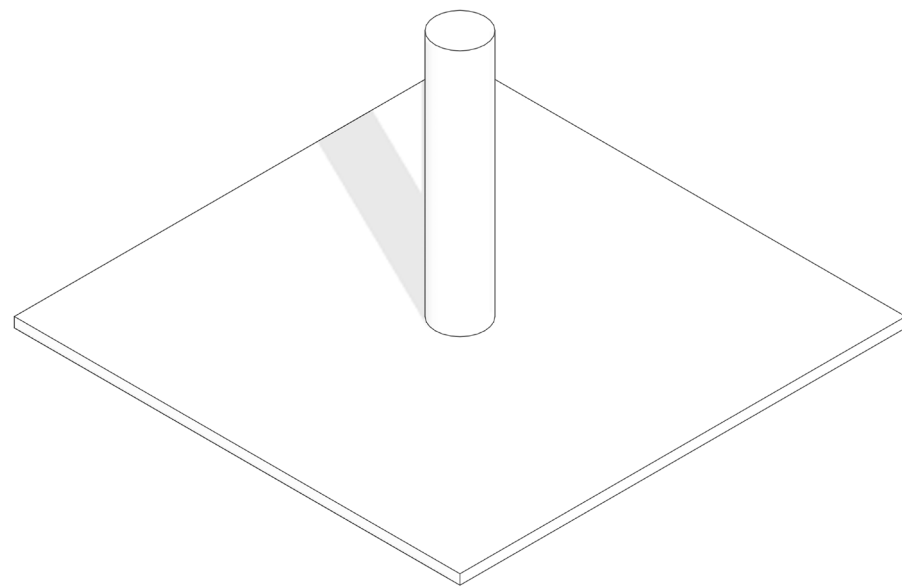


Column

50

Thiis-Evensen, 1987

In general, the column is perceived by people as an element that provides safety. Indeed, if the column gives way, both it and whatever it supports collapses and crushes us.⁵⁰ However, although all columns have the same support function, there are great perceptual differences between a circular and a square one.





[18]

Each of the countless columns of Bernini's Piazza San Pietro in Rome has a square base large enough for one to sit on quite comfortably. These multiple 'seats' offer informal hospitality to everyone, even when the rest of the piazza is deserted.

TITLE: St. Peter's Square, Rome /
SOURCE: Hertzberger, 2005, p. 185

51

Thiis-Evensen, 1987

52

Strauven, 1998, p. 302

The circular columns, adopted by van Eyck in the orphanage, appear more robust due to their closed shape. A shape that gives a sense of freedom to the surrounding environment. Moreover, the curved surface conveys an impression of concentration, a circling around a central point.⁵¹

In this regard, the orphanage provides a magnificent example. A simple column surrounded by a circle drawn on the floor stimulates the children to run around it.^[19]

In the orphanage, the topic of the column was addressed through different solutions. ^[20, 21, 22, 23]

Here the column is anything but an obstacle.⁵²

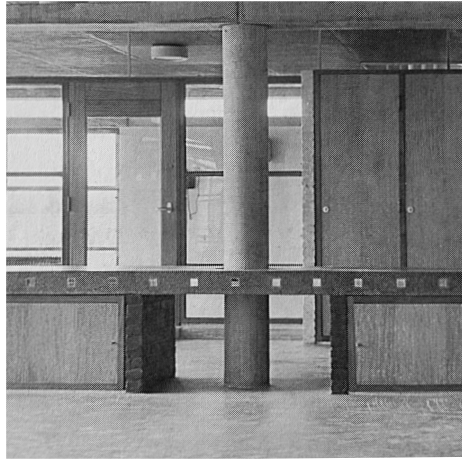
In a children's department, for example, the column marks the center of a small seating area. Another example is a column that rises in the middle of a small circular pool. Similarly, another column is set in the middle of a worktop.

[19]

Column. Burgerweeshuis.

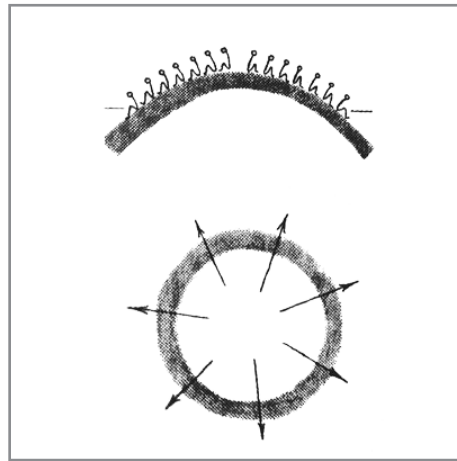
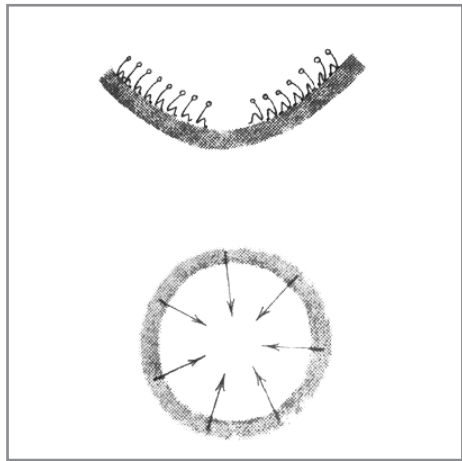
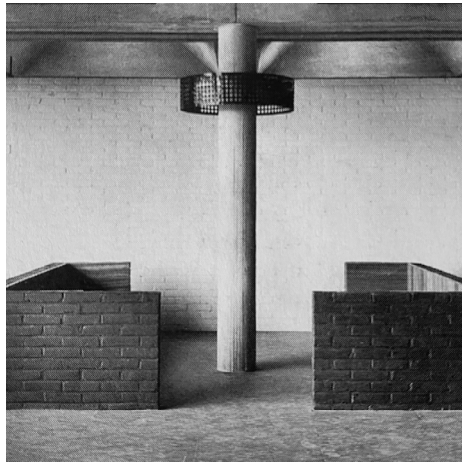
AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999





[20, 21, 22, 23]
Columns. Burgerweeshuis.

AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999



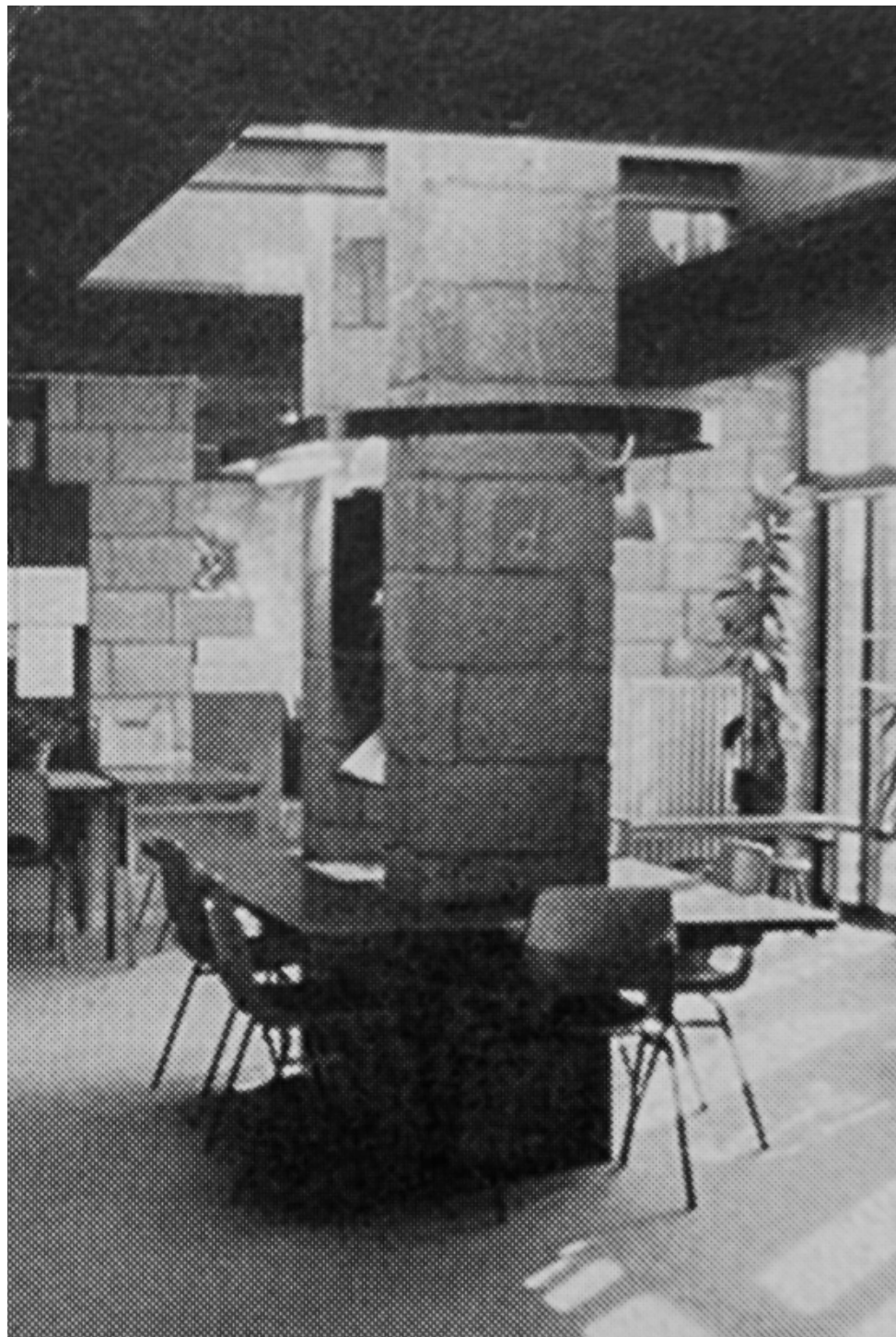
[24, 25]
Two kinds of centrality.

AUTHOR: Aldo van Eyck / YEAR:
1965 / SOURCE: Ligtelijn, V., Strau-
ven, F. (2008), *Collected articles
and other writings, 1947-1998*. SUN.
Amsterdam.

[26]

Reading column. Montessori school.

SOURCE: Lüchinger, 1987



On the contrary, the square columns, adopted by Hertzberger in the Montessori school, have a composed shape. A shape that directs people in space. Indeed, in approaching a square column we encounter a mass which, if it does not stop us completely, leads us along beside it in a definite direction.⁵³

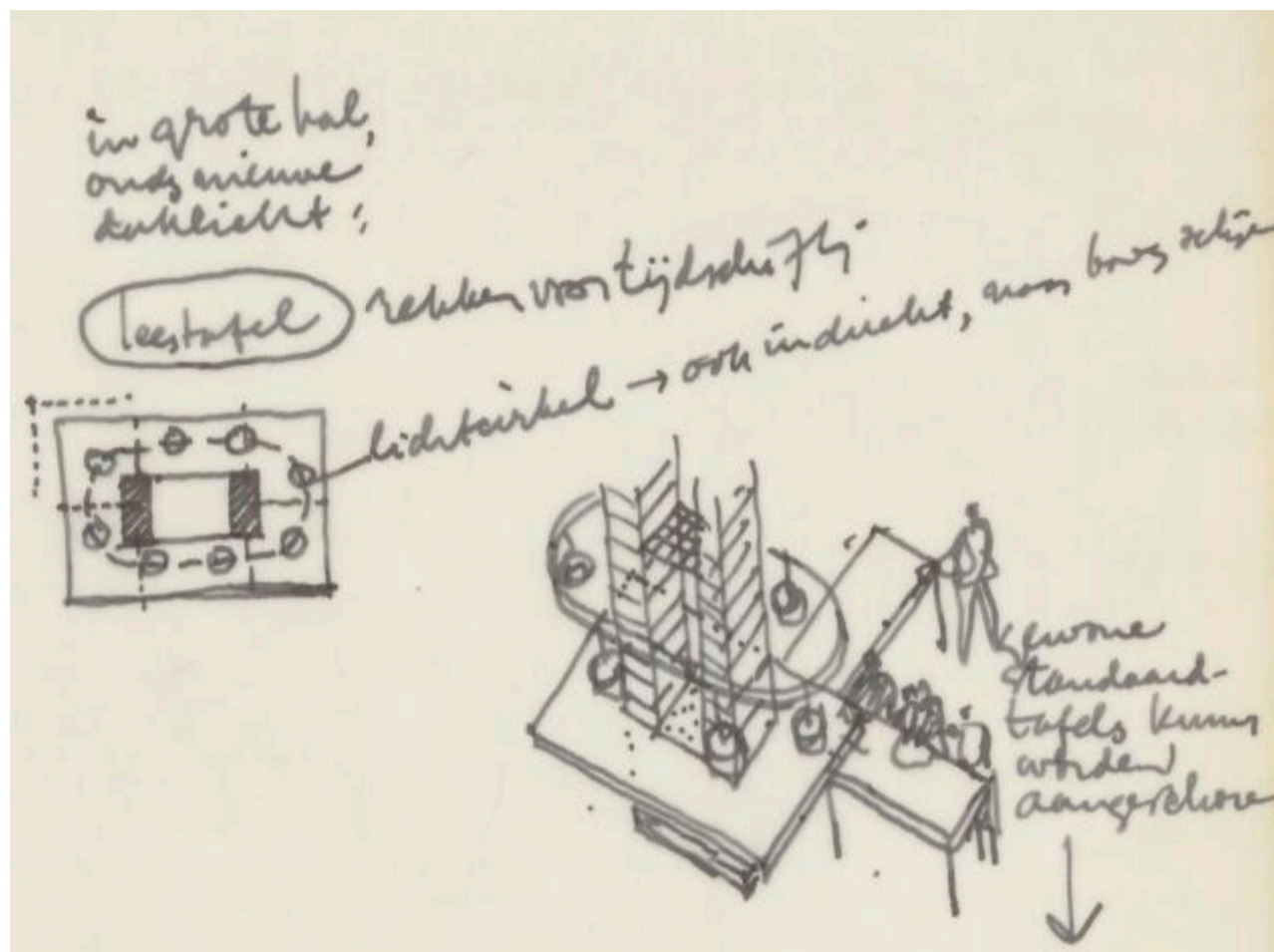
This type of column also offers the opportunity to create a stopping place. Hertzberger, for example, used a column in the learning street to do just that. As you can see in the image on the left^[26], he placed tables and chairs around it. In this way, the column becomes an island, a kind of small house that can be approached from all sides. This gives you objects in space, built structures that divide up and so articulate the space around them.⁵⁴ Furthermore, being in the center of the learning street, this space generates that magnetic effect capable of drawing attention.

53

Thiis-Evensen, 1987

54

Hertzberger, 2008, p. 88-89



[27]

Sketch of the reading column. Montessori school.

AUTHOR: Herman Hertzberger /
YEAR: 1969 / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
HERT.1 10344493 Uitbreidingen La-
gere Montessorischool, Jacoba van
Beierenlaan 166, Delft, 1968-1970

Gateway

55

Arnheim, 1974

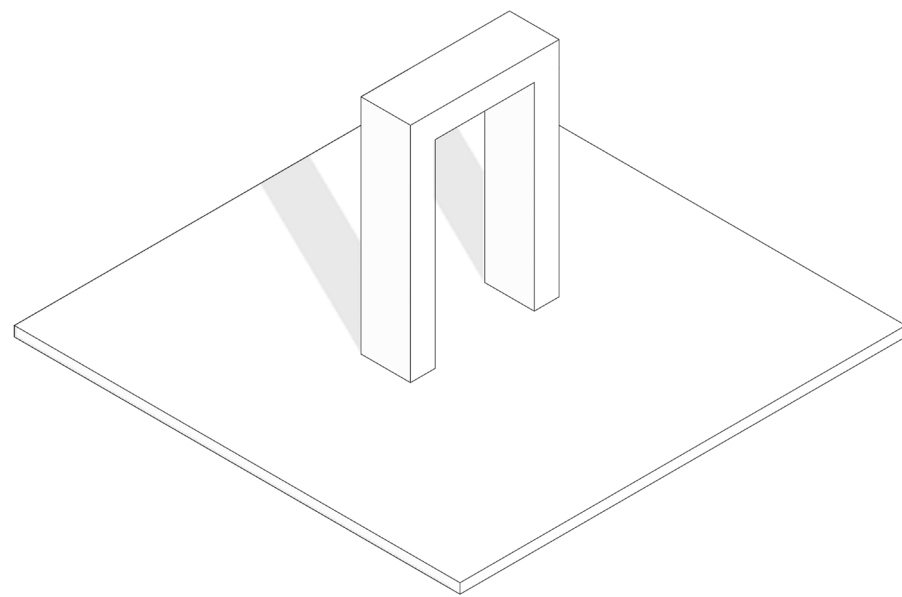
56

Alexander, 1977, p. 277

Each person, unconsciously, perceives the space by parts. This is because the human eye is unable to understand the whole at the same time. In support of this claim, Rudolf Arnheim in his book “Art and Visual Perception” demonstrated, through a series of simple drawings, how our eye tends to see things in a simplified way.⁵⁵ It is for this reason that human beings see the city as a collection of neighborhoods, streets, buildings, and so on.

But what is it that allows us to perceive the different parts of space? They are the boundaries. They often exist only in people’s minds. However, they are sharper, more vivid, more alive, if they are physically present in the world through a ‘something’. It can take different forms: a row of trees, a bridge, a portico, a portal, etc.

Regarding this, Christopher Alexander in his book ‘A Pattern Language’ argued the importance of “*whenever possible, emphasize the feeling of transition for the person passing through the gateway, by allowing change of light, or surface, view, crossing water, a change of level.*”⁵⁶





[28]

At first glance, the wall seems to belong entirely to the church, as the five identical, symmetrically placed entrances suggest. However, closer inspection reveals that the church in fact has only four doors, the fifth giving access to the Via Roma.

TITLE: Piazza Ducale, Vigevano, Italy / SOURCE: Hertzberger, 2000, p. 225

[29]

Gateway. Burgerweeshuis.

AUTHOR: Violette Cornelius / YEAR: 1961 / TITLE: Burgerweeshuis aan het Ijsbaanpad, naar ontwerp van Aldo van Eyck / SOURCE: Stadsarchief Amsterdam / ARCHIVE COLLECTION: Historische foto-opdrachten



Van Eyck used a very simple architectural language for the design of portals.

There are two in the orphanage: one is situated in the party room^[29] while the other one marks the entrance of the bicycle parking^[30]. These simple portals demonstrates how much boundaries influence our behaviours. Indeed, the stylized shape of a door has the power to make us imagine a kind of boundary. On one side of the door you are 'here', on the other side you are 'there'. Here we celebrate, there we rest easy.



◀ [30]
Bicycle parking, Burgerweeshuis,
AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999

The poetics of these elements comes from van Eyck's ability to see beyond functional aspects. A door is not just an element that is 90 centimeters wide and 210 centimeters high. Indeed, it also introduces themes such as those of the threshold and passage. According to van Eyck: "*modern architecture must interiorise through its very form the perceiving, moving and relating subjects*". In this way, buildings are "*brought to life by their inhabitants*".⁵⁷

57
Teysot, 2013, p. 162

58

Alexander, 1977

59

Alexander, 1977, p. 581

60

Strauven, 1998, p. 288-289

61

Ligtelijn, 1999, p. 89

Unfortunately, buildings are often hostile to dialogue with the city. They operate essentially as private territory for the people who are inside.⁵⁸ Conversely, van Eyck wanted to create a strong link between the orphanage and the street. This connection is located on the north side of the building, the one overlooking Ljsbaanpad street. On this side, two wings of the building extend towards the street, leaving space in the center for a large gesture of invitation: the portico. Indeed, the portico allows you to glimpse from the street the large square that precedes the entrance of the building. An architectural solution that clearly comes from the past.⁵⁹ The architectural theorist Christopher Alexander defines the space created by the arcades as: “*an ambiguous territory between the public and the private world that makes buildings more friendly.*”

According to van Eyck, the portico “*appears to invite children from the surroundings to come and seek contact with those who live in the Orphanage.*”⁶⁰ In this way the transition between exterior and interior is gradual. This is crucial, especially for an orphanage. Indeed, leaving home is a very traumatic moment in the life of these children. The advantage of these blurred boundaries is to create a continuity of spaces that can mitigate the anxiety that these transitions cause.⁶¹

[31]

The portico seen from the internal square. Burgerweeshuis.

AUTHOR: Frans Busselman / YEAR: 1989 / TITLE: Entree van het Burgerweeshuis van architect Aldo van Eyck / SOURCE: Stadsarchief Amsterdam / ARCHIVE COLLECTION: Foto's





[32]

The portico seen from below.
Burgerweeshuis.

AUTHOR: Arsath Ro'is, J.M. / YEAR:
1967 / TITLE: Ingang nieuw Bur-
gerweeshuis / SOURCE: Stadsarchief
Amsterdam / ARCHIVE COLLECTION:
Foto's eigen fotodienst

Narrow

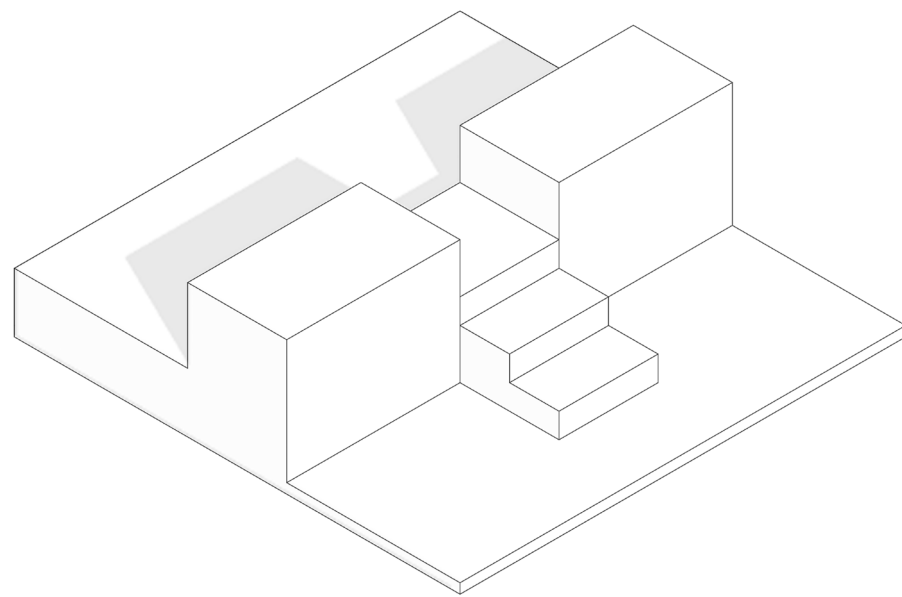
62
Hertzberger, 2005, p. 63

63
Dodi, 1953, p. 33

64
Cullen, 1971, p. 45-46

Historic cities are characterized by a great variety of small, narrow and irregular spaces. By comparison, modern spaces are huge and perfectly regular in their shapes. In historic cities, people feel comfortable. Oppositely, in modern cities, everyone is bothered by the proportions and geometry of places. This happens because today everything is designed quickly in front of a screen. The impeccable geometric regularity that architects aspire to today has nothing to do with people's experience of space. Furthermore, as Herman Hertzberger argues, "*large spaces resemble 'deserts' simply because they are too empty*".⁶²

Our predecessors, on the other hand, were completely indifferent to the problem of systematic regularity.⁶³ The narrow and irregular passages of the historic cities come from a design 'on the field' and from the gradual historical development of the city. According to Gordon Cullen, one of the qualities of these spaces is that of generating "*a sense of unaccustomed constriction and pressure*". *It is through the sequence of large and narrow spaces that our sense of orientation is stimulated.*⁶⁴





[33]
Stairs designed by Alvaro Siza.
Salemi, Italy.

AUTHOR: Roberto Collova

[34]

Narrow passage with stairs.
Burgerweeshuis,

AUTHOR: Roos Aldershoff Fotografie
/ YEAR: 2018 / SOURCE: FRAME. <https://www.frameweb.com/project/bpd-burgerweeshuis-amsterdam>





◀ [35]

Narrow passage with stairs.
Burgerweeshuis,

AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999

It is not surprising that Aldo van Eyck also addressed the topic of this paragraph. Indeed, the city-house is made up of a complex articulation of large and small spaces. Thanks to this articulation of the space, the building and the furniture acquire a reciprocal meaning.⁶⁵ The space illustrated in the images ^[34, 35] is an example. Some steps pass through a piece of furniture creating a narrow passage. Additionally, this passage is highlighted by the presence of two totem-shaped street lamps. It generates a kind of pressure that stimulates people to cross it.

65

Hertzberger, 2005, p. 126-127

66

Bouman, 1969

Student life doesn't flow smoothly along a clear and straight road but through a large number of secondary streets and detours. Blom designed a building with hundreds of 'accidents'. The idea was to create a building where there was room for fantasy and romance, surprise and conviviality. According to Blom, these are basic life requirements.

67

Hengereld, Strauven, Blom, 2008,

p. 54

68

Lelsz, 1969

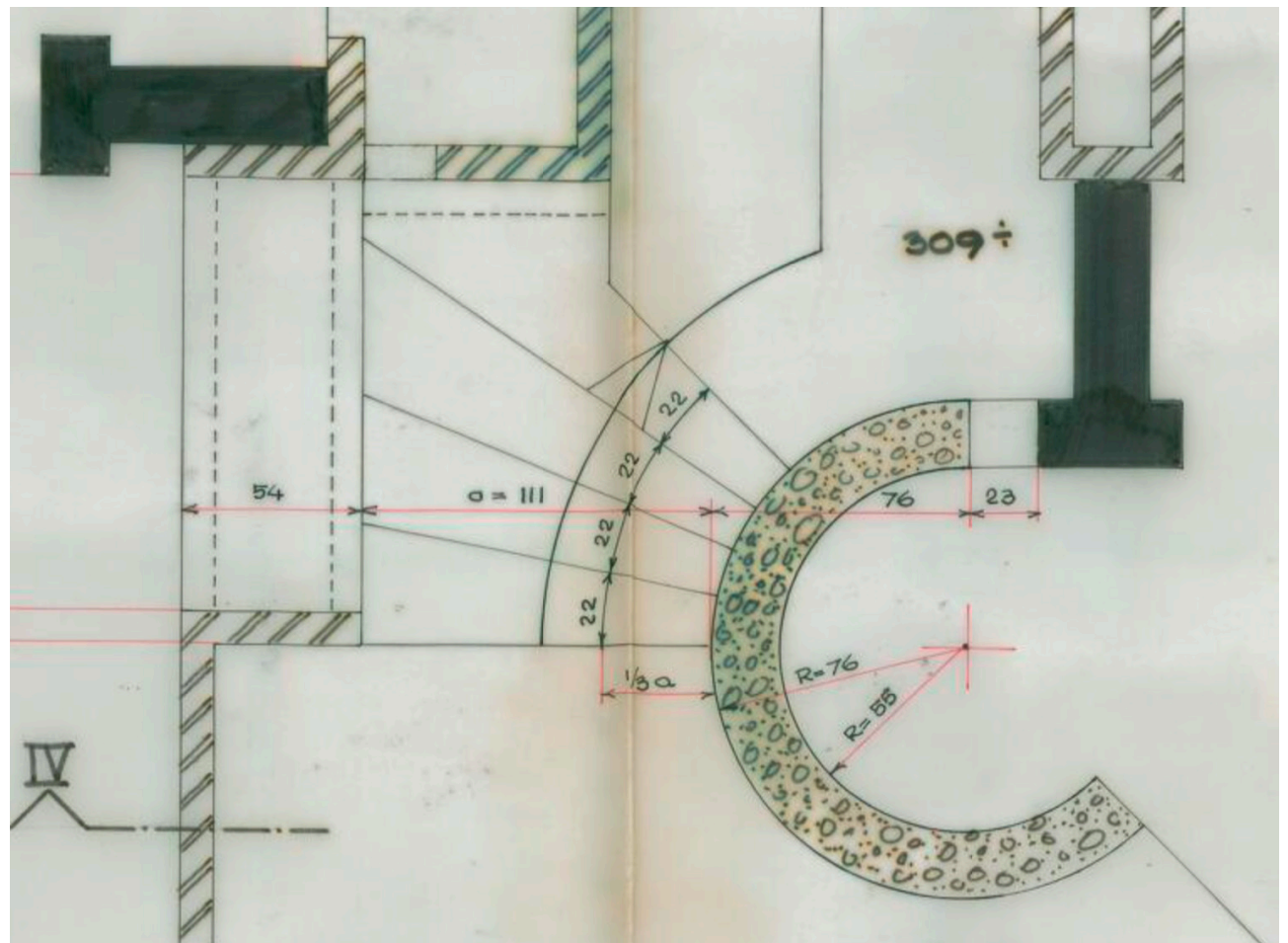
Piet Blom approached the same theme through a more irregular language, just like that of historic cities.⁶⁶ He designed stairs and corridors as real urban spaces, and not just as simple connecting spaces. So he went against the modern bad habit of making long and sterile corridors. According to Christopher Alexander, it is because of these habits that "*it is hard to imagine that a corridor could ever be a place of beauty*". Take for example one of the many stairs in the Bastille. The staircase^[36] is placed in a narrow space between two walls. On the one hand, a curved wall invites and hides the staircase at the same time. On the other hand, a fragmented sequence of walls widens and narrows the size of the steps. This architectural solution creates a labyrinth effect that gives the impression of walking inside a small town.⁶⁷

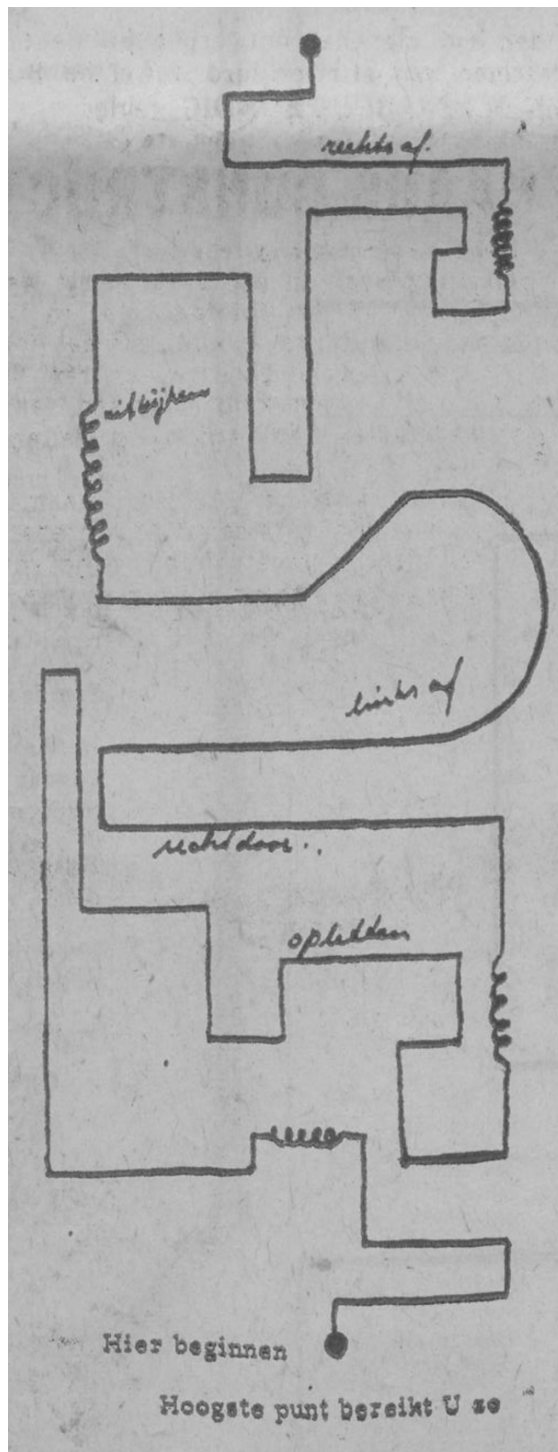
Speaking of safety, many criticized these architectural solutions saying that, in case of fire, there was a risk of getting entangled. Blom, ironically, replied that it is silly to enlarge a space by forty centimeters just to let the fattest of chefs pass.⁶⁸

[36]

Staircase. Bastille.

AUTHOR: Piet Blom / YEAR: 1968
/ SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970





◀ [37]
Circulation diagram, Bastille.

AUTHOR: Piet Blom / YEAR: 1969 /
SOURCE: Lelsz, 1969

◀ [38, 39, 40, 41]
Sequence of frames taken from a
short film. Bastille.

YEAR: 1969 / TITLE: T.H. Twente,
De Bastille / SOURCE: Matthijs
Rodijk. [https://www.youtube.com/
watch?v=9aBZ8mbi0fw](https://www.youtube.com/watch?v=9aBZ8mbi0fw)

[42]

The courtyard of the mosque in Cordoba is shaded by orange trees growing in circular depressions in the pavement. These circles are connected by means of channels, thereby forming an efficient irrigation system for the trees. This design derives its beauty from the fact that the form shows so clearly how it functions.

TITLE: Mosque, Cordoba, Spain /
SOURCE: Hertzberger, 2005, p. 235



[43]

Gully, Montessori school.

SOURCE: Lüchinger, 1987



A great contribution is also provided by the Montessori school in Delft. Here a small gully, located at the back of the school, was used to distribute water for outdoor activities (sand-boxes, gardening, etc.). It is impossible not to find similarities between this gully and those that Hertzberger saw during some of his trips to France and Spain ^[42]. The gully was a miniature version of a river. Through the imaginations of children, the canal stimulated a large number of activities such as the creation of bridges and dams ^[43]. It demonstrates the power of metaphor and suggestion. Despite its small size, the gully was perceived by children as a real river to cross, block with a dam, etc.

Hertzberger develops the theme also through the use of perforated building blocks^[44]. Indeed, the holes give the blocks an unfinished look that encourages people to fill them in some way. It is a magnificent example of reciprocity between form and use.⁶⁹

Also interesting are the two small holes made in the facade of the gym that allow people to take a peek ^[45]. According to Hertzberger, the architect has the task of offering 'incentives' that evoke 'associations'. Only in this way can architecture be 'interpreted'.



◀ [44-45]

Small holes. An example of reciprocity between form and use. Montessori school.

YEAR: 2008 / SOURCE: Doctor Casino. <https://www.flickr.com/photos/doctorcasino/> SOURCE 2: Lüchinger, 1987

High place

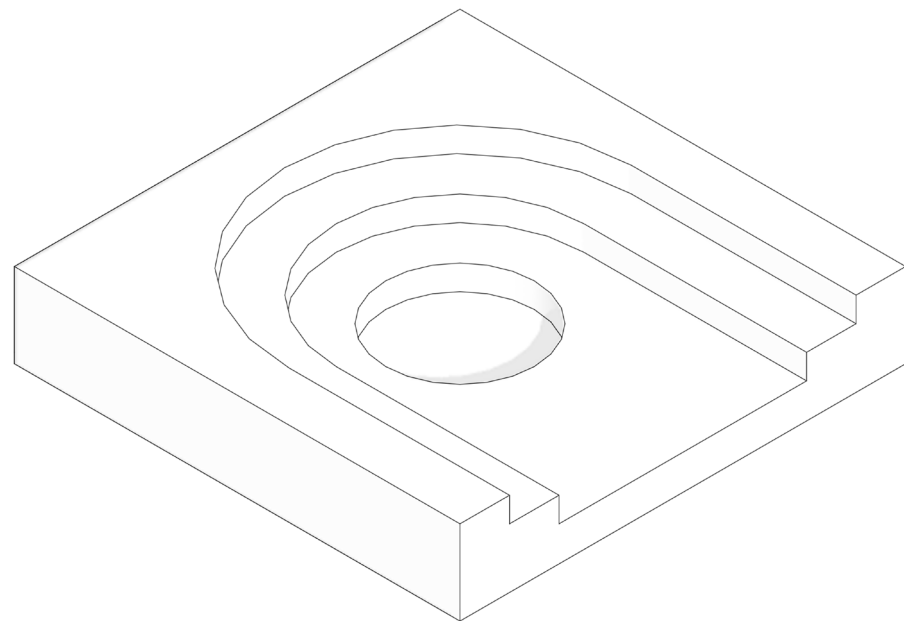
70

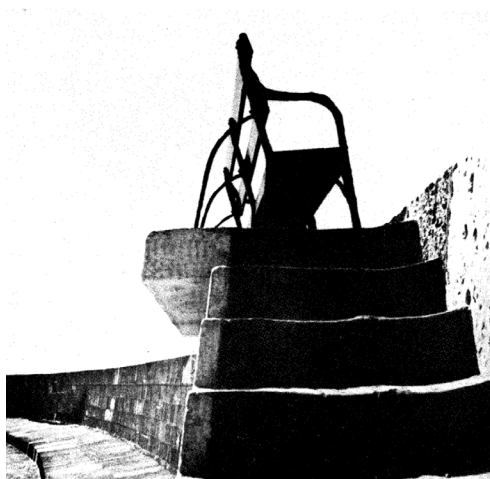
Loidl, Bernard, 2014, p. 77

71

Cullen, 1971, p. 178

Space is not defined only by a center, a right, a left, a front, and a back. It is also defined by an above and a below. In particular, this paragraph concerns the theme of the 'above', namely that of 'high places.' Indeed, differences in height have a great potential for creating space.⁷⁰ In this case, it is precisely the change in height, the passage from one level to another, that defines the boundary. Using the words of Gordon Cullen, "*it isn't only the view you get from being high, it's the feeling of advantage, the feeling that you have got into a position of privilege*" that makes this type of space so interesting.⁷¹





[46]

The more usual and natural classification is up and down. We look up to some people, we describe others as having a low mentality. The awareness of relative height is ingrained in human nature; ... it cannot be denied that even in the humdrum modern town awareness of level stimulates the citizen. Height equals privilege, depth equals intimacy.

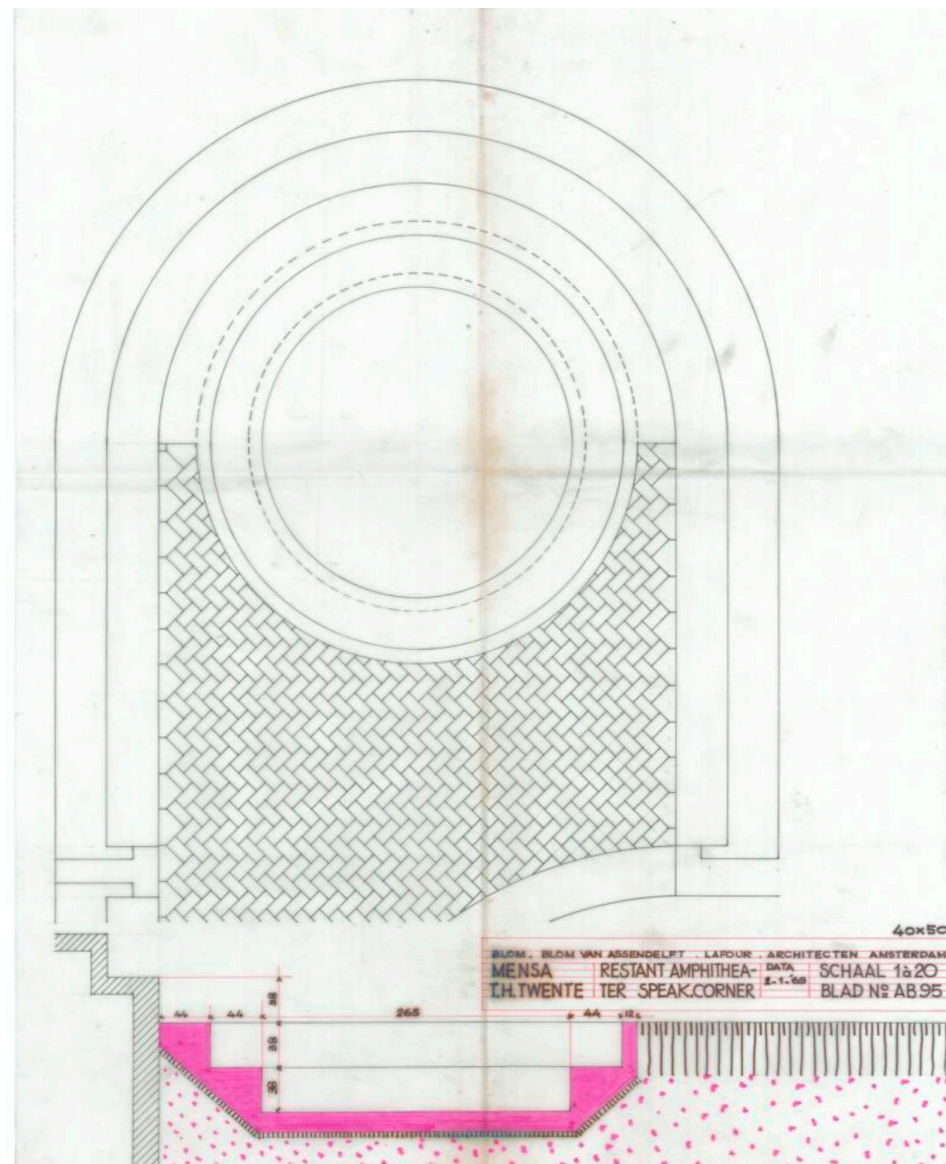
TITLE: Above datum / SOURCE:
Cullen, 1971, p. 176

The speakers' corner designed by Piet Blom is a clear example of this. A beautiful meeting space that recalls the shape of an amphitheater. So much so that even Blom himself, as can be seen from some drawings, used to call it that way^[47]. It consists of a small circular stage surrounded by some seating steps. A sort of amphitheater in miniature that can accommodate up to two hundred people at the same time.⁷² Indeed, the idea was to create a space to organize events, conferences, and musical performances.

[47]

Speakers' corner. Bastille.

AUTHOR: Piet Blom / YEAR: 1969
 / SOURCE: Het Nieuwe Instituut /
 ARCHIVE COLLECTION: BLOM.1
 10315740 Mensa 'Bastille voor de
 Technische Hogeschool Twente in
 Enschede, 1966-1970



Furthermore, it is interesting how this space connects two different levels. In the highest part of the seating stairs, there is a terrace where people can look out and see what is happening inside the small amphitheater^[48]. In fact, the building was not conceived as a series of horizontal floors placed one above the other, but rather as a sequence of levels that slide over each other. The floors are not aligned, thus creating visual connections between the different areas of the building. Here, Blom's passion for the architecture of the past is evident. The amphitheater, the differences in height, and the terraces are all themes that the architect borrows from the historic city.



◀ [48]
Speakers' corner. Bastille.

SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970

[49]

Baby department. Burgerweeshuis.

AUTHOR: Oppenheim, G.L.W.
/ YEAR: 1968 / TITLE: Interieur
speelzaal / SOURCE: Stadsarchief
Amsterdam



Looking at the speakers' corner and the terraces designed by Blom, you may notice a frequent presence of circular shapes. This is certainly a characteristic that he shares with Aldo van Eyck. Indeed, circles abound also in van Eyck's work.⁷³

An instance is the small 'mountain' of steps built in the baby department of the orphanage^[50]. These three steps, which for an adult are little more than a rise in the floor, for younger children instead represent a real mountain to climb. Just three steps; that's enough to stimulate children to reach the highest point, from which they can look down and survey their world.⁷⁴ Indeed, as pointed out by Aldo van Eyck "*the architecture is presented as more complicated than we are ourselves, which is complicated enough*". So why complicate things? This little architecture is as simple as it is effective.

73

Ligtelijn, 1999, p. 24

74

Alexander, 1977, p. 316



◀ [50]

Three steps. Burgerweeshuis.

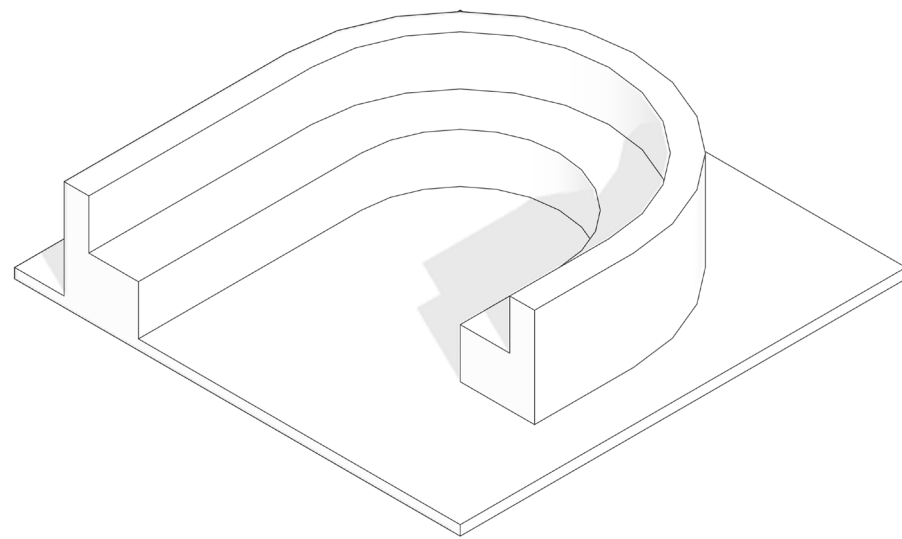
SOURCE: Grafe, 2018

Enclave

75

Alexander, 1977, p. 610

An enclave is a small and distinct area enclosed within a larger area. These spaces are very important, as they have the task of differentiating the space in which they are located. Indeed, as Christopher Alexander argues, “*in any building, people need a gradient of settings which have different degrees of intimacy*”.⁷⁵ If a building has such a gradient, the people inside it can choose different contexts for different social interactions.





◀ [51]

The aerial view of this village of Zambian herdsmen recalls the mycological phenomenon called witches' rings. Here, a thousand thatched huts form a circle around the chief's enclave, composed of huts for his many wives.

TITLE: Rural architecture / SOURCE: Rudofsky, 1964, p. 133

An example is the pit made by Hertzberger in Delft. It is located in the part of the building reserved for the kindergarten and is filled with some wooden blocks. Children can take out these blocks and use them in a variety of ways^[52].

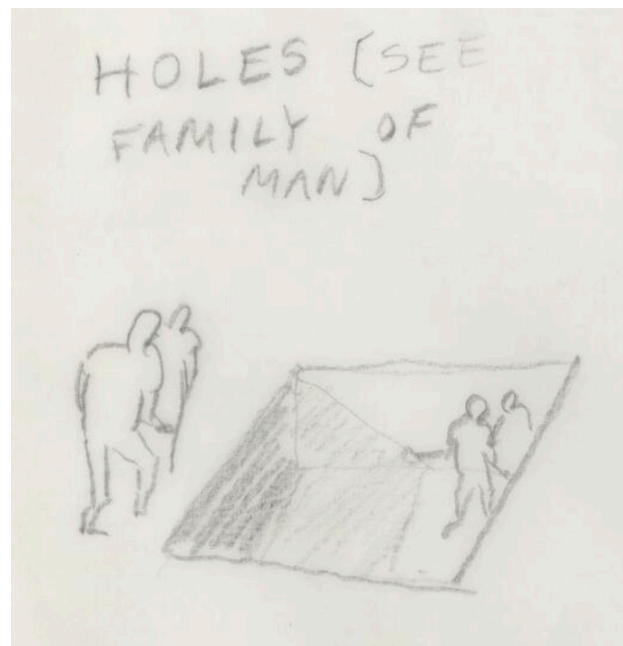
This is one of the architectural solutions that Hertzberger is most proud of. There is no publication, article, or interview where he does not mention it. In particular, he loves to tell how children use this space. For instance, says Hertzberger, they use blocks as chairs, but also as elements to be stacked to build towers or to be lined up to form trains. If the podium block evokes the image of a mountain to climb to enjoy a good view from above, the pit instead gives a feeling of closure and isolation.⁷⁶

[52]

Sunken sitting area. Montessori school.

SOURCE: Hertzberger, 2008



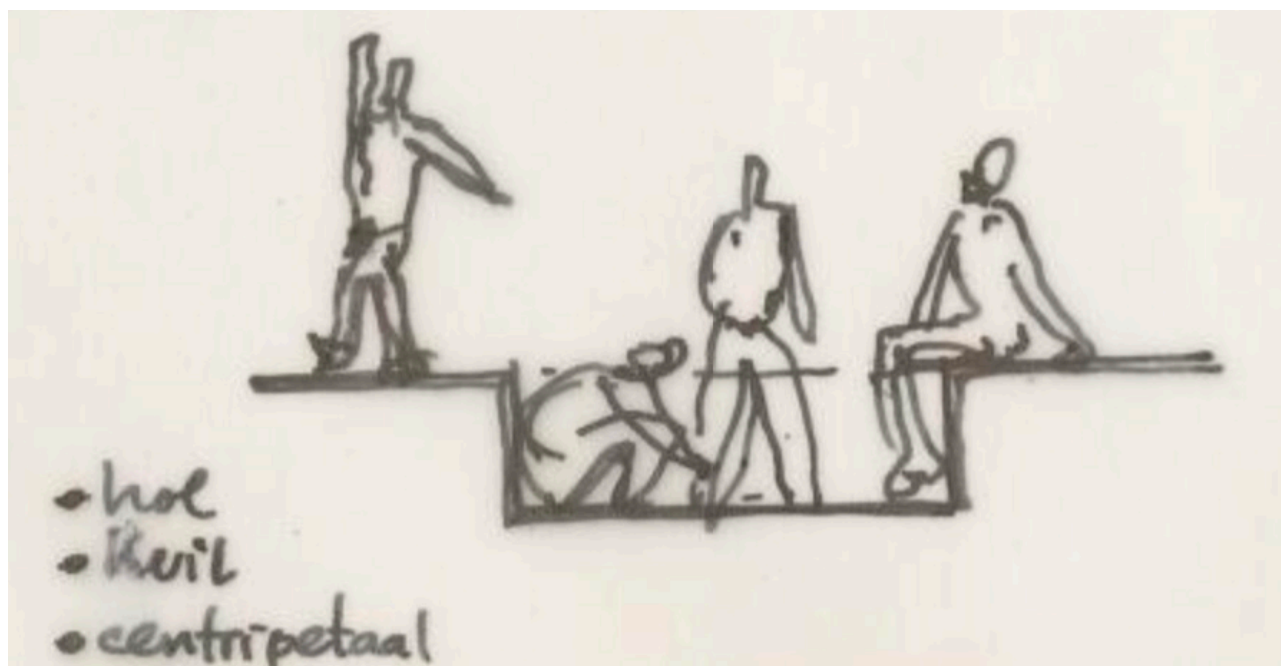


[53]

In this sketch of the pit, Hertzberger notes a book title: 'The Family of Man'. This book, the permanent embodiment of Edward Steichen's monumental exhibition, reproduces all of the 503 images that Steichen described as "a mirror of the essential oneness of mankind throughout the world. Photographs made in all parts of the world, of the gamut of life from birth to death." The New York Times once wrote that it "symbolizes the universality of human emotions."

AUTHOR: Herman Hertzberger /
YEAR: 1970 / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
HERT.1 10344493 Uitbreidingen La-
gere Montessorischool, Jacoba van
Beierenlaan 166, Delft, 1968-1970

associaties
betekenissen
Symbolen



[54]

In these sketches Hertzberger writes about associations, meanings, symbols (associaties, betekenissen, symbolen). For example, the pit can be perceived as a hollow (hol).

AUTHOR: Herman Hertzberger /
YEAR: 1970 / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
HERT.1 10344493 Uitbreidingen La-
gere Montessorischool, Jacoba van
Beierenlaan 166, Delft, 1968-1970

77

Alexander, 1977, p. 858

78

Lelsz, 1969

Some enclaves built by Piet Blom and Aldo van Eyck are also noteworthy. One of these is situated in the entrance square of the orphanage^[55]. It is a semi-closed space with a circular shape where it is possible to stop and discuss in a group. The choice of the circle, unlike the other shapes, is because people prefer to sit facing each other, rather than side by side.⁷⁷

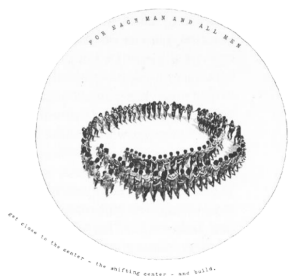
Piet Blom instead created an enclave for the Bastille cinema area.^[56, 57, 58]

The horseshoe shape of the sofa acts as a magnet that groups people to watch the television; an inviting gesture at its most basic.

In some respects, one can be very critical of this building. However, as Jac Lelsz wrote in a 1969 article: *“in the Bastille, there are several conditions for the realization of some essential human desires. The desire to meet many, including those who are very different. And also the desire to close in a smaller circle, possibly with more similar groups”*.⁷⁸

[55]

The circular enclave located in the center of the external square, orphanage, Amsterdam. In one of Otterlo's circles van Eyck wrote: “get close to the center, the shifting center, and built”.



AUTHOR: Violette Cornelius / YEAR: 1961 / SOURCE: Ligtelijn, 1999

78





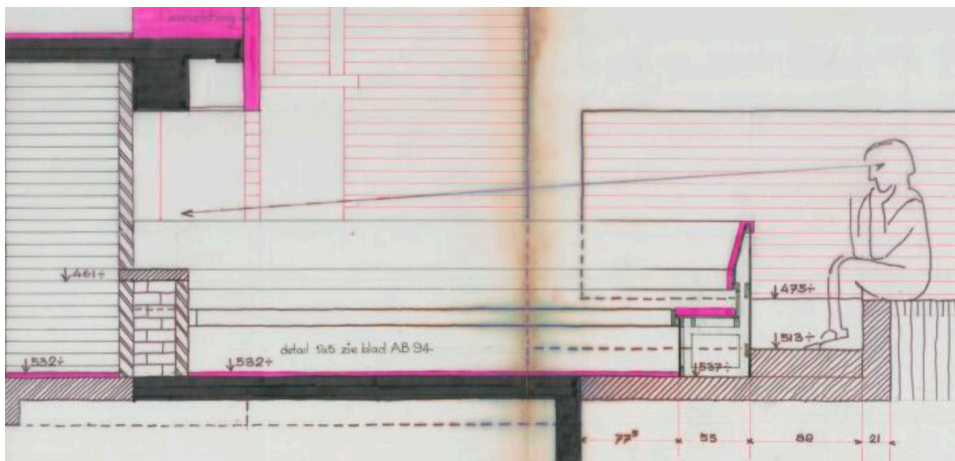
[56]
The cinema full of people. Bastille.

SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970



[57]
The horseshoe-shaped seat. Bastille.

SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970



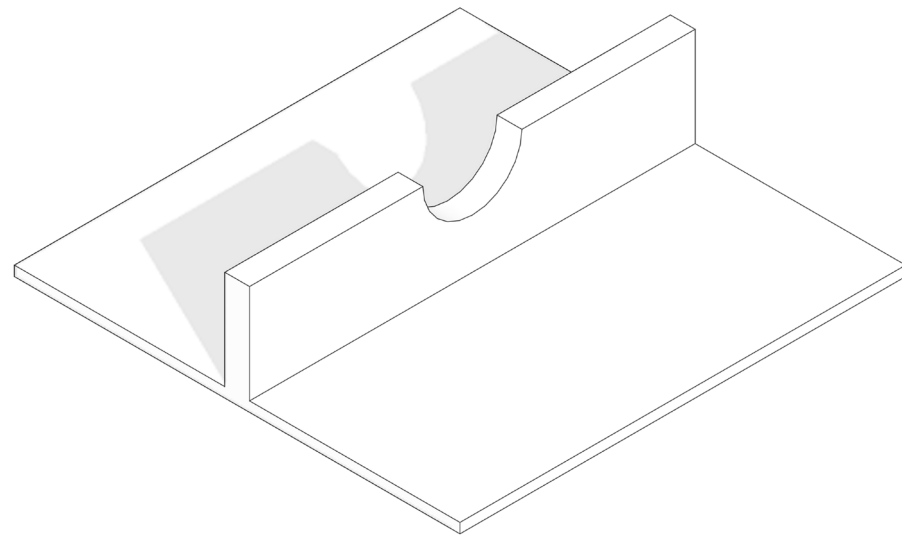
[58]
Drawing of the tv corner. Bastille.

AUTHOR: Piet Blom / YEAR: 1969
/ TITLE: Het subcorner / SOURCE:
Het Nieuwe Instituut / ARCHIVE
COLLECTION: BLOM.1 10315740
Mensa 'Bastille voor de Technische
Hogeschool Twente in Enschede,
1966-1970

Edge

79
Stevens, 2007, p. 115

The edges are perceived by people as safer places. Indeed, they offer a controlled level of exposure. As Quentin Stevens writes in his book 'The Ludic City', comfort also includes "*the psychological comfort of remaining discreet*".⁷⁹ It is for this reason that people frequent these spaces in moments of waiting or to rest. The Dutch sociologist Derk De Jonge defined this phenomenon as the 'edge effect'.





[59]

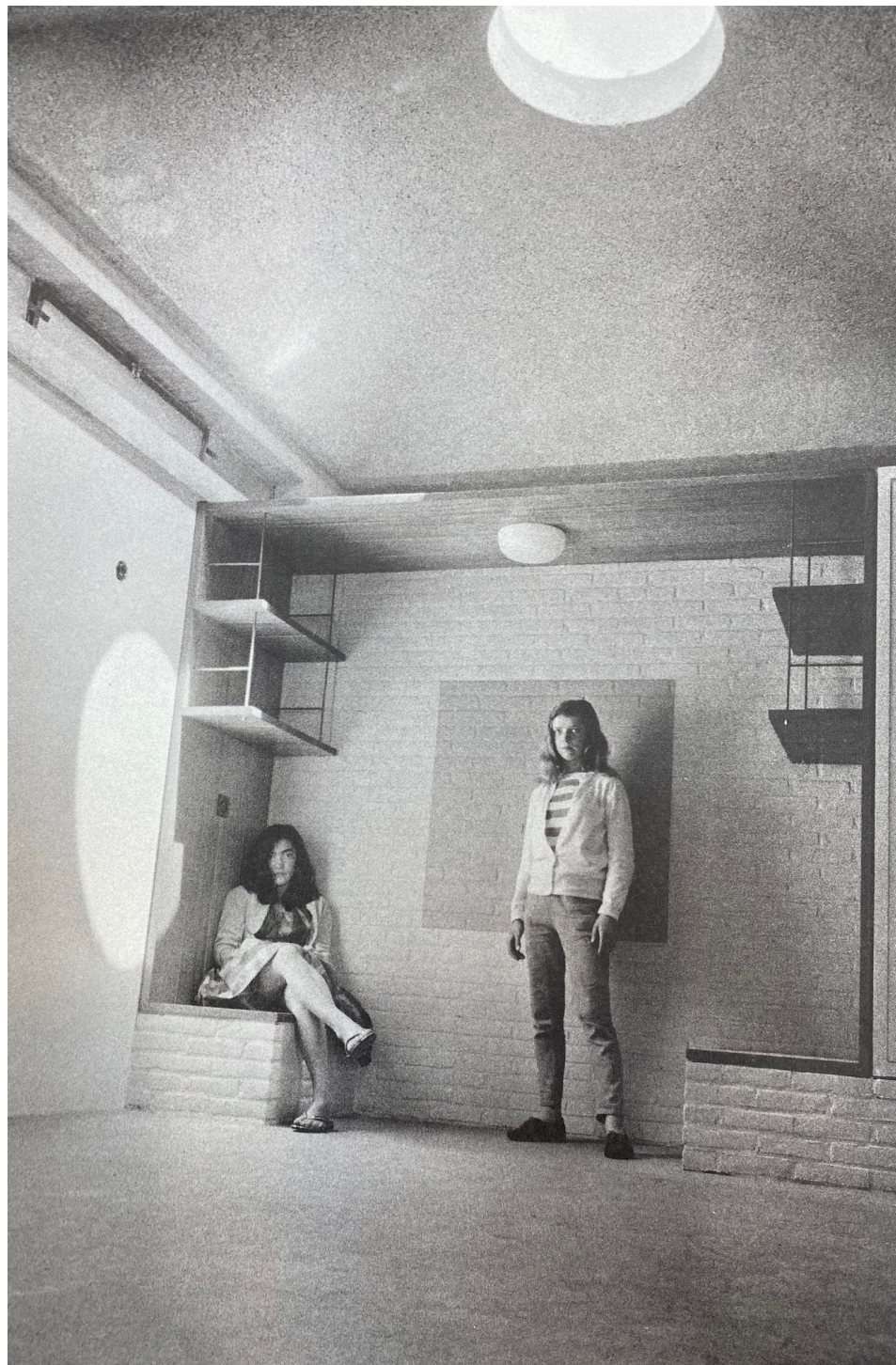
Two lovers along the edge of the
Seine river in Paris.

AUTHOR: Izis / YEAR: 1987 / TITLE:
Bord de Seine / SOURCE: Hertzber-
ger, 2000, p. 230

[60]

Reading corner. Burgerweeshuis.

AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999



Staying on the edge does not mean total passivity.⁸⁰ Indeed, as the urban planner Stevens argues, it often happens that people meet right along the edges, giving rise to long chats, board games, etc. An example is the niches designed by Aldo van Eyck^[60]. However, the most interesting 'edge' area of the orphanage is the one near the entrance, where there are two identical benches^[62]. This interior space was designed as an exterior. Van Eyck wanted children's behaviors and movements to remain as vigorous as they are outside.⁸¹ In particular, the seats along the interior street create moments of rest that tell a lot about van Eyck's poetics. Indeed, the quality of this space is represented by the quiet(er) surroundings, protected back by a wall and which offers a large space to look at: the square. Furthermore, the light near these seats is inspired by street lighting^[61]. Children can play with it, moving from one lit area to another, from light to shadow to light.⁸²

80

Stevens, 2007, p. 119

81, 82

Ligtelijn, 1999



◀ [61]

Street light. Burgerweeshuis.

DESCRIPTION: Street light, orphanage, Amsterdam / SOURCE: Grafe, 2018

◀ [62]

Bench. Burgerweeshuis.

AUTHOR: Violette Cornelius / YEAR: 1961 / SOURCE: Ligtelijn, 1999

Piet Blom designed numerous solutions for the edges of the Bastille: from the bar tables ^[65,66] to the parapets of the terraces ^[63, 64]. In particular, Blom's designs for the parapets are interesting. Each one is different. Some are more traditional, others are more particular, such as those in the shape of a horseshoe. Looking at some historical videos and photographs it is interesting to see how students used these parapets. Some used them as tables, others sat on them, yet others climbed over them. These edges are real 'in-between' spaces.

[63]

Frame taken from a short film, Bastille.

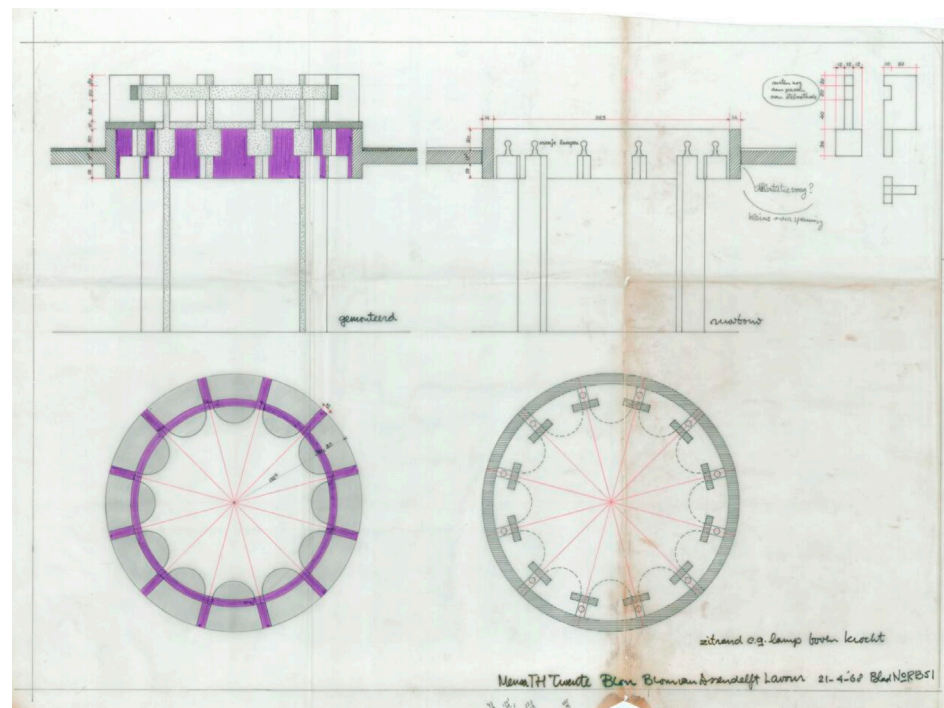
YEAR: 1969 / TITLE: T.H. Twente, De Bastille / SOURCE: Matthijs Rodijk. <https://www.youtube.com/watch?v=9aBZ8mbi0fw>



[64]

Terrace. Bastille.

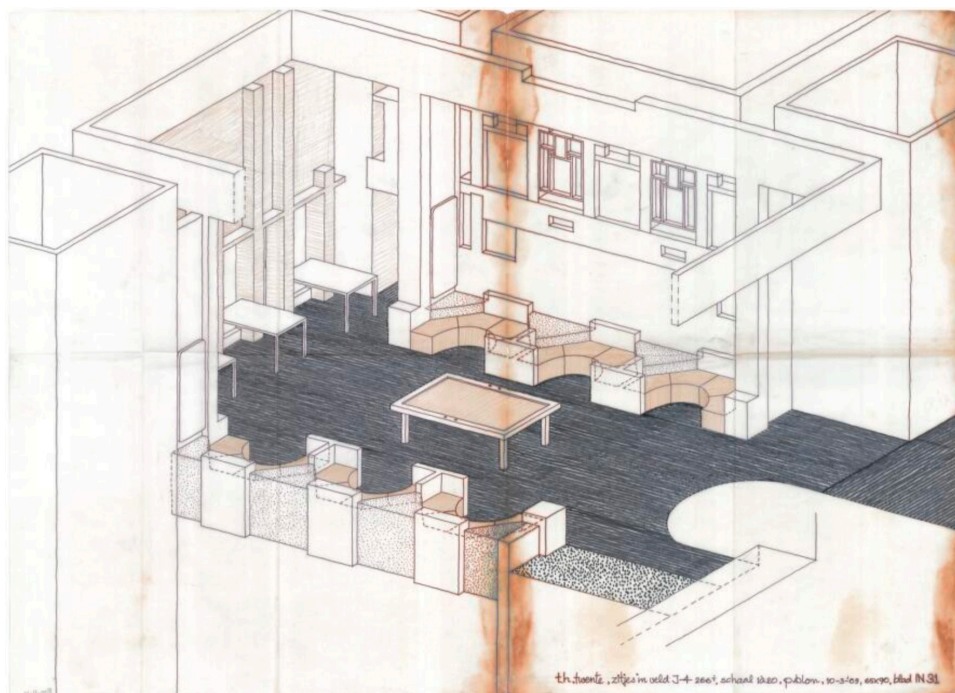
AUTHOR: Piet Blom / YEAR: 1969 / SOURCE: Het Nieuwe Instituut / ARCHIVE COLLECTION: BLOM.1 10315740 Mensa 'Bastille voor de Technische Hogeschool Twente in Enschede, 1966-1970





[65]
Terrace. Bastille.

AUTHOR: Piet Blom / SOURCE:
Het Nieuwe Instituut / ARCHIVE
COLLECTION: BLOM.1 10315740
Mensa 'Bastille voor de Technische
Hogeschool Twente in Enschede,
1966-1970



[66]
Seats axonometry. Bastille.

AUTHOR: Piet Blom / YEAR: 1969
/ SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970

83

Hertzberger, 2008, p. 185

84

Alexander, 1977, p. 1127

85

Alexander, 1977, p. 1125

Hertzberger dealt with the theme of the edge in the outdoor space of the Montessori school. Here, the only thing separating the school's public courtyard from the street is a low brick wall, originally assembled from blocks with square openings.⁸³

The wall is still used today in a variety of ways^[67]. For example, parents sit on it. On the other hand, children often use it as a limit of their soccer field. In designing this space, it almost seems that the Dutch architect followed some advice from Christopher Alexander, such as: "*place the walls to coincide with natural seat spots; make them of brick, if possible; pierce them with holes...*".⁸⁴ The low wall, indeed, functions as a barrier which separates, and as a seam which joins, at the same time.⁸⁵

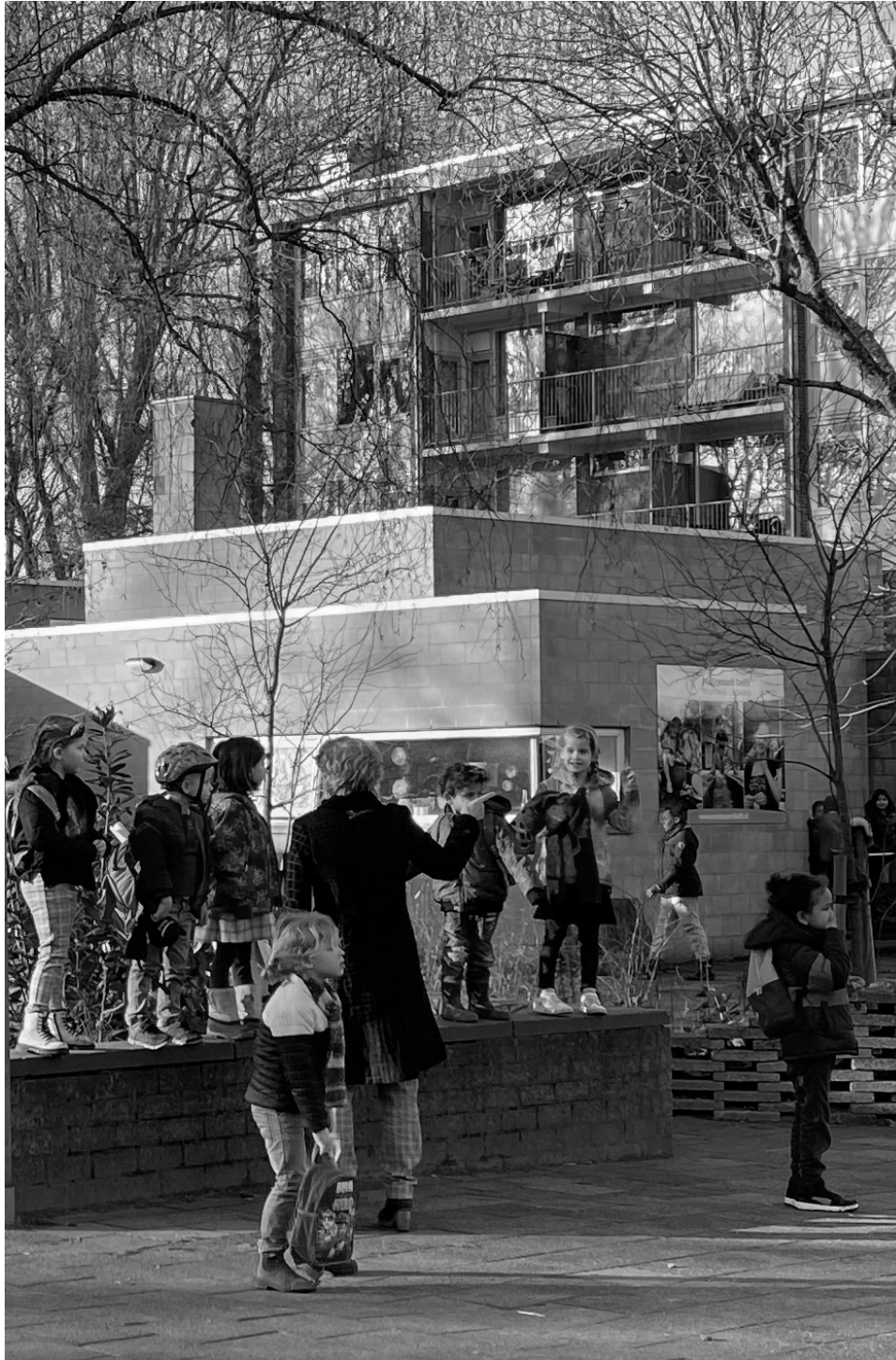
Thanks to this solution, the schoolyard is a fully-fledged public space. It can be used by the children of the neighborhood even when the school is closed.

[67]

Low brick wall. Montessori school.

SOURCE: Hertzberger, 2008, p. 185



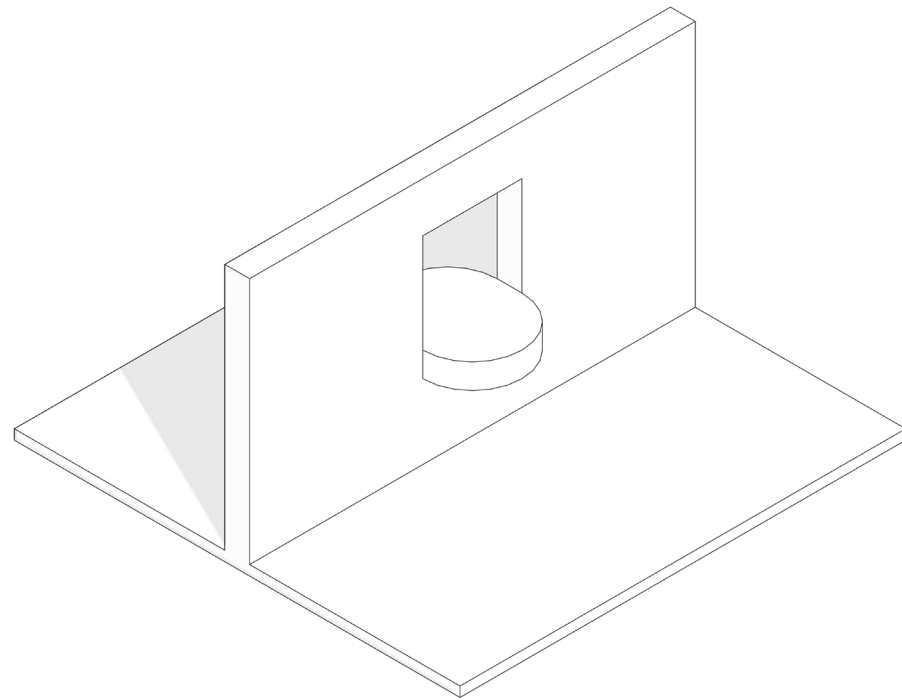


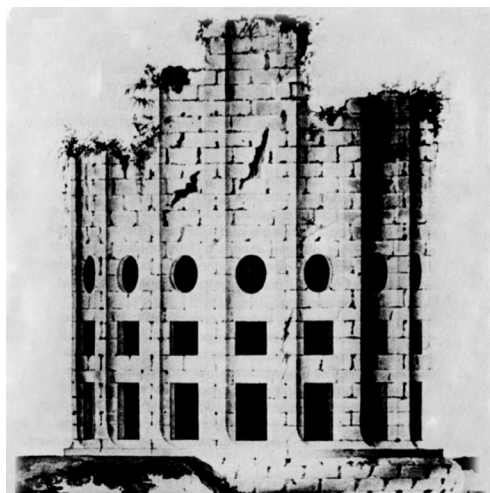
◀ [68]
Children waiting for their parents.
Montessori school.

AUTHOR: Alberto Merisio / YEAR:
2022

Opening

An empty window is not just a simple hole. A hole, if of adequate shape and size, is capable of influencing the entire meaning of the wall, making it lose its main function, namely that of separating and closing the space. In fact, an opening in a wall allows two different spaces to communicate with each other.





[69]
Column house in Retz by E.-L.
Boullée

AUTHOR: Claude Arthaud / YEAR:
1973 / SOURCE: Thiis-Evensen, 1987

[70]

Square opening. Burgerweeshuis.

SOURCE: Grafe, 2018



The first structuralist to use this architectural solution differently was Aldo van Eyck. In the orphanage, he made a square opening in which he placed a heavy circular granite base to house a fishbowl.^[70]



[71]

Le Corbusier, Villa Le Lac, 1922-24

AUTHOR: Federico Torra / YEAR:
2016 / SOURCE: <http://federicotorra.com/Une-Petite-Maison>

Van Eyck was a great admirer of Le Corbusier's poetics. Although the Dutch architect never revealed who and what inspired this architectural solution, it is impossible not to find similarities with the famous window designed by Le Corbusier for Villa Le Lac^[71]. What they certainly have in common is how these openings frame the view, emphasizing a certain element, landscape, or scene of everyday life. The result is a kind of painting.

In the orphanage in Amsterdam, nothing was left to chance. For instance, the external street-lights were arranged near the windows with the clear aim of illuminating both the street and the internal corridors at the same time. In this architectural solution, there is everything: functionality, beauty, and poetry.

[72]

The lights seen from the street.
Burgerweeshuis.

AUTHOR: Ioannis Tsoukalas /
YEAR: 2009 / SOURCE: <https://www.flickr.com/photos/11804197@N07/4220098573/>





[73]
Street light. Burgerweeshuis.

AUTHOR: Alberto Merisio / YEAR:
2022

The orphanage is like a collection of jewels. Many architects were inspired by this building and its details. Among the many, we certainly find Herman Hertzberger ^[74, 75] and Piet Blom ^[76, 77]. However, Hertzberger is probably the architect who was most fascinated by him. So much so that when the building was in danger of being demolished he did everything he could to save it. The circular sink he designed for the Delft school is a clear reinterpretation of the square opening designed by van Eyck in the orphanage.^[70]

In this case, what is most interesting is not the shape itself, but the experience that this solution can generate. Indeed, the sink is placed between the wall that divides the children's bathroom from that of the girls. For example, imagine that two children leave the bathroom at the same time and that they have to wash their hands. Instead of washing their hands in front of a wall, the two children are forced to look at each other. Who knows how many games, discussions, friendships this simple sink will have given birth to...

[74]
Sink. Montessori school.

SOURCE: <http://dromanelli.blogspot.com/2017/01/herman-hertzberger-delft-montessori.html>

[75]
Sketch of the sink. Montessori school.

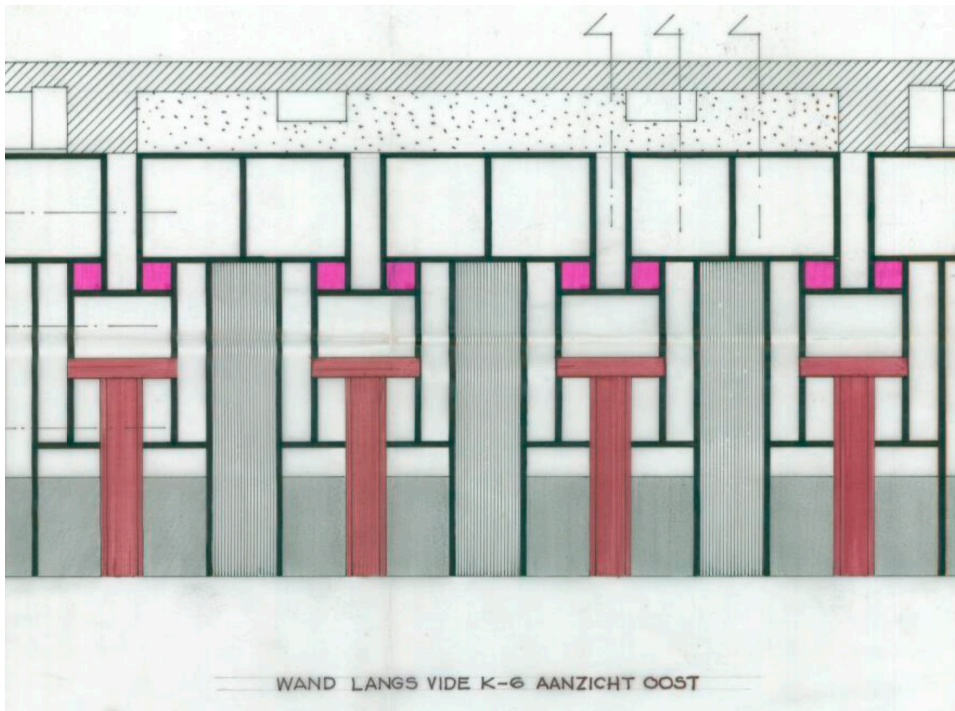
AUTHOR: Herman Hertzberger
/ YEAR: 2009 / TITLE: Schetsen
/ SOURCE: Het Nieuwe Instituut / ARCHIVE COLLECTION:
HERT.110344702 Verbouwing/uitbreiding Delftse Montessorischool, Delft, 2009





◀ [76]
Opening with a round table.
Bastille.

TITLE: Kleinbeelddia's / SOURCE:
Het Nieuwe Instituut / ARCHIVE
COLLECTION: BLOM.1 10315740
Mensa 'Bastille voor de Technische
Hogeschool Twente in Enschede,
1966-1970



◀ [77]
Opening with a round table.
Bastille.

AUTHOR: Piet Blom / YEAR: 1968
/ TITLE: Werktekeningen van de
afbouw / SOURCE: Het Nieuwe
Instituut / ARCHIVE COLLECTION:
BLOM.1 10315740 Mensa 'Bastille
voor de Technische Hogeschool
Twente in Enschede, 1966-1970

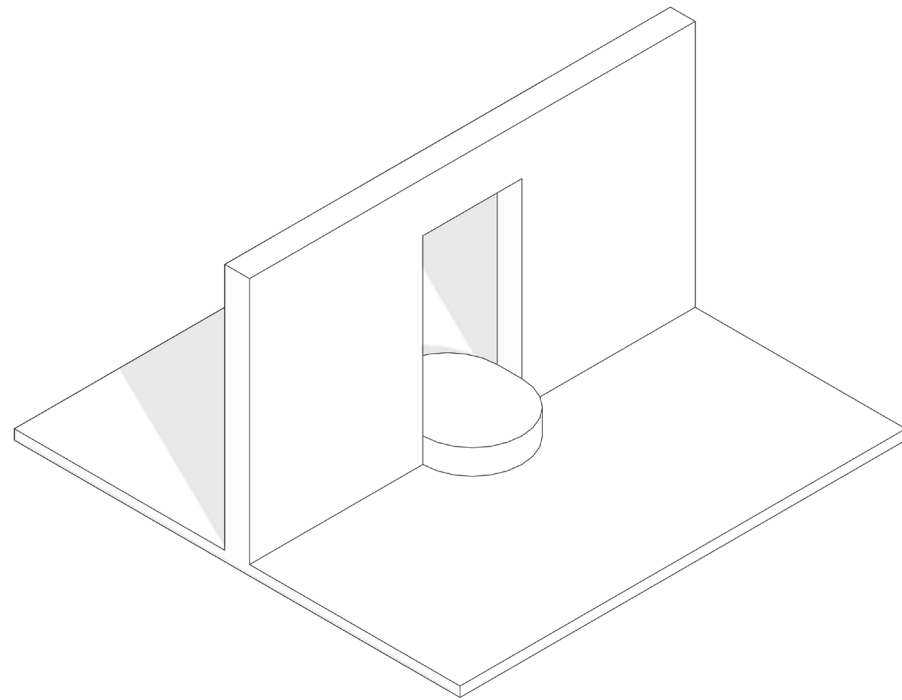
In-between

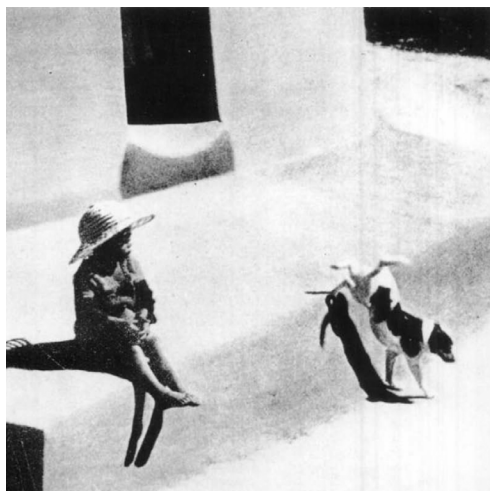
86

Ligtelijn, 1999, p. 10-11

The in-between is a term used by Aldo van Eyck to define that area where your body touches the building directly: threshold, doorjamb, and windowsill.⁸⁶ It is impossible to reach the interior without passing through them.

This transition space between two worlds, neither internal nor external, was considered by structuralist architects as a real 'place'. A place of passage where people meet and know each other, or more simply, greet each other. Not by chance, the concept of in-between is based on the structuralist intuition that sees anthropologists as figures able to help architects to conceive a 'new architecture'.





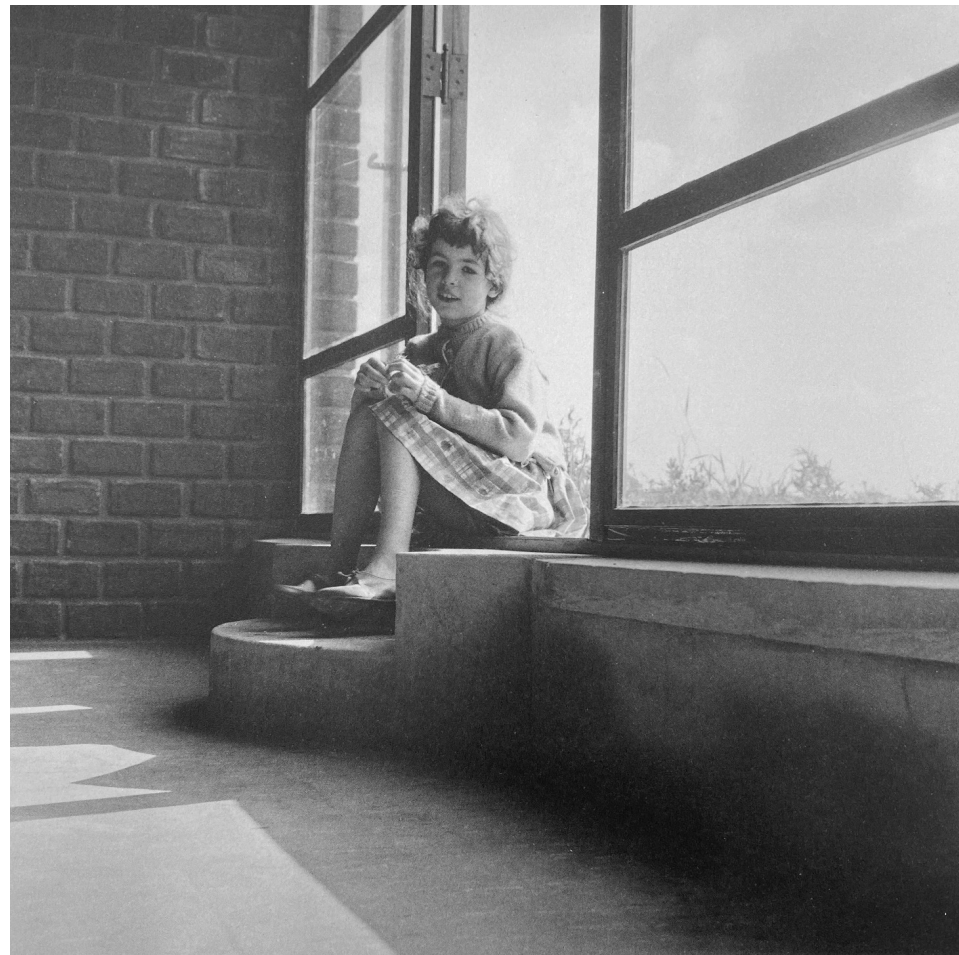
[78]
A little girl sitting on the doorstep.

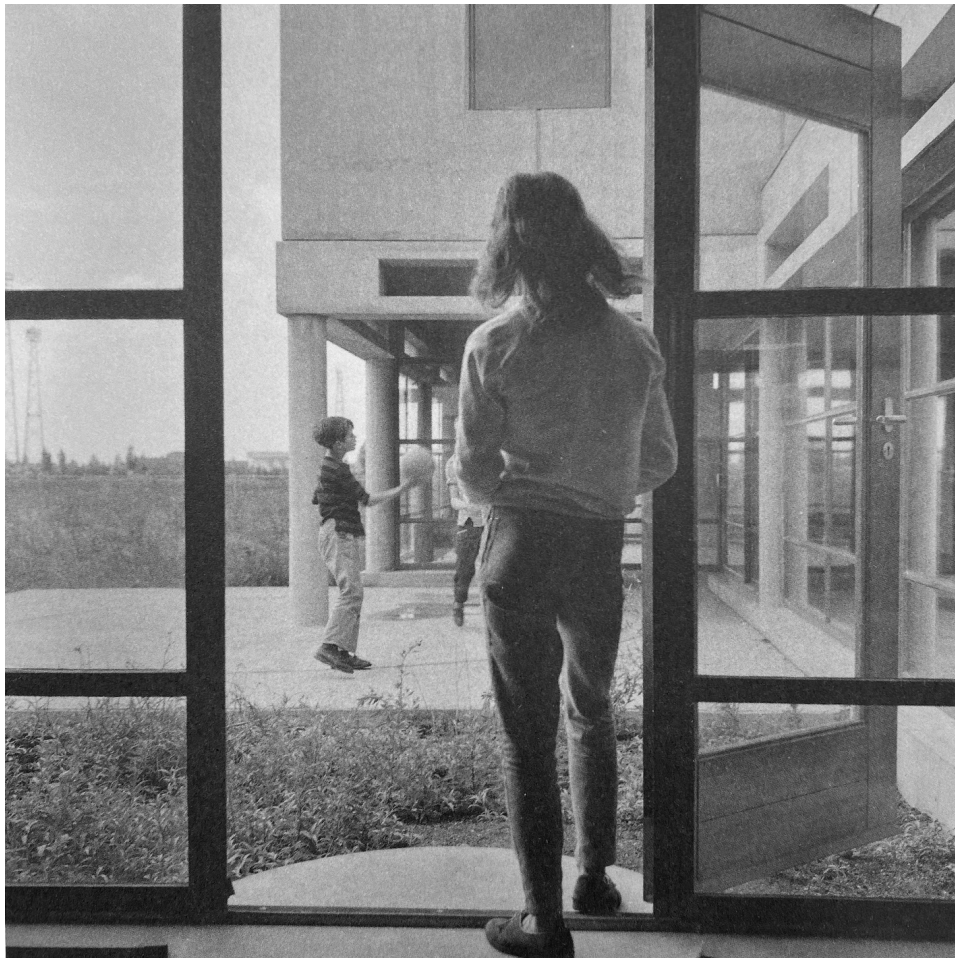
SOURCE: Forum no. 7, 1959

The orphanage was conceived as a configuration of intermediary places clearly defined.⁸⁷ Each threshold of the building is designed to create a 'place of occasions'. Indeed, through their circular shape, they transform the imaginary and narrow boundary line into a sort of 'in-between room'. Some thresholds are a simple rise in the floor^[78], while others are characterized by some steps on which you can sit^[77].

[79]

Threshold. Burgerweeshuis.

AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999



◀ [80]
Threshold. Burgerweeshuis.

AUTHOR: Violette Cornelius / YEAR:
1961 / SOURCE: Ligtelijn, 1999



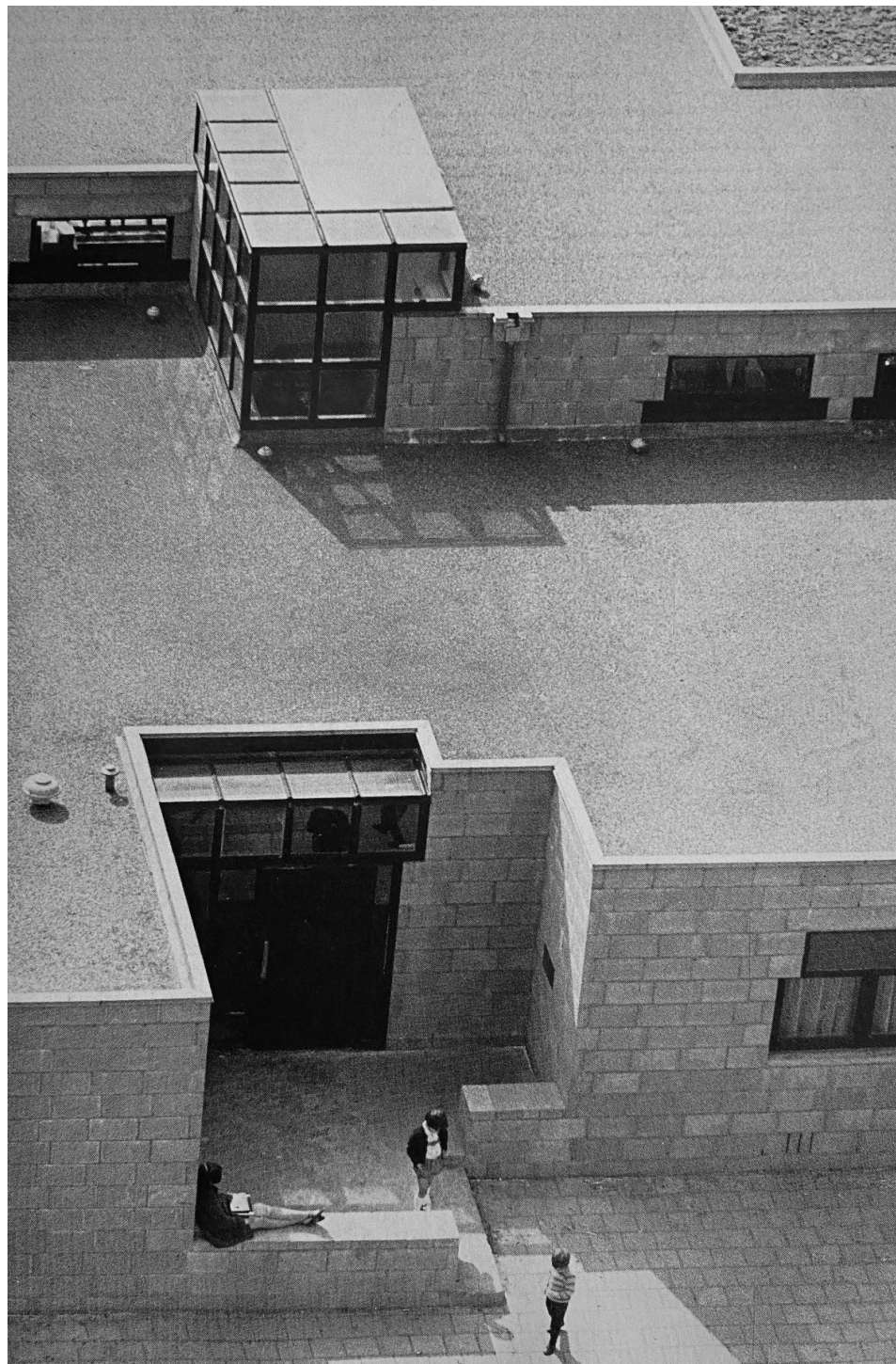
◀ [81]
In one of Herman Hertzberger's
notebooks you can clearly see some
sketches of the thresholds designed
by van Eyck for the Orphanage.

YEAR: 2015 / SOURCE: Taylor-Foster,
2015

[82]

The entrance seen from the outside.
Montessori school.

SOURCE: Lüchinger, 1987



The in-between space 'par excellence' is that of the entrance. Hertzberger designed the entrance to the primary school in Delft as a place that would offer a kind of welcome for children who arrive early in the morning and those who do not want to go directly home late in the afternoon. Indeed, as Hertzberger points out in his first book in the 'Lessons in Architecture' series, "children, too, have their meeting and appointments".⁸⁸

The entrance to the school is therefore characterized by the presence of some low walls which, on the one hand, delimit the space, on the other hand, form an element on which to sit and wait.

88

Hertzberger, 2005, p. 33



◀ [83]

The entrance seen from the inside.
Montessori school.

SOURCE: Lüchinger, 1987

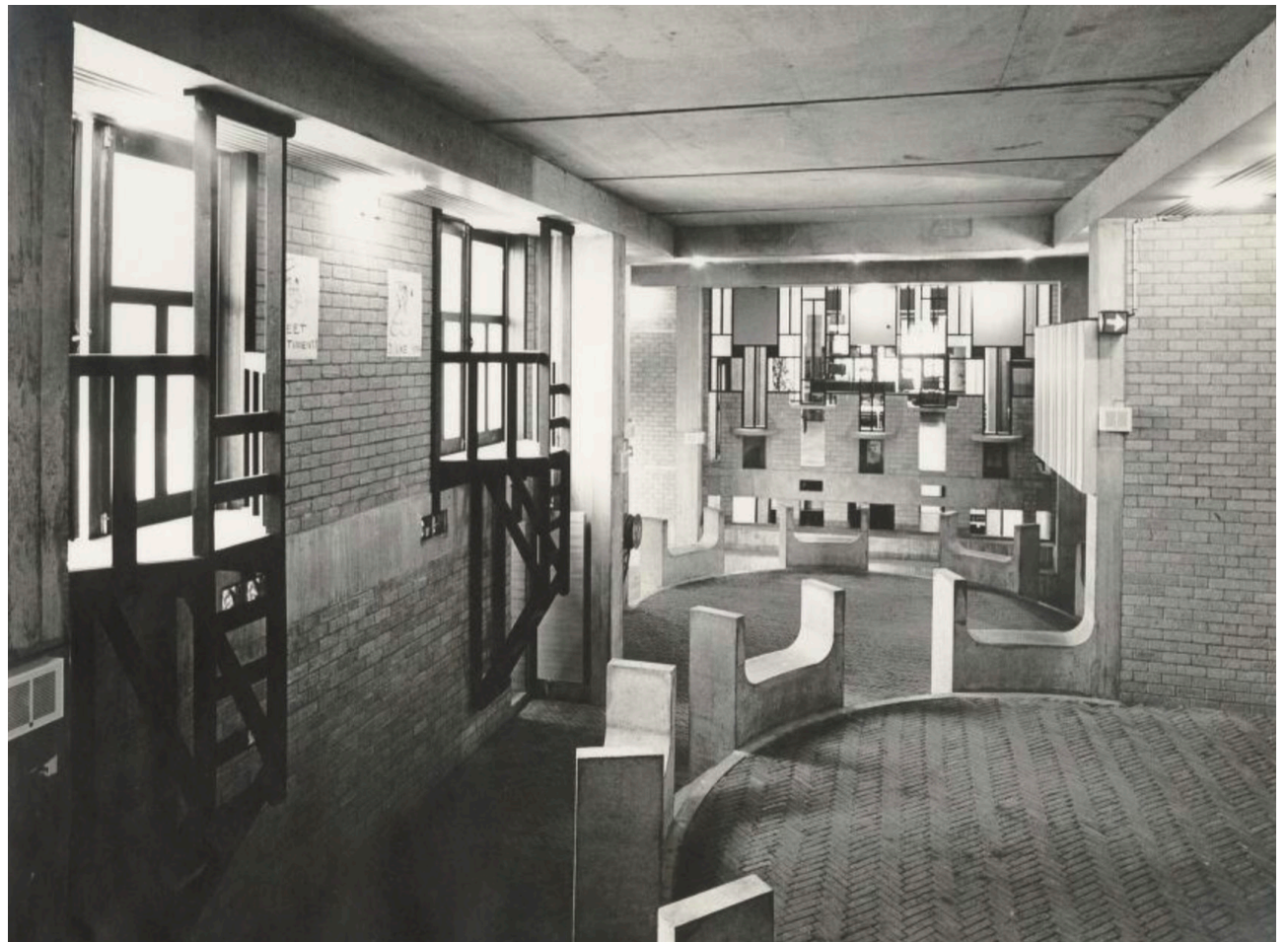
Piet Blom's approach in Enschede was completely different. Blom designed the building as a real fortress. Here, there is no kind of welcome at the entrance, on the contrary, the building has no connection with the surrounding. In fact, Piet Blom accused the clients of having chosen a bad location.⁸⁹

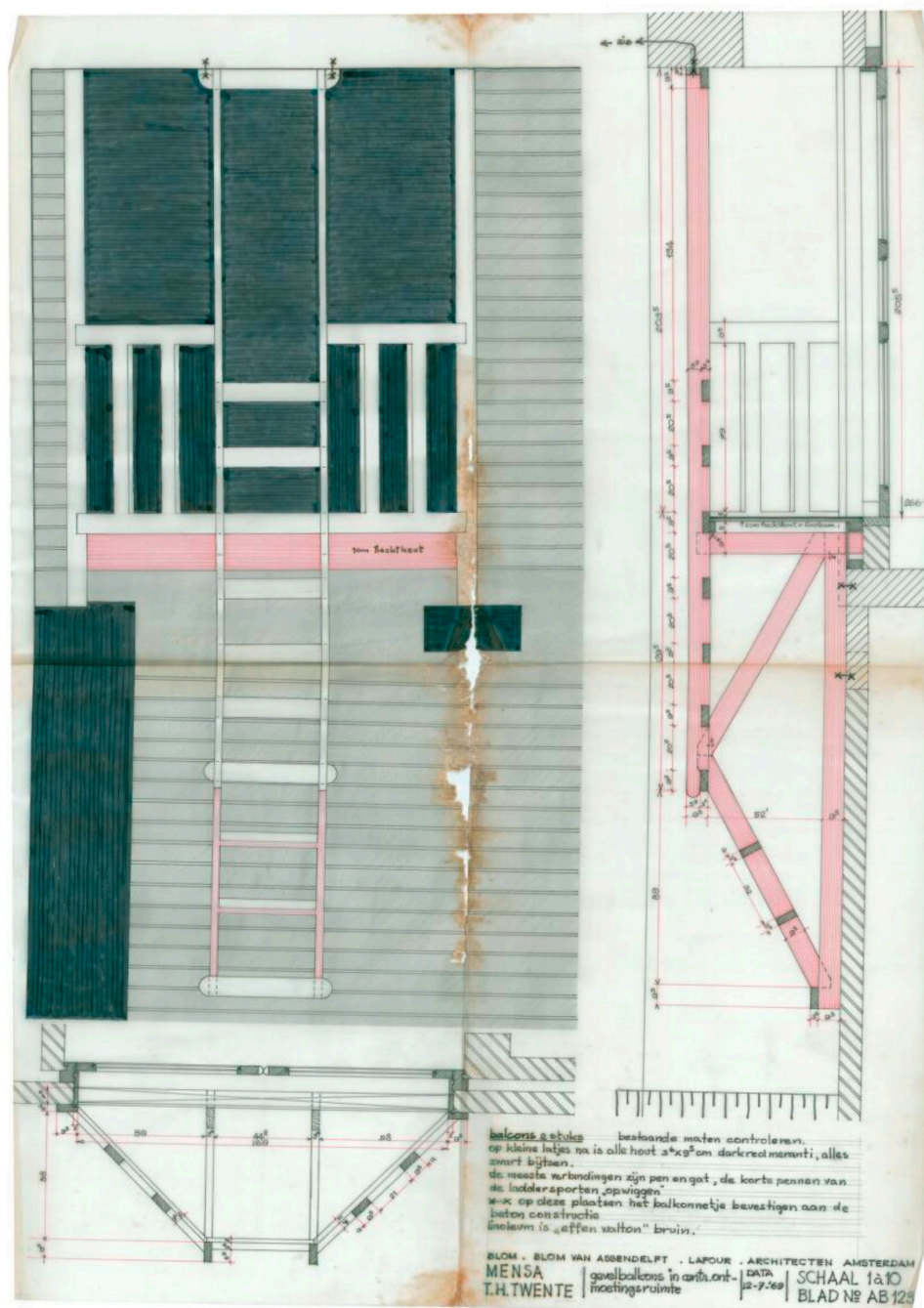
The only openings to the outside are some windows placed unusually several meters above the ground, to let in the sunlight without allowing people to see outside. However, a kind of connection between inside and outside exists. Blom designed two twin wooden structures, almost medieval in style, which could be climbed to enjoy the outside view. On top of these structures, you have the feeling of being in a place neither outside nor inside. It was thanks to these elements, together with the external turrets, that the building was nicknamed the 'bastille'.

[84]

The wooden staircases seen from the inside. Bastille.

SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille' voor de
Technische Hogeschool Twente in
Enschede, 1966-1970





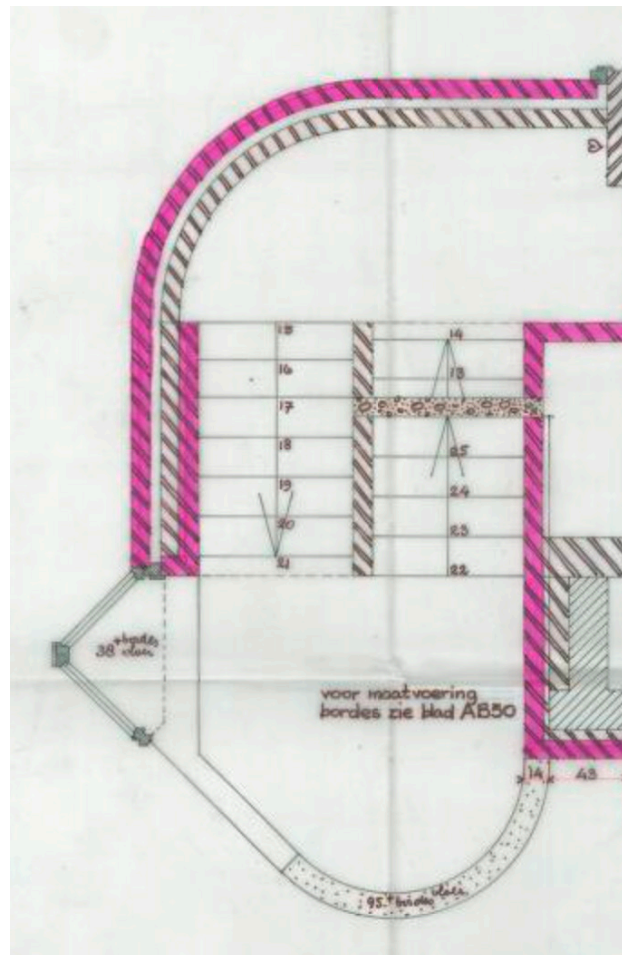
[85]
 Drawing of the wooden staircase.
 Bastille.

AUTHOR: Piet Blom / YEAR: 1969
 / TITLE: Werktekeningen van de
 afbouw / SOURCE: Het Nieuwe
 Instituut / ARCHIVE COLLECTION:
 BLOM.1 10315740 Mensa 'Bastille
 voor de Technische Hogeschool
 Twente in Enschede, 1966-1970

[86]

Plan of the staircase. Bastille.

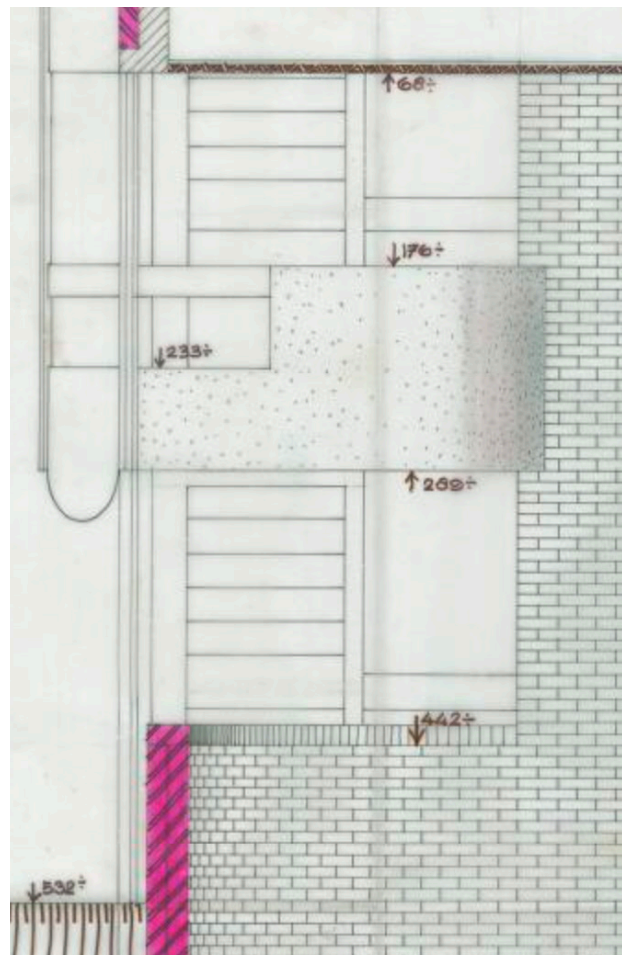
SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970



[87]

Elevation of the turret. Bastille.

SOURCE: Het Nieuwe Instituut /
ARCHIVE COLLECTION: BLOM.1
10315740 Mensa 'Bastille voor de
Technische Hogeschool Twente in
Enschede, 1966-1970



As written in a biography published in 2008: “Piet Blom aimed to recreate a complex, warm form of urban architecture. His primary object was to effectuate a contemporary revision of the multicolored, functional interwovenness of the old city”.⁹⁰ One of the numerous external ‘turrets’ of the Bastille is an example.

Indeed, its design is presumably inspired by the traditional urban style of North African kasbahs. Particularly ‘Kasbahesque’ is the outside staircase that “invites students and professors to populate the building”.⁹¹

However, this is not a new theme for Piet Blom. Indeed, the admiration for the kasbah was already present in his university project titled ‘Let the cities be inhabited as villages’, which he put on paper as a 24-year-old student.

90

Hengereld, Strauven, Blom, 2008,
p.13

91

Hengereld, Strauven, Blom, 2008,
p.14



◀ [88]

Turret. Bastille.

AUTHOR: Klaas Vermaas / YEAR:
2016 / SOURCE: <https://www.flickr.com/photos/klaasfotocollectie/>

EPILOGUE

Today we are experiencing the crisis of the territory. Everything goes fast and consequently it is increasingly difficult for planners to govern the new phenomena of the city. Architects have the important role of trying to solve urban issues through the architectural project, whether it is a building, a square, or even just a seat. It is important to focus our attention on small things as well.

One of the aims of this research is precise to demonstrate how the simple design of a 'boundary' is able to strongly influence people's perception of space. In this sense, history can teach a lot to contemporaneity. In particular, between 1960 and 1990, some Dutch architects addressed the issue of the boundary between city and home, between public and private, between exterior and interior, and so on, in such a revolutionary way that it is still the object of study and research today.

Aldo van Eyck's Burgerweeshuis, Piet Blom's Bastille, and the Delftse Montessori-school designed by Herman Hertzberger are three magnificent examples. In these buildings, every edge, corner, and surface was designed to be used by its inhabitants. Nothing is left to chance. And that's why Dutch structuralism still fascinates us.

However, if we focus our attention on the new parts of the contemporary city we can still recognise some characteristics that were already criticised during the last century. In this sense, brushing up on some virtuous experiences of the past is a useful exercise. Indeed, the history of architecture has a great deal to teach the contemporary practice. *History provides prototypes, a catalog of tried and tested responses to problems.*⁸⁶ It is for this reason that past themes and ideas return cyclically in the practice of contemporary architecture. The aim of this thesis is therefore to provide a structured catalogue of references based on Dutch Structuralism that can be a source of inspiration for architects of today and those of tomorrow. Especially for the kind of architects who care not only about issues relating to 'design' but also to issues relating to its 'humanization'. In this way, the thesis is not just a simple collection of information, as it seeks new connections and provides the basis for new visions for the architecture of the future.

86

Lucas, 2016, p. 9

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Dedicated to

the rebel humanists

