



Grafting (the faculty of) Architecture

About the ever changing position of/in architecture

Research on Architecture

Architecture, the way one thinks about architecture and the way architecture is used, is always in change. But the already existing concrete buildings do not change along. This mismatch is the starting point of my research.

There is a shift in thought needed when thinking about what is mentioned above. There is need for a switch from looking at architecture as determined, finished buildings (objects) to start seeing buildings as capacities that are recognizable parts of their own continuous design process (assemblages).

For this, one has to be more aware of the fact that an architect never has direct access to a building, like a sculptor has - One has to be more aware of the changing processes in time - One has to be more aware of the limit(lessness) of spaces.

This research will show options that make architecture not more flexible (transforming its nature) but more able to understand and react on its own complexness by questioning its own frames and boundaries. It is not about creating new forms of architecture, not about making it able to transfer a geometry into a totally different geometry, but about **creating different scenarios within óne building**. It is about the stable buildings as we know it being able to look beyond itself. It is about designing from the (three-dimensional) section instead of solving a programme in plan. It is about the **complex interactions between spaces and the complex interactions between the elements that form the spaces**.

It is about the fact that **the limit of space is not the wall**.

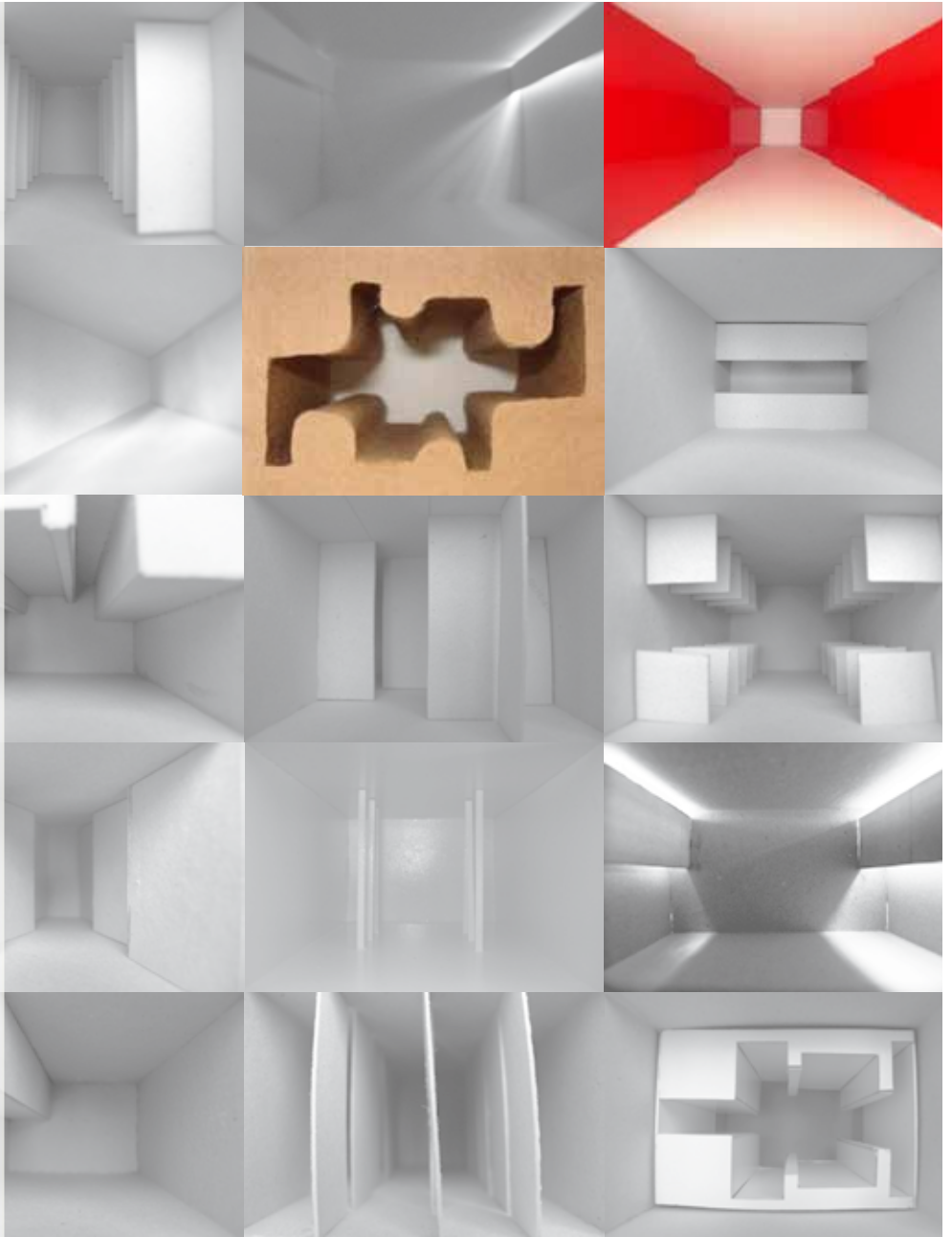
The role of architect(ure)

Determination in / of architecture is an ongoing concern in the world of architectural design. What to design, what not to design? What to predict, what to leave open for chance? How to give that one right answer to the design-question? And how to deal with the fact that the questions (and answers) of today will be different again tomorrow.

But what is really the role of architecture in this? What should the architect determine and what should be left open for participants, the future and the unknown?

The illustration on this page shows a study in which is explored to what extend one, as architect, can 'play' with emotions. The study showed that space definitely triggers: all interviewed participants 'felt' more or less the same emotions in each of the spaces. So as architect one is definitely able to determine something, of which he thinks is right.

But the problem of this determination is that it is always seen from one perspective in one moment of time: one emotion, one view point, one viewer. Whereas architecture is much more than that. So how to handle the fact that an architect definitely determines something, but that that dynamic something is much more complex than one, as architects, can grasp?





Being a Problem Solver

This complexity starts already with making the decision of what to (in-)determine? By designing, one freezes (the outlines of) space, fixes things. Decisions on what to freeze are made by architects on basis of problems that need to be solved: these are the parameters for architects. But how do we know what these problems to solve really are, how do we know that we offer the right solution, for what time-span do we offer these solutions and how can we offer that one perfect solution while experiencing space is multi-dimensional and dynamic?

Could one see the things that one frames as 'manipulation', as a way of imposing the things that one thinks is 'right', i.e. the most suitable acts, thoughts and emotions? Is one even capable of doing /deciding this?

Could one look into the future to predict what is going to or should be happening? There are certain patterns and habits that one could reflect on, there is history to learn from. But as an experiment with a cup (illustration) shows: even the smallest actions cannot be fixed in the most suitable way:

This cup shows the exact pattern of drinking: putting your hand around the cup - lifting it up - placing the cup at your lower lip - tilt the cup a bit and drink. An easy action to determine as designer? Not really: after finishing this cup it revealed that it is only suitable for left-handed people.

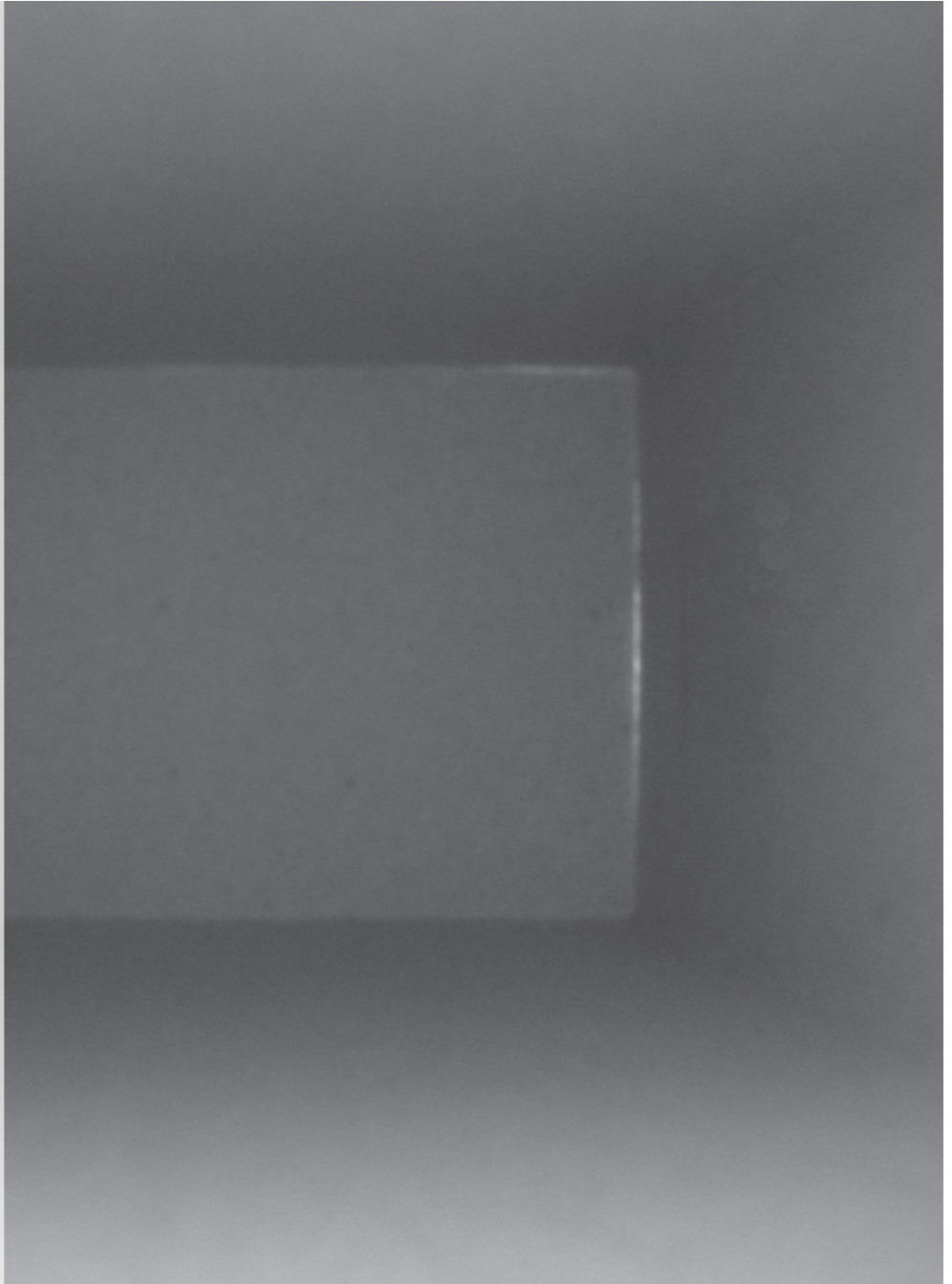
So even the simplest determinations have consequences that might turn out to be adverse.

The complexity of deciding in how one wants participants to perceive and experience space has also to do with the fact that participants take their own way of perceiving and experiencing with them, which depends on their own memories, resemblances and familiarities.

So how does one, as architect, know that the space he thinks he is creating really will be that which is created?

As an experiment this empty box was created (illustration), in which I, as architect, thought I determined everything: it is just a empty space, nobody could interpret this any different. But when someone else saw the box, he picked it up and turned it on its other side, changing the space from being low and wide into being high and narrow.

Therefore, this again shows, that an architect could never determine that one experience that he thinks he is designing: participants will always translate it into their own design. Experience and perception can never be (totally) imposed.





Being too complex

These multi-dynamic influences on space become even stronger when one starts acknowledging that the complex experiences and perceiving of space are never seen only from one participant. They are never linear, never one-dimensional, never one-perspective. Space, its construction, its perceiving and its experience is much more complex, it is a game of constant influencing capacities.

Architecture is a much too complex system to be able to determine that what is supposed to be 'right'.

One should be aware of the fact that space has influence but that one is never capable of imposing that one specific thing that he thinks space should impose: this will lead to over-determination which will end up to be adverse.

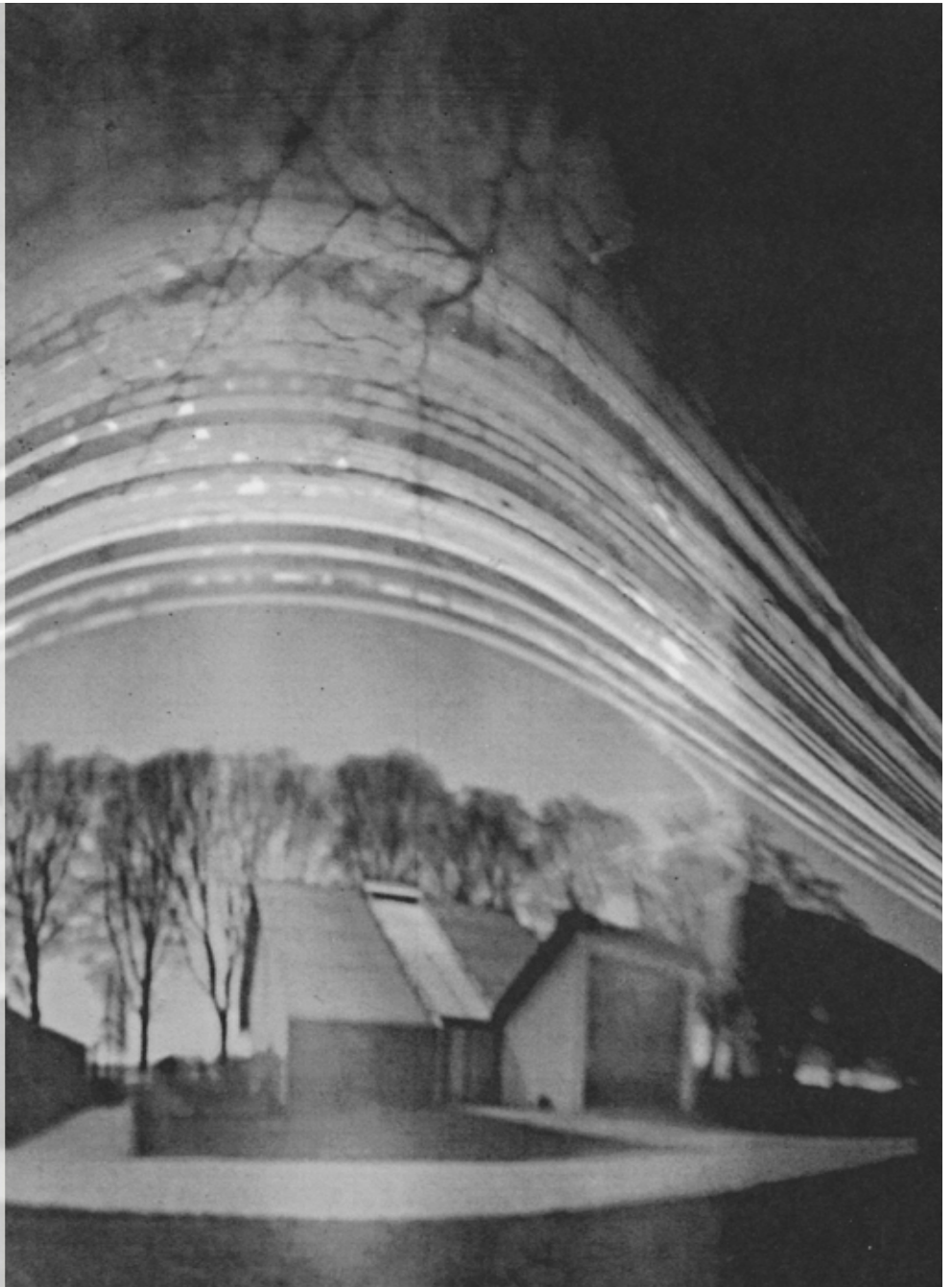
Instead architecture is a play of inter-relations, interrelations between different capacities, different condition, different perceiving, different demands, different spaces, different levels of determination and in-determination.

Being too static

But this doesn't mean that we have to leave everything undecided or totally flexible. We need (parts of architecture) as stable devise for life, we need to be able to rely on habits, as habit protects us from the plethora of information that surrounds us (by making us inattentive). Habit makes sure that we don't have to reinvent all our actions over and over again.

But there is a trap in this statement of determination: stating that something needs to be stable is not the same as stating that something needs to be static. And at the moment architects do treat architecture as something that looks desperately static. In the designing-phase and through our designing tools we are hardly able to grasp the process (!) of developing something architectural as movement, as a series of transformations. 'We seem not to be able to picture, as one continuous movement, the project flow that makes up a building' (Latour and Yaneva). To solve this discrepancy more research should be done on how one could introduce transformation in (the designing phase of) architecture i.e. how one could introduce the factor 'time' in the mostly two-dimensional design methods and static buildings that result from that.

This pinhole-photo (illustration), a photo with a shutter-term of three months, shows how we perceive architecture: something totally static, only the things surrounding it move.



Source: Latour, B. and Yaneva, A. (2008) In 'Give me a gun and I will make all buildings move: an ant's view of architecture' Page 1 and 2



Being too slow

Introducing transformation is not a strange task. Architecture might be treated as static but stasis is just a special case of transformation as everything transforms at its own speed. Right now, one could say, architecture does transform, does change, but not in usable ways and not in the speed as life demands. In this we should not mix up architecture with building, as the building is the frozen part of architecture, there is nothing frozen about architecture itself (see the movement of the building in the picture left).

Though because of this small interface and the fact that we do use the static tools for designing, architecture does not seem to know how to handle movement. It seems rather threatened by it. The life that takes place in and around architecture changes fast, it is dynamic in every second. The design-question, the demands and the requirements, change faster than the building. This miss-match between the slow stable treatment of architecture and the fast dynamic perception and use of architecture is something to be aware of and has to be taken in as aspect of the design. Architecture is not about static objects but about moving projects, and one should not only be aware of this in the methods of designing but also in the design itself: architecture is not one object but becomes very complex when it is perceived in all its dimensions.

But where does the line between transformation (different scenarios) and movement (acceleration) lies? Between architecture and building?

Being flexible

Architects should acknowledge all the influences, not only of architecture but also on architecture. They should be aware of the dynamic systems that architecture is exposed to. One needs to stop seeking for that one perfect solutions, for that one experience, that one perception, that one space, that one frame, that one system, that one drawing(type) and that one theory. One needs to combine all of these into a plural dynamic process.

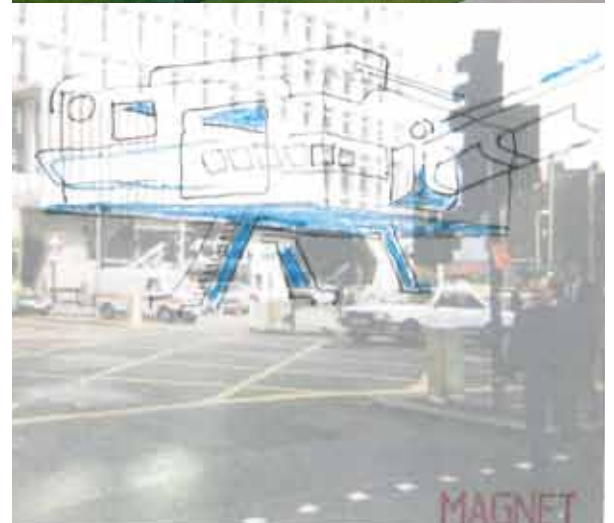
To achieve this one should look at architecture as something less determined, less as a finished building but more as a capacity, as a recognizable part of its own continuous design process. This won't be achieved by designing the unpredictable (the future) or designing the un-stable (moveble), as movement in architecture is much more in the (in) determination than in the fact that it is a trace of real movement.

Being in a continuous process has to do with flexibility, which can be obtained in multiple ways. History already shows some great examples:

- Design with **non-intensions**, like Bernard Tschumi (School of Architecture, University of Miami, Miami, 1993)
- Designing **temporary constantly changing configurations**, like Cedric Price (Magnet, 1995)
- **Designing semi-finished buildings**, like Candilis, Josic and Woods (Free University Berlin, Berlin - 1963)
- Etc.

But are we really looking for this kind of flexibility?

Grafting Architecture



Source Illustrations:

Up: Bernard Tschumi in Wijk, van C. (1991). Architectuur scholen. Architectuur onderwijs heden en verleden. IHAU, TU Delft. Page 83 till 87

Middel: Cedric Price in Price, C. (1984). Cedric Price: Works II. London, Architectural Association. London, John Wiley & Sons. Page 24 and 25

Under: Candilis Josic Woods in Hertzberger, H. (1984). Ruimte maken Ruimte laten. Delft, Technische Hogeschool Delft. Page 34

Grafting Architecture



2007



2008



2010



Being changeable

istory showed that flexibility still proved not to offer the degree of (in)determination as desired: redundancy or the absence of determined content or use leads to useless or empty spaces that are no more vulnerable to change than ones with a predetermined use; accelerating architecture, making it totally moveable, does not lead to indeterminacy: the architect defines how the building can change, and by doing this he is trying rather to control its appearance and use, and next to that this will also not give recognition to the fact that we do have created a system of living that needs the stability, the stable devise. Designing the unknown in a stable though changeable space is related with flexibility but maybe not with the kind of flexibility as we saw in the previous paragraph.

It is more about being able to change the conditions of a building so the architecture becomes different, it is about whether a stable building can absorb changes without transforming into a totally different geometry. Why does one have to build a totally new building to come to new 'suitable' architecture, why does one have to choose for one building, one space that should meet all 'requirements'?

This was also revealed in the survey on the appreciation of the Faculty of Architecture, done for this research-project: people were sad about the former building burning down but loved the fact that it opened up opportunities for new situations, and loved these situation in the beginning, until the point that it became known, routine. But how could one avoid routine without having to build a new building?

Upper and middle illustrations: 'Bouwkunde. A portrait of the faculty of Architecture of Delft University of Technology 1970-2008. Page 24, 67, 86 and 88

Being place(d) in time

Being determined though in-determined, suitable to adapt to change, not an object but a process, has to do with flexibility in the form of accepting different conditions and different spaces within one building.

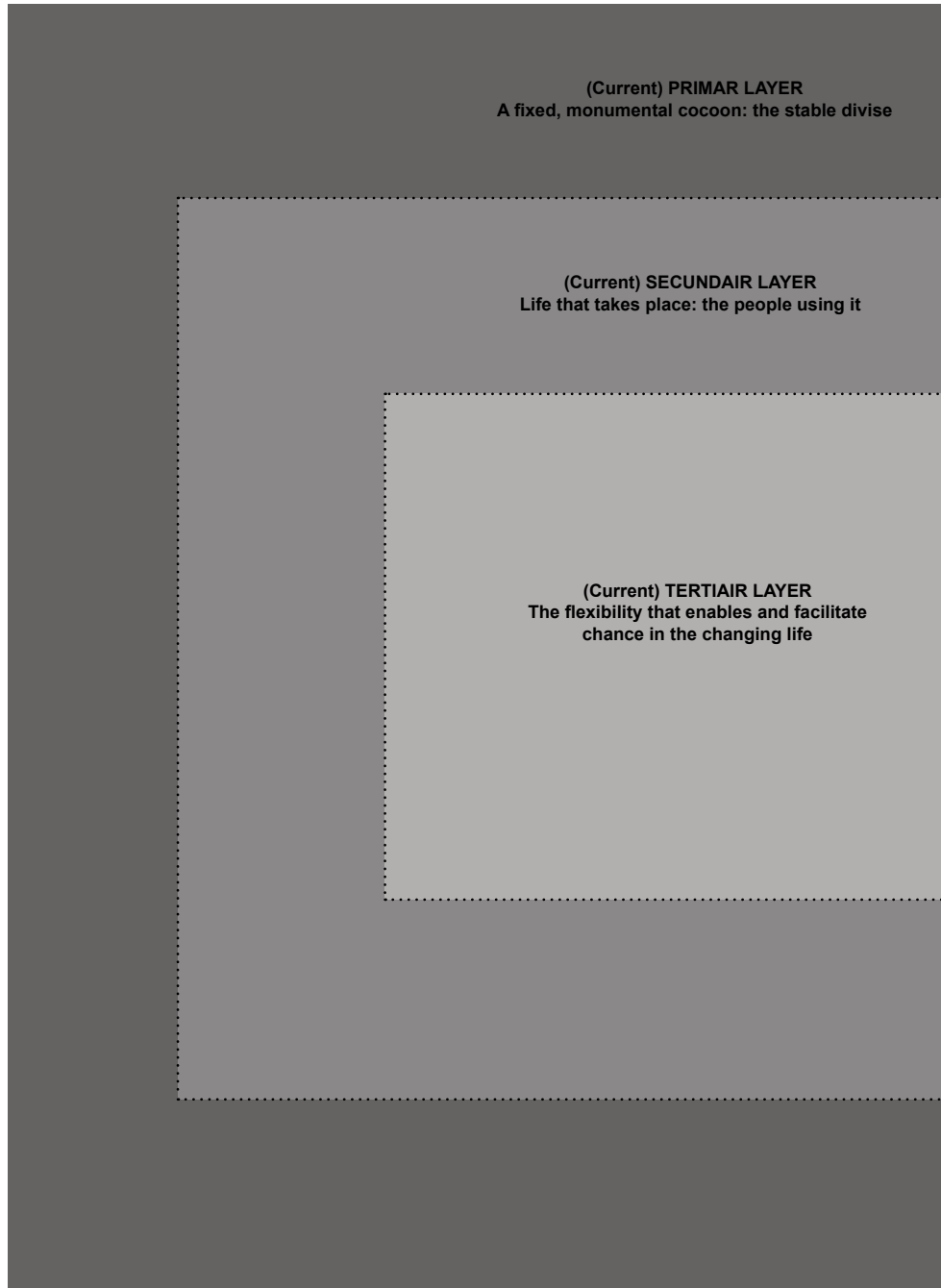
Different condition and different spaces occur at different moments in time. But time does not occur in space, space occurs in time.

Architecture, its perceiving, its occurring, its being is not a pixel, it is a vector: it is about movement. About a chain of events. These events form architecture. Architecture is a dynamic system, build up out of different time-space layers (events and/in spaces).

All time-space layers, and all their in-betweens, form the process of architecture and should therefore be recognized and present in current architecture. All these layers (can) differ in their degree of determination.

The differences in time-space-layers within one building form the key for making architecture able to adopt different changing conditions at different moments in time.





Determining time-space layers

One has to stop seeing architecture as óne (static) object, but more as a dynamic composition in process, based on (the infinite) different time-space layers. These different time-space-scales take place in the same architecture. Hereby one admits that architecture is four-dimensional and all these dimension contain multiple levels.

Designing the different time-space layers within óne building will make it possible to create different layers and determine / indeterminde different things at different moments in time. There will be not chosen for óne but for multiple. The different layers form óne system and will have their own identity within this system, so designs will ábsorb' and 'adopt' better and therefore exist longer.

The aim here is to combine stable and chance, (over)determined and (under) indetermined at the sáme moment in the sáme space. So the seemingly contradicting conclusions of this research: architecture does influence, should not aim to manipulate, also needs to be a stable devise, is threaten as static but it does moves, although too slow, it should be flexible, but not too much... are not contradictions one should choose from. Architecture contains áll these notions and as architect one should be aware of this.

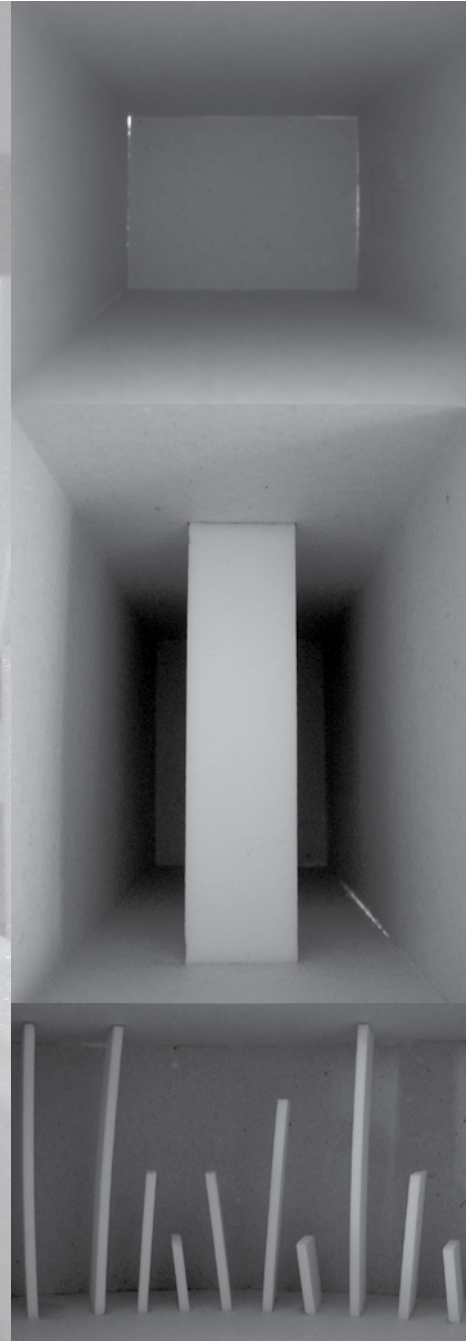
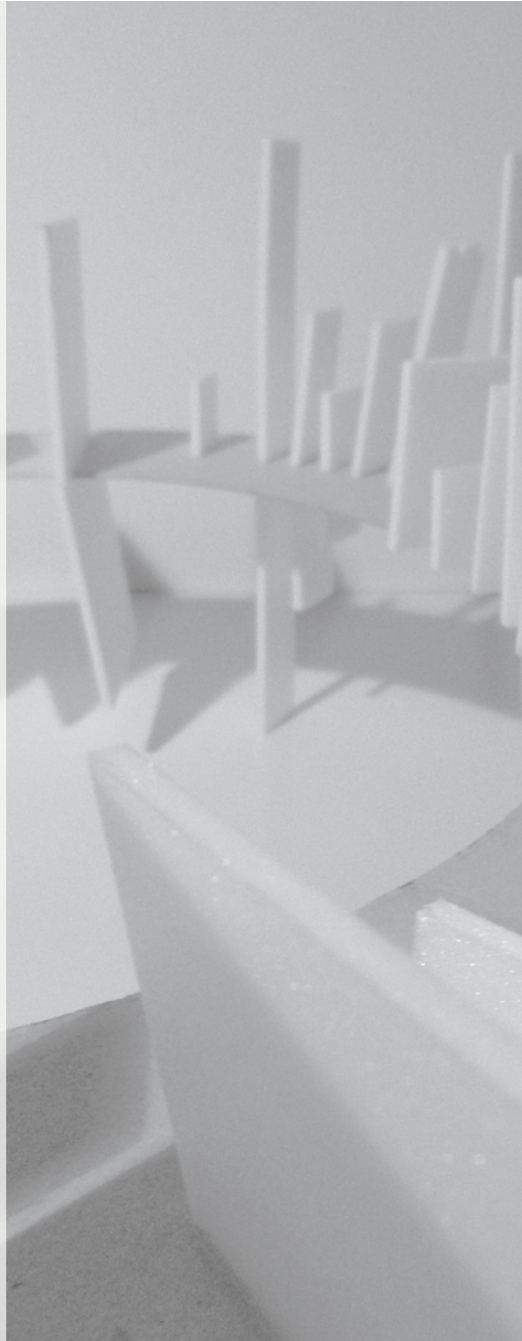
When doing this architecture will start functioning as a dynamic system in which form and perception are never fixed, where parts and the whole are reducible to neither and where the focus lies on capacities and singularities rather than on properties and manifestations.

Being materialised

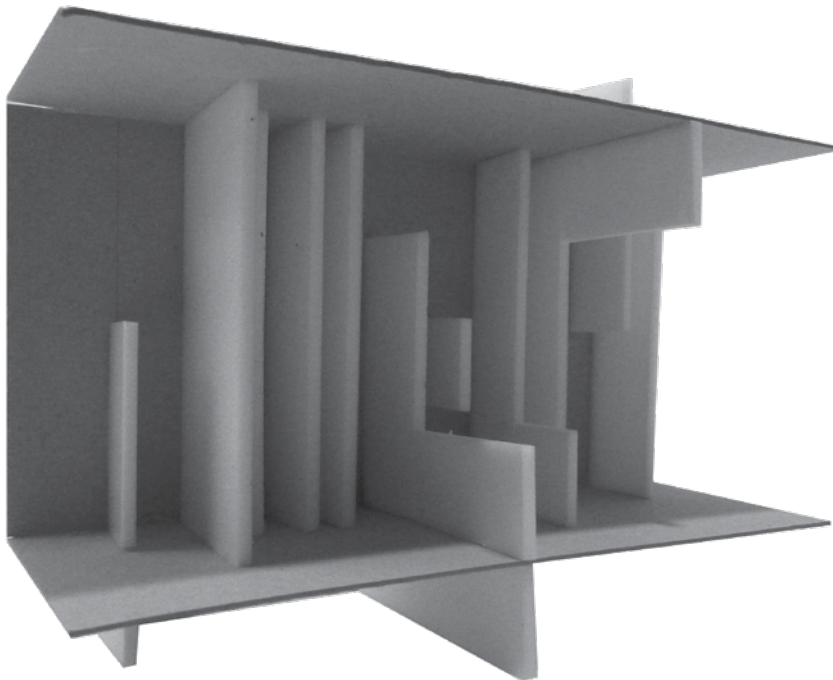
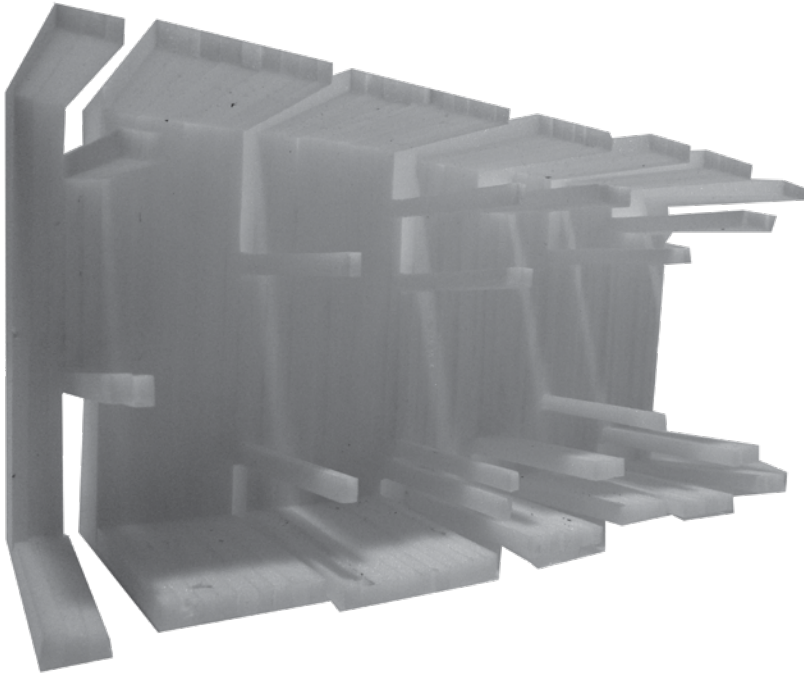
But how do these time-space layers become materialised in architecture? How do we recognize them? How can we design them? One first needs to get grasp on what the relation between time and space is and how one could design (space in) time, instead of (time in) space:

- Designing space is framing and fixing. But by doing this one always frames something, not just space, not just empty boxes
- Something happens in space, but this happening cannot be experienced by observing and spectating, it is about involving. One needs to be part of space, move through space.
- Once one moves through space one doesn't experience the space but this movement through space: the movement makes that one sees new things, experiences the light changing, etc. Discovering all the different moments (= time) in space.
- Frames of space, that we experience through time, don't have a beginning and end: the experience of time is also influenced by things happening outside the architectural frame (for example the changing of sunlight)
- And these frames are also never linear but multiple and dynamic: the time-scales that influence one experience are not the same: the changing of the sun is located in a different time-scale than opening a door.
- The moments where these different time-scales meet are the most intense moment in architecture and experience.

So it is not space that makes space but the different moments in time.



Grafting Architecture



Being layered

What does this tell about architecture? What do architects do 'wrong'? And what should they do instead? Why doesn't the building work as it should according to transformation, chance and change?

At the moment architects treat architecture as objects. One does not frame (and give space) to moments, but designs the moment itself. One acts like there is no difference between the frame an architect chooses, space, and the time that makes this space (see the picture of the model above).

With an object the whole must be adjusted when things need to be changed, there is no distinction between fixed and changeable. Architecture right now seems an either/or situation, while it could also be about the inter-realtion.

One needs to acknowledge that architecture is not the building ansich but the happing, the moment, the experience of this space. Therefore one should stop wanting to design these moment, but starting design the frame in which these moments can take place (see the picture of the model below).

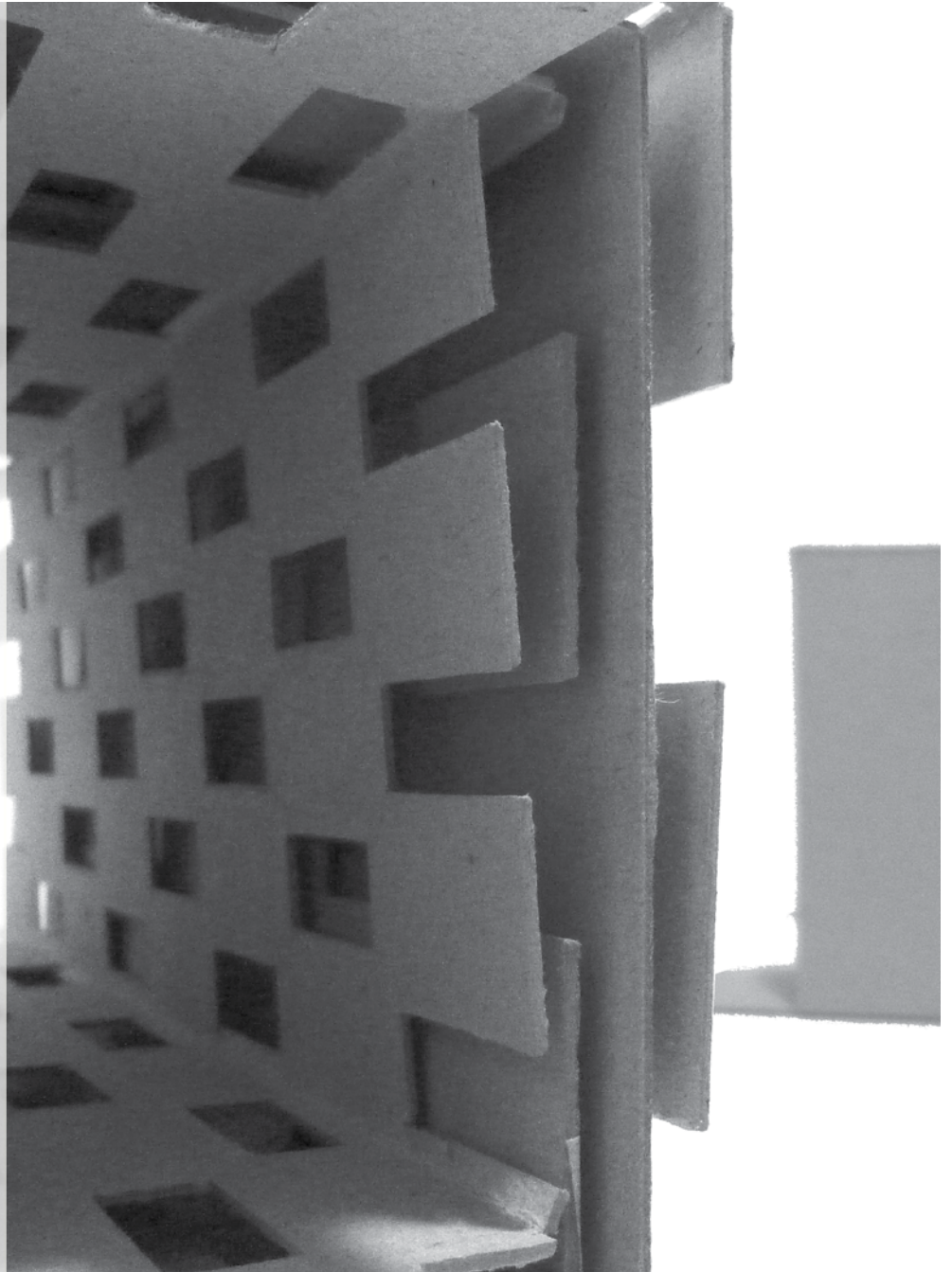
One needs to make the process of moments possible. These moments have different time-scales and are therefore not determined in the same way. This is way one can not create óne object, but a sýstem that contains all these differences.

The system should focus on layers (of determination and in-determination), and together they form the building.

Determining conditions

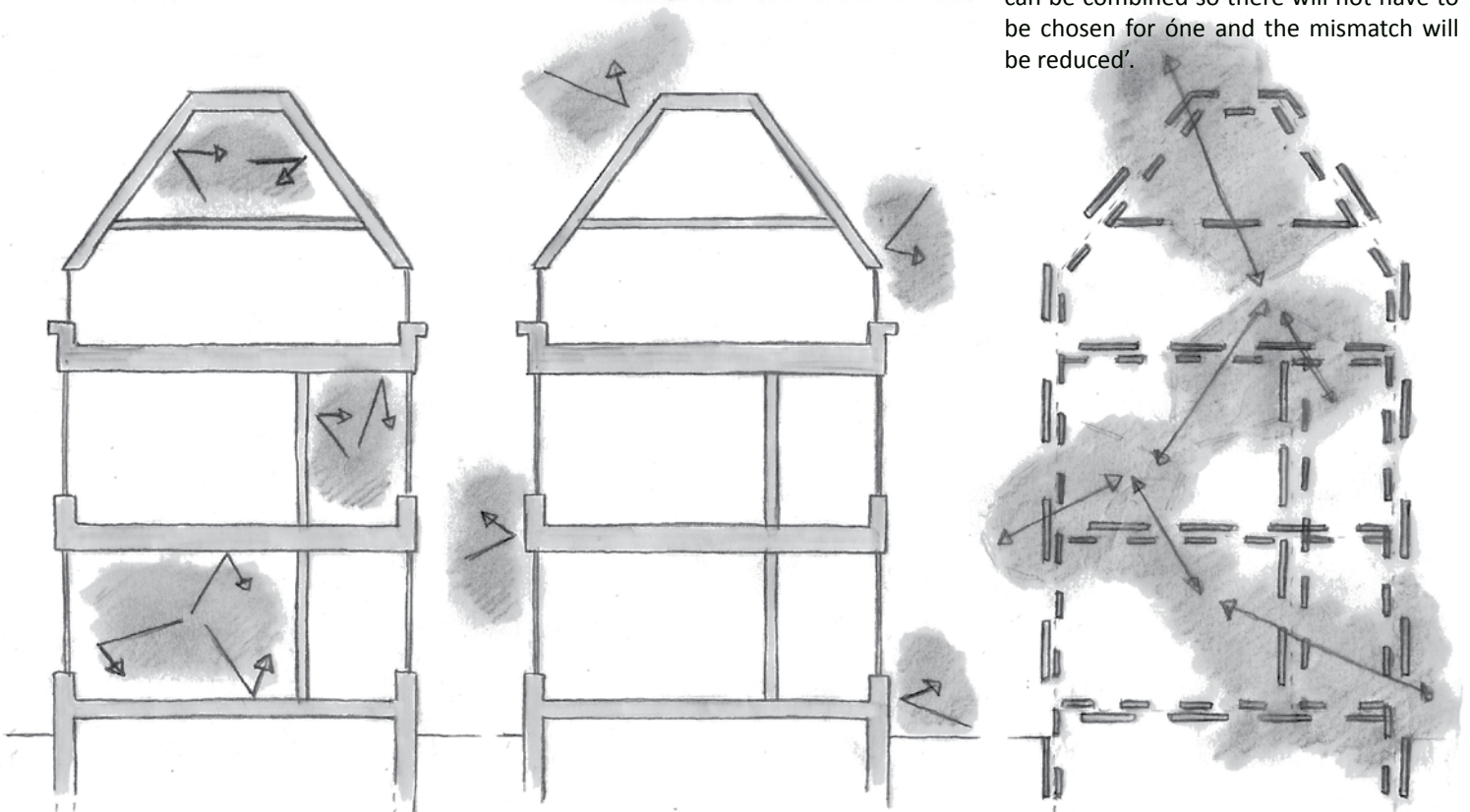
So the role of the architect, what one should determine or not, is not about offering a building, but also not about offering a tailor-made building. It is about this in between: offering a stable decor which contains multiple layers so chance and change, different conditions and spaces, can be absorbed more easily.

With this layering one can look at the *conditions* of architecture, emanating from the building and the structure of space (time). Research on what these layers are does not have to lead to totally new ways of building, it is not about destroying the world of architecture, it is only about not taking the things that there are now for granted, it is about questioning the building as it is there right now, examining what it does, criticizing it, looking at what is missing and searching for ways to tackle or solve this.



'At the moment there seems to be a mismatch between the static way in which one treats a building and its architecture and the dynamic events that actually make architecture. Static buildings right now seem not able to give space to the complexity, the movement and the transformation of its architecture. Instead buildings bounce off all the events that are taking place.

There should be searched for a way in which one can look at architecture less as an impenetrable object but more as a layered process, in which different transformations can be combined so there will not have to be chosen for one and the mismatch will be reduced'.



Mass versus events - no interaction but bouncing - off. The problem: either/or scenario's

Layered architecture, mass interrelates with events in/and space

Researching the section

Architecture should be a layered process and less as the impenetrable objects as what they are now.

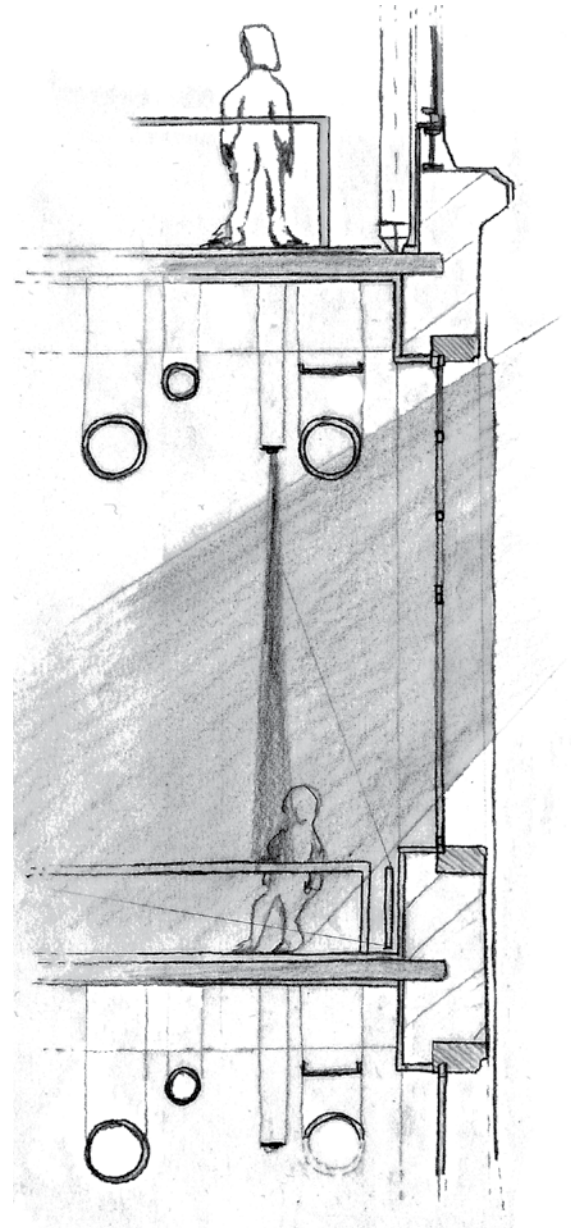
So architecture should be transformed into a series-of-transformation, occurred in time and always in movement. But this transformation should happen without destroying the world of architecture, which makes it necessary to start researching existing spaces in their sections, as the section is something architecture already knows and the only tool able to show it all: the building, the architecture, its perspective, the series of moments etc.

For this project this research is linked to a (re)design of the Faculty of Architecture at the Technical University in Delft (the Netherlands). The already existing building of the faculty is build in 1921 with a major renovation in 2008.

The building was designed with the intention of being the head-building of the campus: an imposing, representative 'business card' for the university. When in 2008 a new building for the faculty of architecture was needed, this building transformed into the location for this faculty, converting the building into a open and playful 'design factory'. For testing my research and statement these decisions won't be taken for granted but questioned. The whole building will not be taken for granted.

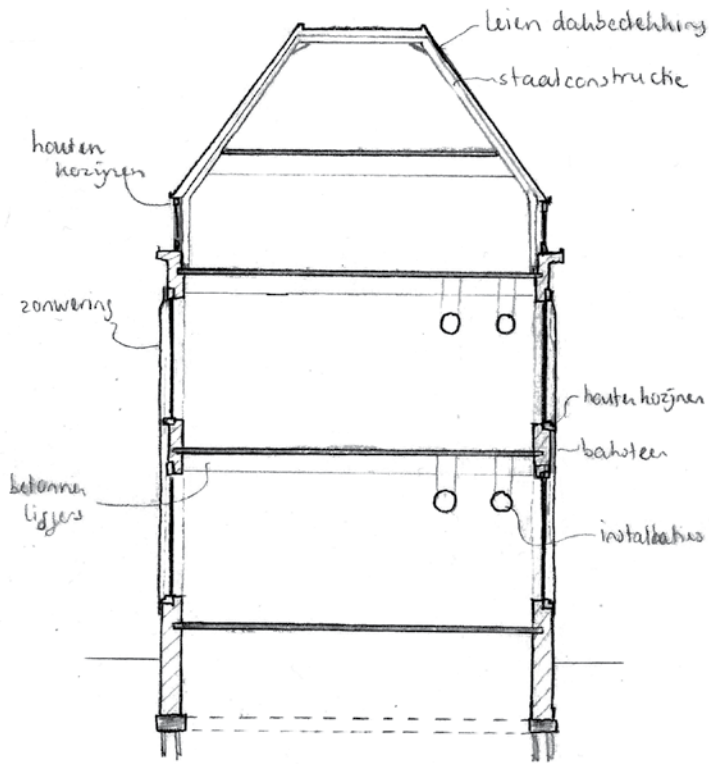
In the section the building will be decomposed, in search for the desired layering.

Grafting Architecture



Section of current part of facade

Grafting Architecture



1:200

Section Studio

Wide open space,
Possible because of extra concrete
construction + emergency pre-
cautions.

Walls loadbearing
All technical / climate installations
at ceiling, in sight because of

Determining Architecture



2008

Floorplans faculty

The building transformed from an
imposing, representative building
containing small, poky spaces to
an open, playful design factory.
This was possible mainly because of
major changes in the building-
structure and safety (technical)
installations.

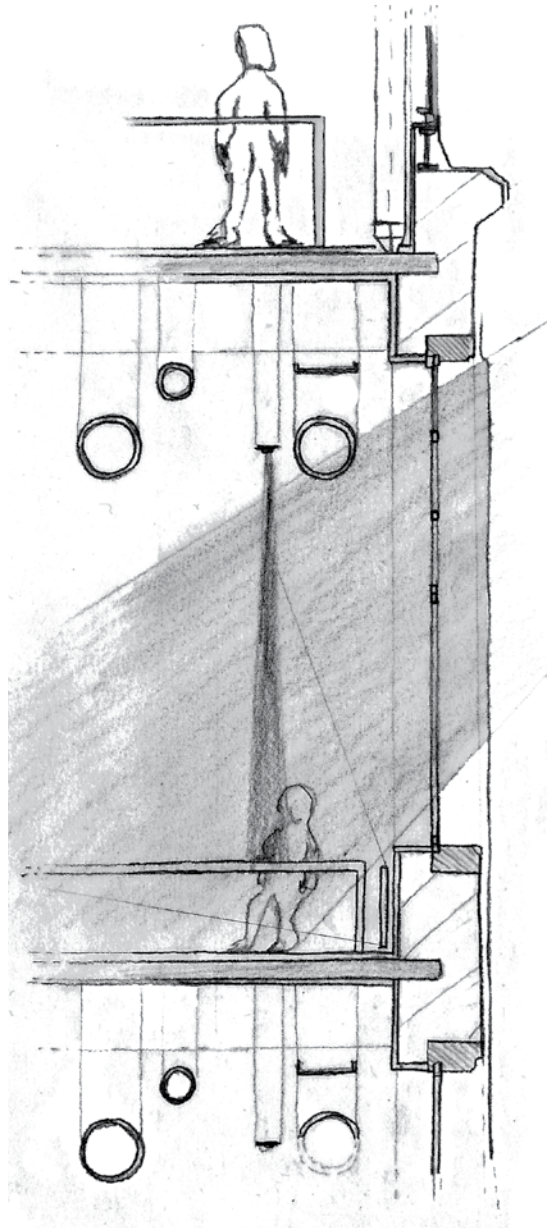
Section of current part of building

Floorplan in 1921 and 2008

The layers of the section

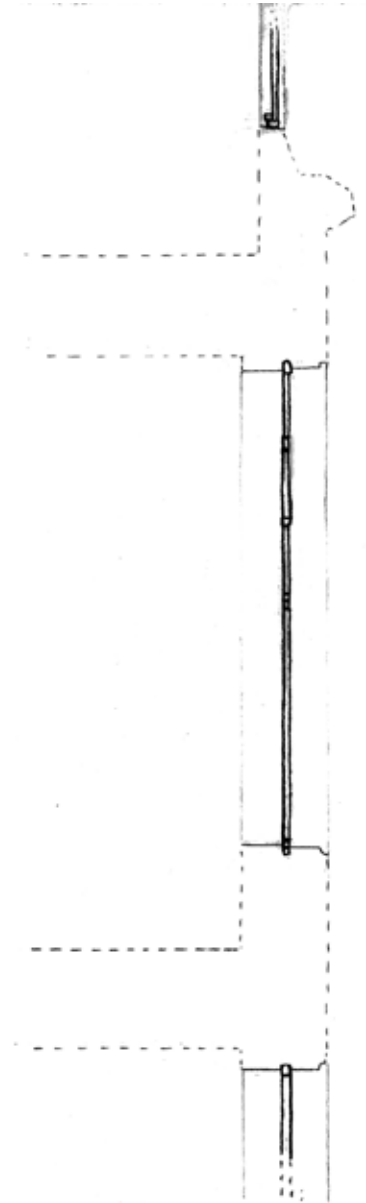
But what are the layers of architecture? Are there layers found in the stable building of the Faculty of Architecture, which could help making architecture more capable of adopting change?

To be able to answer this, the section is pulled apart, resulting in a diagram of layers, showing all the different physical layers of architecture.



The whole section

Grafting Architecture



Transparency
Regulating relations with other spaces

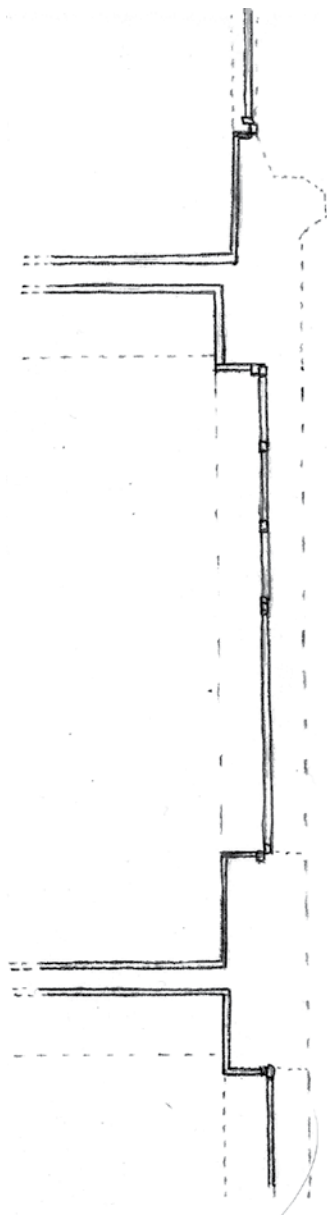
Grafting Architecture



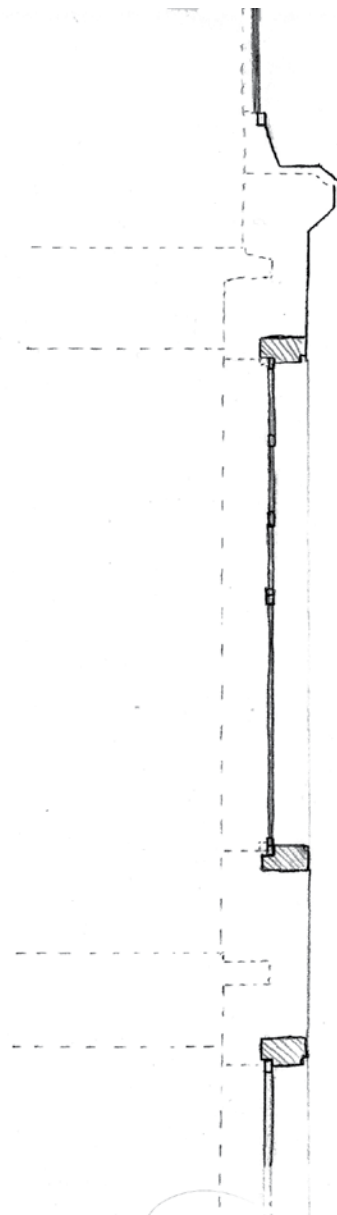
Closed volumes
Physical boundaries of space



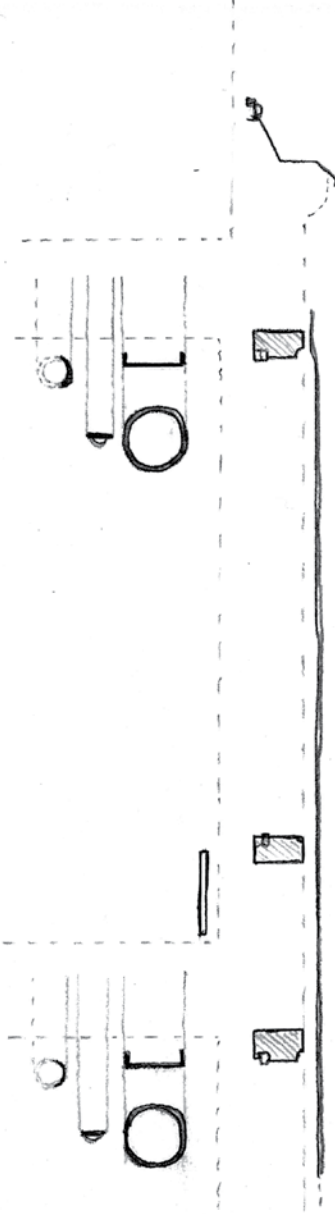
Constructing Elements
What is able to be built



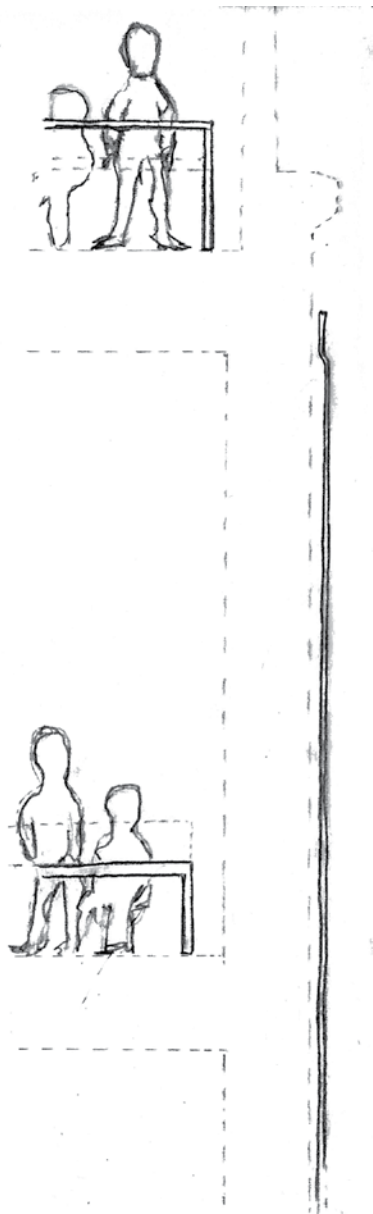
Inner Surfaces
The textures one experiences from inside



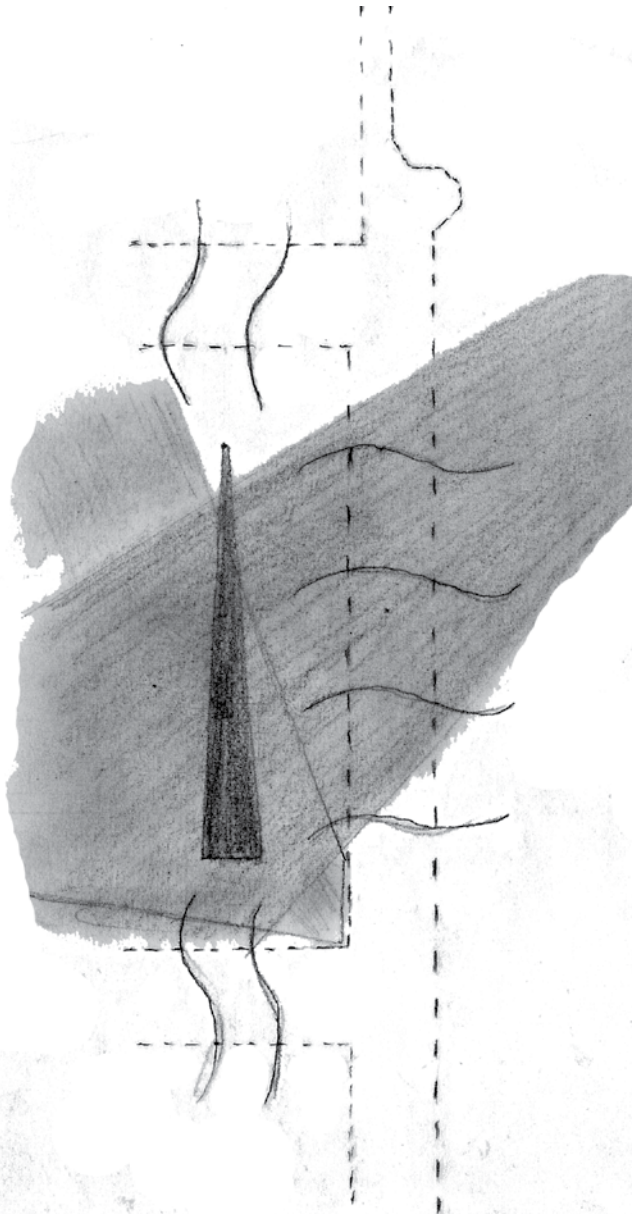
Outer Surfaces
The textures one experiences from outside



Climate Elements
Influencing inner comfort (compared to outside)



Actors
Moveable 'elements' which act on the scale of use and program

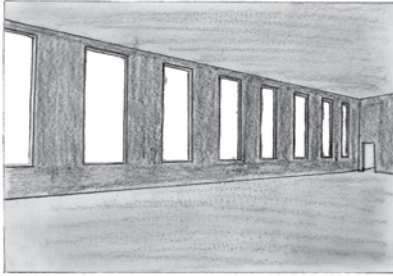


Non-materialised conditions
The invisible conditions like heat and light

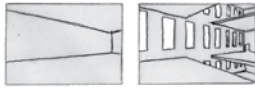
Grafting Architecture

What do they do?

What do they do?



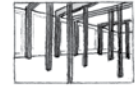
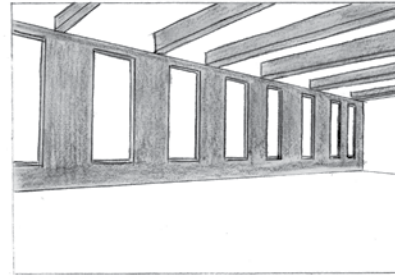
Determining Architecture



Separates inside from outside, making it possible, or not, to interchange events/ activities/ experiences/ perception/ spatial conditions.

Transparency & Closed Volumes

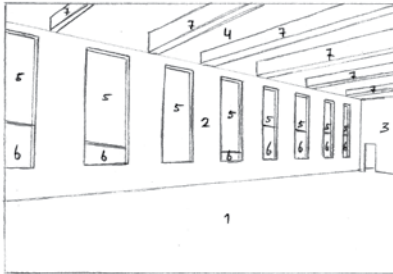
Transparency and Closed volumes



Constructs (to build) the building, framing places, making it possible to add materials, furniture etc.

Construction Elements

Constructing Elements



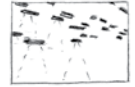
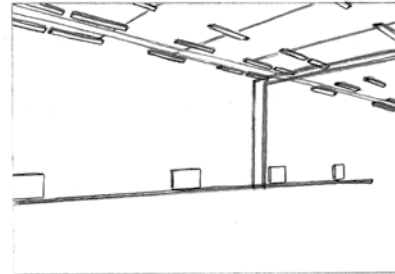
Determining Architecture



The possible textures to see, smell or touch. Making it possible to create a different "look" compared to the outside or to other spaces.

Inner Surfaces

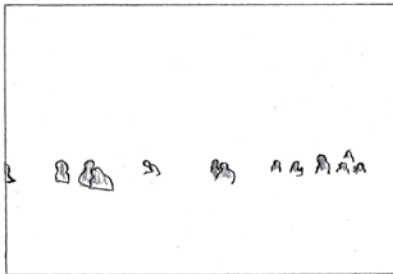
Inner Surfaces



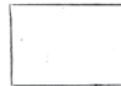
Regulating the not natural non-materialised conditions like air, heat, light, electricity and safety-issues. Making it possible to create vast open spaces (sprinklers and ventilation) & desired functions (light).

Climate Elements (technical)

Climate Elements



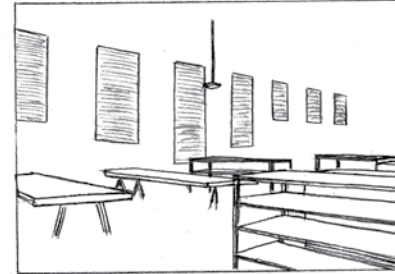
Determining Architecture



Make space by being there. Act actively in space to do the things they want to do.

Actors 1 - the students

Actors (I)



Control the acts of Actors 1. Make the decisions at the scale of 'use' and 'program'

Actors 2 - Facilitair Management

Actors (II)

What do they do wrong?

But what does this tell about architecture and need for questioning this architecture?

At the moment there is a tripartite division made between

- Fixed layers (Primary) (Closed volumes, constructing elements, outer surfaces and climate elements)
- Flexible layers (Tertiary) (Inner surfaces, non-materialised conditions, transparent layers)
- and Actors (Secondary)

Whereby the actors are seen as the mediators between the first and third layer.

These layers are still combination of multiple different conditions in one layer. They are depending on each other, not able to absorb any form of transformation independent from other conditions or layers. Next to that the layer that is called 'flexible' is not that flexible that there is the ability to change conditions easily, it is still strongly attached to the fixed primary layer.

This way of tripartite division is not able to inter-relate with the transformation in conditions of space optimal enough.

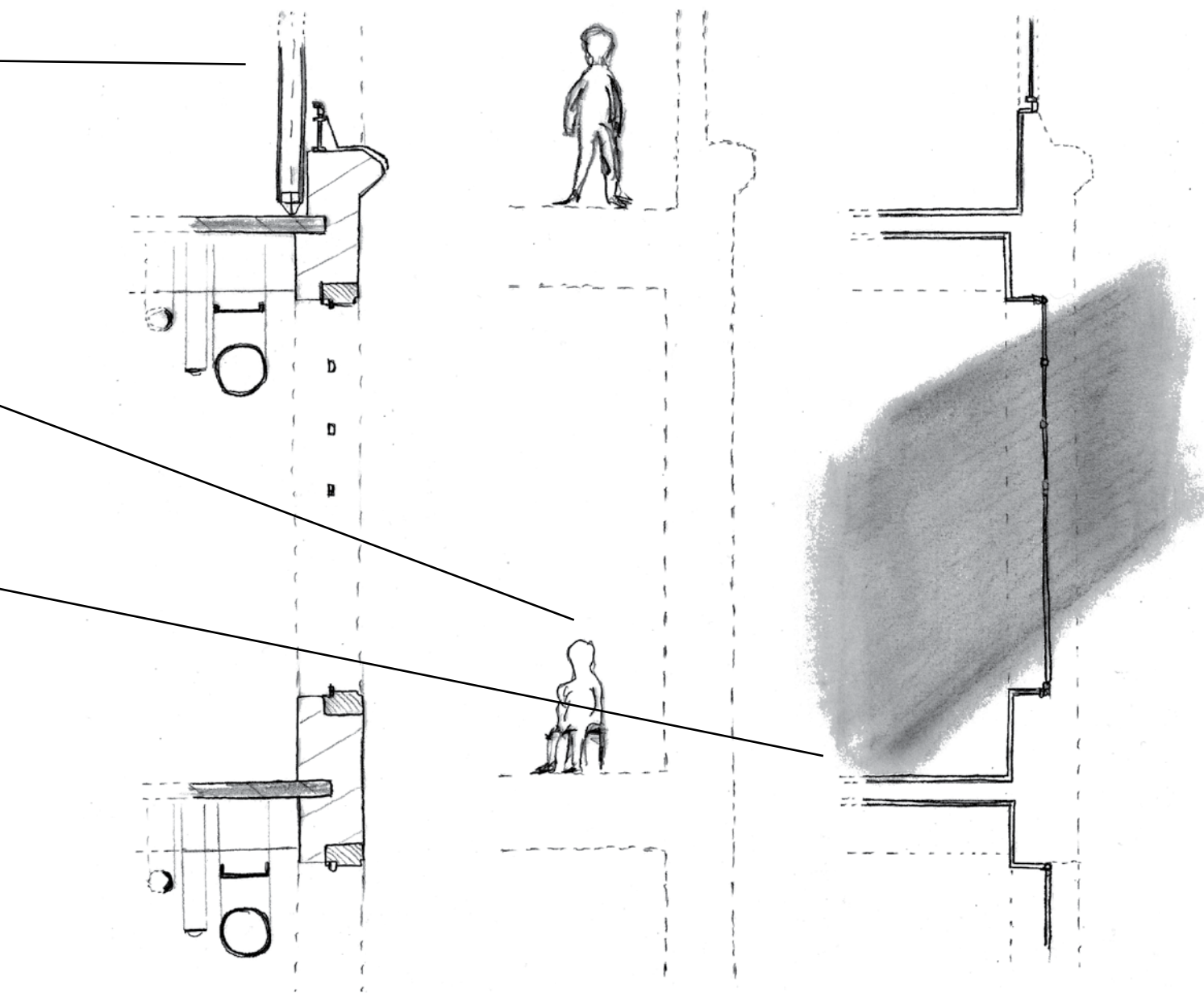
If the layering, the not looking as architecture as a object but as a process, is found in the wall, in the building itself, is it than possible to treat this wall different than one does now?

(Current) PRIMARY LAYER
A fixed, monumental cocoon: the stable divide

(Current) SECONDARY LAYER
Life that takes place: the people using it

(Current) TERTIARY LAYER
The flexibility that enables and facilitate chance in the changing life

Grafting Architecture



Primary Layer
A fixed, monumental cocoon: the stable divide

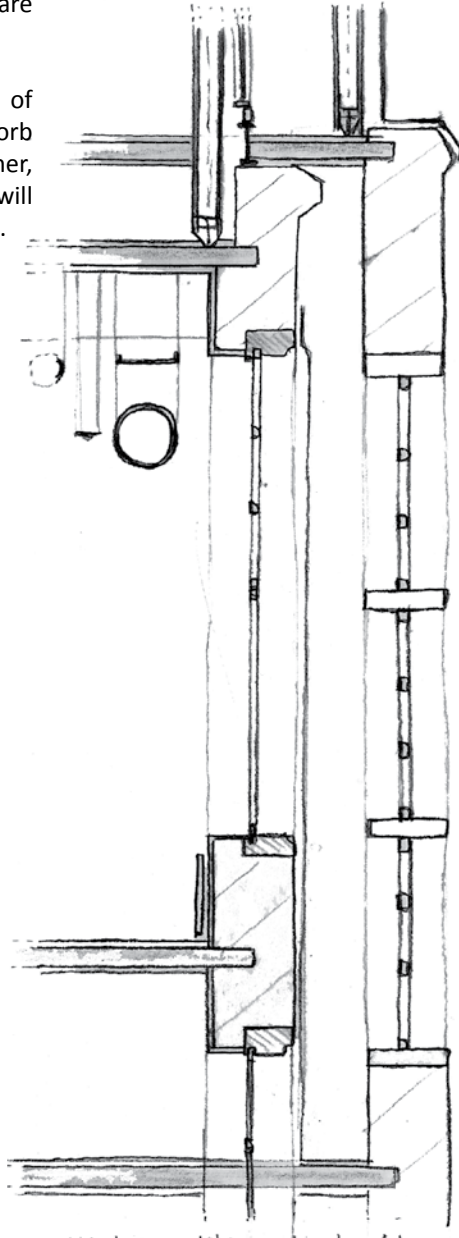
Secondary Layer
Life that takes place: the people using it

Tertiary Layer
The flexibility that enables and facilitate chance

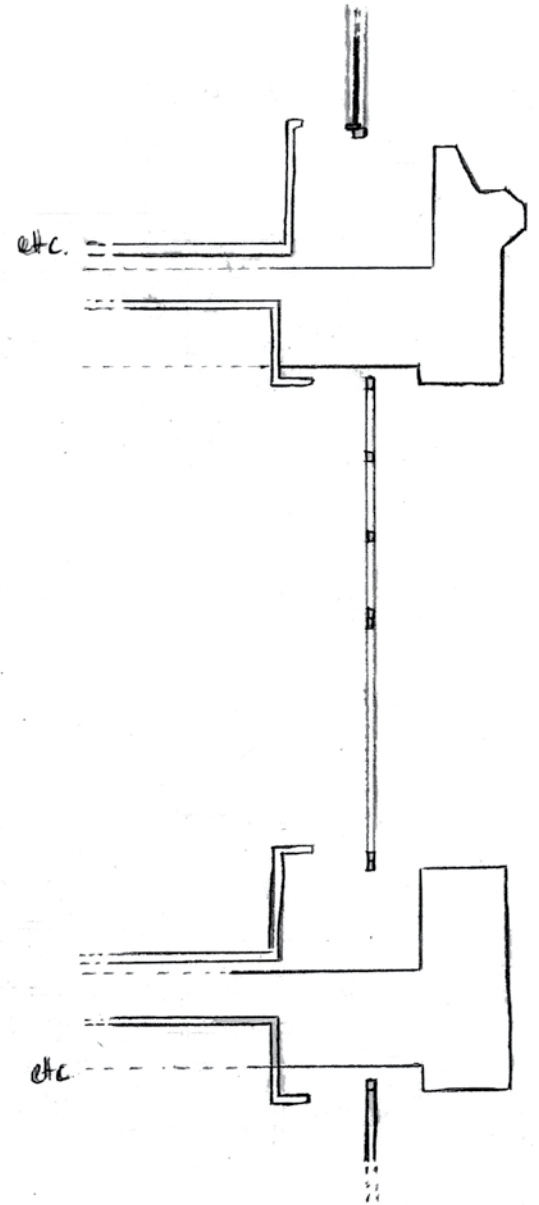
Being a-symmetrical

Research should be done on whether different configurations of layers are possible.

The key is found in the *a-symmetry* of layers. When one layer is able to absorb different transformations than the other, the whole will never disappear while it will be possible to introduce transformation.

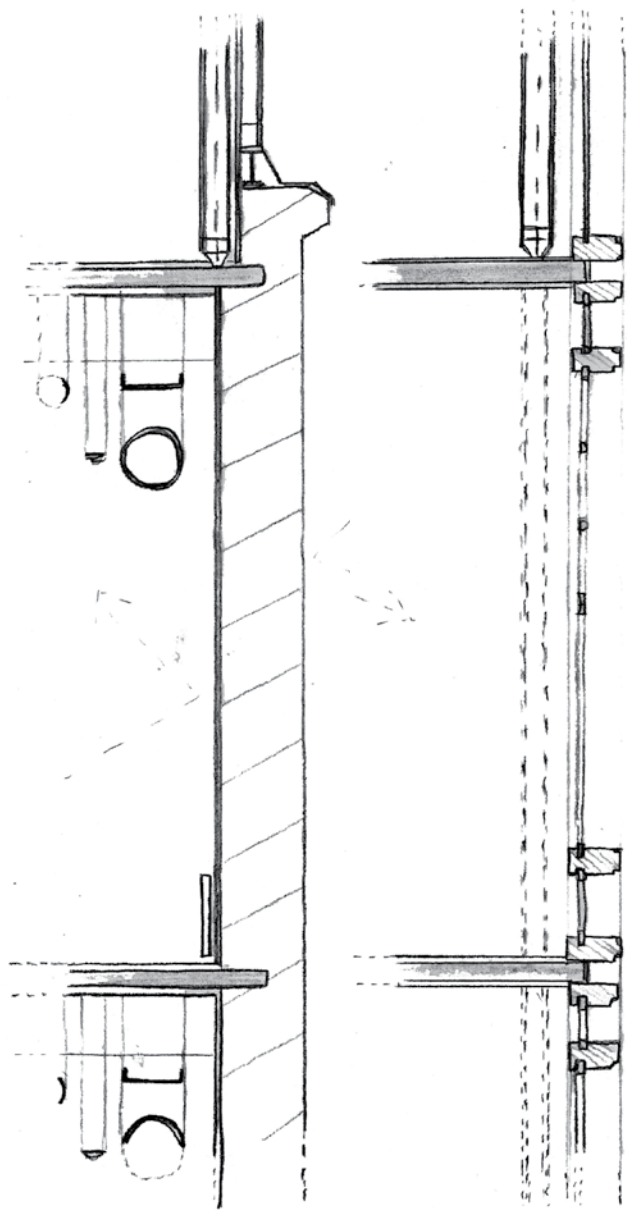


Multiplying different sets of layers



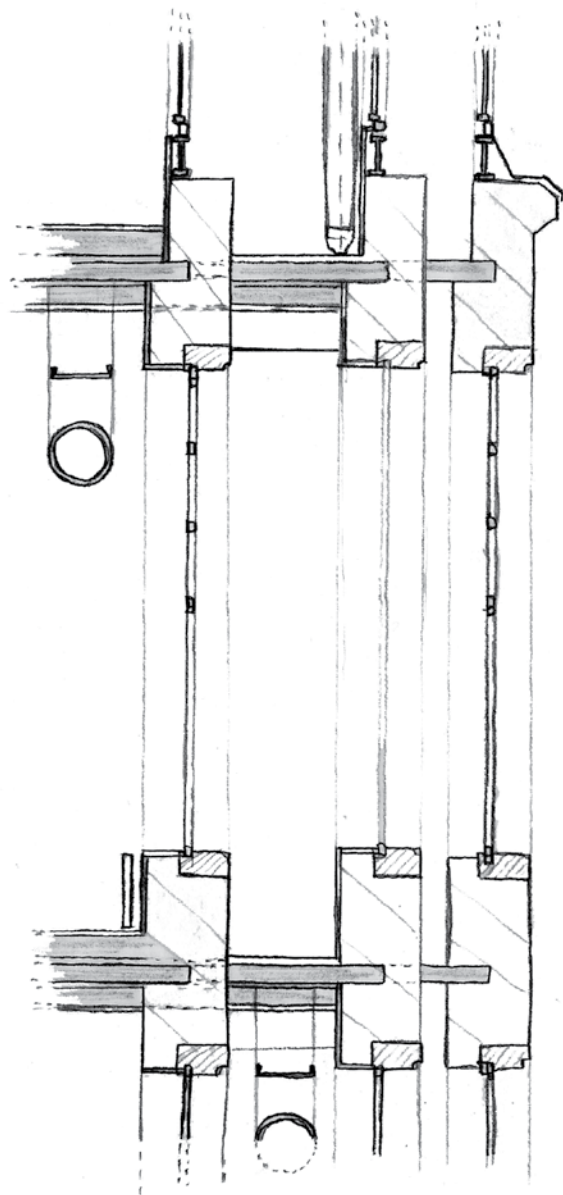
Separating layers

Grafting Architecture

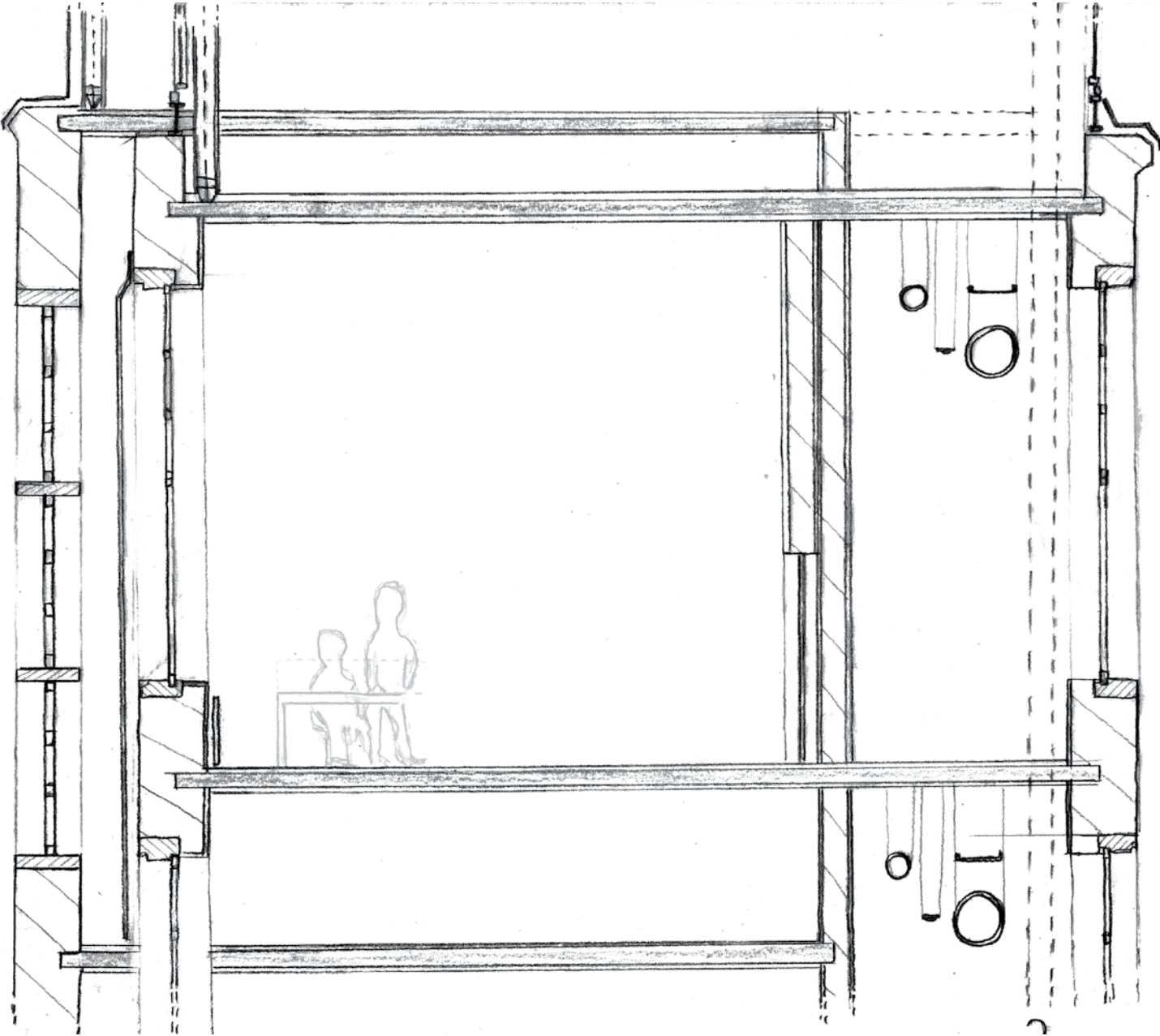


choice between layers

Specifically choosing between layers
(depending on the section)



Repeating the same package of layers

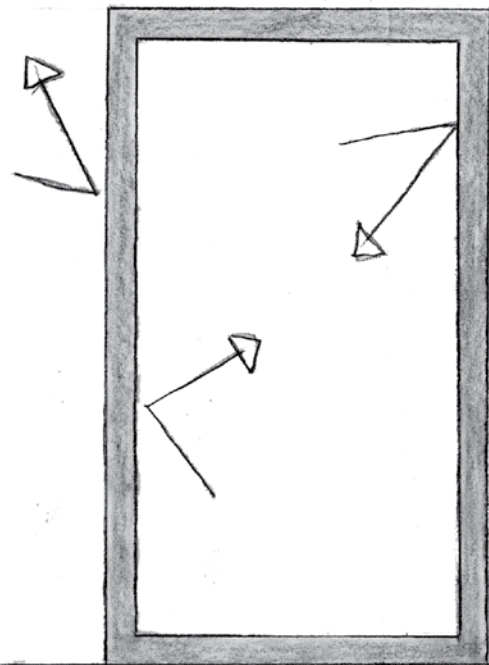


Static buildings right now seem not able to give space to the complexity, the movement and the transformation of its architecture. Instead buildings bounce off all the events that are taking place.

There should be searched for a way in which one can look at architecture less as a impenetrable object but more as a layered process, in which different transformations can be combined so there will not have to be chosen for óne.

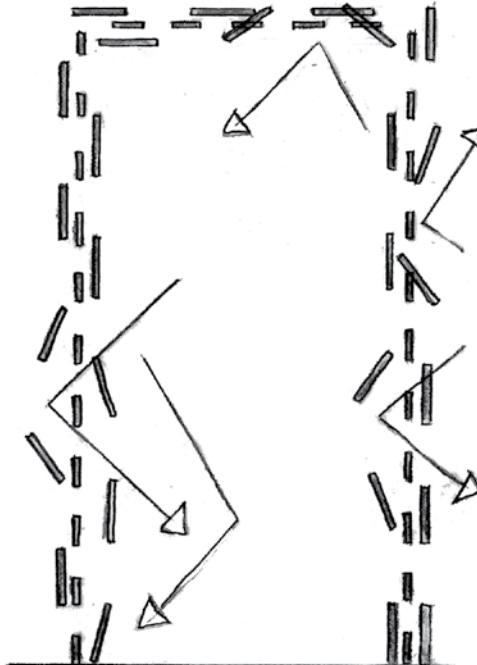
The core is found in a series of layers, in collaboration with the technology in these layers, which become visible in the wall and the spaces these walls create. Right now architecture becomes a static object because of the believe that the limit/end of space is the wall of a building. But in this wall, after the wall and in between the walls happen the things that máke architecture. The limit of space is not the wall at all!

Architecture is a story of multiple happenings, of multiple walls and of multiple spaces on all sides of these walls. All these different elements can be different from each other, providing a transformable architecture, but in order to combine them into óne conversation their grafting should be carefully thought of! **And it is this grafting, combining and the creation of complex relations and their reciprocity which is the desigtask for any architect.**



Statement

'Architecture is treated to static, it should recognize that the limit of space is not the wall, it should 'bent' more and become less an object and more a process of multiple layers combined in óne conversation'



Theory

Introducing asymmetrical layers makes it possible to 'bent' more and to create multiple spaces without losing the fundamentals of these. (Architecture won't become a flexible 'Barbapapa'.)

Search for a solution

Changing the stable devise as object into a stable devise as process in which there is not chosen for óne best, but for multiple others combined into óne conversation, all grafted equally.

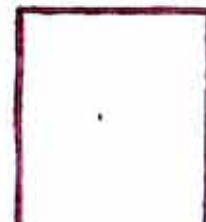
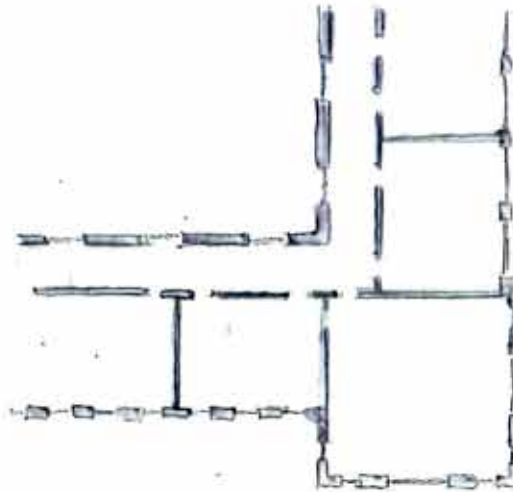
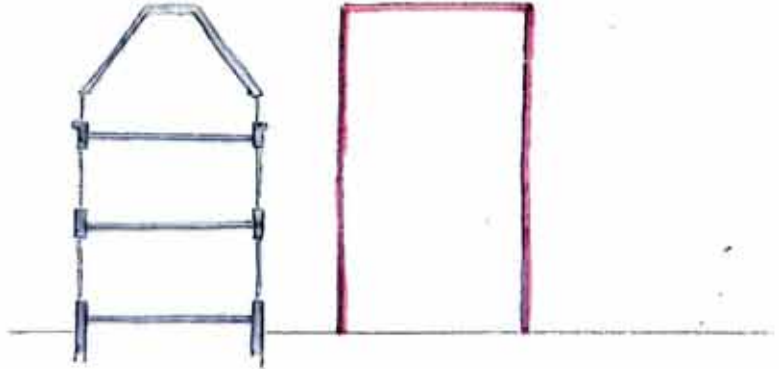
Catalogue of layering/grafting (Buildings)

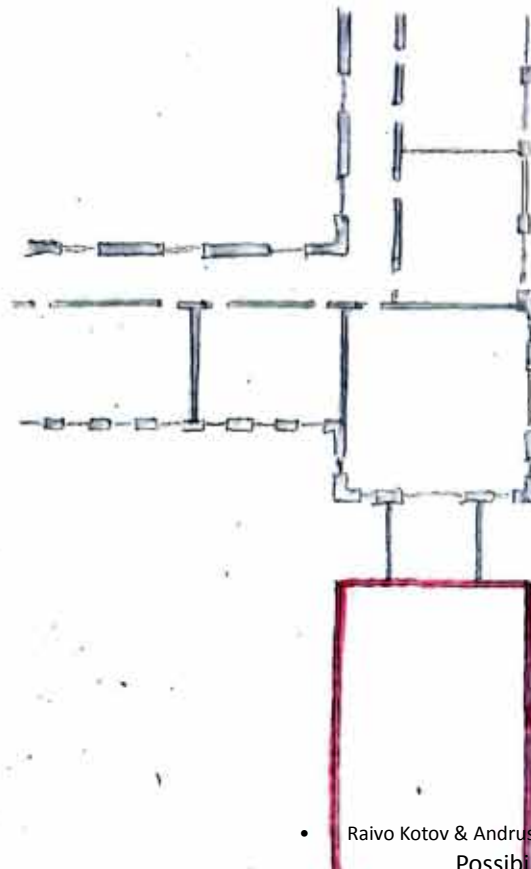
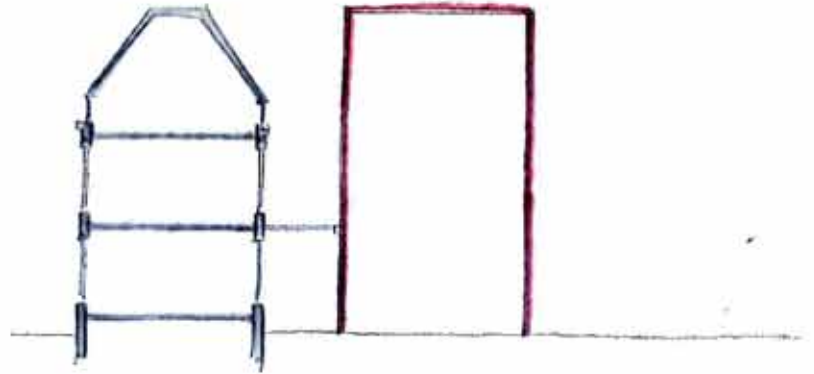
But how to layer and combine different walls, and different spaces that are created in and on both sides of these walls? A Catalogue of Layering/Grafting is created for research on this.



- David Adjaye - Nobel Peace Centre - Oslo
 - Franz Schwechten - Kaiser Wilhelm Gedachtniskirch - Berlin
- Possibility: Not combining into one.

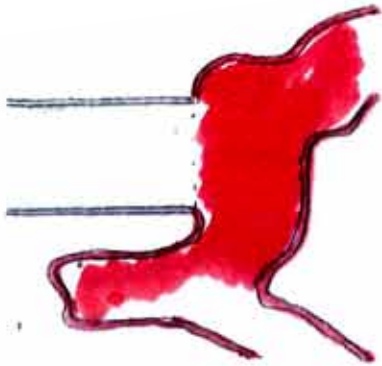
Grafting Architecture



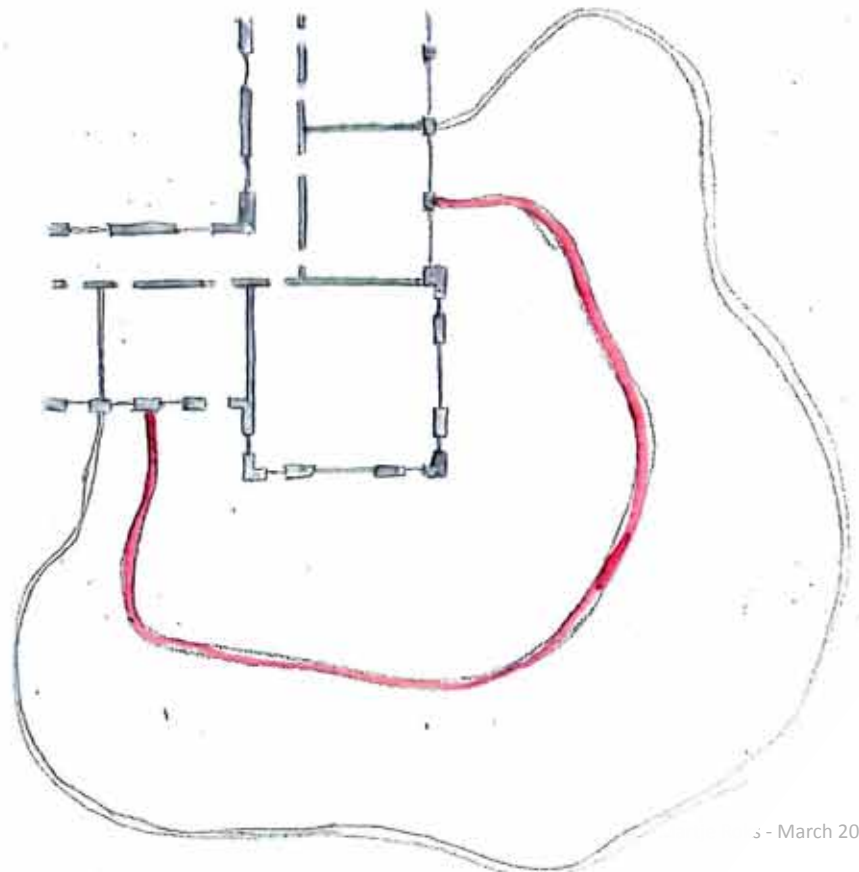
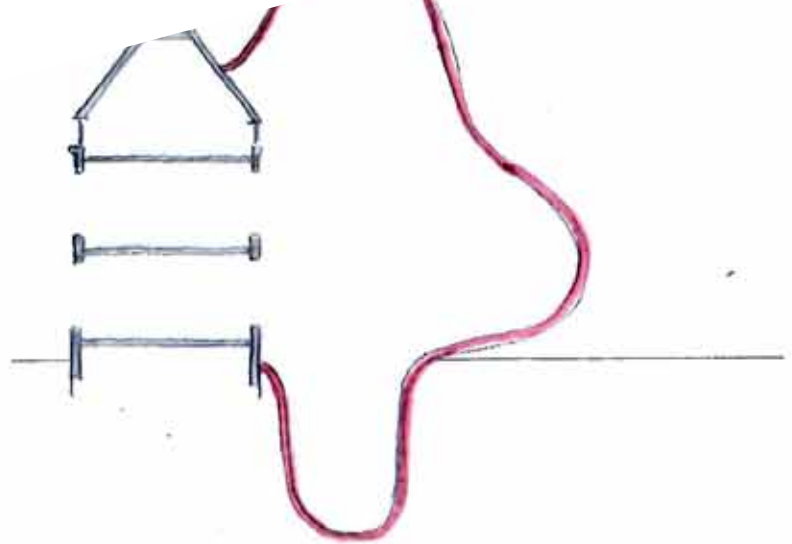


- Raivo Kotov & Andrus Kõresaar - Fahle building - Tallinn
Possibility: Interconnecting spaces

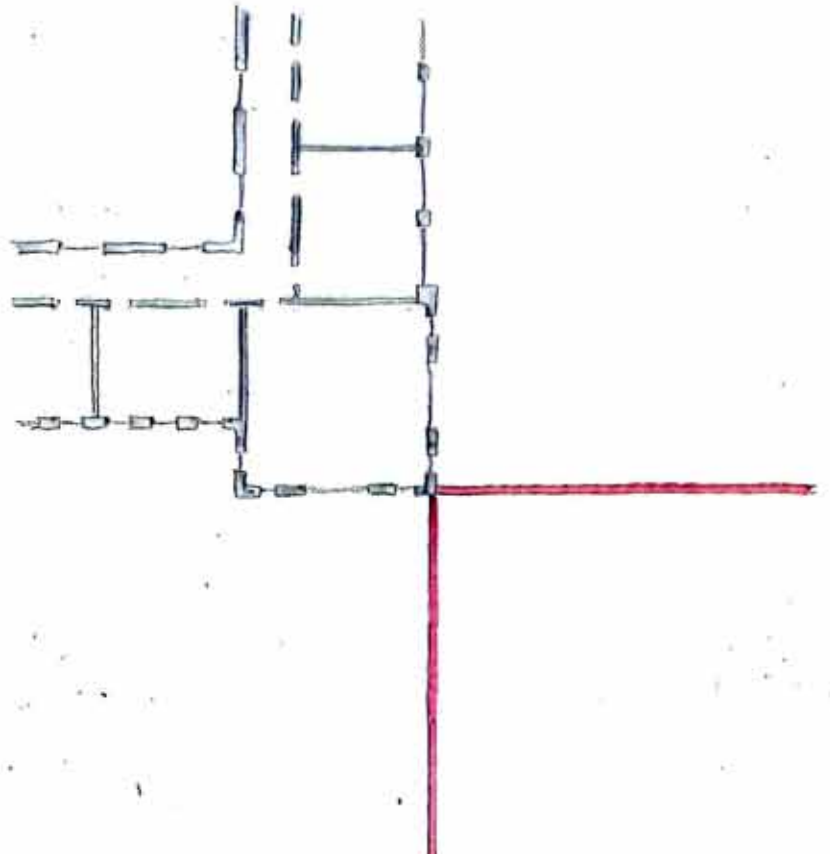
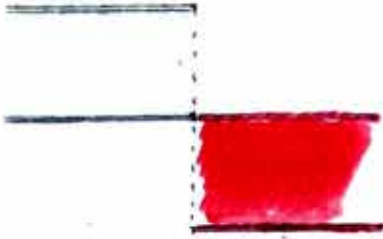
Catalogue of layering/grafting (Buildings)

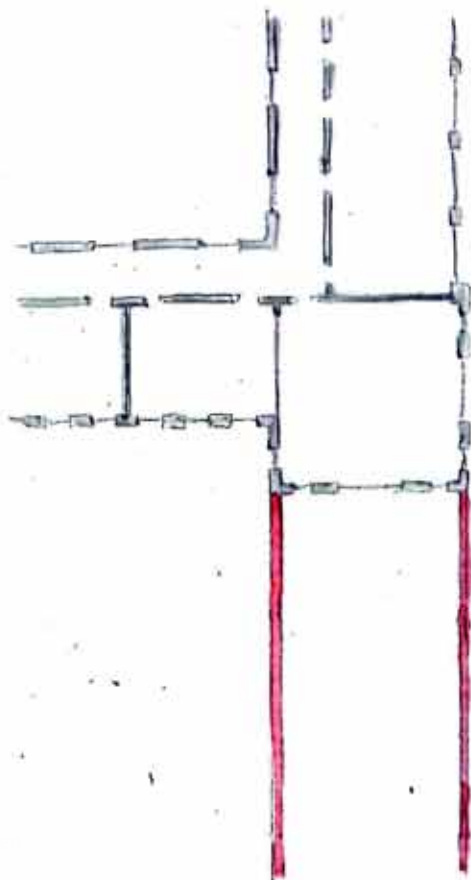
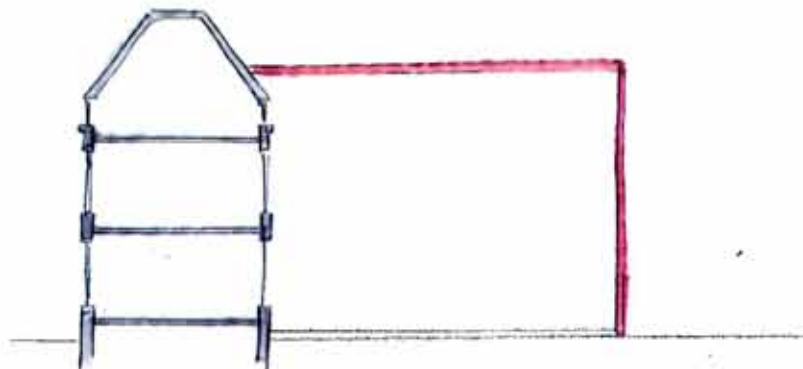


Determining Architecture

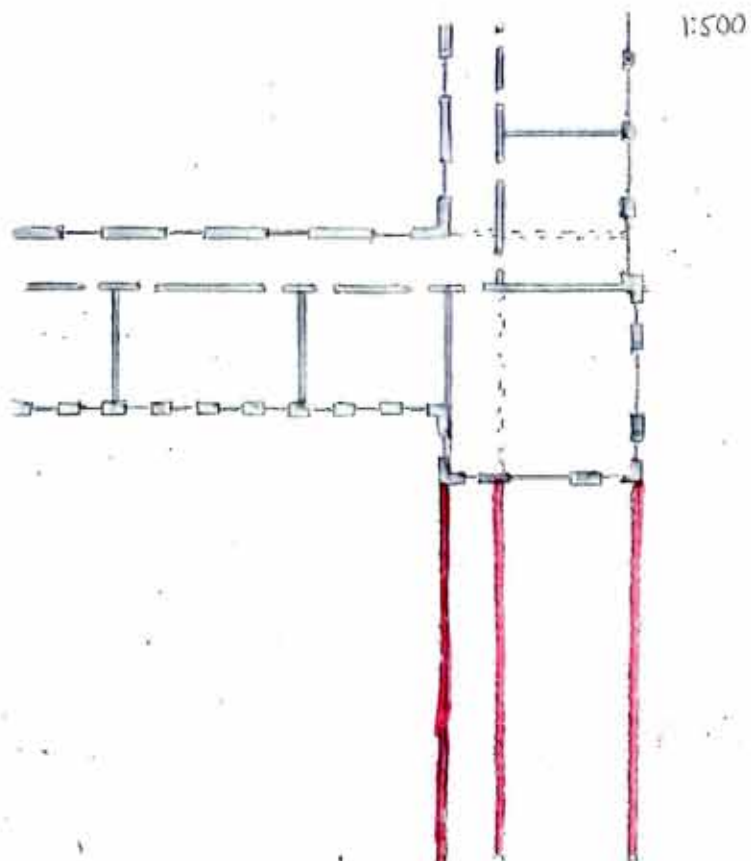
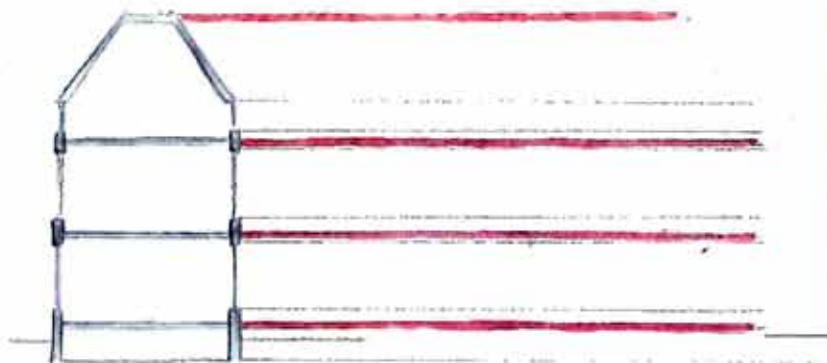


- Peter Cook - Kunsthaus - Graz
 - Will Alsop - Ontario College of Arts and Design - Toronto
- Possibility: Contrasting each other



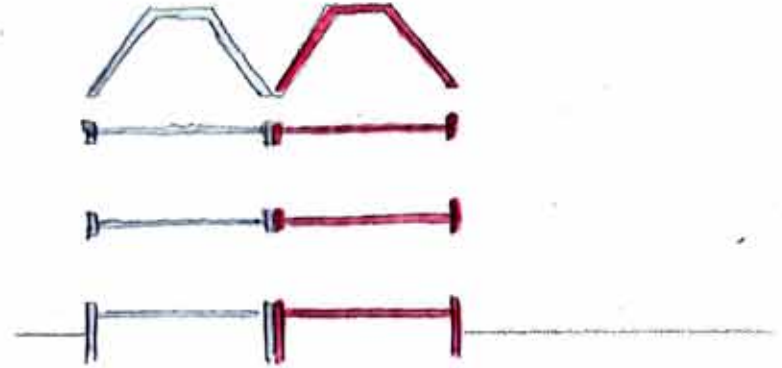
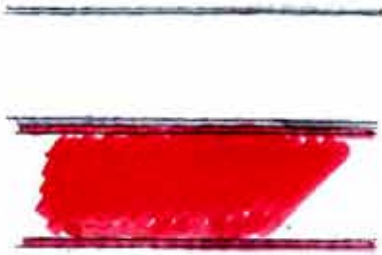


- Mario Garzaniti - SocialHousing- Schaarbeek
 - Dorte Mandrup Arkitekter Aps - Sport and culture centre - Cope
- Possibility: Paste Cold

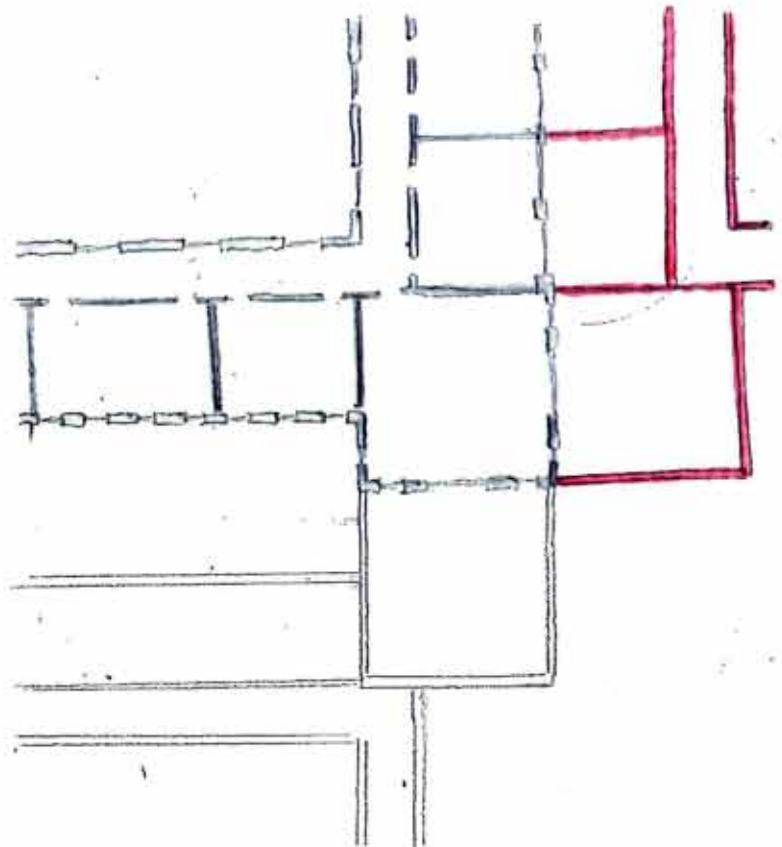


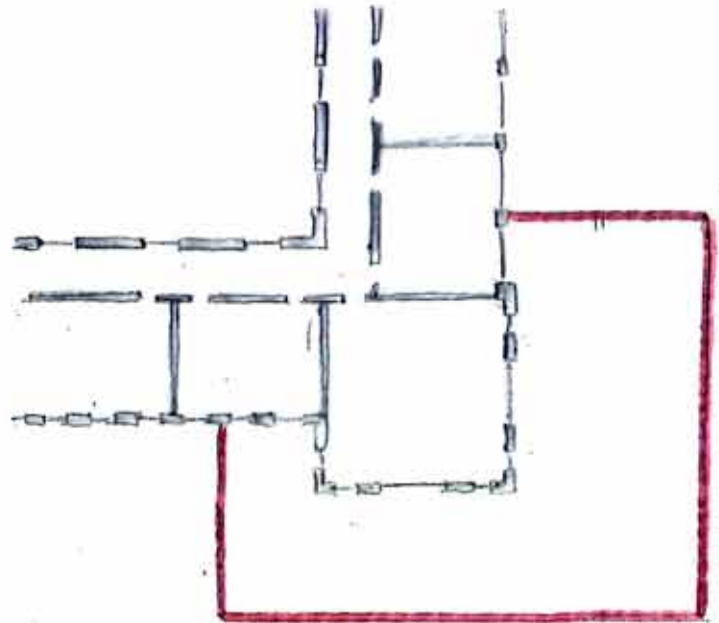
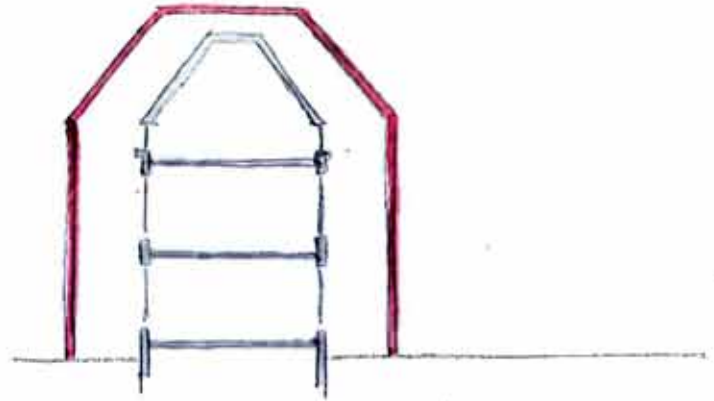
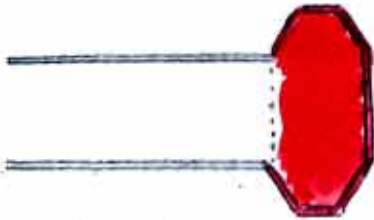
Bridge Xavier Font

- Xavier Font - Footbridge Pont Trencat- Sant Celoni
Possibility: Continuation of the same

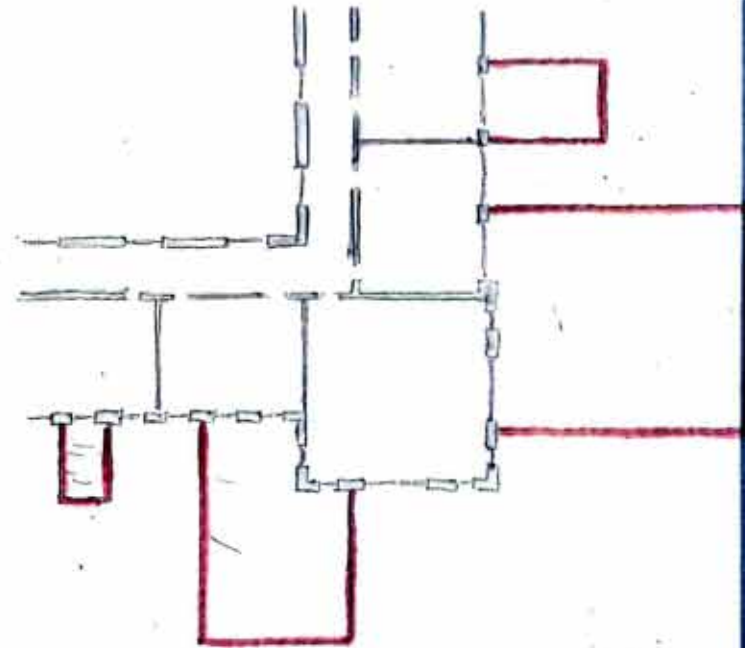
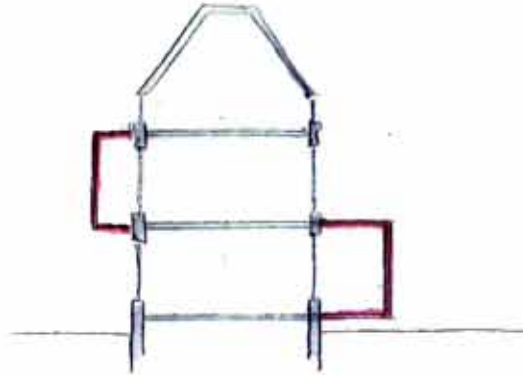
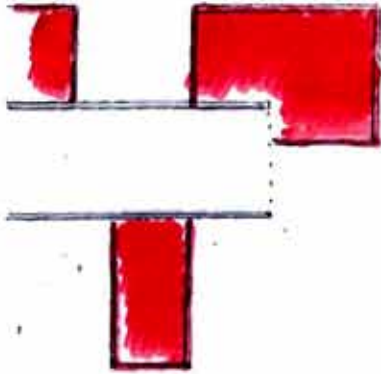


• Andrea Bruno - Les Brigittines - Brussel
Possibility: Mirroring each other

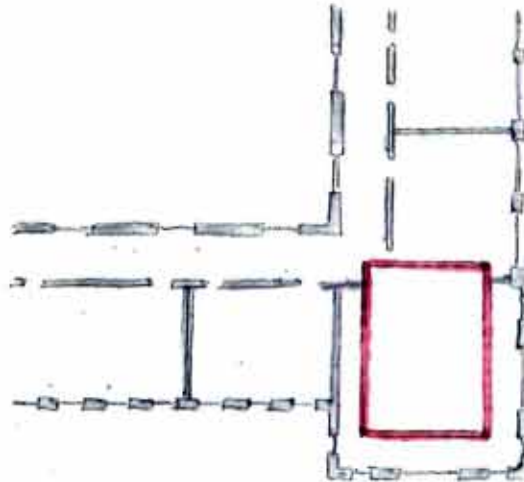
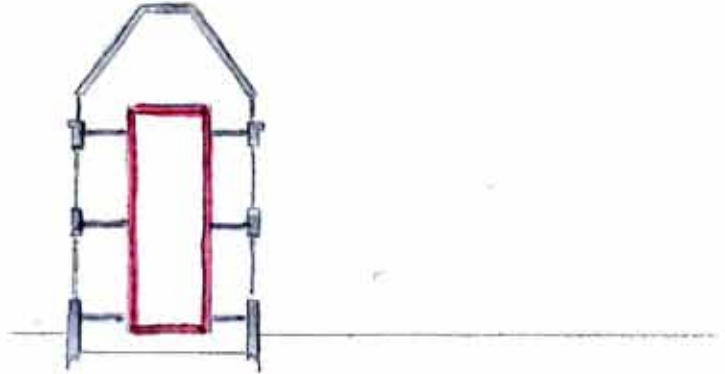
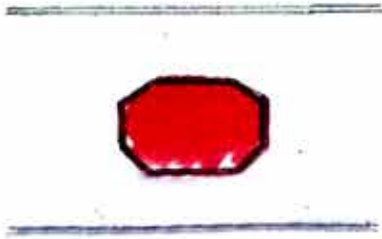




- Herzog de Meuron - Caixa Forum - Madrid
Possibility: Starting & Finishing each other

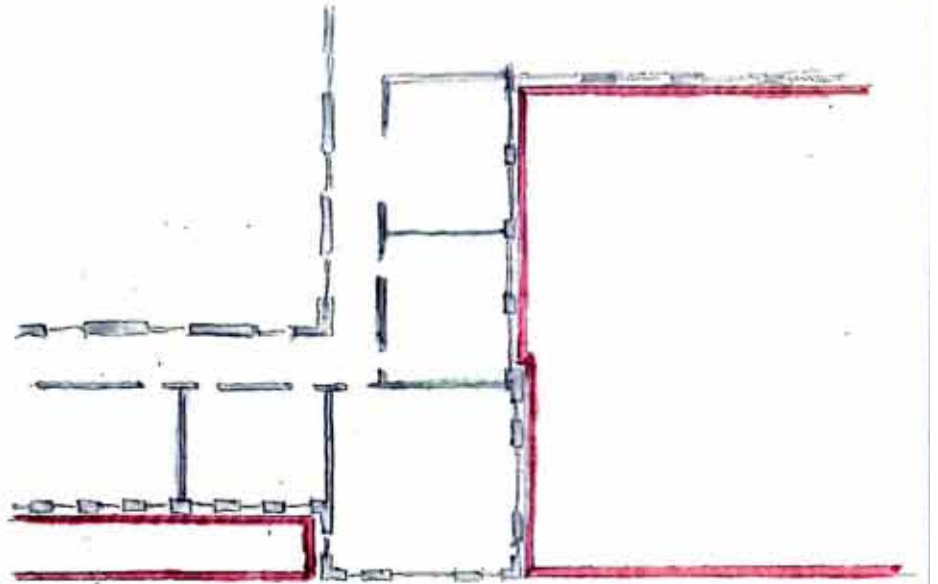
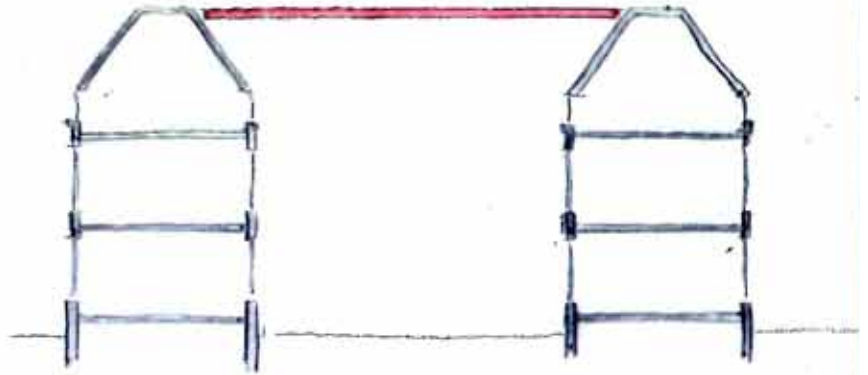
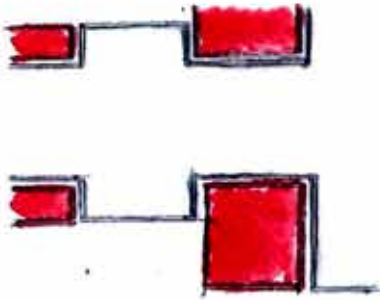


- Stefan Eberstadt - Rucksack House - Germany (no fixed place)
Possibility: Fragmenting the whole



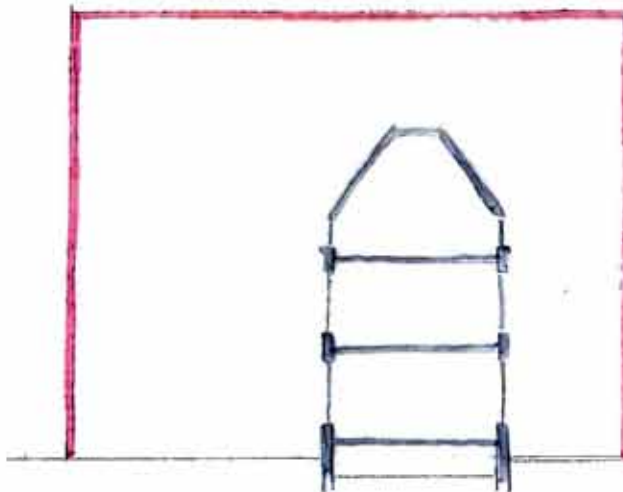
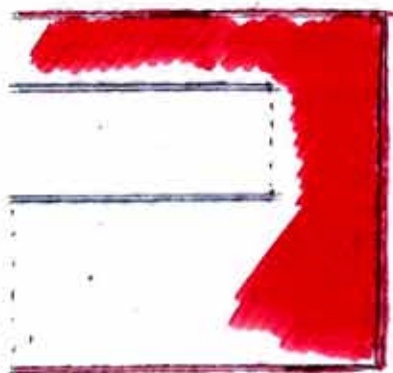
- David Chipperfield - Urban Plan - Teruel
- Anish Kapoor - Marsyas - London Tate
 - Frank Gehry - DG Bank - Berlin

Possibility: Constructing in each other

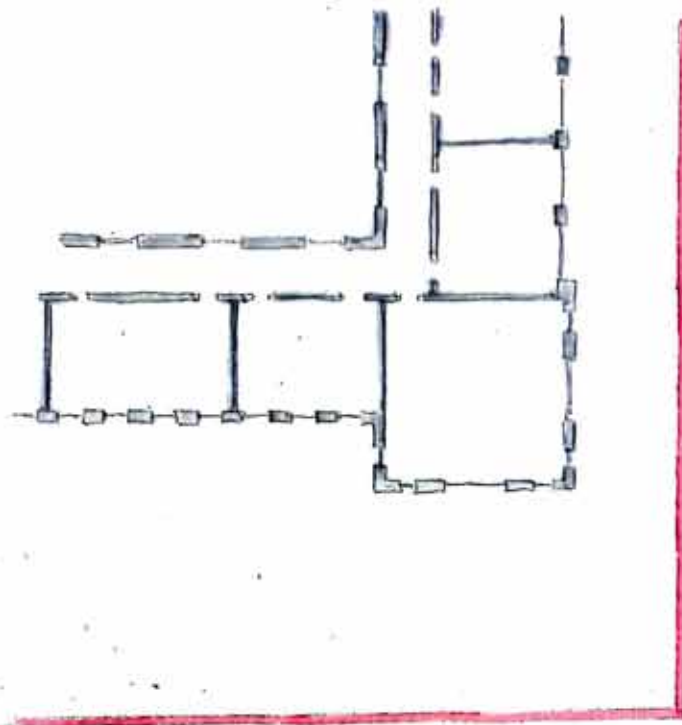


- SANAA - New Museum of Contemporary Art - New York
Possibility: Filling-up each other

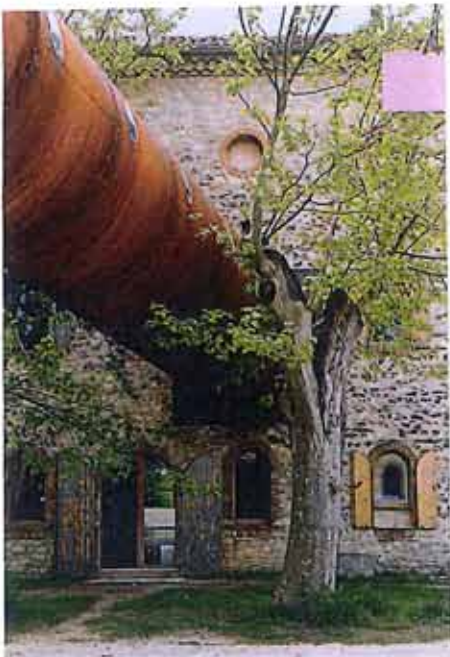
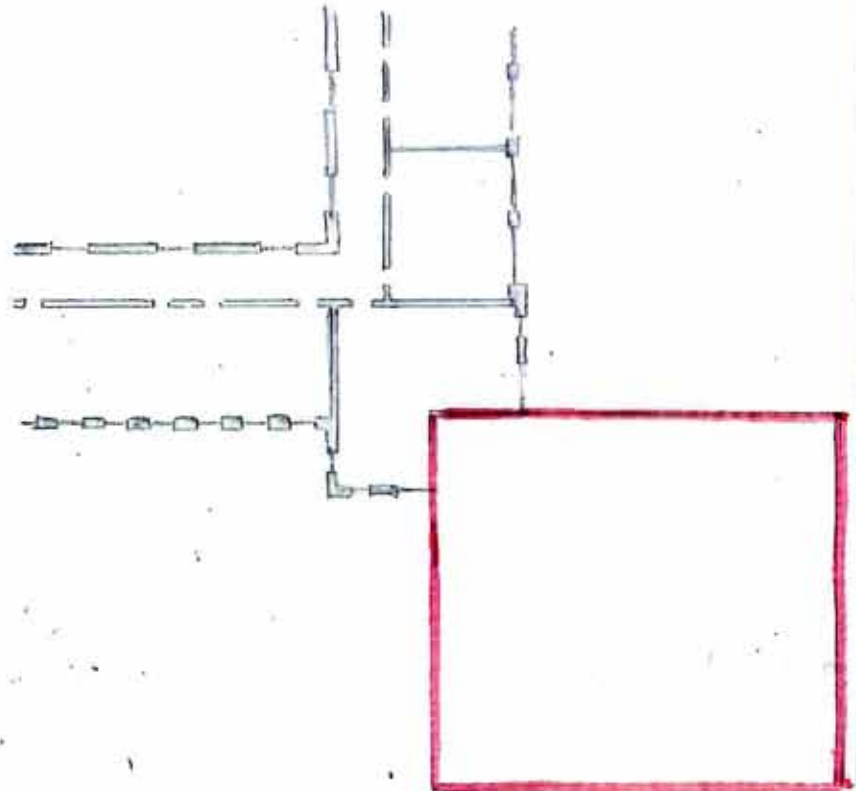
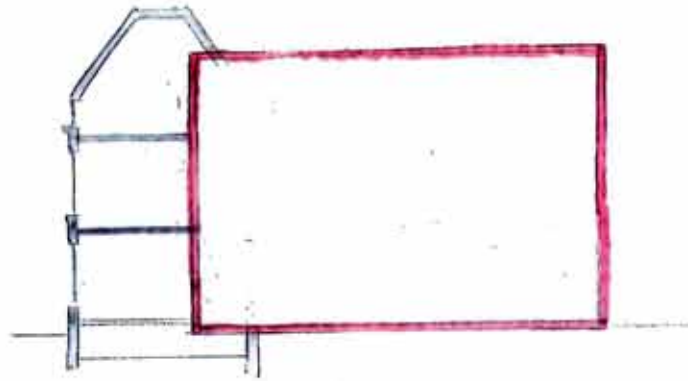
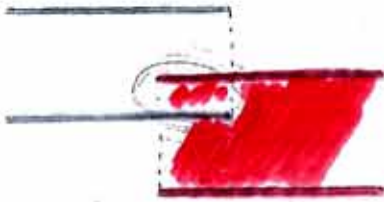
Constructing around each other



Arto Centre, Cracow



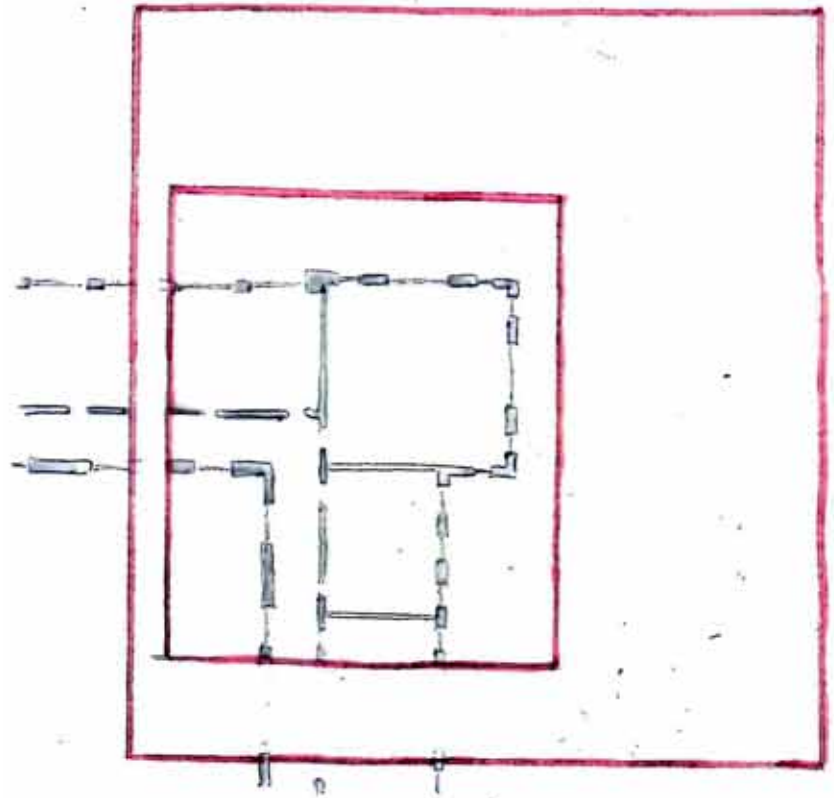
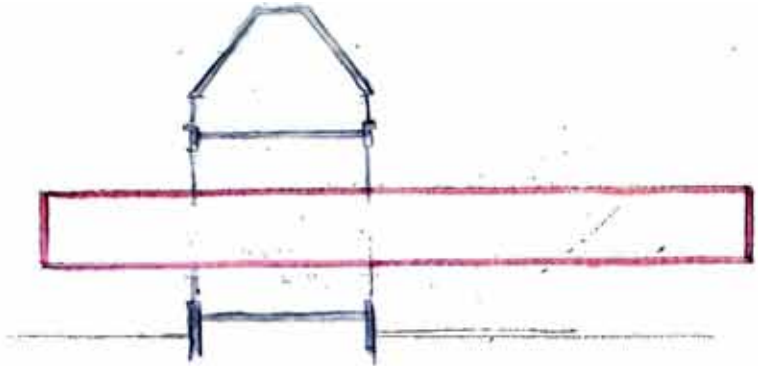
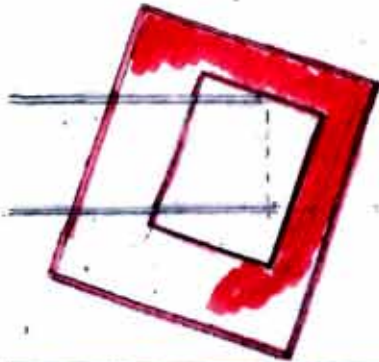
- Allmann Sattler Wappner - Herz Jesukirche - Munchen
Possibility: Constructing around each other



• Anselm Kiefer - Atelier - Barjac
Possibility: Grasping into each other

Grafting Architecture

Catalogue of layering/grafting (Buildings)

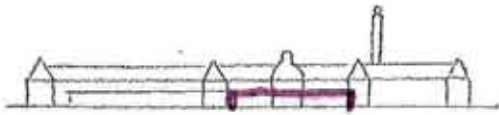
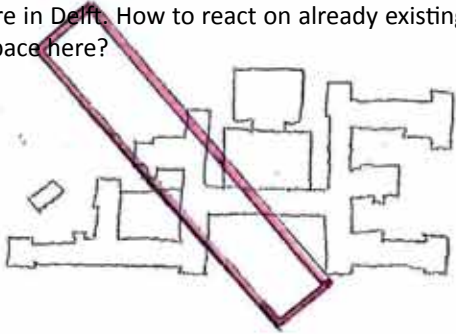


- Jean Nouvel - Cartier Foundation - Paris
 - OSA - Kunsthalle LPL - Liverpool
 - Arts centre - Cracow
- Possibility: Cross-combining

Cross-comining multiple others

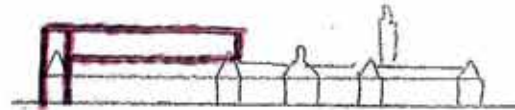
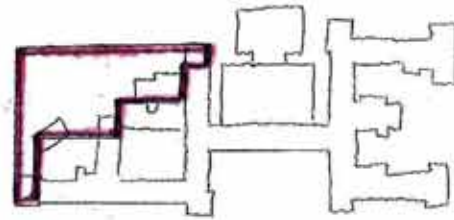
Grafting Architecture

The exersize 'proved' on the already existing Faculty of Architecture in Delft. How to react on already existing layers of space here?



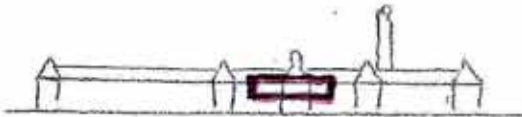
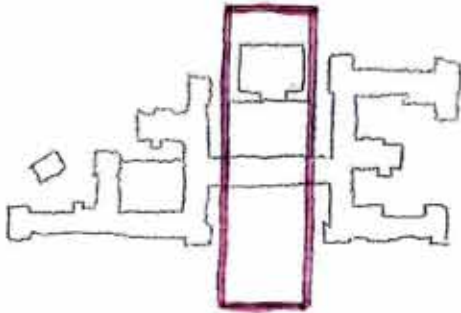
Complete randomness

$$1+1 = -2$$



Reacting on specific issues

$$1+1 = B$$

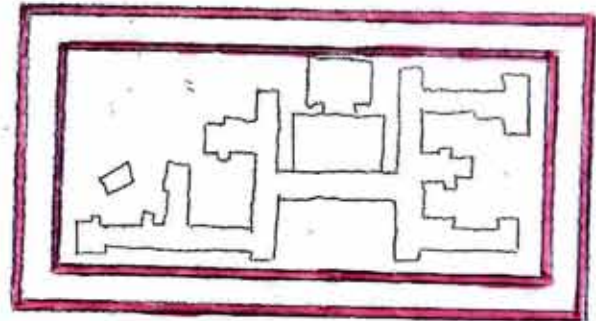


Joining in ritme, being family

Polite rudeness

Accepting & upgrading DNA

$$1+1 = 3$$

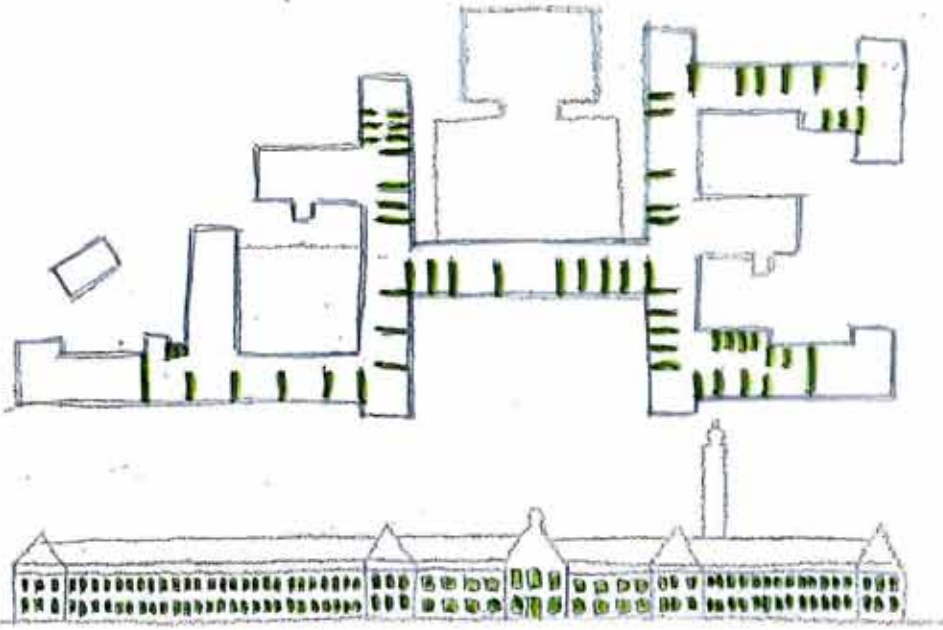


Being in the same space without touching

Communicating from a distance

$$1+1 = 2$$

Grafting Architecture

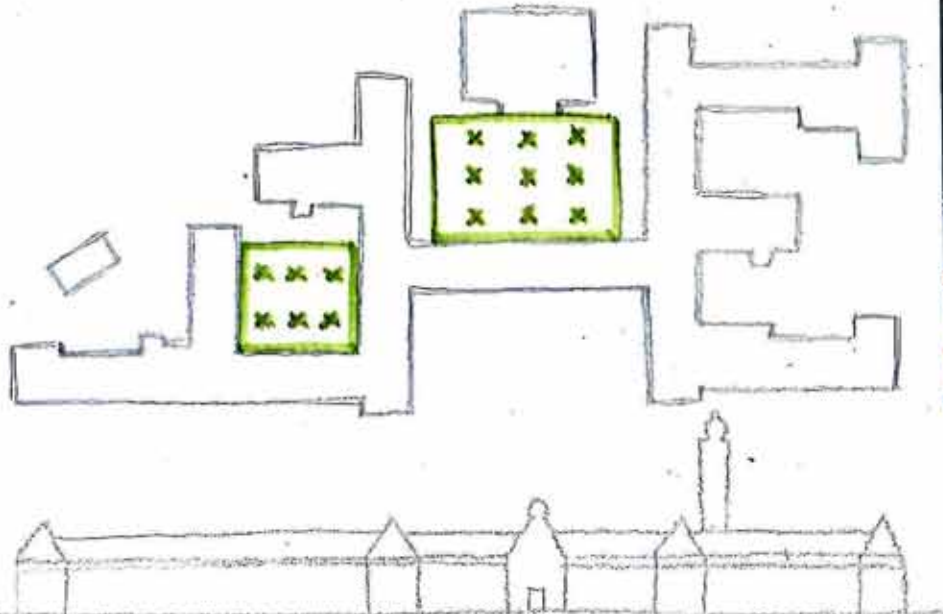


Characteristics of Space (BK)

What are the characteristics of the already existing layers?

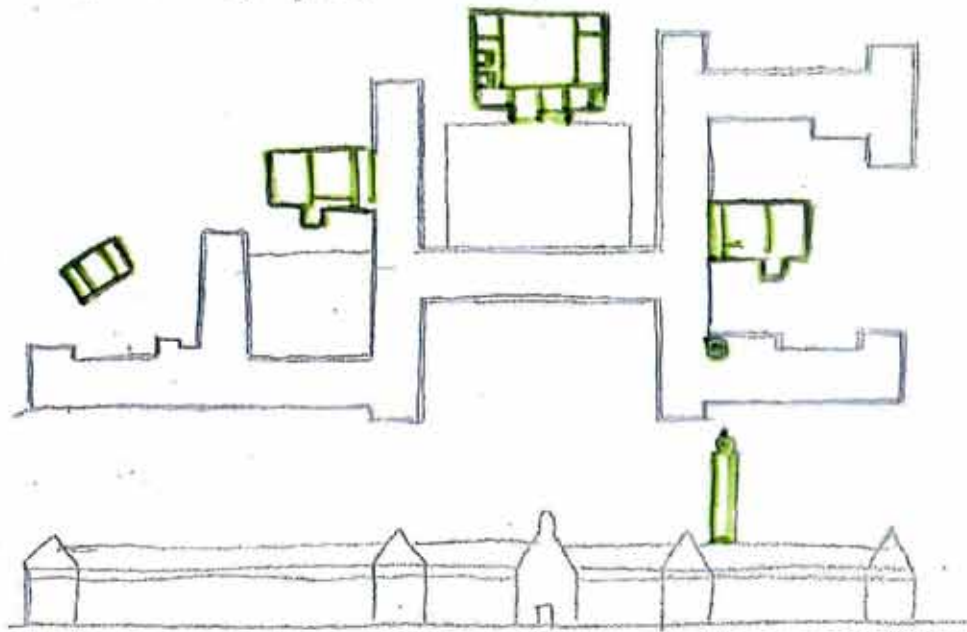


Rigide repetitive structure



Open spacious light structure

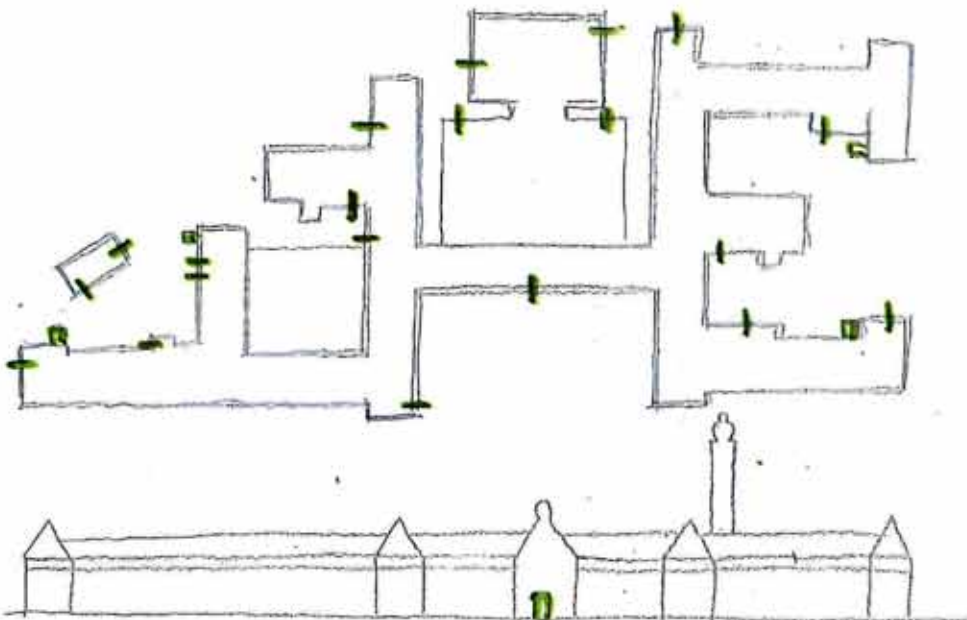
Characteristics of Space (BK)



Grafting Architecture

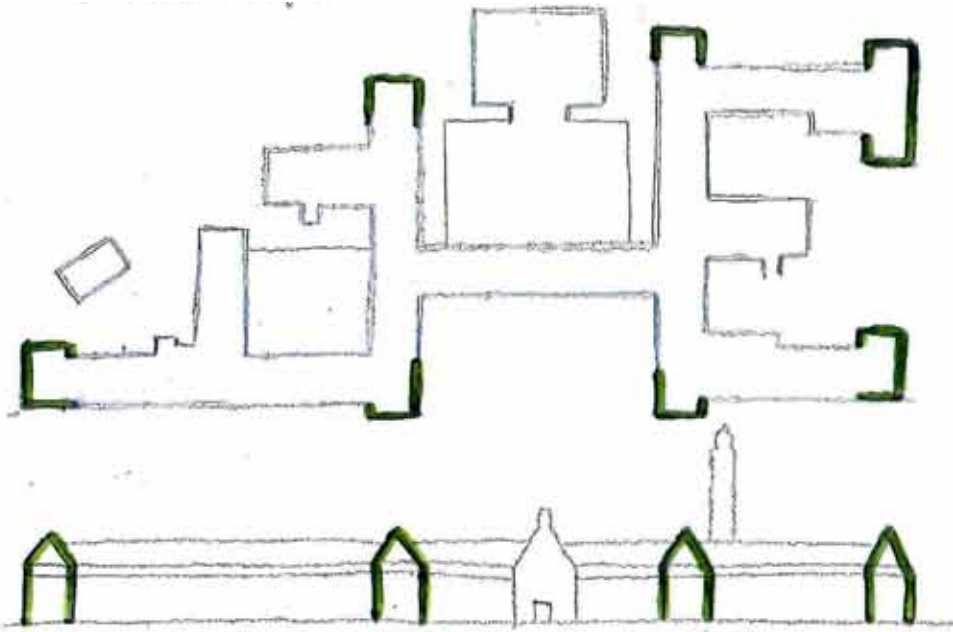


Diviation within structure



Entrances / manoeuvre directions

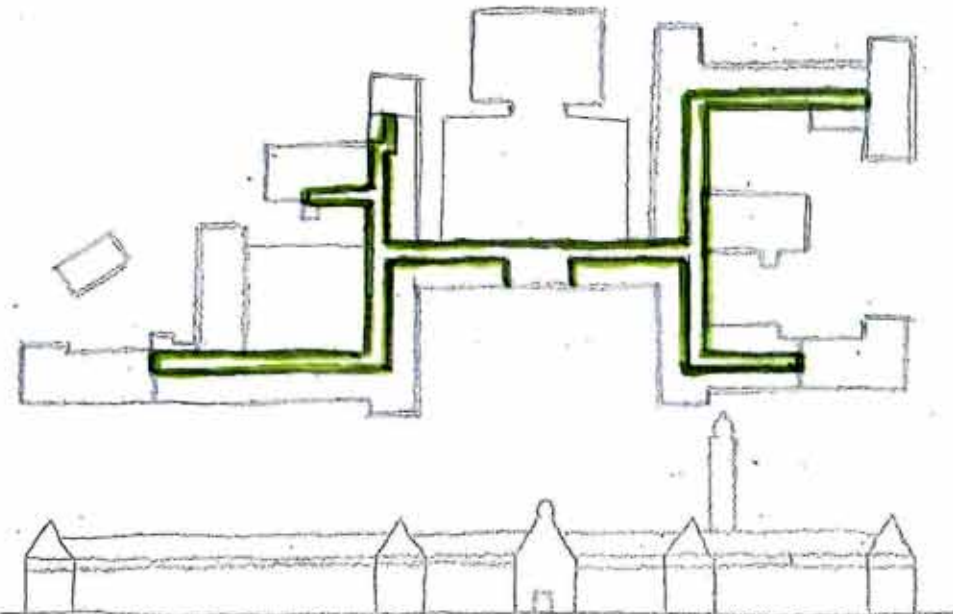
Grafting Architecture



Characteristics of Space (BK)



Diviations / Completions of structure.



Corridor - traffic space

Characteristics of Space (BK)

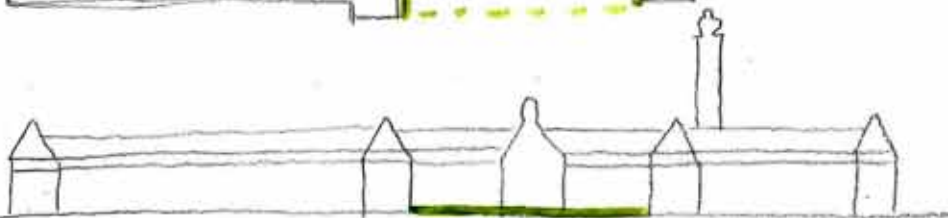
Grafting Architecture



Used spaces outside structure



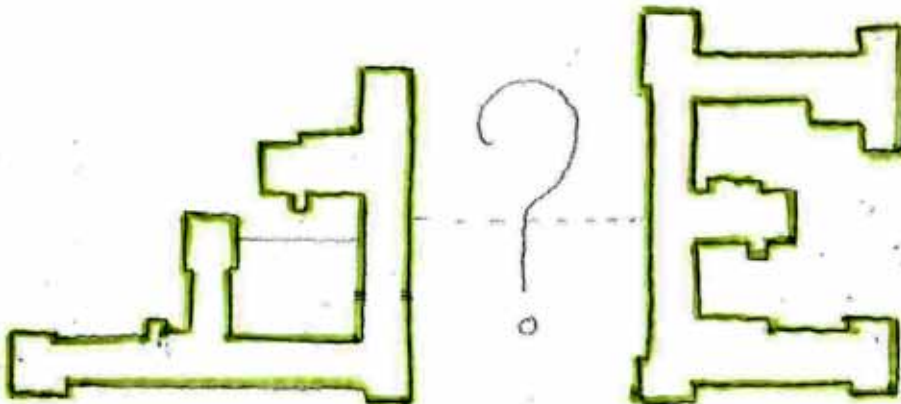
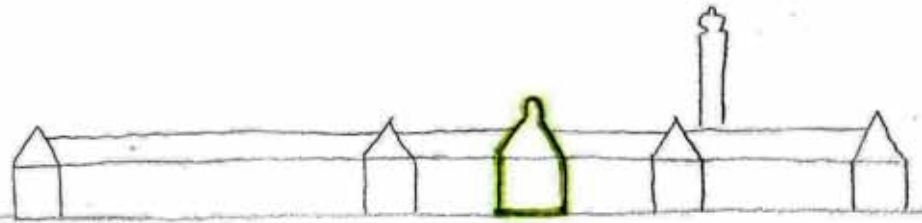
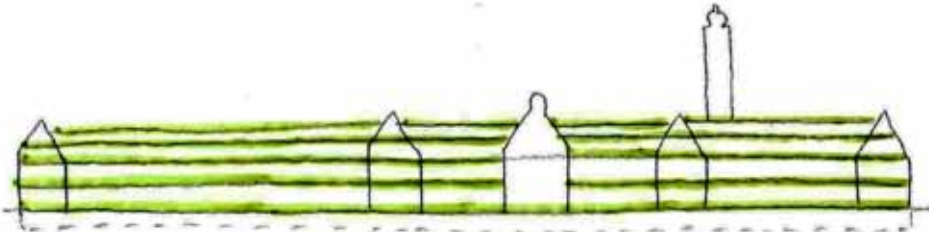
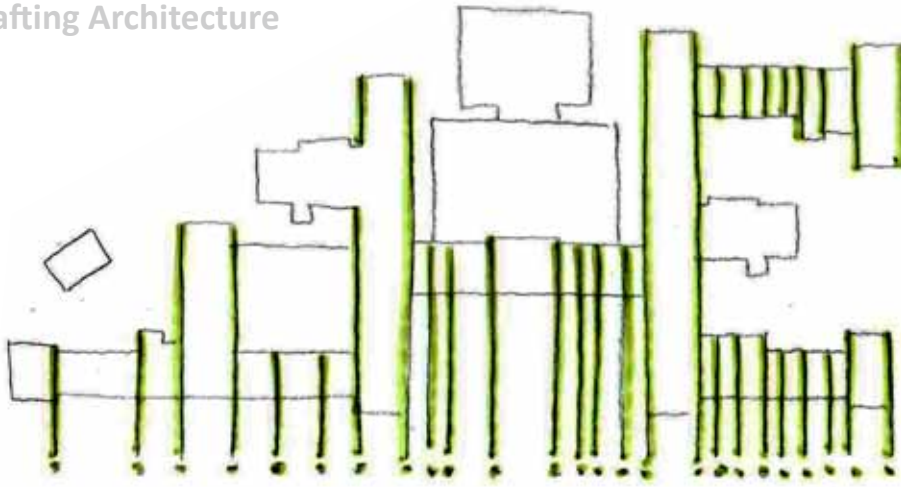
left over-spaces on plot



Grafting Architecture

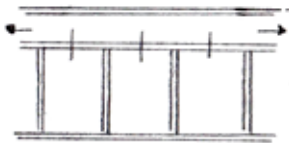
The DNA of one other (BK)

Where in the building this layering and cross-combining can take place without disturbing the characters of the spaces?



Characteristics of Space (BK)

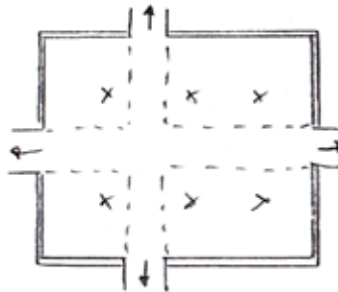
What conditions are still missing and could be corss-added?



Small + private
rigid, repetitive
structure, no traffic

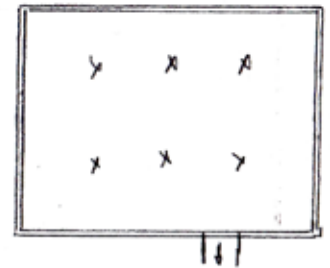


Small + public
group spaces,
broken structure,
semi-traffic



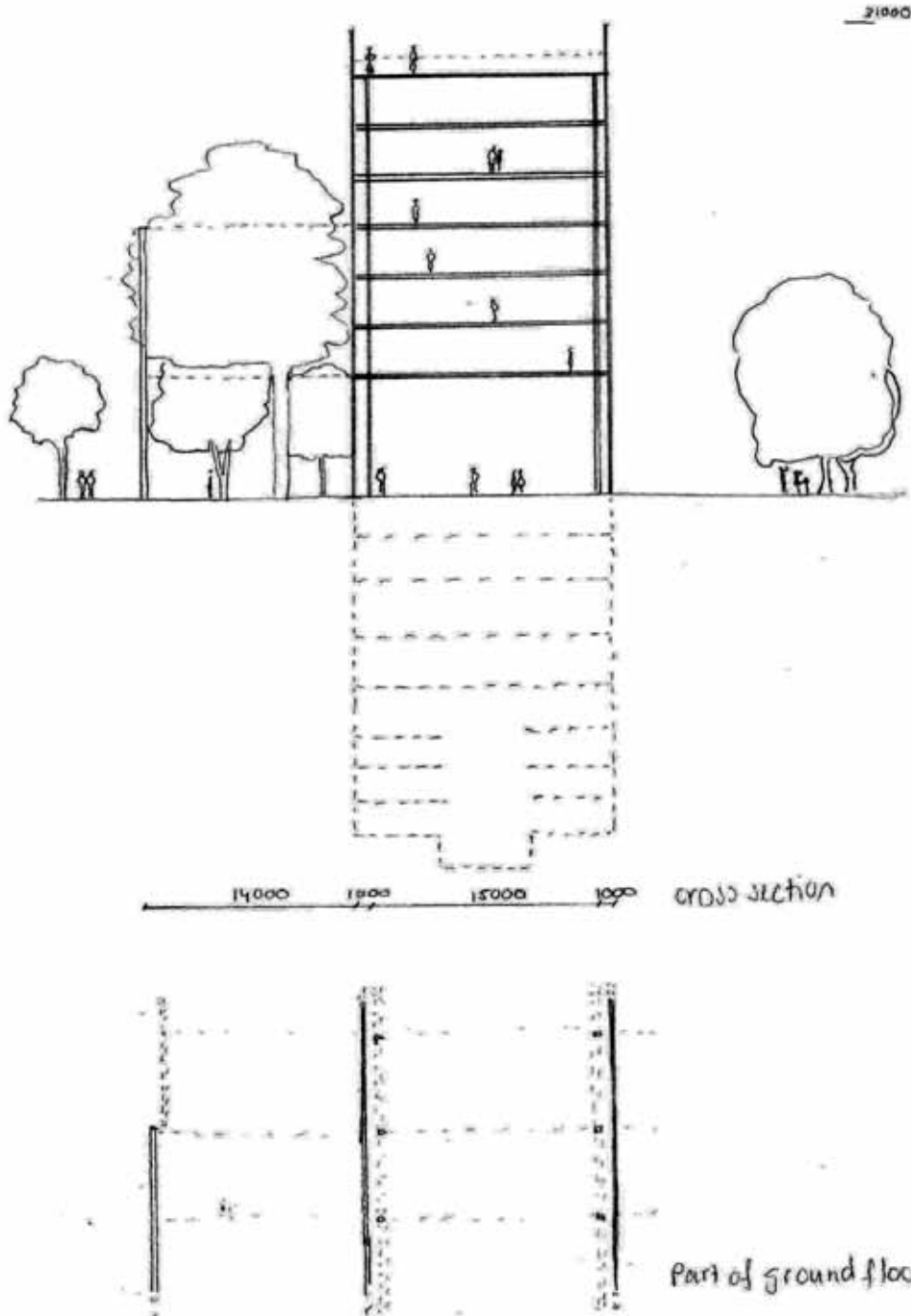
large + public
open, multifunctional,
traffic, no-one's-land

+



large + private
large, closed, private,
people there for the same
purpose

Grafting Architecture



The limit of space is not the wall

The Cartier Foundation (Paris 1994) by Jean Nouvel: creating different spaces within one building by literally layering the walls (facades).



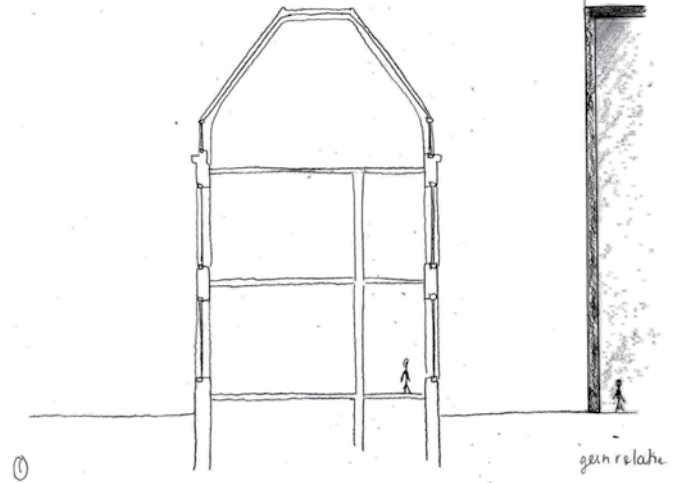
Source: El Croquis 65/66 (1995). Jean Nouvel 1987 1994. Madrid, Premio COAM. Page 246 and 247

Where do the 'others' graft

How to react on already existing layers of space and where to add other new layers in this exercise for the Faculty of Architecture in Delft?

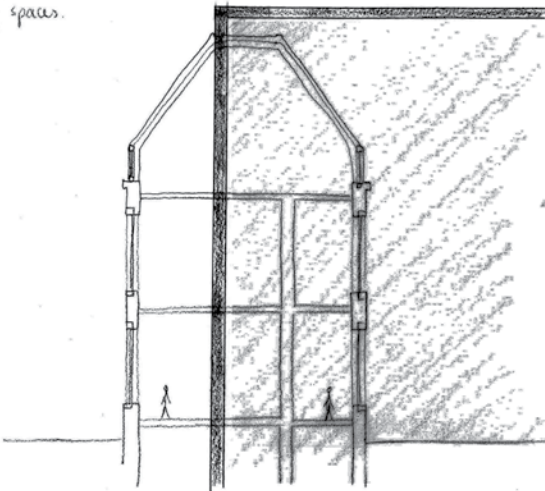
Grafting Architecture

adding closed spaces does not necessarily leads to relations and 'good' spaces = + stays ?



⊕ perfect tension between the one, the other, their coming together, all good quality spaces.

g.z.



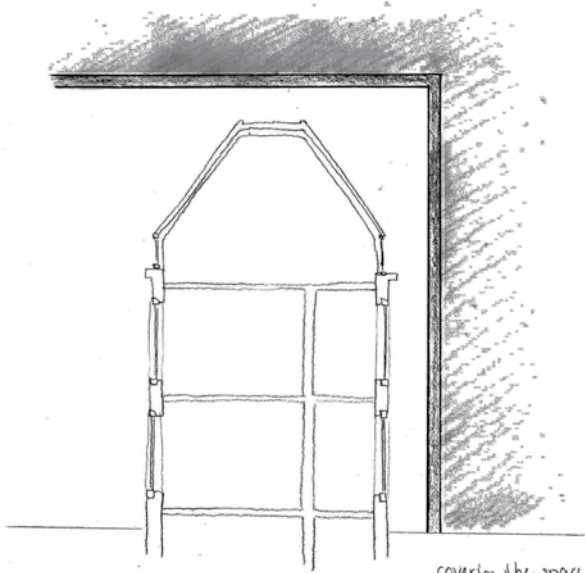
⊕
Covering the existing totally, is the extra space created useable? what is it?

②

Grafting Architecture

not adding closed spaces but open spaces,
changing & asymmetring the spaces.

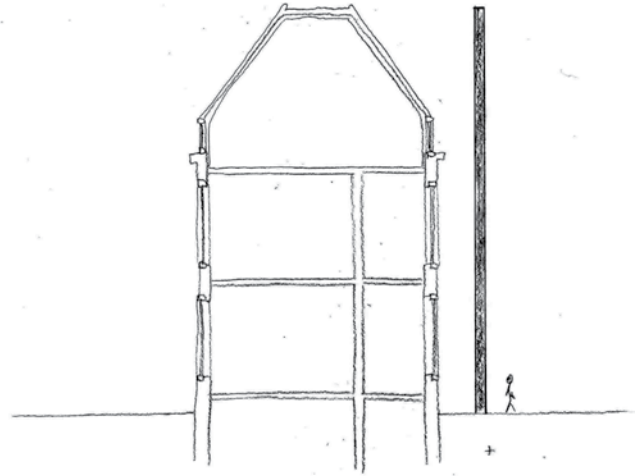
+



3

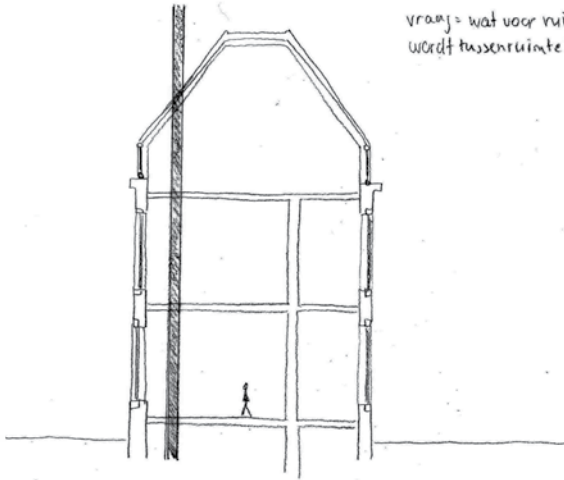
covering the space, but not using
the rest-space as direct space, gives
more opportunities.

4

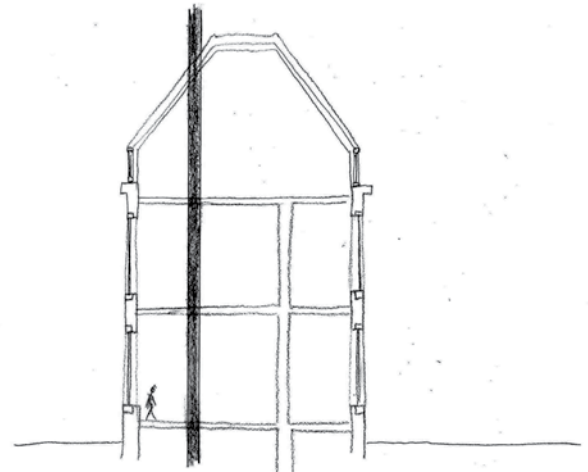


not adding closed spaces but open
spaces, changing &
a-symmetry-ing the space, from
inside (users could have more
direct relation)

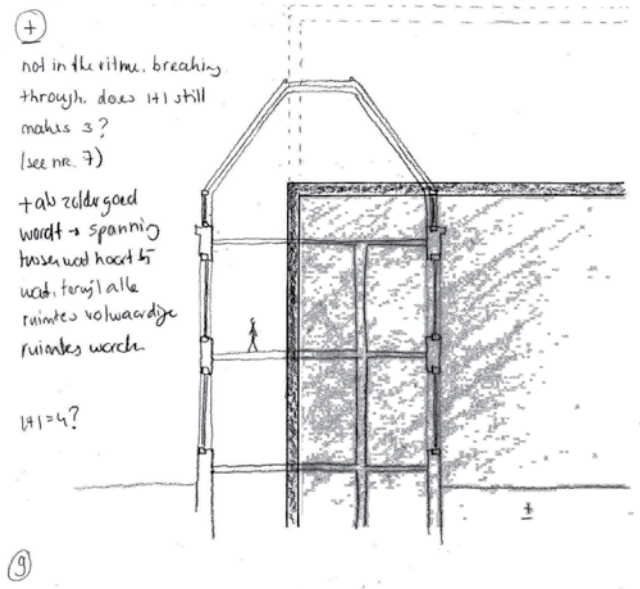
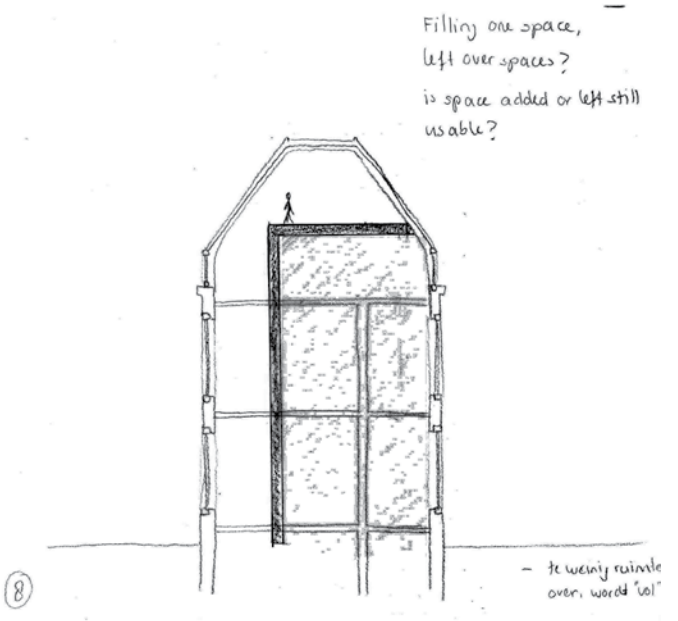
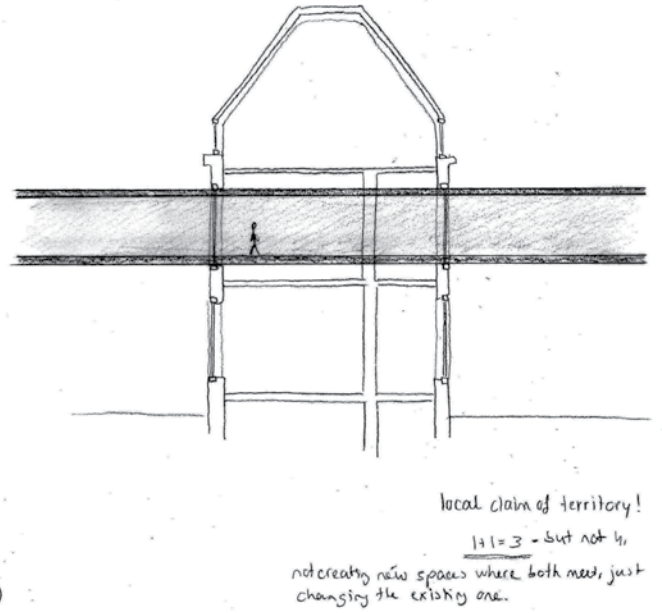
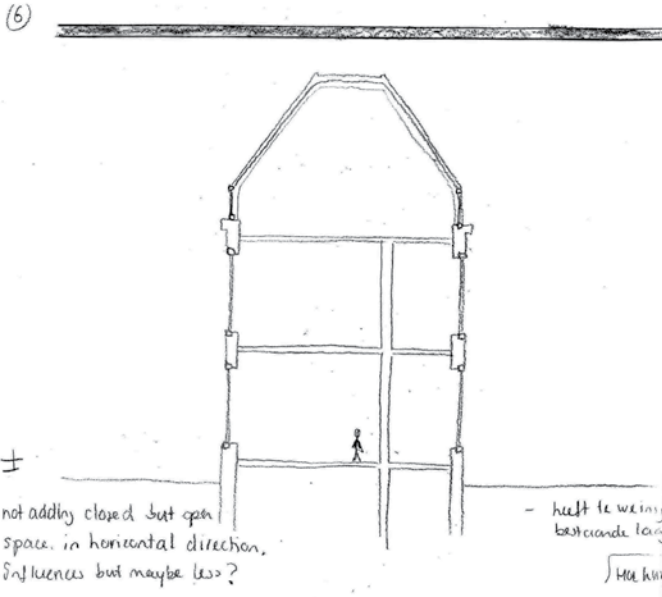
vraag = wat voor ruimte
wordt tussenruimte??

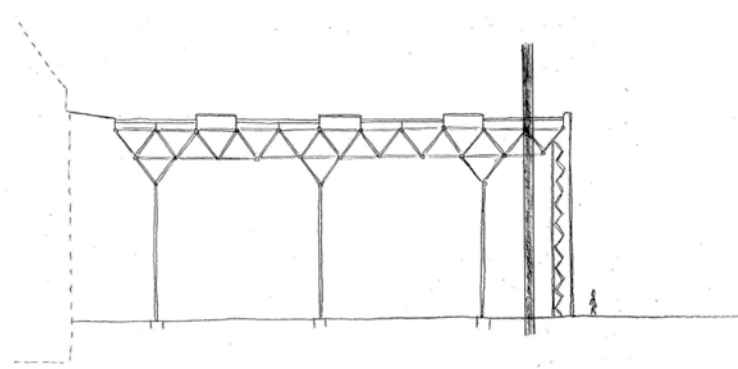
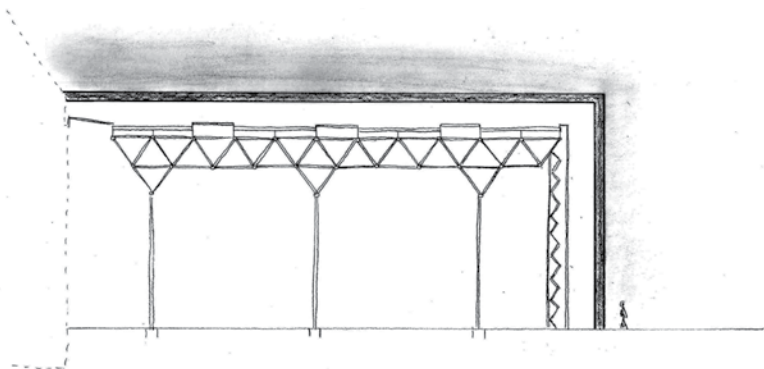
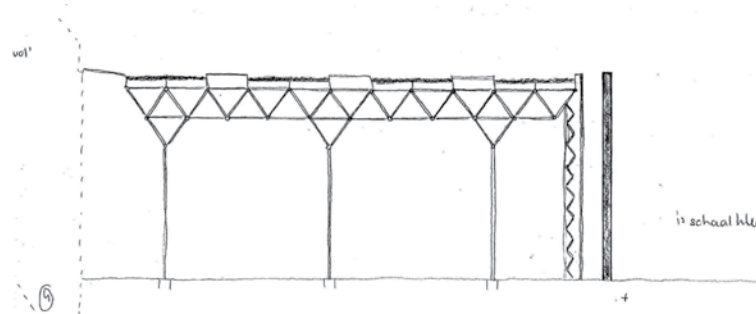
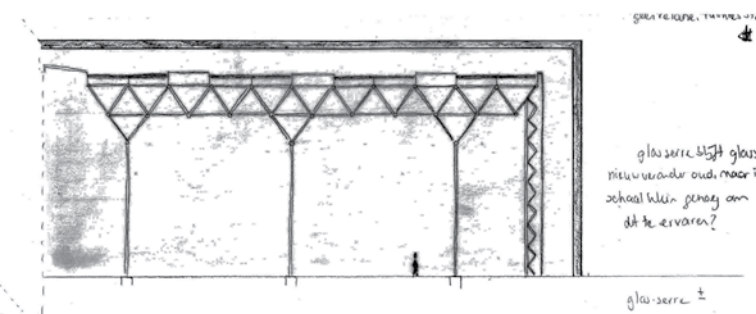
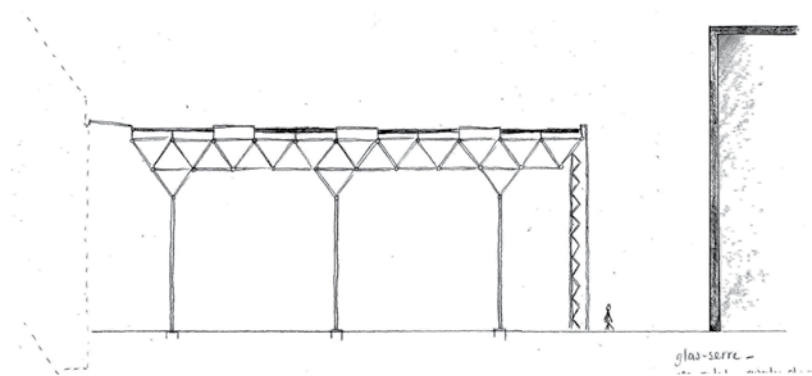


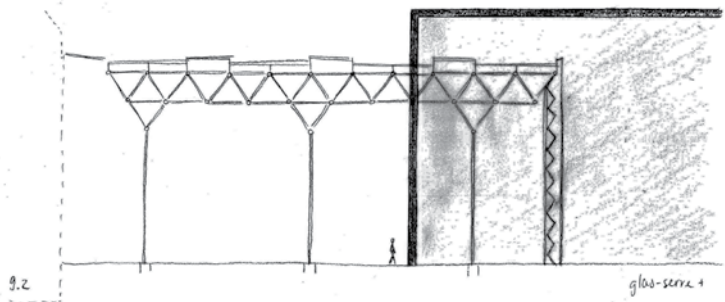
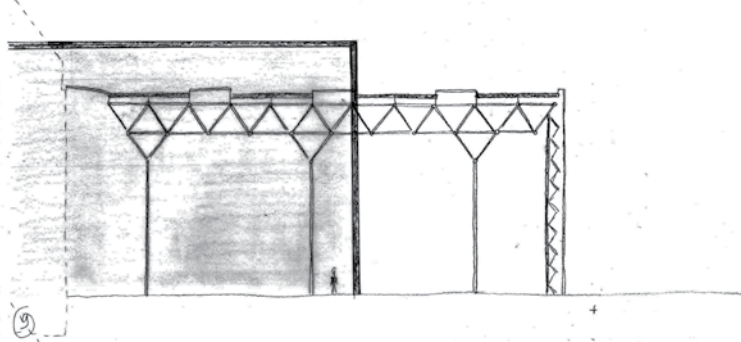
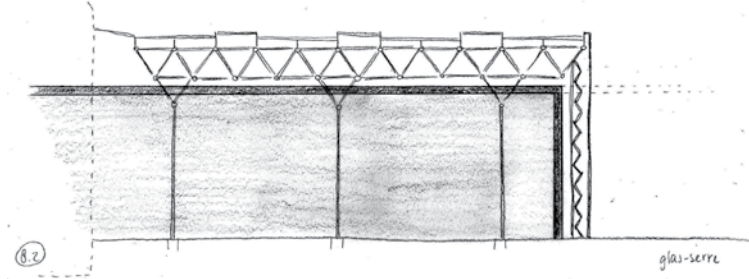
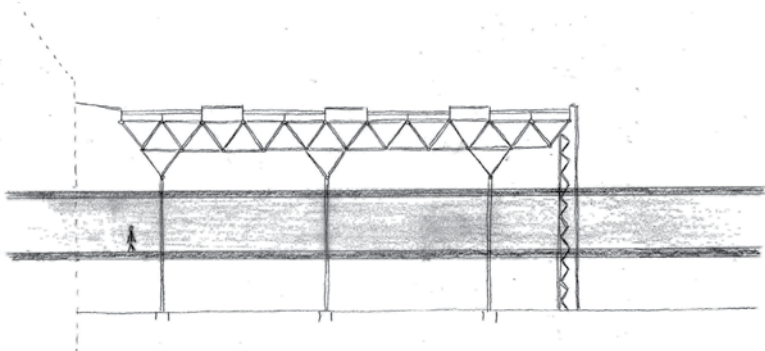
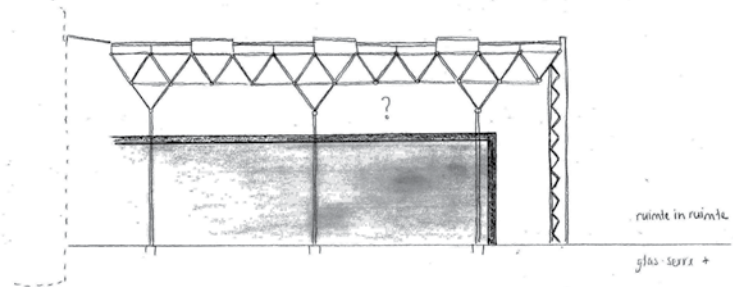
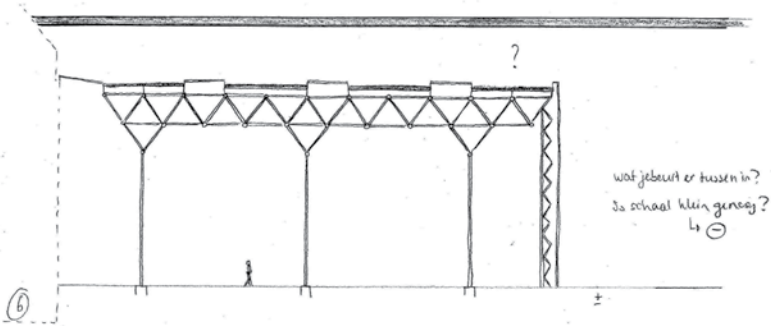
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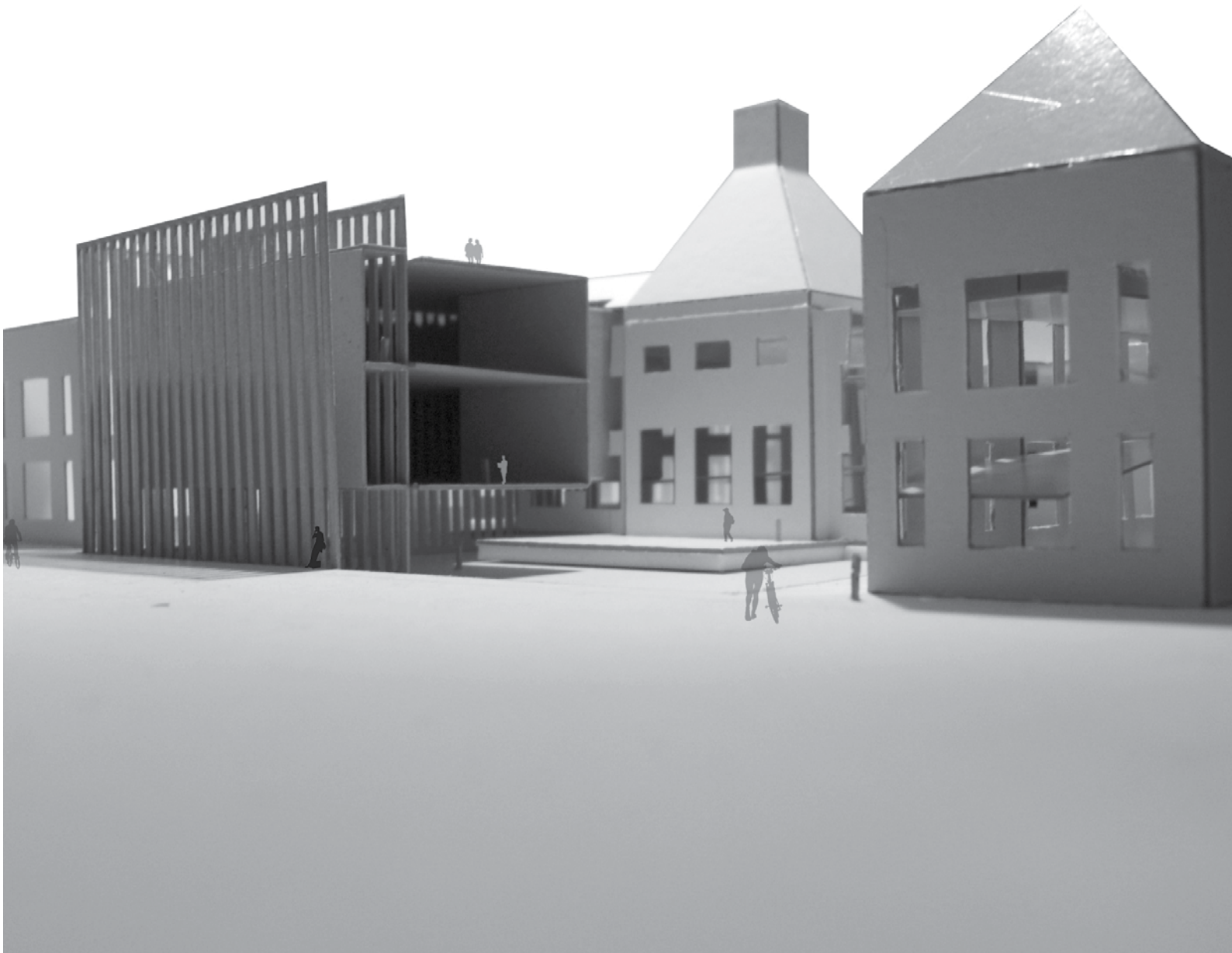


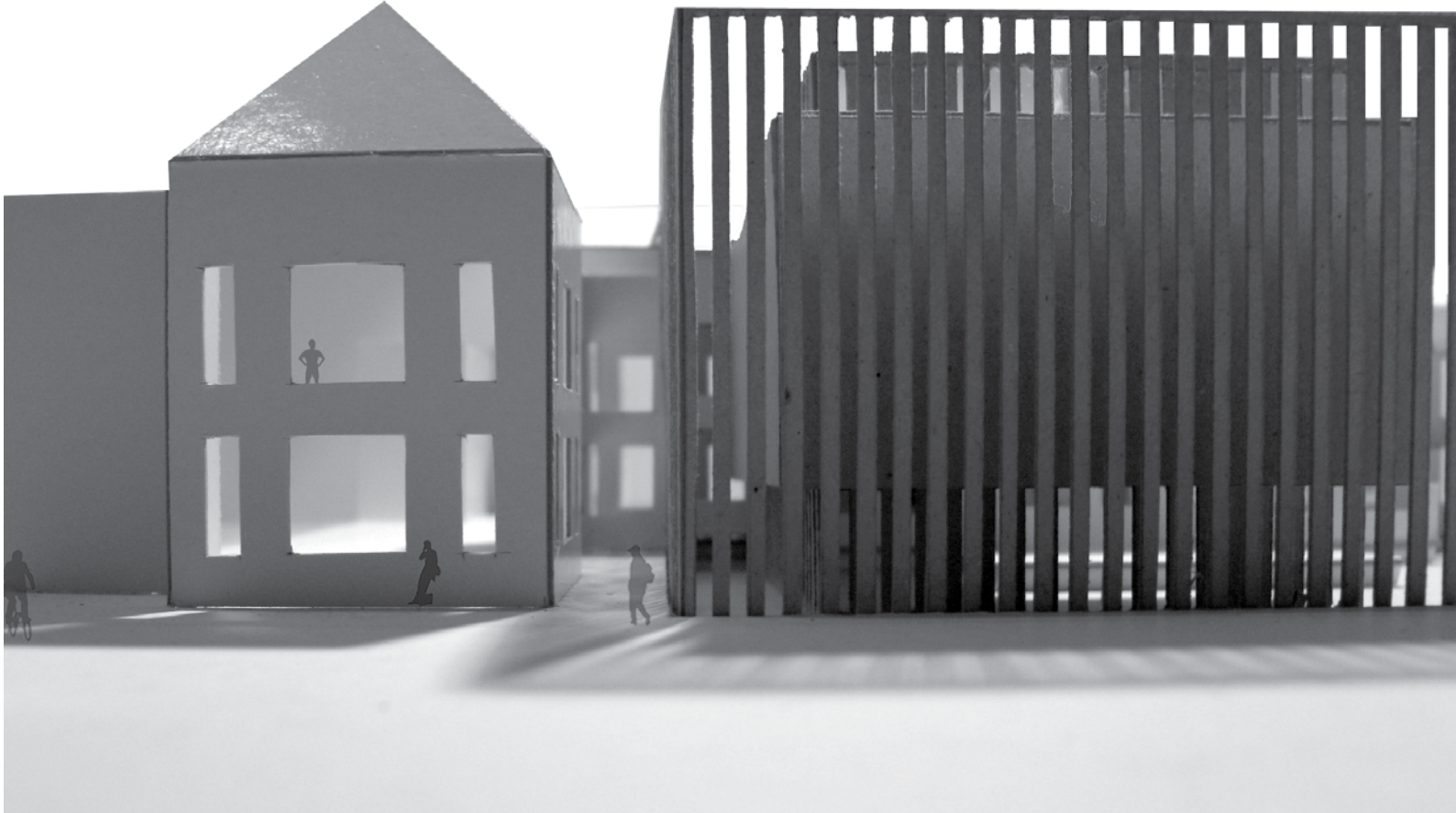
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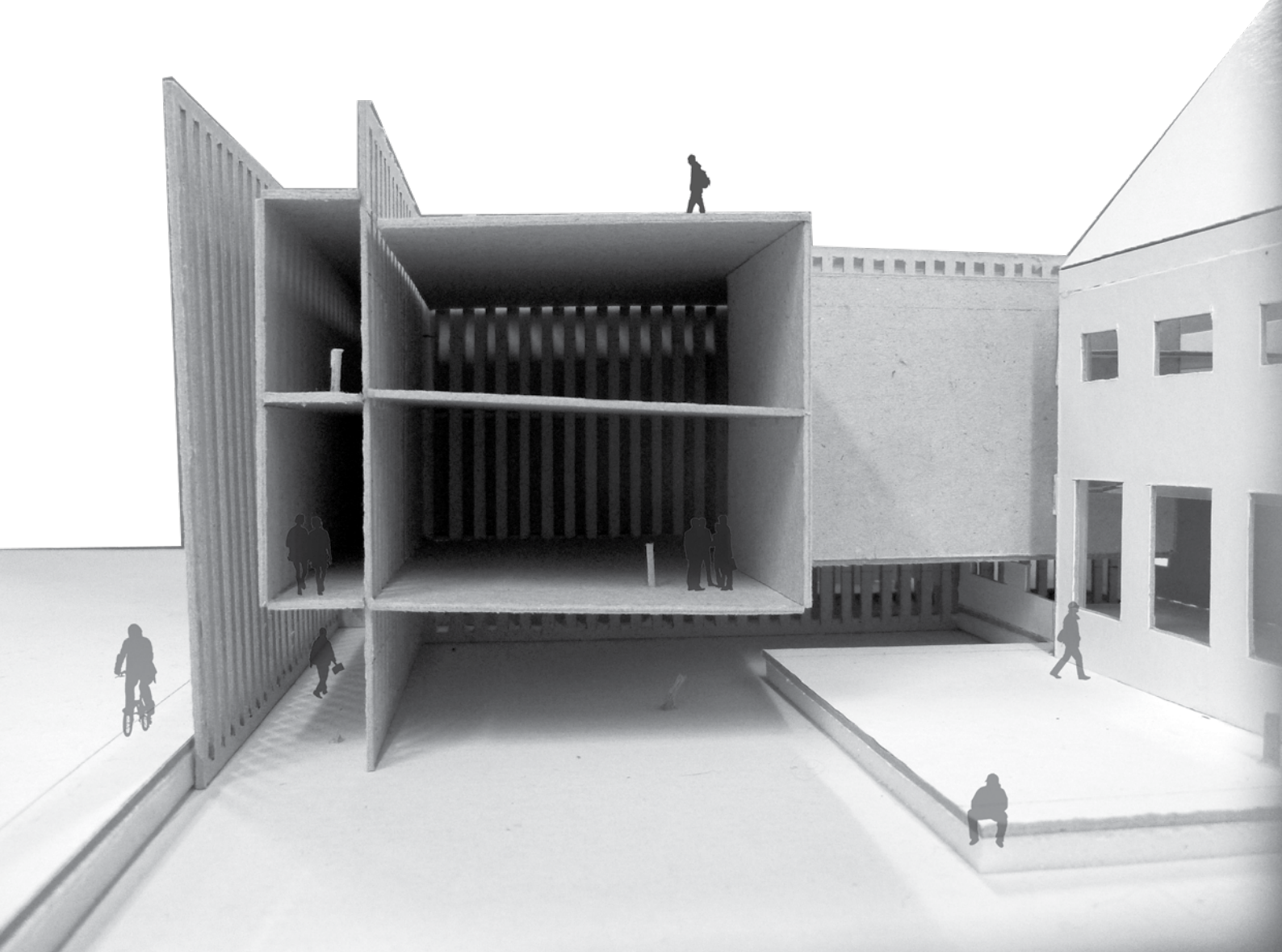


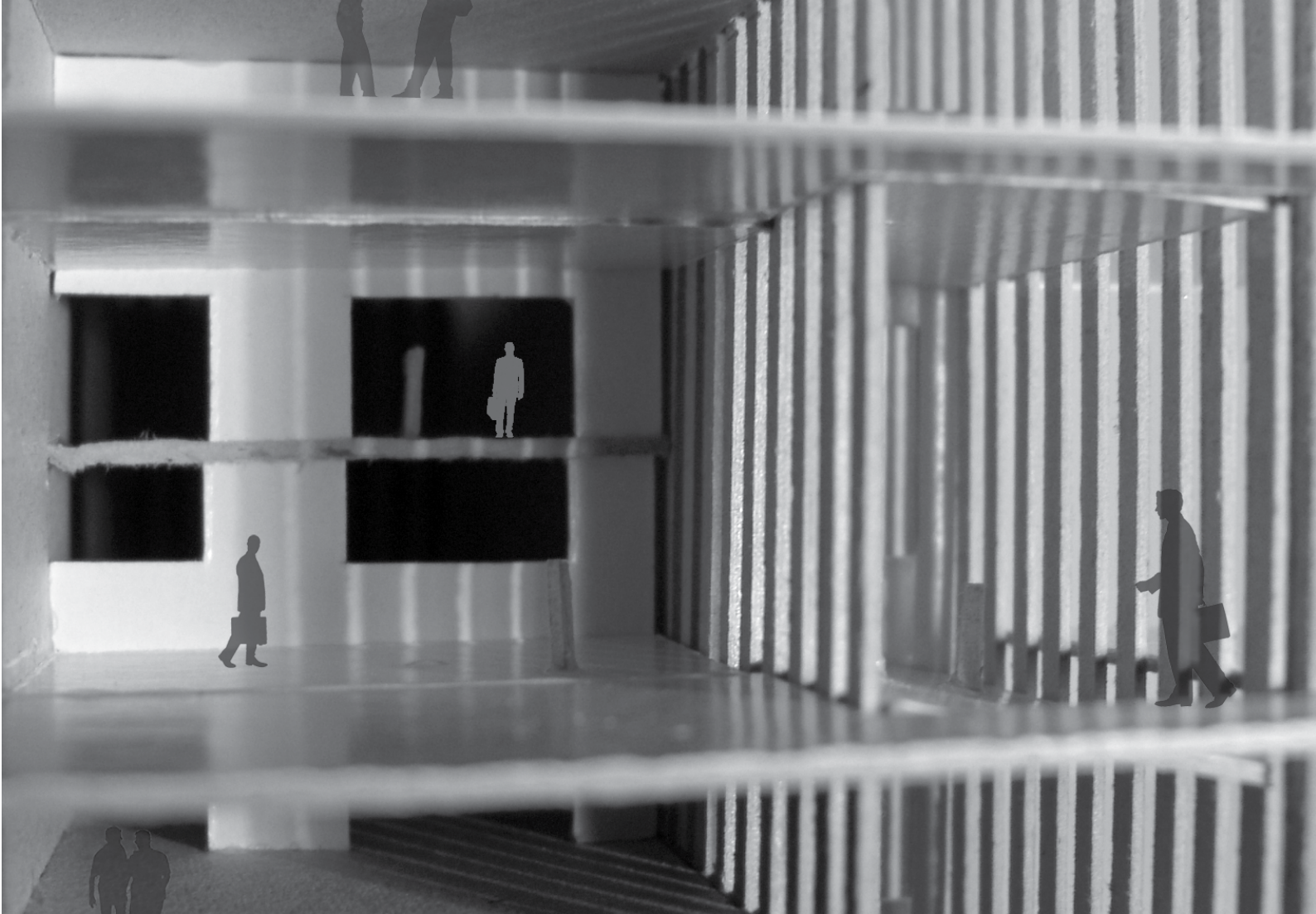












Grafting Architecture

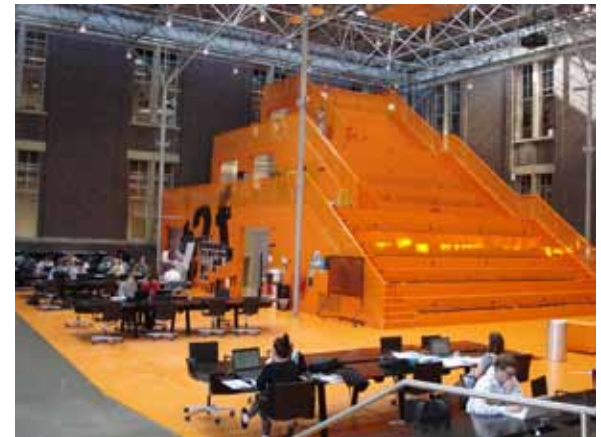
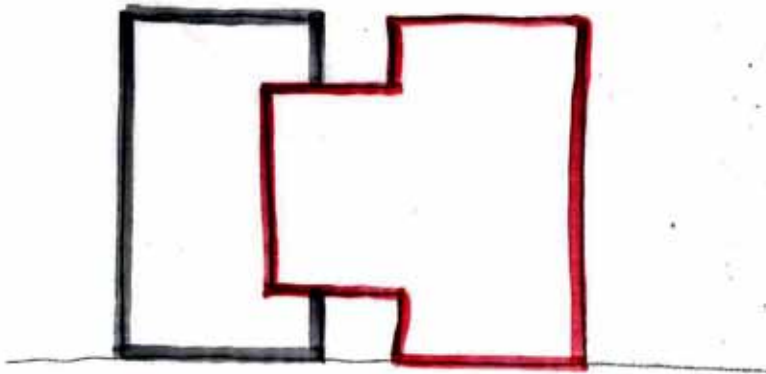
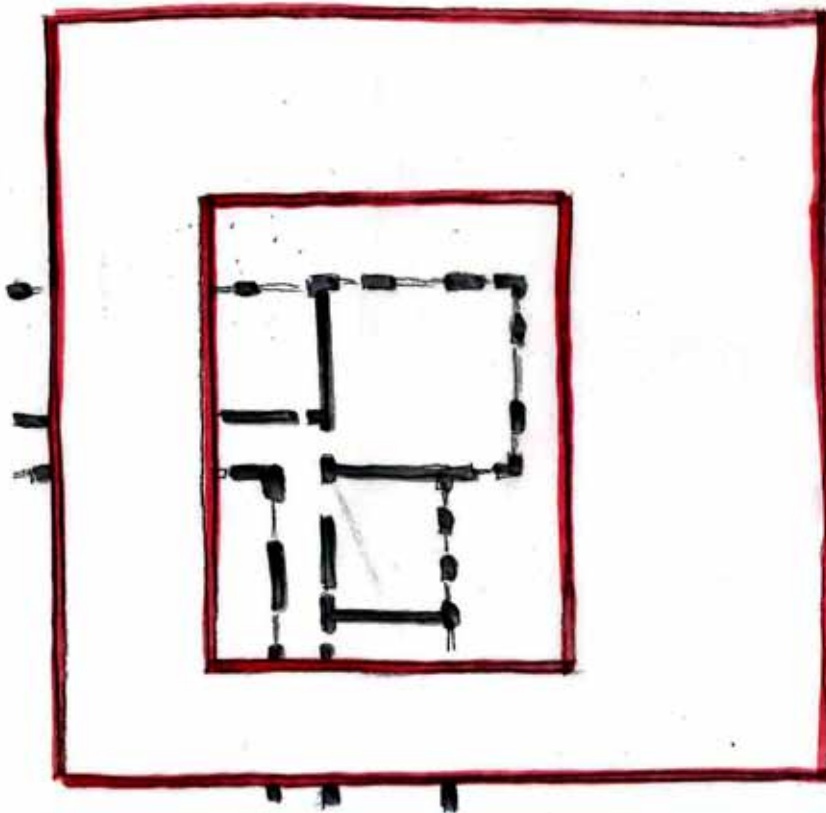
Catalogue of layering/grafting (Interiors)

Cross-combining multiple others

The Grasping-space

The proces of grafting takes place by one of the multiple spaces penetrating the other(s) and taking over.

In this researh seen as negative for not making $1+1=3$ or taking advantage of the oppurtunities all the spaces create.



example - glass box 18h city east

Catalogue of layering/grafting (Interiors)

Grafting Architecture

Cross-combining multiple others

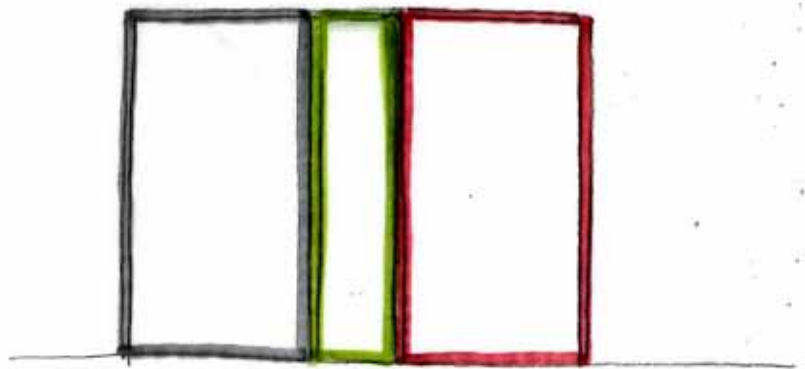
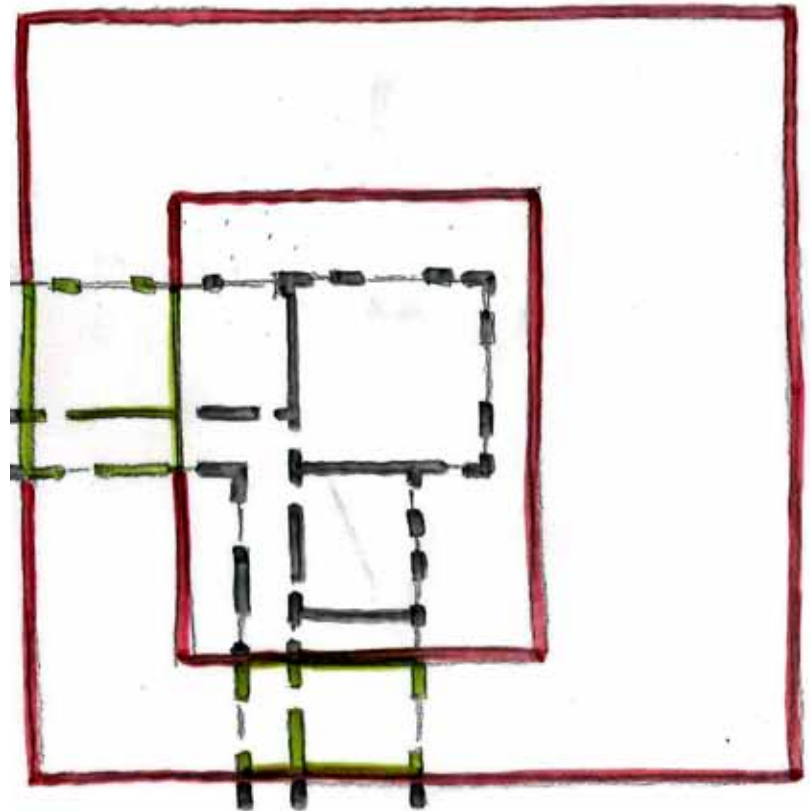
The Connecting-space

The proces of grafting takes place by adding an independent inbetween space, glueing multiple different spaces together, but not transferring their relations or characteristics.

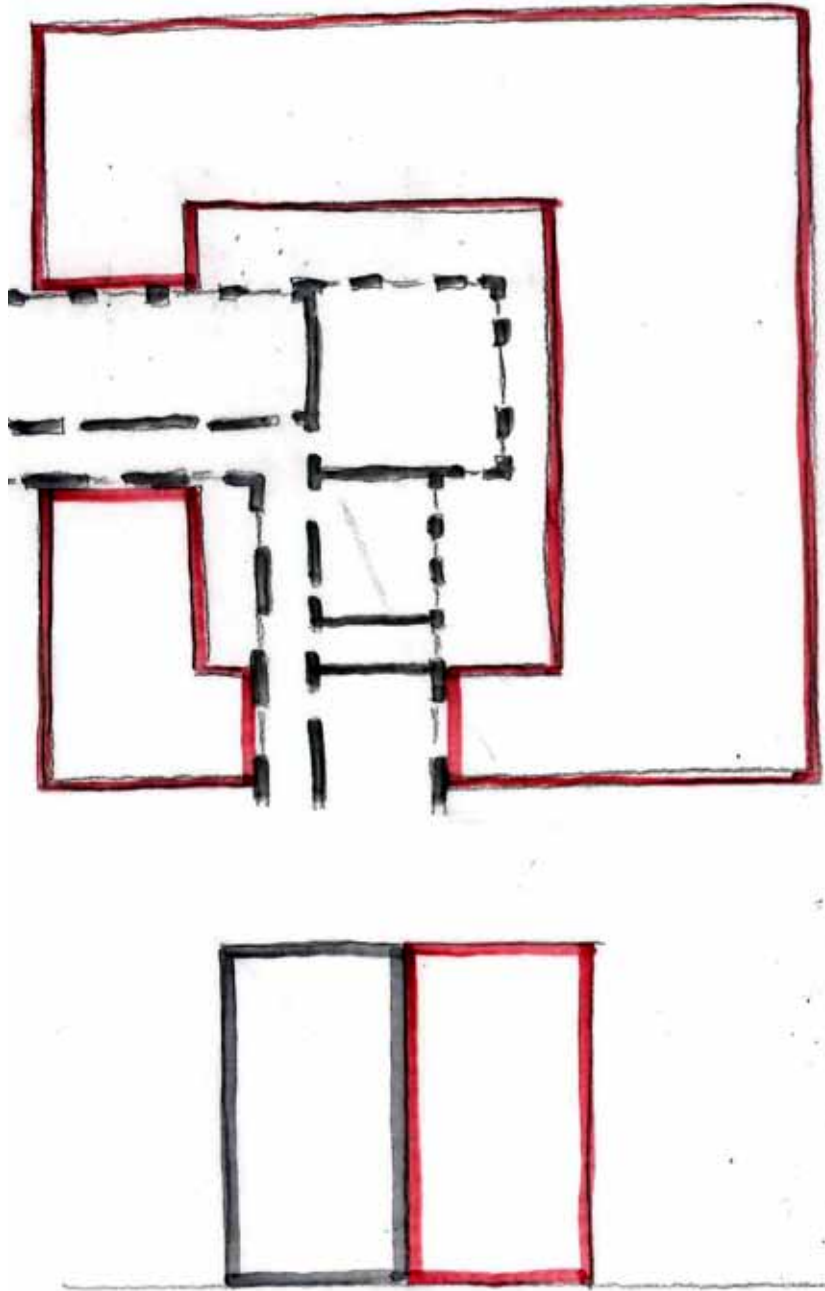
In this reseacrh seen as negative for not making $1+1=3$ or taking advantage of the oppurtunities all the spaces create.



example - glass box Bk city south



Grafting Architecture



Catalogue of layering/grafting (Interiors)

Cross-combining multiple others

The Paste-Cold Space

The proces of grafting takes place by gluing the multiple spaces together, creating no other than a fysical relation.

In this reseacrh seen as negative for not making $1+1=3$ or taking advantage of the oppurtunities all the spaces create.



example - glass box Bk city east

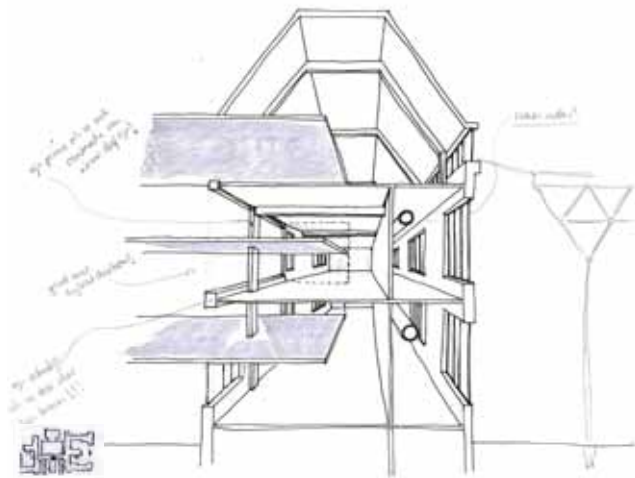
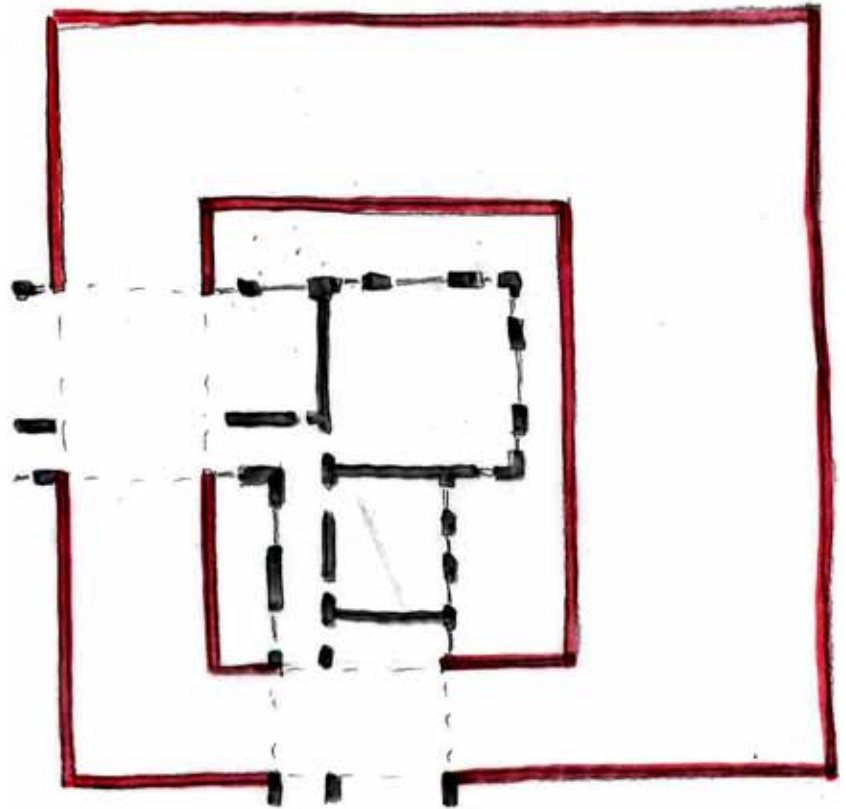
Catalogue of layering/grafting (Interiors)

Grafting Architecture

Cross-combining multiple others

The Swaying Spaces

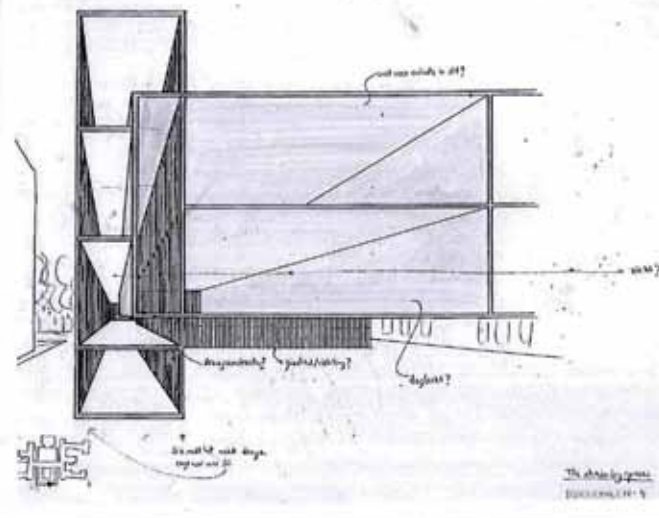
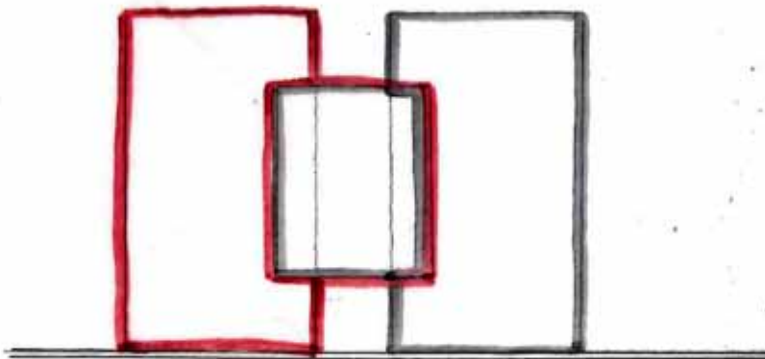
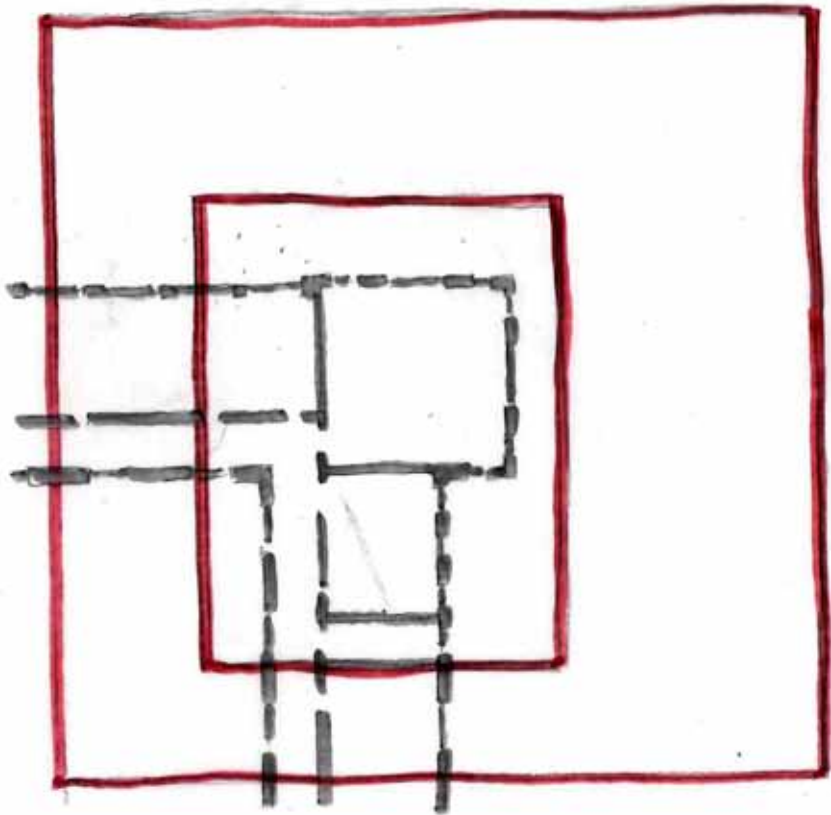
The proces of grafting takes place by the creation of Swaying Spaces, arising from the comming together of multiple others, but belonging to either the one, the other or none. Standing like a tree in the wind, swaying from left to right, forward to backwards.



Cross-combining multiple others

The Chaining-spaces

The proces of grafting takes place by spaces that are the result of the commitment between multiple others, taking over characteristics of all.

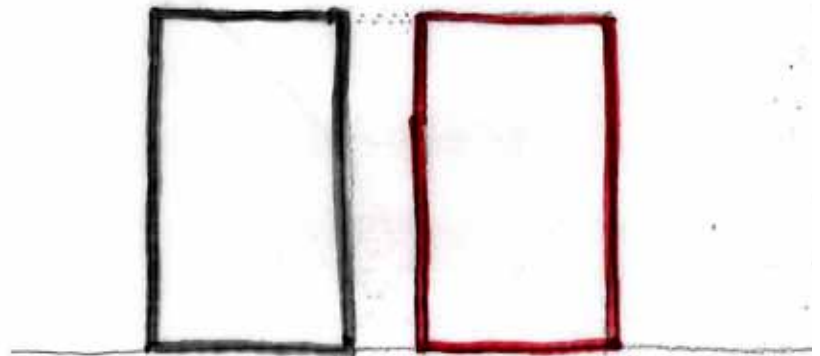
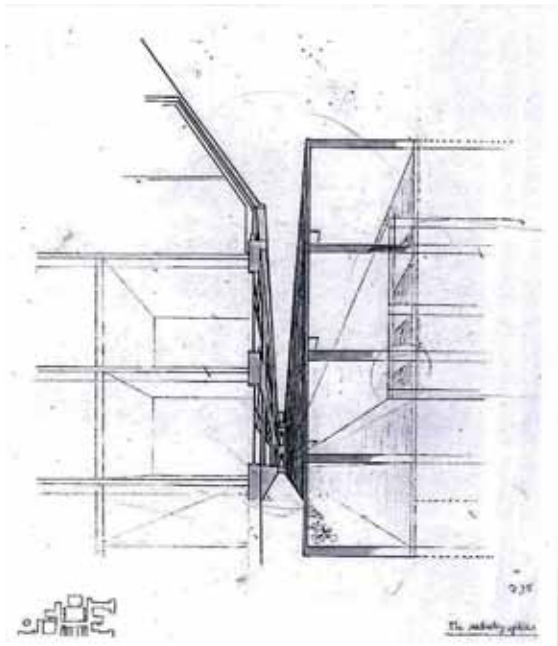
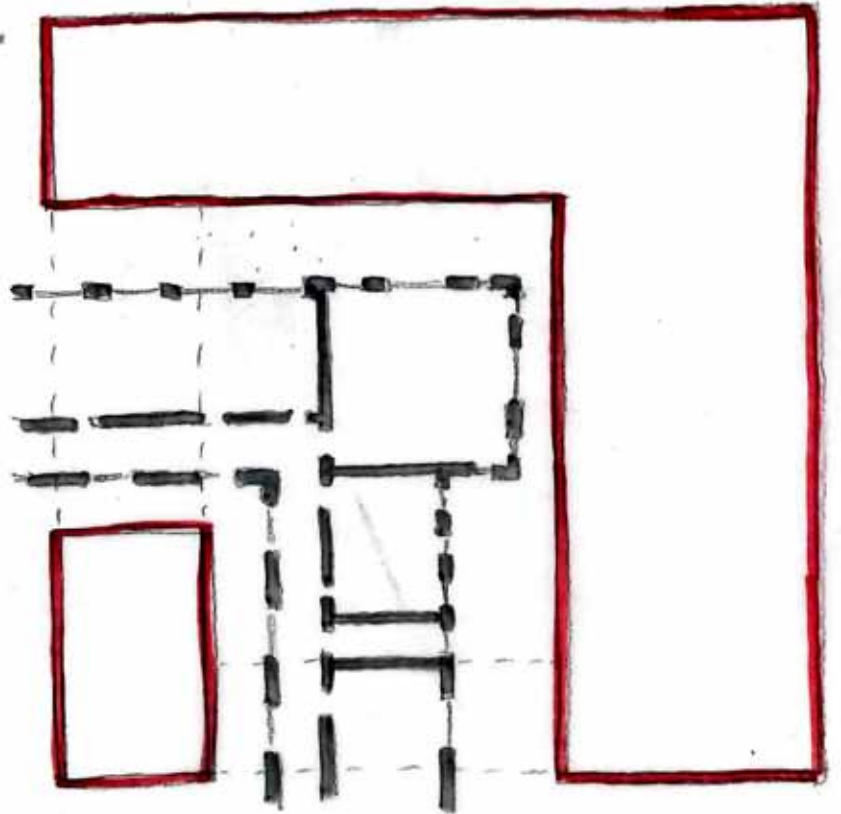


Catalogue of layering/grafting (Interiors)

Cross-combining multiple others

The Mediating Spaces

The proces of grafting takes place by the creation of a 'neutral' space, making sure two or more different spaces can communicate and relate to each other, transferring their characteristics etc.

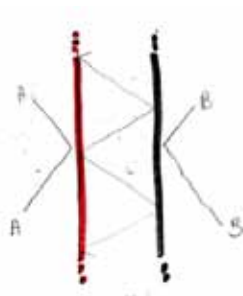


Grafting Architecture

Cross-combining multiple others

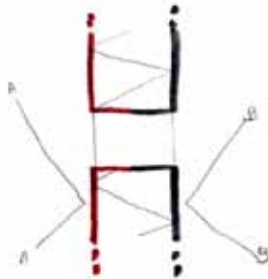
The Massive Divider

A massive element (wall/floor/roof) with two different characters and events on each side, not revealing any characteristics or relations to/with its other side: not taking advantage of the opportunities all the spaces create.



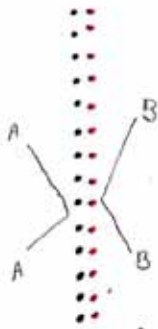
The Massive Holes

A massive element (wall/floor/roof) with two different characters and events on each side, revealing its other side through openings but not necessarily influencing, sharing or communicating to each other: not necessarily taking advantage of the opportunities all the spaces create.



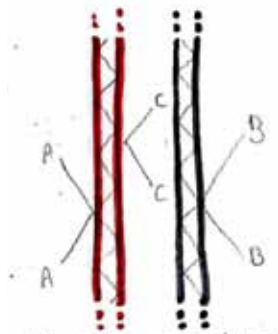
The Transparent Deny-or

One transparent element (wall/floor/roof) which does not say anything about the characteristics and relations between its two sides.



The Gap Element

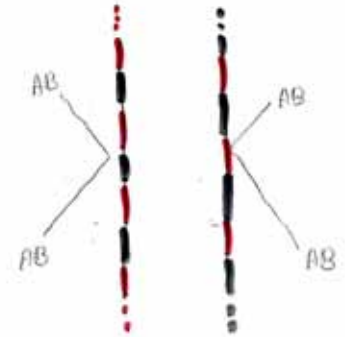
Two massive elements (wall/floor/roof) each with its own character, holded together by an interspace which does not transport characteristics or relations but has its own character.



Catalogue of layering/grafting (Elements)

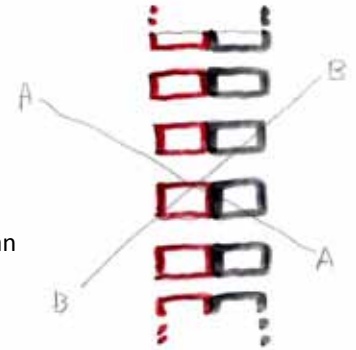
The Massive Conversation

An element (wall/floor/roof) with multiple characters on each side, not choosing for one but converting relations with other spaces.



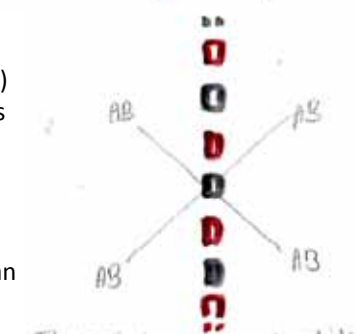
The Semi-Transparent Conversation

An element (wall/floor/roof) with two different characters on each side which can be combined and transferred by creating the right amount of transparency. Transparency can still be there but the specific characters can too.



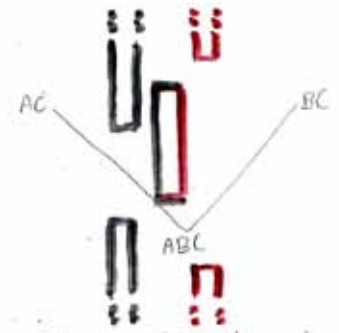
The Semi-Transparent Relation

One element (wall/floor/roof) which contains characteristics of multiple spaces. The characters can be extra combined and transferred by creating the right amount of transparency. Transparency can still be there but the specific characters can too.



The Inter-Spacious Element

The element (wall/floor/roof) is not an object but a 'small building', creating space and characters in itself.

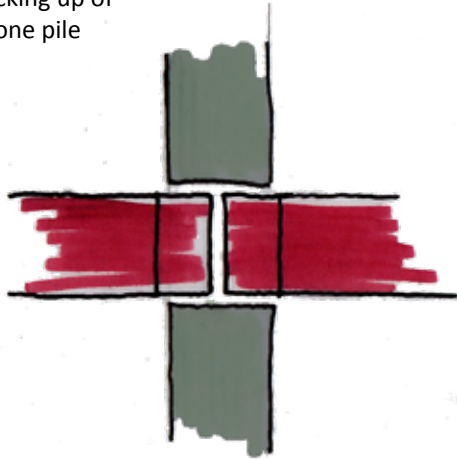


Catalogue of layering/grafting (Details)

Cross-combining multiple others

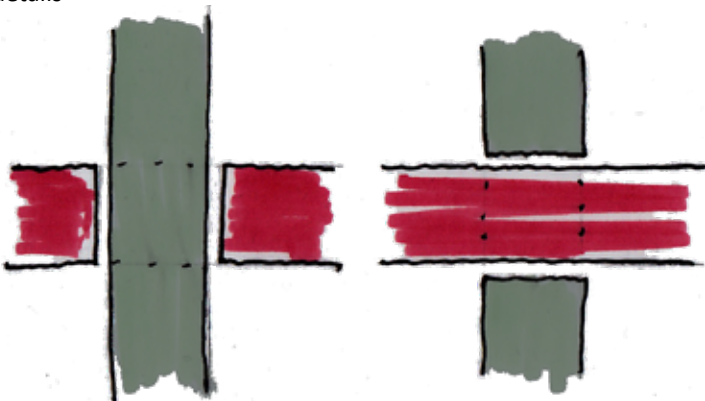
The Tradition Detail

Traditional stacking up of differences in one pile



The solution

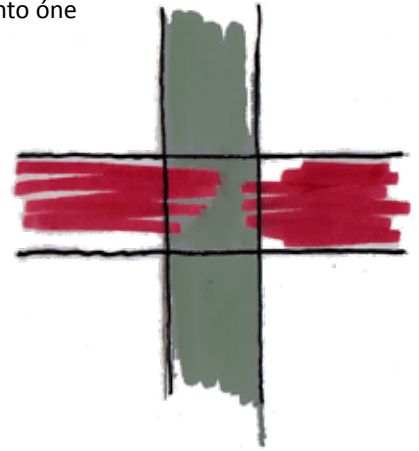
Space overlaps, continuous and break through, as well do the details



Grafting Architecture

The trap

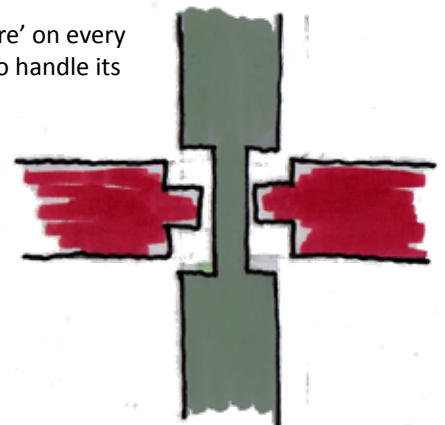
Wanting to combine every encounter literally into one



The detail

Continouing space, giving room to the other, communicating and being complementary.

Acting as 'furniture' on every scale to be able to handle its complexness.



To be presented ad P4-presentation and
P5-presentation.

A tour through the 'final' graft' - the new contour

Photos of model 1:1000

Grafting Architecture



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A tour through the 'final' graft' - the new entrance

Photos of model 1:100

Grafting Architecture



Grafting Architecture



A tour through the 'final' graft' - the new grafts

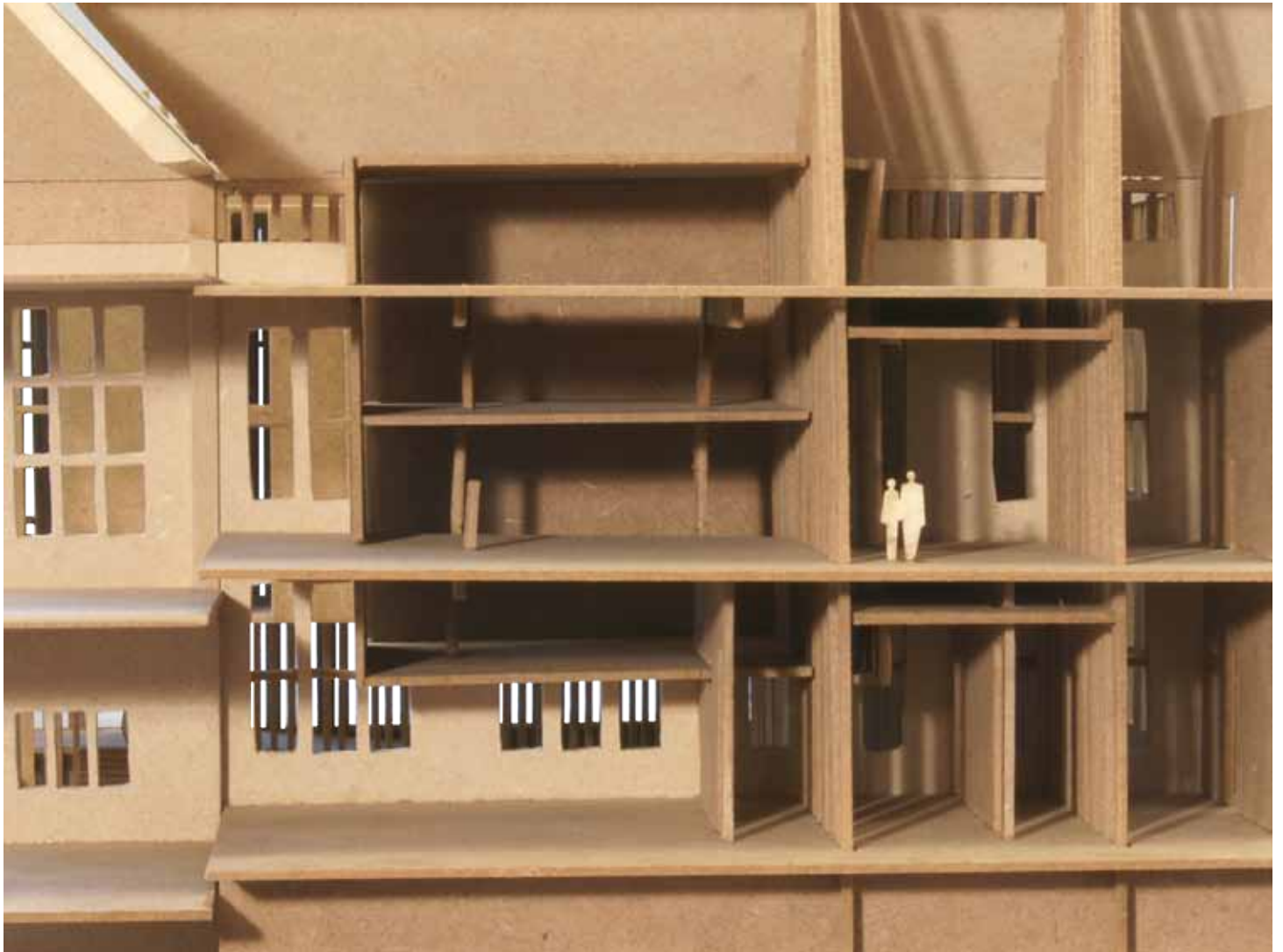
Photos of model 1:100

Grafting Architecture

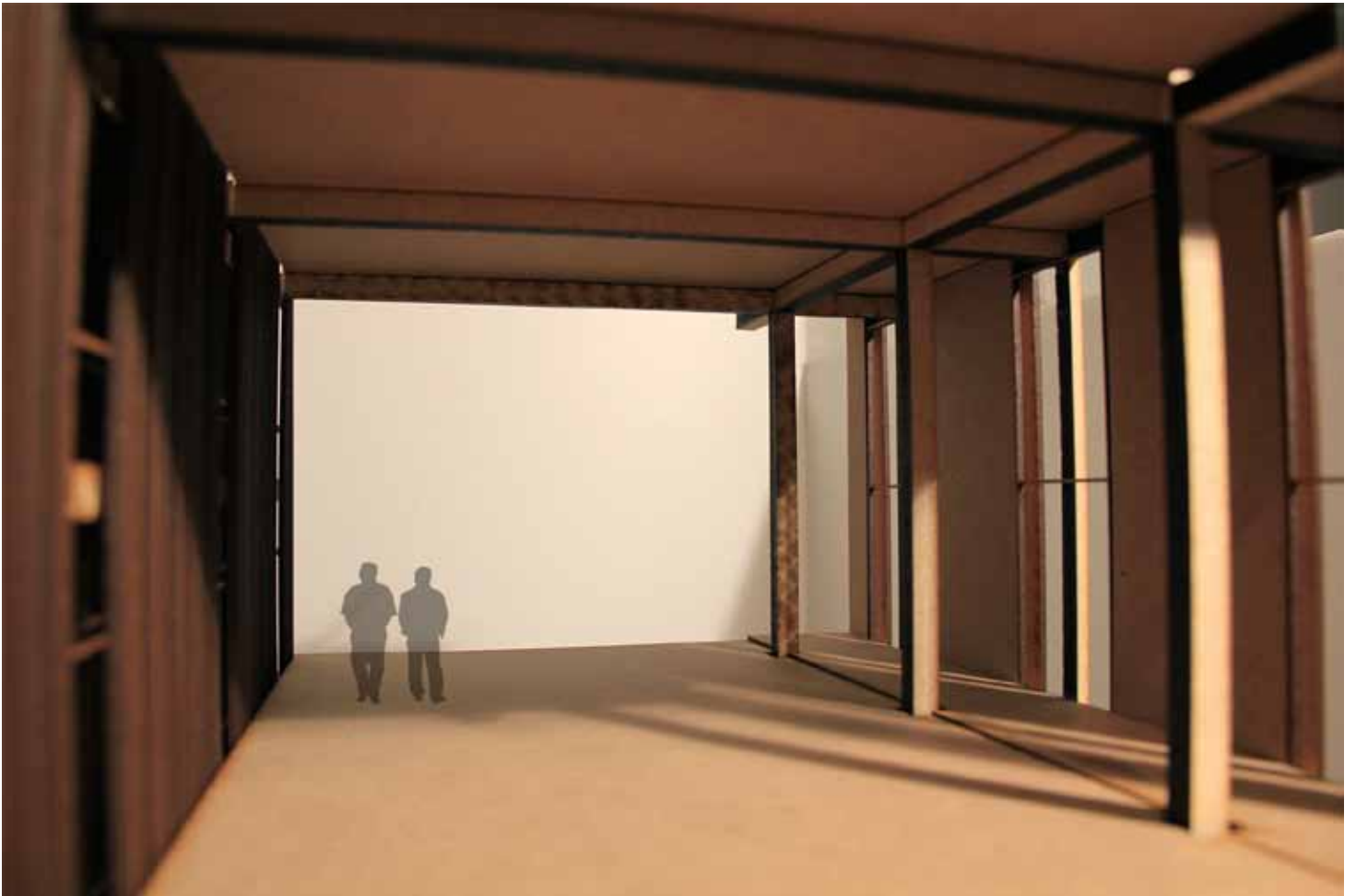
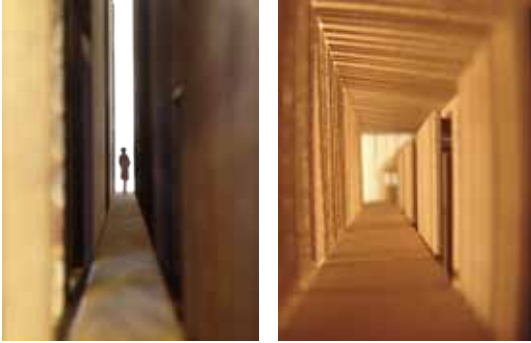


Grafting Architecture









Grafting Architecture

Photos of model 1:100 / 1:50



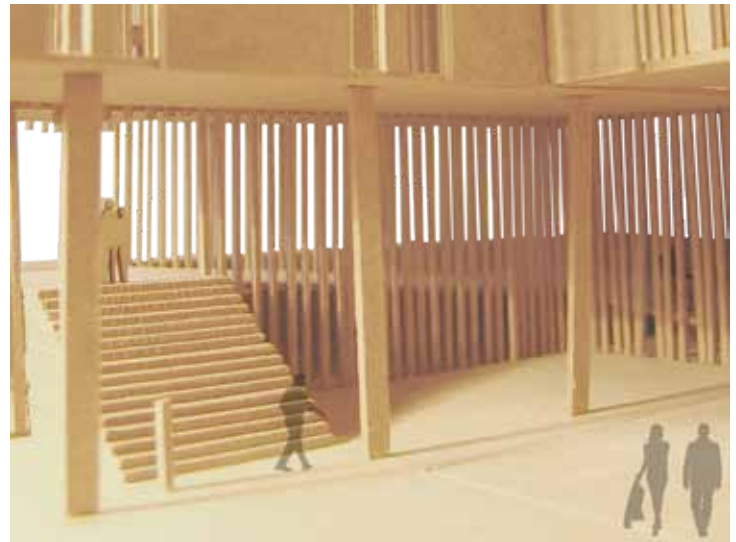
A tour through the 'final' graft' - the new exteriors

Photos of model 1:100

Grafting Architecture



Grafting Architecture



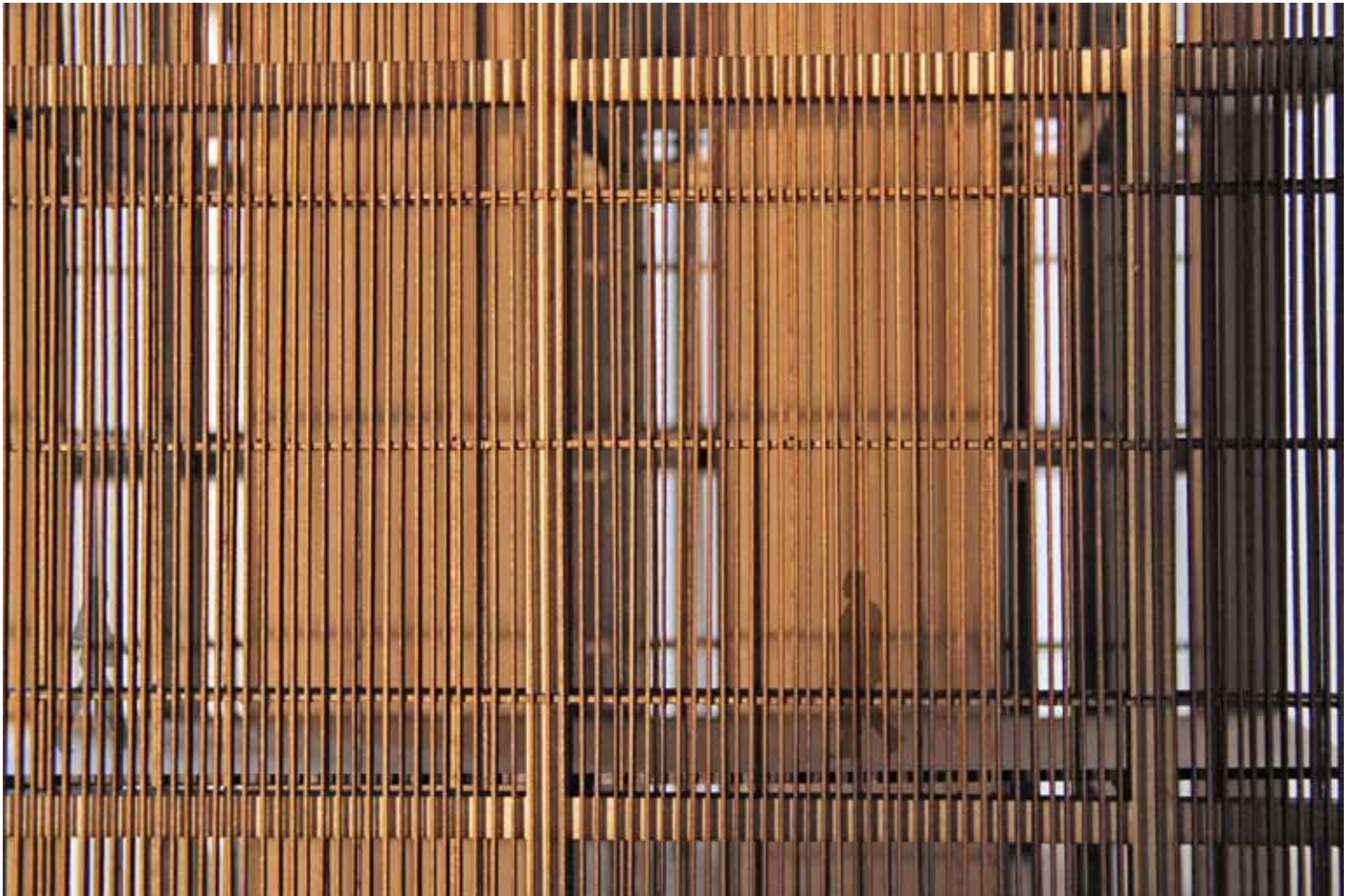
A tour through the 'final' graft' - the new elements

Photos of model 1:50

Grafting Architecture



Grafting Architecture





Grafting Architecture





Grafting Architecture

Photos of model 1:100 / 1:50



Martje Roks - April 2013

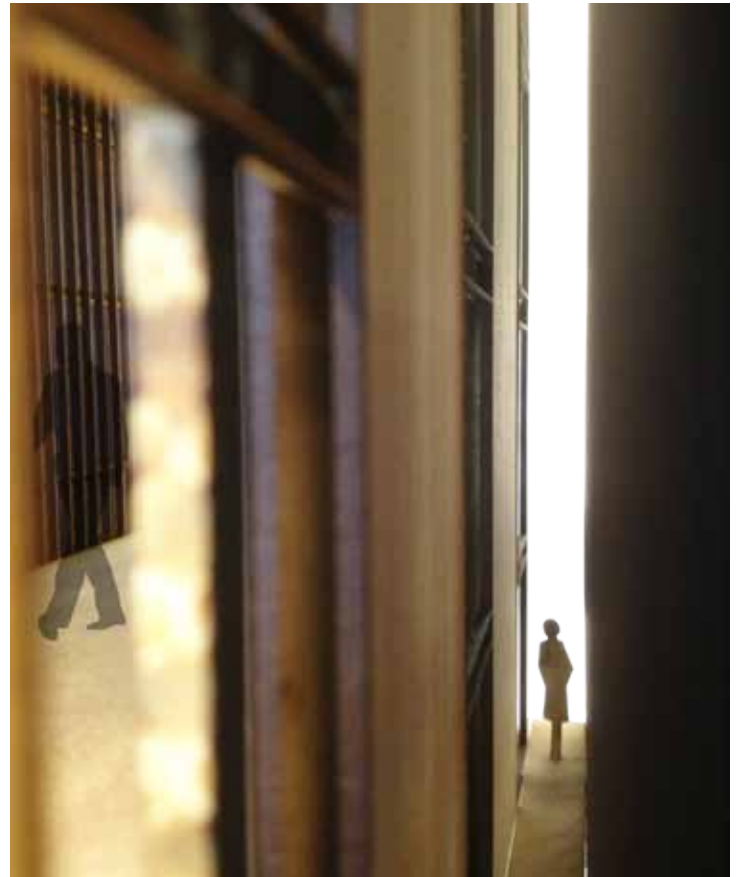
A tour through the 'final' graft' - the new elements grafted

Photos of model 1:50

Grafting Architecture



Grafting Architecture



Photos of model 1:5



Grafting Architecture



Writing about graduating on Architecture

A short reflection:

(The theory)

Graduating on Architecture is just one frame of a whole study, a moment in time which will be different (in interpretation and in results) tomorrow, one week from now, one year from now. A moment in which the student should make a statement. A statement reflecting on the things gathered in the years of study before. A statement which not contains the whole world of architecture, but just a frame of it, which is not a final conclusion, but the start of a way of thinking. For this, graduating on Architecture actually means 'Starting to think of your role as Architect'. In the research that is showed in this booklet a start is made on figuring out who the Architect in the student is. It opens questions and gives possible answers on how to design in the future. But it is not a final, closed process. As less as it really was a start. It already started years ago, it will finish years from now. But for sure the process of graduation gave new insights, new views, new buildings, and it shaped the Architect in the student more and more.

Coming to a theory and reflecting/testing/proving/projecting it in a design was the main goal of this graduation. Starting from intensive and profound philosophical research, not only on architecture but on the whole world and ways of being, the architecture as we see it now could not be taken for granted anymore.

As this booklet showed, the theory that is constructed for this project started with the mismatch between dynamic architecture

and static building. Architecture, the way one thinks about architecture and the way architecture is used, is always in change. But the already existing concrete buildings do not change along and neither does the static way architects treat their buildings. Trying to solve problems with it while not even being able to pin point what those problems really are.

The static buildings right now seem not to be able to give space to the complexness, the movement and the transformation of its architecture. Instead buildings bounce off all the events that are taking place.

There should be searched for a way in which one can look at architecture less as a impenetrable object but more as a layered process, in which different transformations can be combined so there will not have to be chosen for one. Space is no either/or question.

One has to realize that space does not stop where the architect sets a physical frame. It continues. As does the program, use and techniques within this building. Everything is always still in progress (as well in space as in time).

So I stated that architecture is about the complex interactions between spaces and the complex interactions between the elements that form the spaces. Architecture is about the negotiation between the one side and the other. The one side and the other of the building, of the use, of the technique, of the conditions, of the wall etc. Architecture is not about creating objects, about creating ones, about creating solutions, about

Grafting Architecture

either/or scenarios.

Right now architecture becomes a static object because of the believe that the limit/end of space is the wall of a building. But in this wall, after the wall and in between the walls happen the things that make architecture. The limit of space is not the wall at all! The core is found in a series of layers, which for architecture becomes visible in the wall and the spaces these walls create.

Architecture is a story of multiple happenings, of multiple walls and of multiple spaces on all sides of these walls. All these different elements can be different from each other, providing a transformable architecture, but in order to combine them into one conversation their grafting should be carefully thought trough! **And it is the thinking about this grafting, combining and the creation of complex relations and their reciprocity which is the design task for any architect.**

This research and design project showed options that make architecture not more flexible (transforming its nature) but more able to understand and react on its own complexness by questioning its own frames and boundaries. It is not about creating new forms of architecture, not about making it able to transfer a geometry into a totally different geometry, but about creating different scenarios within one building. It is about the stable buildings as we know it being able to look beyond itself. It is about designing from the (three-dimensional) section instead of solving a programme in plan. It is about the complex interactions between spaces and the com-

Grafting Architecture

plex interactions between the elements that form the spaces.

The process to come to this theory opened so many questions that even the question 'Why design architecture?' came along. It touched on one thousand subjects and travelled on a road passing by and researching more questions, like:

- Does architecture has an active role in how actors are emotionally and physically influenced in their well being?
- Are we able to solve problems with our architecture?
- On what do we base the decisions of what to determine and what not?
- How to handle the fact that an architect definitely determines something, but that that dynamic something is much more complex than we, as architects, can grasp?
- And how do we handle the fact that our determinations should only last for a appropriate time?
- Can we look in the future to predict the problems that should be solved then?
- Should we try to find a way to make architecture more flexible, literally moveable and changeable?
- Or is there a way to look at architecture as something stable though less monumental, less as a finished building but more as a capacity, as a recognizable part of its own continuous design process?
- What is the relation between time and space in this?
- What is the role of the wall in the complexness of the assemblage/limit of space?
- Is there a difference between building,

architecture and space in this?

- Is it possible to create different scenarios, different architectures, within one building?
- Are the design tools that we use at the moment able to grasp this complexity of real architecture and building?
- Etc. Etc.

All these questions were not asked necessarily for finding an answer, they were asked for being able to react on the architecture as we see it now. To be able to take position in designing. They were based on real experiences and perceptions, more than on literature and books, the questions arose out of and were projected on actual architecture: models have been made, drawings were produced, photos were analysed, everything to stay in the real world of architecture, while questioning so much more than that. This research and design (therefore) can never been seen as separated things. They influenced and reacted on each other constantly and simultaneously.

(The process)

But there are four 'traps' discovered in this process that need reflection. The first one being language (theory 'versus' the actual design), the second one being abstraction (which was of high importance in the phase of conceptual design), the third one being the choice for two-dimensional or three-dimensional tools (which influenced the phase of the materialised design) and the final one being the parting between designing architecture and designing a building (which came to the surface at the end of the design phase):

Language (theory)

Language is a system that made humans to what they are now, our capability to speak and to relate words to events, emotions and to other words makes us intelligent and for example, able to create something like architecture. But language is not real (tangible), it is not interpreted by every person in the same way and one thousand words can still say nothing about its subject, being in this case the real experience of space. Gaining knowledge through reading, writing, speaking and hearing was very important and indispensable in this graduation project, it was essential for coming to a design(position), but the gap between language, talking/thinking about architecture, researching architecture, and the actual space and designing of this space still was a hard one to seal.

A step that helped in this process was found in realizing that the graduation project is just one frame, in which you cannot research and design every aspect of the world of architecture, but in which you have to focus on the issues that are most important for you now. So you have to leave some luggage behind: some researched items were worthwhile researching but could not be main issue of designing. Going through this process did made it happen that the main research theme evoked, in this case starting from 'The role of the architect and his architecture' to 'The introduction of chan(g)ce in architecture' to 'Grafting and combining, hence interacting between, different spatial qualities and boundaries within one building(frame). This process was part of the studio, focussing much on

research and less on a final design.

Next to that it also helped to not have to do a lot of new research on the issues that are space-related but not the building itself: program and location. Issues that matter for any design but distract from the óne frame that was researched in this project now, a frame that focused more on spatial quality-question than on program/function-questions. That is the reason why in this case there has been chosen to project the research on the building of the faculty of architecture in Delft, the building where the research itself took place.

Abstraction

But to be able to project the research on a building and come to a design from there one has to be very precise in the products that are created on the way. For getting a clear view on what you are doing, what is happening and what one wishes for, spatially, one has to get rid of 'abstraction' (at a certain point). Schemes, diagrams and even plans and sections that do not tell what there réally is, (but tell the story that you want to tell in a simplified way), restrain from making decisions. Decisions that will catch you in the end anyway. Being very precise on what you, as designer, want and what you don't want is the only way to come to a design that is aiming high and tells the whole story, but to be precise one also needs to design precise. This specially defined the phase in between conceptual design and materialised design. Of course we need abstraction from time to time to make things clear and communicate about it, mainly in the conceptual designing phase, but the abstract schemes themselves are not the final goal, not a

materialised product. Using abstraction is a choice, which sometimes is helpful and leads to new welcome things, but one had to be aware of this and be able to pin point it. One has to realize this all for not falling in the trap of abstraction that leads to the postponing of real decisions.

Two-dimensional architecture

These real decisions also can be made more easy by choosing the proper design tools.

Therefor the search for the suitable designs tools became very important in this process. Questioning architecture and not focusing on the issues of a program/function, asked for other ways than designing (through) a two-dimensional floor plan. It asked for a way to reveal the complexness of three-dimensional space. A combination of hand drawings of two-dimensional sections and three-dimensional sections made it possible to think about the spatial qualities, but physical models got the design process really started. Once the space is really there, is actually 'build', one can not deny or evade anything anymore.

Only for a short time the computer turned out to be of great help, showing more information about the actual precision of the spaces. But to talk about and design real space, one has to built and experience it in reality, even on a smaller scale physical models showed the building and its architecture best.

To be able to show what you want to show you have to use your tools properly. The three dimensional (results of the) tools used in this process made it more capable to capture the complexness of space, as

stated in this research, and the physical models gave the best view on what was really there so the design process could keep on going anytime from there on. This was specially of importance in the (end) phase of the materialised design.

Architecture or/and building

But working with psychical models also helped to take a next step in the process, the step to go from space to building (in this case the verb, to built). The real decisions in this project focused for a long time on the spatial characteristics and qualities, on the complexness of architecture. But in this process the complexness of building was not taken in account in the same way. Main goal was: designing space, not constructing space. This parting between designing architecture and designing a building is a hard one to pinpoint, as one could state that in practice architecture and building are one and the same. But in the end the parting did seem to play a very important role: a possible pitfall but also a possible upgrade. In the process the awareness of the parting that seemed to be created and the awareness on how to handle this possible parting was discovered late: it is permissible to see a difference between architecture and building, but they don't exist without each other so for not falling in the trap of designing something that can not be build, the building should be included in the process from the start on. In the end it turned out positive, as the construction could be handled in the same way as the space, improving the project only more and more. But for a next project thoughts about real construction could be developed earlier to not fall in the trap of

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making the construction a possible pitfall for the project.

Possible pitfalls will always be there, designing is not about following a prescribed route that inevitably will lead you to a 'right' design. And that is also not what has happened here. This design is not planned or predicted, but discovered through 'experienced experiments'. There was no recipe, and there probably is still no receipt, but one can always learn from the past, even without taking it for granted!

(The end result)

This also goes for the product that was finally designed for this project: an addition to the existing faculty of architecture. The new added space is placed around the head entrance, creating a different entrance, a new courtyard, a new type of indoor spaces and extra outdoor space.

The indoor spaces that are created by the addition did not focus on a program but focussed on being big but private, as that was the type of space missing in the already existing building.

The aim was to let the new addition communicate with the old building, not by copying it, mirroring it or contrasting it but by finding a way to be independently together: all building parts should have their own character though fitting together as one. The tool used to achieve this is found in the 'grafting catalogue' and is cross-combining, in which different types of spaces are placed in and over each other, like it is multiple different buildings

combined into one. In this project there is chosen to communicate between the different spaces through distances and dimension, through combining spaces, through creating new spaces in between the added spaces, through reacting on construction and textures. But nothing is a copy or a remake of the other.

The new entrance is created in addition to the already there main entrance. Right now this part of the building is the part where the building is weakest, in mass and use. By adding a new way of entering, crossing multiple different spaces and levels, a whole new introduction to the building is created.

The new added spaces consist of one big indoor space that can be used by large individual groups. This space is surrounded by a walkway, so the space itself does not become traffic space. The walkway functions as the mediator between the new indoor space and the old building, as well as the public space. The walkway itself has an over-proportion making it also usable as used space.

The way these spaces are assembled together erased from the research, criticizing the way spaces are assembled 'normally', there was searched for ways to let space communicate, have their own identity but graft all together at the same time. At the point where all the different spaces meet, cross-combine or separate new types of spaces are created (to make sure that the spaces continue every time). Between the new added spaces and the old building a 'un-defined' space is created, swaying between

the old and the new, not belonging to neither but being part of both. Between the two new spaces a 'chaining-space' is created, taking over the characteristics of both but by combining these being an individual space. Going from one space to the other one has to cross the chaining-space, has clear view lines to the old building. And the outdoor space between new and old can be seen as 'mediating' space, creating neutral space so there is room to transfer the differences between the others.

The spaces that are created are not created out of the idea to merely add more square meters. They are added to create more space. Space with its own strong identity, spaces that are missing now, spaces that need to be there to make the whole (and its use) more and more flexible. And to be able to this one has to not only look for the things that need to happen in a program, that need to happen inside, but one has to look at the asymmetry, the negotiation, the reciprocity between everything so qualities are created everywhere and the building does not depend on it use anymore.

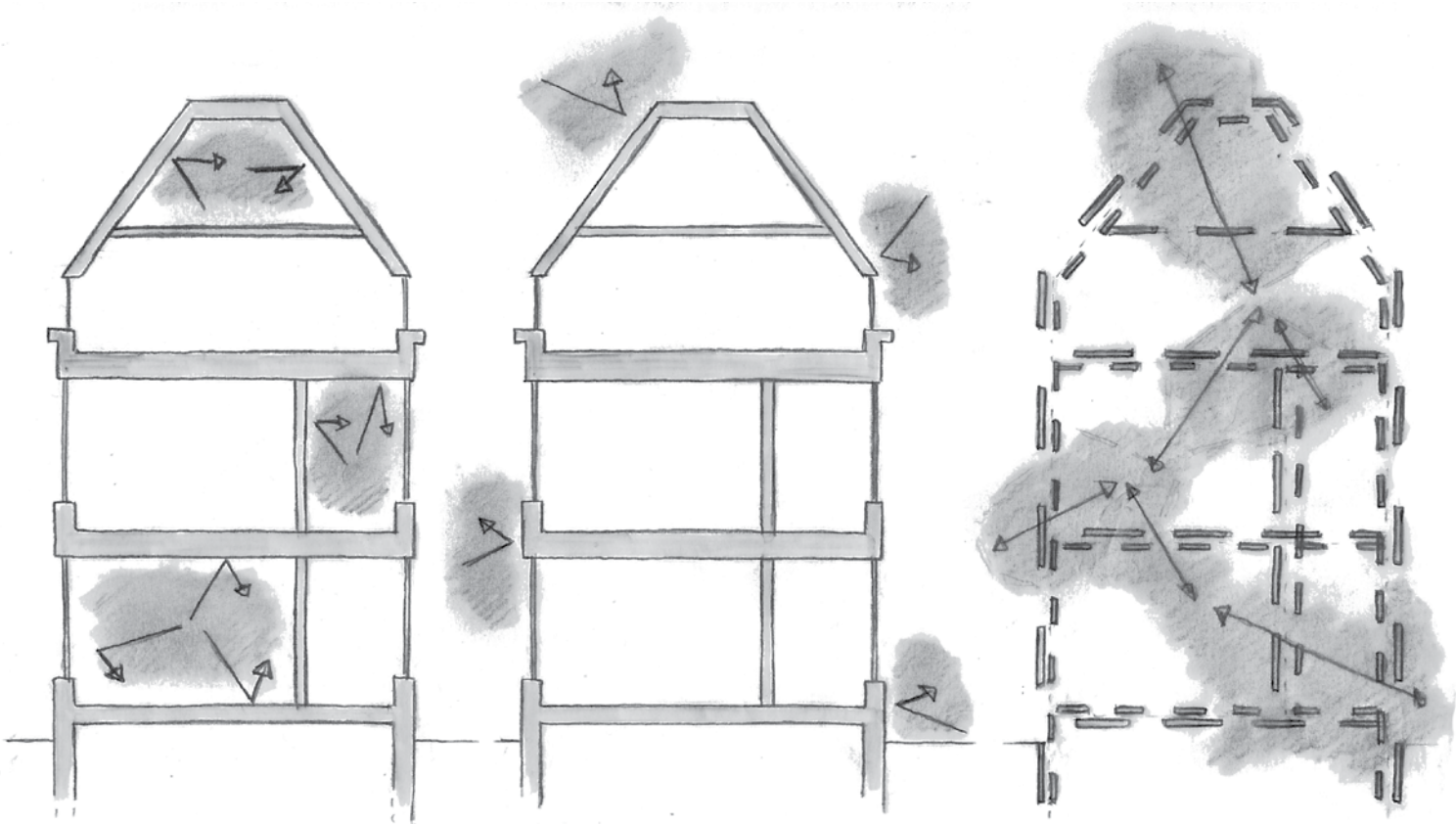
Therefore the two added spaces and the already existing space of the old building are grafted together in ways the theory revealed, and the 'facades' (which are more 'elements') of these three spaces play a very important role in communicating and transition between all the spaces. It defines the spaces and their identities, it makes the space being able to stop or continue. It follows rhythm and transparency, without copying anything, creating one

continuous space build up out of different identities. This is possible because of the fact that the 'elements' are grafted together in the same way as the spaces, as showed in this research. Designing the facade not as one massive element but as a layered space, it can be questioned whether the facade stops the space or continues it. And by the way everything is cross-combined one even starts to think which facade belongs to which space. In the facade the constructing elements form their own layer, making it possible to handle all sides of the facade different from each other. Hereby the facade becomes more than just a building envelop.

The same goes for the way of detailing. Here the whole theory comes together. Constructing the building out of wood makes it possible to handle every detail and every facade as its own 'building', being able to get grasp of the complexness of continuations and boundaries. The traditional ways of 'piling' everything together would have lost all the complexity, continuousness and communication of the spaces. But the search for a way of detailing that does shows this, is a huge contradiction to our traditional ways of constructing. And therefor this design will be build different from other buildings, it will be build like it is furniture.

The whole of this final design of this research and project turned out, as already stated during the research, not to be an answer that creates totally new forms of architecture. It even can be stated that the design includes a lot of classical elements, which can be said is inevitable when communicating with the already existing building of the faculty which is quite classical and noble in itself. But the one thing that a classical building would never do is the way of 'moulding' the details and separating every layer, of the

spaces, the facades, the constructions, the textures etc. all having there own identities while creating one space, or two, or three, or seven. One plus one will never be two after this, it will always be more. There is interaction and coherence created between different elements that together create more than there whole, that could not be there without the other but also have their own identity, of which their interaction and cohesion form the design, while constructed at and functioning on all at different levels each wanting to create different things. This is the 'flexibility' in architecture and building that we nowadays need. This is the role of the architect(ure).



Mass versus events - no interaction but bouncing - off. The problem: either/or scenario's

Layered architecture, mass interrelates with the complexity of its space

Statement

'Static buildings right now seem not able to give space to the complexness, the movement and the transformation of its architecture. Instead buildings bounce off all the events that are taking place.

Architects should recognize that the limit of space is not the wall, that architecture should 'bent' more and become less an object but more a process of multiple layers combined in one conversation'

Martje Rokx - April 2013

Theory

Introducing asymmetrical layers makes it possible to 'bent' more and to create multiple spaces without losing the fundamentals of these. Right now architecture becomes a static object because of the believe that the limit/end of space is the wall of a building. But in this wall, after the wall and in between the walls happen the things that make architecture. The limit of space is not the wall at all! (Architecture won't become a flexible 'Barbapapa'.)

Search for a solution

Architecture is a story of multiple happenings, of multiple walls and of multiple spaces on all sides of these walls. The known stable devise as object has to be changed into a stable devise as process in which there is not chosen for one best, but for multiple others combined into one conversation, all grafted equally. **And it is this grafting, combining and the creation of complex relations and their reciprocity which is the designtask for any architect.**

Position Paper Martje Roks – 4052005

Juni 2012

Grafting Architecture

The role of the architect, architecture and architectural education

Point of departure

Being architect, what does that mean? What do you as architect do? What does your architecture do? What is the role of architect(ure) in this world?

Determination in / of architecture is an ongoing concern in the world of architectural design. What to design, what not to design? What to predict, what to leave open for chance, for the unknown? How to give that one right answer to the design-question? Determining too much, over-determination, leads to spaces that cannot be used proper anymore, determining too less, under-determination, will lead to spaces that will not be used at all anymore.

With architecture we freeze space, which has an interactive influence on the way participants act, think and feel. These experiences of space are decisive for the way one appreciates architecture. Decisions on what to freeze are made by architects on basis of problems that need to be solved, these are the parameters for architects. But how do we know what these problems really are, how do we know that we offer the right solution, for what time-span do we offer these solutions and how can we offer that one perfect solution while experiencing space is multi-dimensional and dynamic, ever changing?

During the MSc3 period at the studio Delft School of Design (tutor Dr. Ir. Andrej Radman) these questions have been centre point of research. The answers were not to be found through using existing methods, but through critically questioning these methods and being open for new ways of designing. That is why the research did not

start in architecture itself, but in everything that is related to architecture, in the philosophy of Gilles Deleuze and Félix Guattari and their 'Three Ecologies'.

The Research and critical position

The main difference in asking research questions arising from this philosophy was not to ask 'what is inside your head', but rather ask 'what is your head inside of'. It is about tapping not into the solipsistic world of design, but rather into the relation of exteriority or the design of the world. This already changes one important starting point in designing: we take the problems that need to be solved as parameters for our designs, but should not look for the answer of these problems but for the questions. Starting not from the question 'What is it?' or 'What does it looks like?' but from the question 'What does it do?'. Changing the position from 'what is going on' in 'what happens'. This stems from the idea that architecture in itself, form, does not provoke action: action reacts on action itself. Architecture does not force a certain experience, it is not capable of doing this as the affection, feeling, becomes after the affect. And to look to this affect we should not look to properties but to capacities.

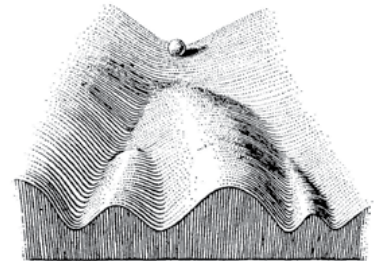


Illustration 1 The epigenetic landscape. The capacities / chreod not as fixed template but as pathway in which a developing form gathers the information and the influences necessary for it to make itself what it is.

Designing not the demanded personal affections but the unknown affect, the capacity, asks for a start from the milieu, the ecological approach, the mesoscale: recognizing that the environment has multiple levels of



ANIMAL-ENVIRONMENT SYSTEM

Illustration 2 The Ecological Approach. '(Holistic) life-form-environment system vs. dichotomy (biology and psychology study the animal and physics studies the environment). By form of life we mean a life that can never be separated from its form.'

architecture form and perception can never be fixed, never embedded, never predictable. Pointing to the second and third aspect of this research: for what time-scale does one design and how to handle the fact that the (perceiving of) architecture is something dynamic?

With architecture we frees (the outlines of) space, fix things, but all architects know that this does not mean that architecture becomes something static. We could call it stable¹ but it does keeps changing from the moment the first ideas are born, that even once it has been built it ages, it is transformed by its users, by nature, modified by all what happens inside and outside, renovated and transformed in order to meet new demands and requirements. And we need this 'flexibility in determinations' to be able to create the most 'optimal'

¹ - Note that stable means not the same as static. Although they are both opposite to dynamic, stable does accept dynamic while static excludes any form of movement or transformation. In this research static is used to express that something is invariably and unalterable while being stable means that there is a constant that allows movement but will always keep containing its fundament. It is stationary, steady and consistent.

structure, with smaller units embedded in larger ones, and it cannot be reduced to a single level of description. The whole is one dynamic system. Changing one aspect will lead to a change of the whole, to change the whole you have to change the aspects, it is not reducible to neither. This leads to the conclusion that in

spaces. But here it is that the two main problems of architecture become clear: firstly, in reality architecture does change, but the life that takes place in and around architecture changes even more, it changes faster, is dynamic in every second. The design-question, the demands and requirements, change faster than the building. As Yeoryia Manolopoulou says: 'The architecture of the moment, its calm or terror, requires subject-object relations that architects can only influence to a limited degree.' (Manolopoulou 2007, page 63). This miss-match between the stable architecture and the dynamic life is something every architect should be aware of and should take in as aspect of the design to be able to create a design that will be suitable for this world. In our design process and research we should therefore stop seeking for one object to make, for one typology to follow, for one experience to provoke, for one sign to communicate, for one human function to take place, in the life of a building there is not one. Acknowledging this will make it possible to see architecture more as a process of transforming singularities, instead of a one right answer – object.

The second problem is that we as architects do not always take this movement after being build in account, but we never take the transformation of a building before it is build, in the design phase, in account. During designing, we treat architecture as something that looks desperately static. We are hardly able to grasp the process (!) of developing something architectural as movement, as a series of transformations. 'We seem not to be able to picture, as one continuous movement, the project flow that makes up a building' (Latour and Yaneva 2008, page 1 and 2). To solve this discrepancy, between the multi-dimensional space and the single-dimensional methods, more research should be done on how one could introduce transformation in the designing phase of architecture i.e. how we can introduce the factor 'time' in our mostly two-

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dimensional design methods. There has to become a radical reversal of movement and space, where movement does not occur in space, rather, space becomes a product of movement. In order to perceive one has to move. The tools that we use might have to change, switching from two dimensional drawings and computerscreens into four dimension models.

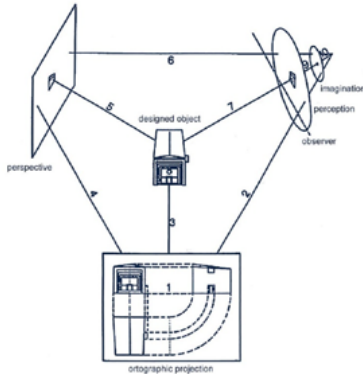


Illustration 3 Autographic vs. allographic arts.
'Allographic arts are those capable of being reproduced at a distance from the author.'

But as Robin Evans diagnosed, the peculiar disadvantage under which architects labour is that they never work directly with the object, but through an intervening medium, which is almost always the drawing, 'while painters and sculptors, who might spend some time working on preliminary sketches and maquettes, all end up working on the thing itself.' (Evans 1995, page 369) The paradoxical separation between the doer and the deed often causes architects to commit the fallacy of misplaced concreteness by treating concrete actual entities as if they were categories of thought or representation.

But architecture is not a representation, it is real. As well as that the (four dimensional) models that we make are no representations, they are real. Just as the phenomenology tries not to reduce humans to objects one should also try not to reduce materiality to objectivity, try not to reduce matter to what can be drawn (Latour and Yaneva 2008, page 4 and 5). And that is how we should treat

architecture and their models. Because why do we keep relaying on our own reflections, on our own 'man in the middle of the world', and not step out of this gap between description and reality and start seeking in matters of practice, of doings and actions (Barad 2007, page 135)?

In their real-ness we can not set the design apart in different ingredients: all ingredients used in the research form the whole, changing the ingredients will change the whole, changing the whole will change the ingredients. Therefore it impossible to take óne episteme as starting point for research. Design has to be addressed from everything at once at the same time. Spatial, ontological and epistemological distinctions sets human apart (Barad 2007, page 136). This separateness is not an inherent feature of how the world is. But it is more an illusion, an artifact of human consciousness.

The future

The research (methods) used in MSc3, seeking amongst others into philosophy and mathematics, and connection this to architecture has lead to new thoughts on designing, with as main (personal) conclusion stop looking for objects, for óne's (óne solution, óne function, óne episteme etc.) but now the reverse needs to happen. Theories have been connected to architecture but to come to architecture itself real architecture should be created, and connected to the theories again. That is how to continue in MSc 4.

To be able to give an answer to the problems of architecture one should look at architecture as something less monumental, less as a finished building, less as óne object but more as a capacity, as a recognizable part of its own continuous design process.

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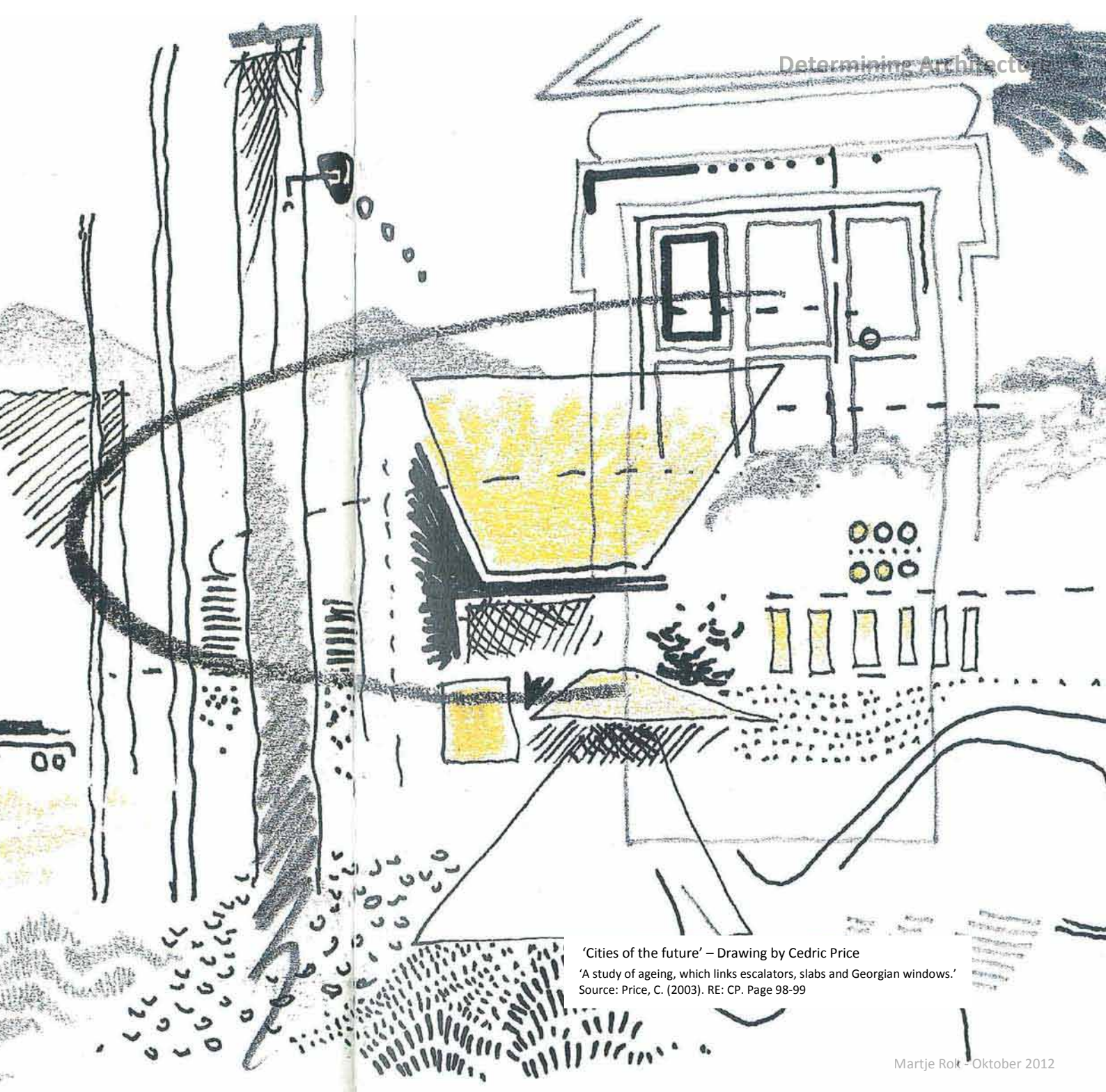
Cedric Price and the Anticipatory Architecture

About the determinations in/of architecture

April 2012 – Martje Roks

This essay is written as part of the course 'AR3DSD040 New Urban Questions or Minor Infractions' and is supplementing to my graduation project for the studio 'AR3DSD020 Architecture Thinking' at the TU Delft. This graduation project has as theme the 'determination of architecture' and mainly focuses on the question of what an architect should determine, what an architect should leave open for users and how an architect can create fitting determinations for a very long time span. It is about the belief that architecture influences the users and that therefore an architect should provide the right space for its users. But providing one right space is never possible, because the wishes and demands of users always change and because space is more than one: there is never one user, one room, one scale etc. Next to this, space is always fixed and always stable, while the things happening in and around it are always in motion. That is why the answers for a right space cannot be found not in architecture itself but in the capacities of architecture. My goal is to find a way to design these capacities, without stabilizing them so they can be adjusted to the wishes and demands of the user at any time.

During the lectures for 'AR3DSD040 New Urban Questions or Minor Infractions' a lot has been told about the diversities of design decisions, the different solutions architects found to certain problems and the effect these solutions have had on the world and the future. The main question being whether these architects determined the right things, based on the right reasons and whether we, as future architects, should continue this way of designing or try to find different solutions. That is why, for this essay, I chose to do research on the designs of Cedric Price, a British architect who questioned the world of design and the things architects should determine in a very critical and radical way. His designs were serious attempts to change the world of architecture and urbanism, based on the developments of the future, turning architecture into something that people have large influence on, something they heavily anticipate in. In his eyes, architects should determine as less as possible, creating possibilities for life.



'Cities of the future' – Drawing by Cedric Price

'A study of ageing, which links escalators, slabs and Georgian windows.'

Source: Price, C. (2003). RE: CP. Page 98-99

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Abstract – Architecture, Determination, Flexibility, Price

Architecture and urbanism determine the way people live. It offers possibilities or imposes restrictions. The requirements people demand from architecture and urbanism change every day. So to determine things that satisfy the ever changing user becomes a very complex job for the architect. How can architects, with their fixed determinations, keep up with the changing motions of life? Is the current conventional architecture even capable of doing this?

In this article the work of architect Cedric Price, a British architect who questioned the world of design and the things architects should determine in a very critical and radical way, is researched to see what answers he gave to the question of determination of architecture and to find out what architects nowadays could learn from his work.

Introduction – Architecture that is too slow

Thoughts about how people want to use architecture and urbanism change every day. Architecture and urbanism itself also changes. But do these changes go well together? Do they change according to the same ideas? Do they change in the same speed? In the same direction?

We use architecture as a décor for our living, for the activities we need to do. These activities are dynamic processes of movements. Literally every second people are in action: changing their minds or acting to get things done. We move from one place to another, grab things so we can use them, open windows to get fresh air in, close curtains to keep the light out etc. Architecture and urbanism 'serve' these moments for us.

Architecture and urbanism itself are static, it only changes with the help of others, people or nature. It doesn't move

itself, it doesn't react by its own. Influenced by other factors architecture and urbanism change too, but not every second. The changes in architecture and urbanism take way longer, sometimes decades: architecture is designed to be monumental, cities exist for ages.

There is a strange contradiction found in this: the static architecture which can not react on anything is the décor for the every second changing motions of life. How do architecture and urbanism manage to keep up with our movements and changing ideas while in itself it is frozen? And does it even really manage to do this?

Some architects argue that it doesn't. That conventional architecture and urbanism is actually failing, that it is not capable of keeping up with the ever changing societies and that it is not able to solve the problems it should solve. One of these architects is Cedric Price.

Cedric Price lived from 1934 till 2003 in England. He started his architecture career at the time when the English society was in great flux: having the Second World War just in the past, searching for new ways of living. There were many problems. The politics where struggling to find ways to change from an elite empire to a democratic healthcare state, the industry had problems implementing the new techniques developed in the rest of Europe and education was only there for the lucky ones so the shortage of well-educated employees shrunk. The numbers of unemployment raise and the economy was lacking and not able to keep up with other industrial countries (Mathews 2007, p. 8).

All of this had his effect on architecture: there was no money to build big, private organizations disappeared and the government got everything under their power and started building as much as possible for the lowest

investments. This resulted in poor social housing, based on minimum standards (Webster 1997, p. 17). The mainstream of English architects tried to find the solutions for a new suitable architecture by looking at Sweden, a country that had developed more linear because they did not take part in the war. A movement based on a picturesque vernacular resulted from this in England, called New Empirism (Webster 1997, p. 14). But the younger generation of architects, finished their education just after the war, had the feeling this architecture was not able to offer the right solutions and that the mainstream architects had to compromise too much. They had the feeling they had to develop totally new options, based on the new life of pop culture, commercials, street life etc. (Curtis 1996, p. 545). Architects like Peter and Alison Smithson and James Stirling stood up. The former trying to re-implement the modern ideas of Le Corbusier and Mies van der Rohe, transferring them into asymmetric, rough constructions. The latter referring to the symbols and utopias of the Machine Age of the 1920s. But there was also a second movement, trying to find the answers more in technology, basing their designs on the throw-away economy, clip-on technologies and mass consumption. The group Archigram being the most large one in doing this. Lone wolf Cedric Price was working next to them, having a lot of similarities with this group, but not being part of it. The main reason for this being that Cedric Price's critics on the conventional architecture and urbanism were much more serious and radical, his use of technology slightly different, and he paid no attention to the image (Price 1984, p. 255).

Cedric Price stated that, for architecture and urbanism to be able to keep up with the fast changing society, it should not rely on form or style (Curtis 1996, p. 539). The answer was not to be found in monumental symbols of culture

coherence, but in creating room for developments and temporariness (audacity). These kind of spaces could not be found by looking in the past, so (copying or transforming) history was not the right starting point, but by looking to the processes of the now and the future. Involving people in space, letting them be able to make their own decisions, provoking action and in this way determining as less as possible as architect seemed inevitable for Cedric Price (Price 2003, p. 98). In this way, Price stated, architecture could give space to all the changes and developments of life instead of framing and thereby obstructing them.

In this essay the thoughts and designs of Cedric Price, regarding to architecture and urbanism, are further explored to find out what his answer was to the problem of architecture being too static and too slow and to see if his solutions can be helpful in the search for a 'better' (responsive) architecture.

Main Body - The anticipatory design of Cedric Price

The first character of Cedric Price's designs in a search for a better architecture is the fact that he was not trying to find his answers in architecture itself. Cedric Price stated that architecture was not about building(s), but more about the social, economical and political responsibilities it has (Price 1984, p. 20). For him it was about the world and the people on this world and the need to give room for their processes. As he stated: 'Architecture is too slow to solve problems, instead it must create new appetites, new hungers. Architecture doesn't need the role of mental imperialism anymore, it is too slow and too heavy. Architects should not want to be part of creating law and order through fear and mystery. It is all about creating a dialog. We should create conditions that require action / reaction.' (Price 2003, p. 57).

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He kept himself primarily busy with the construction of ideas and processes instead of with the constructions of a building. By doing this he more and more took a role as anti-architect, and his architecture as anti-designs. He refused symbolism or illustrative expressions based on images of the past, but preferred a non-design, dismantling architecture and making it disappear into unconventional systems relevant to social demands. For the construction of his designs he mainly used existing industrial structures and other non-defining elements so his architecture would become unrecognizable and thereby anonymous (Price 2003, p. 34). His architecture and urban plans were supposed to give people freedom in use, anticipating and thereby continually changing the buildings so that all the needs of that moment could be served. Because of this his designs could be free from any symbols or meanings so they could function as neutral services (Lyll 1980, p. 107).

So to come to the point where architecture can serve anyone at any time, provide the right space for any one at any time, Price rejected any reference to architecture (no typology, materials etc.). But the question is if we don't need these references? As architects we learn from history and as people we need history to build up and understand our identity. Buildings and cities are the décor for our life, not the throw-away products that we use as tools. We need a 'stable' décor to be able to pursue our habits and patterns. Shouldn't architecture therefore be recognizable and reliable? Or wouldn't it bother us if we don't have that stability to rely on as long as it gives us individual freedom to choose in exchange?

Cedric Price did see these individual, personal influences on buildings as a major advantage and this can be seen as the second character of Cedric Price's designs in a search

for a better architecture. His statement was that people should have complete control over their environment (Mathews 2007, p. 108). To make this 'anticipation' possible Cedric Price used technology as a tool. Stimulated by the work of Buckminster Fuller he searched for technical systems that could make architecture flexible and changeable without losing its main structure. In one of his first designs, The Fun Palace (1961-1964), Cedric Price started to share his ideas with the world. For this design, a multifunctional theater, he designed a stable steel structure mainframe which contained movable walls, floors, ceilings, movable closed volumes, movable video projectors etc. All these movable parts could be moved by the audience by inputting their wishes in a complicated cybernetic computer system which would pass on the information to a giant movable construction crane which would transport the flexible building parts within the main structure. This Fun Palace was designed as a real proposal but it is never realized. The Inter Action Centre, the younger brother of the Fun Palace, is. The Inter Action Centre (1977) is a multifunctional cultural centre and the building Cedric Price designed for this contains, again, a main steel framework. Within this frame closed volumes could, according to wish, be placed, having an independent building structure of their own. These closed volumes could contain, if desirable, an interim floor. These floors were made as 'tables' and the 'legs' of these 'tables' could be adjusted in height, so interior flexibility was also guaranteed. By making these three parts of the building independent of each other the building gained maximum flexibility and the whole assemblage changed many times during the years. To keep this process fluent Cedric Price designed a technical manual which he gave to the users so they knew what to do (Lyll 1980, p. 109).

The way of designing anticipation in both these projects relies on flexibility and indetermination, though they are designed in two totally different ways. Where the Inter Action Centre is more stable and the changes in the building are more slowly the ideas for the Fun Palace suggest a minute to minute change in which every user has his own contribution. The question is if this would really work in real life. Cities and buildings are used by many people, during totally different times of the day, for totally different reasons. There are lots of flows. So as an architect, to create an anticipatory design, you should leave all these flows open. But this is not possible as architecture itself is something fixed, there is always something that is determined. And we need this determination: action only reacts on action. We need resistance and friction for things to happen. If there is nothing to react on than people won't use it, won't do anything. So does architecture literally need to move? Should it stay a décor and not a product. We live in a décor, with the help of products. Or can we see architecture as a product, like we see cars and televisions? As something that we can buy, use and throw away if it doesn't work anymore? Do we need to question the monumentality of architecture and urbanism?

Cedric Price did question the lifespan of conventional buildings, the third characteristic of his designs in a search for a better architecture. His statement was that it was not that buildings should last a long or a short time, but that they should last an appropriate time (Price 2003, p. 87). Though, buildings should never last forever and the architect should determine a valid age for the building depending on whether the building would still be useful and suitable by then (Hardingham 2003, p. 74). In Cedric Price's

ideas architecture has, just like food, an expiration date and for the Inter Action Centre, mentioned above, this date was set on a maximum of 20 years after realization. So when, after those 20 years, the English Heritage and the Twentieth Century Society wanted to show their respect for the building and suggested that it could be placed on the English list of monuments, Price got shocked and protested. He claimed that the idea of the building was that it should be demolished by then, so the building ended up being demolished, like Price wished (Hardingham 2003, p. 29).

By doing this Cedric Price made himself a rare person in the field. Conventional designers are in the very strong belief that what they design should stay as long as possible, they attach value and personal pleasure to that. The ego of the architect is in a way just as important as the buildings they design, which is a remarkable feature of the field as the users don't need to live with the architect but with the architecture. But of course the architect is not the only crucial factor in determining the lifespan of buildings. There is also the issue of validation by users, technical state and, most important, money. Nowadays people don't invest money in things that only last a few years while they could also last longer. As an architect should we pay attention to this or shouldn't we? Cedric Price stated that these issues did not belong to the aim of architecture. According to him architecture was only about creating the right thing at the right moment, with the main goal making it possible, as much as possible, the delights of life.

He stated that delight was the factor that proved whether architecture was 'right', whether it was accepted by the people and sustainable because of this (Price 2003, p. 87). His ideas on delight, the fourth characteristic of his designs in

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a search for a better architecture, becomes clearly visible in a more urban focused, not realized project, namely Magnet (1995). In Magnet Cedric Price suggested to place ten 'magnets' on locations in and around London, locations that are without interventions unused or misused, like spaces above roads, water and railways. The Magnets where structures build out of existing industrial machine like construction cranes, aircraft conveyors, scissor lifts etc. The idea that by using these existing elements the Magnets could be easily build up, adjusted, replaced or taken away again. By making these structures, again, mobile, adjustable and reusable they wouldn't become 'like normally happened with buildings inactive, static, institutionalized, formalized, privatized or redundant' (Hardingham 2003, p. 96). They were not seen as end results but as a way of stimulating the continuous need for change. The function of the Magnets was to create new architectural happenings, to bring new life into the city and create more spaces of delight and surprise (Mathews 2007, p. 247).

The idea was that the Magnets wouldn't take space but instead create space, so that new social relations could develop and new patterns and urban movements could be created. As Price stated: 'Magnets offer us a series of inherently changeable public amenities which take ease of access, sanctuary information and delight as their starting points.' (Ulrich Obrist 2009, p. 11).

With this project Cedric Price clearly shows his notion of the influences architecture and urbanism can have on their users, on the way they feel, think and act. He takes the pleasures that architecture can bring, by making influenceable and changeable spaces for people, as the main goal of his designs. But it is important to clarify that by acknowledging this influence he did not state that architecture could

solve problems. He rejected the role of architecture as a mere improver, a formal enricher of the environment as it at present exists. But instead, he said, it should make the potentials of possibilities work, it should isolate the potential qualities of delight in the most ordinary forms. But can you really state that architecture has no meanings in itself? That it is neutral? Every artifact contains symbols and memories, every artifact provokes action and emotion. Won't even non-designing eventually, when we are used to it, become design? Filled with symbols, meanings and intentions? To escape this problem Cedric Price used change: when nothing is fixed nothing will ever become stable, nothing will ever become design.

One of his quotes clearly elucidates and summarizes his opinion and the four characteristics and statements discussed in this text: 'To transfer concern into action in any area of a late 20th century metropolis, one should have little time for nostalgia. To look at such an area is to investigate:

- Regions of responsibility
- Fields of usefulness
- Zones of effect
- Volumes of opportunity

But uppermost is the need to realize that no urban space is operationally finite, that no plan has a single scale and that no artifacts are timeless. City structures and systems as found are the natural hazards of the future. All cities last too long, but thankfully, all cities eventually fall. The architect in accepting the latter should ameliorate the former. Demolition must not merely be a palliative (..) but be a cause of celebration of the future. Change is inevitable but the change of choice is heady stuff. (...) No

city that lives is static. Calculated uncertainty and conscious incompleteness combine with benign fragmentation to form the three Canons of the Design.' (Hardingham 2003, p. 40 en 41).

Conclusion – Architecture as part of its own continuous design process

With his designs Cedric Price questioned the megalomaniac architectural profession, dismantling the most holy ambitions. He rejected form, rejected building, rejected monumentality, rejected the architect. He introduced technology, flexibility, anticipation, indetermination and temporality into a very fixed world. Regrettably, most of his designs are never realized so they could not have been tested. This still leaves a lot of questions open. Do we need references to architecture or do we need to find new solutions in other fields? Do we need a monumentality to give identity and a stable décor? Or can we start treating architecture as products in this throw-away society? Does architecture literally need to start moving in order to keep up with our movements? Or do we need resistance to be able to react? For what lifespan should we design? Do the architects need to determine the right solutions or do people need to have influence so they can determine what is right? As an architect, how much do you fix? In this changing world over/under-determination is the ongoing concern of architecture and urbanism. But we need stability, we need architecture as a mnemonic device. Maybe Cedric Price was right at some points, maybe architecture is not about the building but about what happens between people and the building, about the capacities of buildings. My question is whether these capacities are found in making architecture move and making it flexible or whether these capacities are found in

making architecture less specific and more neutral and non-intentional. Maybe the answer is to look at architecture as something stable though less monumental, less as a finished building and more as a readily recognizable part of its own continuous design process. The architect should not think his building is done after he handed in his last drawing. He should acknowledge that his building at that point is only just at the beginning of life, of development, of change. An architect should design this process, by creating the starting points. Cedric Price certainly opens new routes for discovering how to do this, but more importantly, he dared to ask the questions that every architect should ask himself once and he kept the architecture debate lively and open. We need this debate to start with because thoughts about how people want to use architecture and urbanism change every day. Architecture and urbanism itself also changes. But do these changes go well together? Do they change according to the same ideas? Do they change in the same speed? In the same direction? Architecture and the determinations in/of it will always be a question. Whenever you think you found an answer, the question has already changed.

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**The image of dwelling and the phenomenon of
the pitched roofs**

A snapshot of my thoughts – Martje Roks

Juli 2011

The image of dwelling and the phenomenon of the pitched roofs

A snapshot of my thoughts – Martje Roks (4052005)

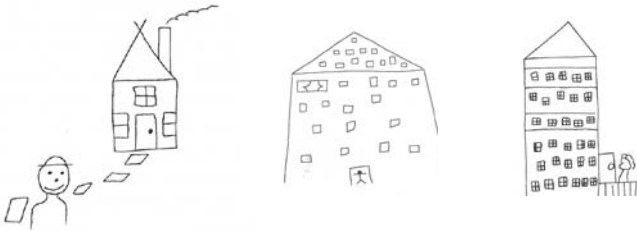


Illustration 1 – 2 - 3

From everything surrounding us, we have a ‘picture’ in our imagination. Not only from materialistic objects but also from who we are, what we want to be and where we came from. This image is personal and based on our own thoughts, knowledge, experiences and interpretations.

These images also play a role in architecture: we read space based on references and comparisons to that what we already know / seen before. We always look through a ‘frame’ and manipulated ourselves by doing this. We judge, give value and decide ourselves what we do want to see and what we rather not want to see.

On the other way, the things we are seeing (in architecture) are not neutral either. All materialized objects already contain values, they already ‘mean’ something. With that, space also contains compressed time. What shows itself is different in different times. And when something is in use, it might be build but it is not finished as long as we keep using it.

We learn how to look. And one of the things that influences this are the (arche)types, created through history and used in all fields of science and design. With this I not only mean (arche)type as schemes of underlying structures, but also archetype images. For example the image of dwelling. Because how is it possible that a dwelling is a very personal place, but when you ask a child of western society to make a drawing of a dwelling, they all draw kind of the same: a square box, with several square windows and a pitched roof on it, most times with a chimney sticking out.

It seems a strange contradiction, that we ‘see’ things in a very personal way, based on our own thoughts etc. but that when it comes to one of the most personal things, the dwelling, we do all live in ‘the same’ one. So then what exactly are the forces that shape dwellings and give them their clearly identifiable characteristics? What determines the image, the form, of a dwelling?

All travelers coming back from the city Zirma have clear distinguished memories: a blind black man who jells to the crowd, a fool bending over the edge of the roof of a skyscraper, a girl walking with a young puma on a leach. But in reality lots of blind man walking through Zima are negroes, in every skyscrapers is someone who goes crazy, all fools spend their time on the edge of a roof, and all pumas are bred because of a girls wish. The city

is redundant: it repeats itself until it ultimately ties itself into the mind.

Myself, I also just returned from Zirna: my memories contain airships moving in all directions at the level of the windows, streets filled with shops where the place tattoos on the skin of sailors, subways packed with corpulent woman who fall prey to the oppressive heat. My companions, however, swear they have only seen one airship floating between the steeples of the city, one tattooist who showed his needles and inc and perforated drawings, and just one corpulent woman who was searching for cold air at the back balcony of the carriage. The memory is redundant: it repeats the signs until the city starts to form.

(Form: Italo Calvino – ‘De onzichtbare steden’ – p. 26-27 – translated by M. Roks)

The dwelling

Everyone knows what a dwelling is, because dwellings are an indispensable part of each human life. We grow up in dwellings, we come ‘home’ in dwellings at the end of the day, we visit (people in) other dwellings and through life we move ourselves from dwelling to dwelling.

The term ‘dwelling’ is a universally used term, but the image that one gets by the term ‘dwelling’ is not universal at all. In each society the dwelling has its own form. Also the ‘meaning’ of ‘dwelling’ is different for each and every person: one might see his dwelling only as a place to

sleep once in a while, while someone who also works in his dwelling sees the dwelling as a space where he spends his entire day. Because of this, people draw up different demands on their dwelling.

These ‘meanings’ and demands are very personal. But the differences in images reveal only to be different from society to society, not from person to person: when one asks a Nomad what his dwelling looks like, he draws a tent; when one asks a Eskimo what his dwelling looks like, he draws an igloo; etc.

What creates this paradox? First of all, the *intention* of dwelling is a principle that is the same all over the world: the dwelling is a shelter, which offers protection against external dangers (Leupen and Mooij 2008, p. 18). It is the division between the controllable world inside and the uncertain world outside. But when this shelter gets more tuned to the wishes of its inhabitant and gets organized and decorated by those, the shelter becomes more than just a shelter: it becomes a place of residence, an ‘home’ (Leupen and Mooij 2008, p. 19). By doing this one creates its *own* living environment, reflecting his one identity and making it possible to live the way one wants.

Hence, dwellings can be seen as a realization of an own, protected identity. As the German philosopher Martin Heidegger also explains, the verbs ‘to be’, ‘to dwell’, ‘to build’ can all be traced back to each other (Heidegger 1951, p. 7). As he sees, in German languages the verb ‘buan’ (to build) meant in the past ‘wohnen’ (to dwell) as back then the definition for ‘buan’ was: ‘to stay’. So to build means to dwell, to dwell means to build. Next to

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that also the verb 'Ich bin' (I am) is related to 'buan' (to build) which means that to build is to dwell is to be: human beings are because they dwell and thereby build (Heidegger 1951, p. 7).

Hereby Heidegger argues that the essence of building is to be found in dwelling: to build means the creation of places where people can be, can live. And so, according to Heidegger, this means that we are only able of 'building' when we know how 'to dwell' (Heidegger 1951, p. 18). And so far we are still searching for the core of this 'dwelling', as we still need to learn how to dwell (Heidegger 1951, p. 20).

'Now I will tell you about the city of Zenobia, which the next remarkable quality contains: although the city is build on dry grounds, it stands up on very high posts, and the dwellings are made out of bamboo and sink, with lots of verandas and balconies, attached on different levels, on platforms that cross, connected through stairs and hanging-pavements, with viewpoints on top covered with conical-roofs, barrels as (water) reservoirs, wind vanes, and hoisting hook, cables and cranes sticking out.

Which needs, which orders or which desires the founders of Zenobia had that made them choose for this form of the city, is forgotten, en that is way we cannot say whether the city as we see it now satisfies, containing a form that

might have grown out of constant adoptions to the primary and meanwhile unrecognizable design. But what we do know, is that when you ask an inhabitant of Zenobia to describe how a happy place looks like, it is always the city of Zenobio that one imagines, with here pile dwellings and floating stairs, a Zenobia that might be totally different, with streaming banners and flags, but still it will be a derivative from a combination of elements of the first model.

After this argument it is useless to determine whether Zenobia should be counted to the happy cities or to the unhappy cities. It has no use to make a distinction between those two kinds, but we can make a distinction between two other types: the cities that change through time but still are able to contain desires, and cities where the desires wipe out the city, or are being whipped out themselves.

(Form: Italo Calvino – 'De onzichtbare steden' – p. 43-44 – translated by M. Roks)

The forces that shape dwellings

We might still not know how to dwell, but in spite of that it is possible to point out some forces that influence (a) dwelling. Dwelling takes place as part of a bigger universe. As the dwelling separates inside from outside (and vice versa) the activities on both sides influence the way of dwelling. The way you go from your dwelling to your

work, where (in relation to your dwelling) friends and families dwell, where you do your daily shopping etc. all influences dwelling in a bigger sense. Hence a dwelling is inextricably linked with the society in which it is built. Social patterns of behavior, traditions and religion are, amongst others, factors that influence dwelling (Leupen and Mooij 2008, p. 23). These influences of society are different from society to society, from country to country, from city to city but even from street to street. This is because time also plays a role as the (wishes and demands of) society will change (in time). For example, it used to be normal to also work in your dwelling and have a workplace or shop at home, but after the process of industrialization, (first man and later also woman) started to work outdoors, in factories and similar. This meant that a huge part of life started to take place outside the dwelling, instead of in the dwelling (Leupen and Mooij 2008, p. 23).

But as social/society-related activities might differ from society to society, the main-activities that take place in and around the dwelling are kind of similar all over the world: in each dwelling one must be able to gather, cook, eat, wash and sleep. Creating a 'shape' for (a) dwelling is, however, not about these activity itself, but about the way they are exercised and the space they need. And this, again, does differ from society to society.

Although social-society and (his) activities have major influence on dwelling, it is not only this that influences the 'shape' of a dwelling. Also the psychological climate can be seen as a determinant factor. As mentioned before, the dwelling primarily functions as a shelter, to offer

protection against external dangers. One of those 'dangers' is the weather: a dwelling should protect his inhabitant from rain, sun, wind etc. Depending on what aspect one needs protection against, the form of a dwelling will be adapted to. Because of this human being evolved many types of dwelling over the ages (Rapoport 1969, p. 19). Aspects that influence this are for example the orientation of rooms in relation with sun or wind or the form of the roof in relation with the transport of rainwater. This is conditional upon location, as some locations are influenced more by, for example, snow and others by, for example, sun. Locations with less extreme / diverse circumstances are hereby able to create more variations in form, because the climate here will be less-critical (Rapoport 1969, p. 19). An Eskimo, in a climate of extreme snow and cold will have less choices than a Dutchman living in the more neutral and stable climate of the Netherlands.

Related to this there are more factors to point out that affect the shapes of dwellings. Not only the physical climate but also the psychological context modifies the possibilities of dwelling. Main aspect in this is the structure and nature of the subsoil and the (im-)possibilities that come with this (Leupen and Mooij 2008, p. 302).

Arising from this physical context there are also the factors of availability of materials, constructions that can be made by that and technology that is needed / able for achieving that. In the past, when there was no (or at least less) question of 'globalization', one was forced to build with the materials that were found in the near

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surroundings of the building site. For thousands of years wood and stone were main materials in this (Rapoport 2969, p. 24). The materials available, and the technology / techniques that were able to model them, influenced the possibilities of building structures. Important to mention is that the factor of materials, construction and technique is not a determinant factor, neither is the factor of physical context. They both are to be seen as modifying factors: they facilitate and make certain decisions possible or impossible, but they never decide or determine form. They make the enclosure of a space organization, decided upon for other reasons, possible and they might possibly modify that organization but they never decide what is to be built (Rapoport 2969, p. 25).

Connected to this there are a few other modifying factors, amongst others the economical climate. The economical climate influences, special nowadays in time of globalization and infinite choices in building materials, the possibilities of the use of materials and techniques. But again this is not a primary factor, specially not on the historical (arche)type.

And finally there is also the political climate that plays as a modifying factor in the process of shaping a dwelling. This has to do with the contemporary rules and laws that concern the building of dwellings. Also the actors that influences the building processes play a role in this. But once more, this is also not a determinant factor on the (arche)type shape at all. It is just a factor that influences the building(process) nowadays.

To conclude one can see that the shape of a building is forced by many factors, of which only a few of them are really determining. Important is that one should make a division in societies to understand the differences in (shapes of) dwelling. Because despite of the fact that everyone in the world seems to have the same starting points (shelter) and activities (gather, cook, eat, wash and sleep) for dwelling, influenced by society (social/cultural/ritual) and psychical climate those starting points and activities are 'shaped' differently.

Because of this there are all different shapes of dwellings created all over the world. These differences however are still on a big scale and they do not totally solve the paradox between the very personal way of, and imagination of, dwelling and the fact that all children from western society still will draw kind of the same dwelling: the square box, with several square windows and a pitched roof on it, most times with a chimney sticking out.

So how is 'identity', the creation of your *own* living environment, related to the forces? And how is the 'image' / the 'imagination' related to that?

'One who travels, not having an image of the city that is waiting for him, will wonder what the royal palace would look like, the barrack, the mill, the theater, the bazaar. In every city of this state the buildings are different and also placed in a different sequence: but as soon as a stranger, arriving in the unknown city, takes a

look at the collection of pagodas, dormers and haystacks, following the freakishly line of canals, gardens and garbage heaps, he will immediately know what the palaces from the royals are, what the temples from the priests, the inn, the prison, and the slums. (...)

(Form: Italo Calvino – ‘De onzichtbare steden’ – p. 41 – translated by M. Roks)

The image that results from shaping

By shaping a dwelling one bears the forces as describe above in mind. They contain all the wishes and demands from the inhabitants. So by doing this one tries to create the most optimal environment, in which the habitant is able to live the (private) life he wants without being too limited.

From the wished and demands (based on religion, social behavior and traditions and relation to physical climate) one starts to create layouts and plans that ‘organizes’ the activities from the inhabitant in a way that fitted optimal. Starting to organize these activities was the first point of transforming the animal shelter into a dwelling. And by doing this one also started to see ‘patterns’ (Alexander 1979, p. 407). These patterns are all kind of similar within óne society, as they raised up out of the wishes and demands of that society. As the essence of the patterns stayed kind of the same throughout the years one was able to use the patterns, and the way there were shaped, in the past. By using this knowledge and

experiences one started to create a systematic order in all this. From here on certain ‘types’ were stated (Leupen and Mooij 2008, p. 37).

Looking at this development you can conclude that in society one agreed on the fact that a certain ‘type’ suited best for their situation: it made it possible to execute their rituals and traditions, it fitted their (social) patterns of behavior, it protected against the weather in the most optimal way, it was able to be build with the given materials en technologies.

But when analyzing the definition of a type, one sees that a type is an entirety of characteristics and properties of a group or series, that makes them different from others. But it is not a ‘model’, not a fixed, prescribed ‘form’ (Engel and Claessens 2007, p. 152). So for really grab the core of the archetype-image one should also look at ‘language’, at ‘style’. Language in architecture can be seen as a system of representation, while style is the communal language (Engel and Claessens 2007, p. 170). Style is influenced by the same forces as the shape of a dwelling, explained above: standards and values of society, traditions, religion, psychical climate, available materials etc.

So could one say, concluding from this, that by a combination of all above explained forces, the way of organizing activities and creating floor plans and expressing ideals in type and style the archetype-image came into existence? And even if we can, this will still all stay society-related and not personal. There is still a paradox between the fact that dwelling is one of the most

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personal things we do, while we do all seem to live 'in the same' dwelling.

So maybe we have to go back to the origin of it all: the *intention* of dwelling. Because maybe the archetype image of dwelling doesn't arise out of 'form' at all. Because wasn't mentioned before in this essay that '(...) when this shelter gets more tuned to the wishes of its inhabitant and gets organized and decorated by those, the shelter becomes more than just a shelter: it becomes a place of residence, an 'home'. By doing this one creates its *own* living environment, reflecting his one identity and making it possible to life live the way one wants.'

Maybe making your dwelling a really personal place has more to do with the way one decorates it and with the 'experiences' that one has in it. It has not so much to do with form, but with 'feeling'. That might be why all children out of one and the same society draw similar dwellings, but can blindly point out their owns. Because when you look really good, a child not only draws the dwelling, but also the grass surrounding is, the big tree standing next to it, the clouds in the air and the people living in it. It is not about the form, the form is just a tool for creating a symbol.



Illustration 4 - 5 - 6

As said before imagination is not a 'real' picture, it is a picture not based on facts, but on our own thoughts, knowledge, experiences and interpretations. (Arche)types are their because they are seen as the most optimal solution for a problem, we make them personal by 'projecting' our 'own imagination' on it. So the paradox created in this essay, seems not to be a paradox at all. It are just two different ways of looking at the same thing: the dwelling as 'functional object' and the dwelling as 'home'.

'When I, at the moment that I landed in Trude, not had seen the name of the city written in big letters on the airport terminal, I would have believed that I had arrived in the same city as where I had left from. The suburbs where they taxied me through were no different than others, with the same yellow and green houses. Following the same arrows, you would turn round the same flowerbeds on the same squares. De streets showed commodities, packing's and signboards that where no different than others. It was the first time that I was in Trude, but I already knew the hotel I was staying in; I already heard and spoken the conversation I had with buyers and salesman's from ironmongery; other days than that day where ended with the same looking in spirit bottles and at the same wavy belly buttons.'

Why am I even here, in Trude? I wondered. And I was already ready to leave again.

You can take the airplane whenever you want, they said, but you will arrive just in another Trude, equal in all things, the whole world is covered with óne Trude, that will not begin or stop, only the name on the airport changes.

(Form: Italo Calvino – ‘De onzichtbare steden’ – p. 134 – translated by M. Roks)

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Illustration Credits

Illustration 1 till 6 'Childs drawings of his / her dwelling'

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Note

Written by Martje Roks, about the book 'Onzichtbare steden' by Italo Calvino:

The book 'Invisible cities' explores imagination and the imaginable through the descriptions of cities by an explorer, Marco Polo. He describes the things he sees at his travels to the aging and busy emperor Kublai Khan. Soon the emperor figures out that Polo is describing fictive places to him, that all refer to Marco Polo's own city, Venezia.

The majority of the book consists of brief prose poems describing 55 cities. Short dialogues between the two characters are interspersed every five to ten cities and are used to discuss various ideas presented by the cities on a wide range of topics. The interludes between Khan and Polo are no less poetically constructed than the cities, and form a framing device, a story within a story, that plays with the natural complexity of language and stories.

Marco Polo and Kublai Khan do not speak the same language. When Polo is explaining the various cities, he uses objects from the city to tell the story. The implication is that each character understands the other through their own interpretation of what they are saying. Through this the book shows how cities can be, how their secret

fold, where the human imagination is not necessarily limited by the laws of physics or the limitations of modern urban theory. It offers an alternative approach to thinking about cities, how they are formed and how they function.

Fragments of 'Invisible Cities' are used in this essay as a second story line, to show the complexity and versatility of 'imagination' (in architecture). It shows in a very clear and accessible way that everyone has its own image of architecture, its own experience, its own thoughts and its own feelings, while the architecture remains all the same.

Today's newspaper is better than yesterdays because it is today's (Cedric Price)

Take nothing for granted: everything that is done can be re-done or un-done, everything that is made can be re-made or un-made

We are involved in space, actively. Space is not just a container

Drawing is not writing and architecture does not speak

Stasis is just a special case of movement: everything is movement, at its own speed

It is not that buildings should last a long or short time, they should last an appropriate time

Antwoorden zijn altijd tijdelijk en worden gegeven om weer te veranderen

There is not one true architecture: er leiden meerdere wegen naar Rome

Bij architectuur gaat het niet om de voorwaarden voor een ontwerp maar om het ontwerpen van de voorwaarden (Bernard Tschumi)

The limit of your body is not your skin (Gregory Bateson)

Architecture is not buildings, it is everything around buildings, buildings appear in architecture (Aaron Betsky)

De interpretatie van de vraag beïnvloedt de vorm van de antwoorden

A building does nothing: we produce it. A building does not happen to us, we create. We are actors, not users

If a tree falls in the forest, but no one is around to hear it, does it still make (a) sound?

Buildings are too slow, we are too fast. There is a mismatch between the speeds of movement

We don't move through space but we move through time

Action acts on action, not on form

A building is not a static Object but a moving Project

Alles aan een gebouw is onderdeel van de eeuwige vlucht van architectuur

A building is a contested territory and it cannot be reduced to what it means and what it is (Bruno Latour)

Het gaat om ontwerpen voor het onbekende in plaats van het voorspellen van het onvoorspelbare

The key is asymmetry. Don't settle for simple distinctions between one and the other. It is about the negotiation. From static towards transitory

We are not defined by the choices that we make but by the choices that we face

Nothing happens, things are already about to happen or have already happened. Consciousness is highly overrated and always comes last

Nothing is logically necessary, anything that happens is continually obligatory

Met vragen stellen kom je verder dan met antwoorden geven

Henri Ford: Als we mensen gevraagd hadden wat ze wilden dan hadden ze gezegd dat ze een sneller paard wilden.

Grafting Architecture

Architecture

The conditions of space

Building

From the verb To Build. The construction that (makes it possible to) frame a place

Capacities

The ability to do or contain a particular thing

Chance

The possibility for something different to happen

Change

To become different, transform from one state to another

Conditions

The terms that make it possible for something to happen. The physical situation that something is in / is affected by

Cross-Combining

Putting together multiple different things, not into a collage (in which the origin and identity of the 'thing' becomes redundant to the collage) but as an assemblage in which the 'thing' remains its own identity and meaning

Dynamic

Being exposed to / able to adopt to forces that produce change, movement or transformation

Flexibility

The ability to change or be changed easily according to the situation

Vocabulary of Architecture

Fixed

Something being in state of already arranged and not able to be changed

Graft (to)

To join or add something new, unify, interconnect

Layers

Being built up from multiple (different) elements, forming together one whole

Process

Going through a series of change, going through various stages of being

Space

Not the air between the walls but the structure, that in time are created by events taking place

Stable

The ability to adopt change without losing its fundamental nature

Static

Staying in one and the same situation, not being able to embed or undergo any form of transformation

Time/Space scales

Different moments or stadiums in time or space, depending on their relation and the micro / mesa / macro point of view

Transformation

A change in the appearance or character of something

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